ARCHITECTURAL REVIEW BOARD WORK SESSION AGENDA

Town Council Chambers
765 Lynn Street, Herndon, VA 20170

Wednesday, June 12, 2024 | 7:30 PM

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1. **Call to Order**
2. **Public Hearings**
   a. Application for an Addition and Alterations, ARB #24-002, to consider an application for alterations and an addition to the Herndon Elementary School at 630 Dranesville Road.
3. **New Business**
   a. Discussion Item - Architectural Language Presentation
4. **Comments**
   a. Comments from the Staff Members
   b. Comments from the Board Members
5. **Adjournment**

Architectural Review Board Work Session
Agenda Item 2.a.

Agenda Item: **Application for an Addition and Alterations, ARB #24-002, to consider an application for alterations and an addition to the Herndon Elementary School at 630 Dranesville Road.**

Meeting Date: June 12, 2024

Category: Public Hearings

Prepared by: Tamsin Himes, Lead Planner/Design-Development

Description:
This application proposes the construction of a large addition, smaller additions, new exterior treatments for the existing building, and further modifications to the Herndon Elementary School. The site plan for this project is not fully approved, but it may be approved at the time of the ARB regular meeting on June 26, 2024. The Board cannot take any official action on this case prior to site plan approval, so if the site plan is not approved by the regular meeting date, this case will require a continuance to the July 17, 2024 regular meeting.

Background:
This item was previously before the Board at the September 6, 2023, ARB work session and the February 7, 2024, ARB work session as a discussion item. The substance of the application has remained mostly unchanged since the February 2024 work session with a few modifications discussed in this report.

Budget Impact:
n/a

Recommendation:
Staff recommends approval of ARB #24-002 for additions and alterations to the Herndon Elementary School with the following condition:

1. This approval does not include any signage which will require a separate sign license application through the Department of Community Development.

Attachments:
1. Staff Report
2. Exterior Elevations
3. Roof Screening Diagram

4. Site Plan
5. Materials Information
6. Applicant Presentation

STAFF REPORT

Agenda Item: ARB #24-002, Application for additions and alterations

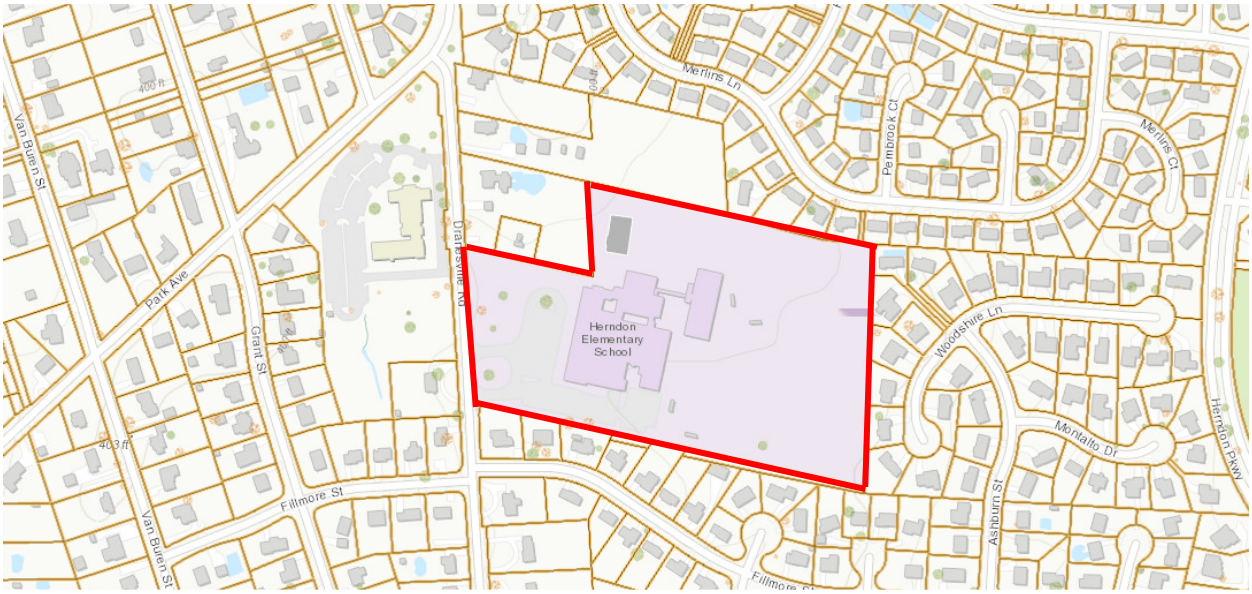
Meeting Date: June 12, 2024

Staff Contact: Tamsin Himes, Lead Planner, Design and Development

Summary Information:

Proposed Modification	Additions and Alterations		
Address	630 Dranesville Road		
Fairfax County Tax Map Number	0104 02 0066A		
Owner(s)	School Board of Fairfax County		
Applicant	Najib Hameed, Coordinator III, FCP		
Business/Organization	Herndon Elementary School		
Property Use	Educational Institution		
Zoning District	R-10, Residential Single Family -10 District		
Adjacent Zoning	**North:** R-10, Residential Single Family -10 District **South:** R-10, Residential Single Family -10 District	**East:** R-10, Residential Single Family -10 District **West:** R-10, Residential Single Family -10 District	
Building Type(s)	School	**Date of Construction:**	1969
Architectural Style(s)	Mid-Century school		
Exterior Material(s)	Brick		
Neighborhood Design Profile	Single-Family Residential Neighborhood		
Comprehensive Plan Land Use Designation	Community Facilities		

Location Map:



Background & Site Description:

Site description

The subject property is located on the east side of Dranesville Road between Ferndale Street and Park Avenue. The parcel comprises 13.8885 acres of land and is situated within a residential neighborhood. The property slopes down from the road with the school positioned towards the center of the lot.

Previous Discussion Items

This item was previously before the Board at the September 6, 2023, ARB work session and the February 7, 2024, ARB work session as a discussion item. The substance of the application has remained mostly unchanged since the February 2024 work session with a few modifications which will be discussed in this report.

Case Details & Proposal:

This application proposes the construction of a large addition, smaller additions, new exterior treatments for the existing building, and further modifications to the Herndon Elementary School. These changes are part of a complete renovation of the entire school. The submitted materials include photos of the existing front façade, elevation and perspective renderings of the proposed alterations to the front façade of the building, a plan view of the structure and proposed additions/alterations, site/grading plan, color

elevation drawings, line elevation drawings of four facades and interior courtyards, materials specifications, and a physical materials board.

The site plan for this project is not fully approved, but it may be approved at the time of the ARB regular meeting on June 26, 2024. The Board cannot take any official action on this case before site plan approval, so if the site plan is not approved by the regular meeting date, this case will require a continuance to the July 17, 2024, regular meeting.



Existing west (front) facade

West (front) façade, existing structure. The west façade of the existing school faces the right of way and is the most visible portion of the building. The project includes extensive modifications to this façade. The existing building features first and second-story windows across the length of the façade with breaks at regular intervals. The project proposes replacing all windows with storefront system aluminum and glass windows, semi-transparent glass. With this change, the project introduces dark-formed metal cladding that breaks up the window rows at irregular intervals, altering the fenestration. Another visual modification is the replacement of a red band capping the top of the façade of the existing building which is either replaced with dark gray metal cladding or repainted to match the formed metal paneling used elsewhere on the façade.

The expanded entrance adds an awning, covered open-air area that extends forward from the current entrance located on the west façade, and also includes an addition that extends beyond the current south façade of the building to the right of the entrance. The addition and awning feature metallic finished flat metal panel siding, red pillars, and additional bright blue accents on built-in bench structures, and a brick base that follows the grade change. The window and door systems near the entrance match the new windows of the façade with dark aluminum frame systems and semi-transparent glazing. Under the entrance canopy, the exterior brick is painted grey. Toward the middle of the west façade is a two-story rectangular bump-out with the same light gray flat metal

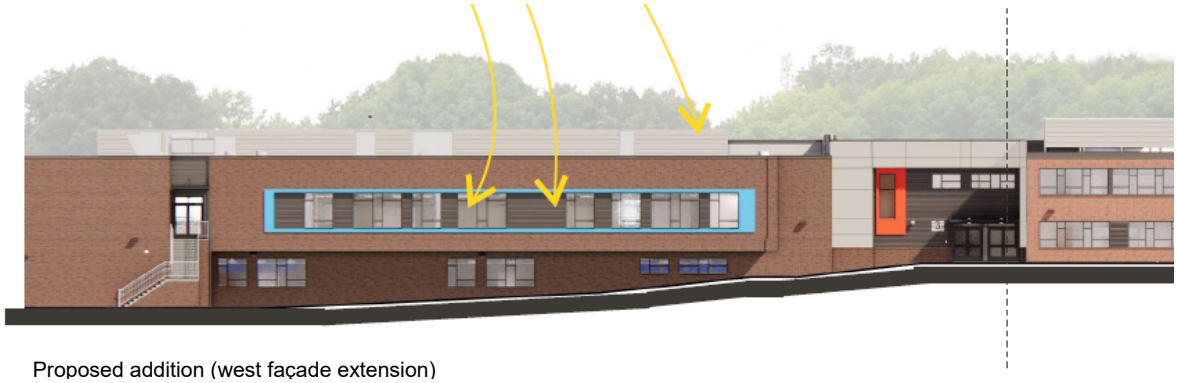
paneling used on the expanded entrance. The bump-out also uses dark-formed metal paneling between windows as is used on the window systems throughout the façade.



Proposed west (front) facade

The project and proposed modifications to this façade have been slightly altered since the Board saw this project at the February 2024 work session. These changes include the color of the front entrance pillars (previously yellow, now red). The type of metal paneling used on the entrance addition and bump-out (previously vertical formed metal paneling, now flat metal paneling), and the color of the rooftop equipment screening which now matches the flat color of the flat metal paneling.

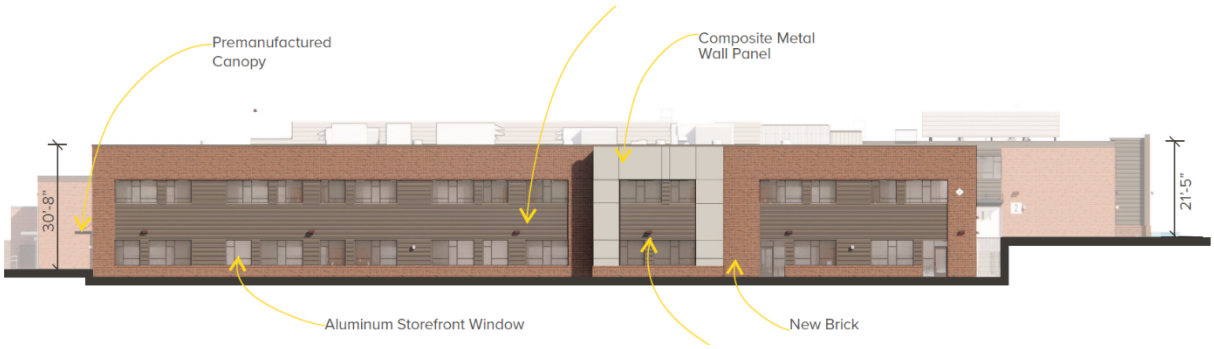
West (front) façade, new addition. The proposed addition extends to the north (left) of the existing façade. The new addition is nearly equal in length to the existing front facade but less visible from the right of way. An architectural hyphen connects the two and sits between the existing structure and the main façade of the addition, differentiated from both old and new facades with the use of light gray and formed metal dark gray paneling and light gray flat metal paneling, accented with an orange door, with minimal use of brick.



Proposed addition (west façade extension)

The main façade of the addition uses primarily brick cladding and features a second-story horizontal window system framed in bright blue with divisions of dark gray metal cladding. Surrounding the window system the façade includes few details but features three window systems below and a door and access stair to the left.

North façade (left side) new addition. The north façade consists completely of the new addition. This façade is divided into three sections: two horizontal window systems divided horizontally and vertically with dark gray formed metal paneling and bordered by brick façade, and between these two, a pump-out featuring a smaller similar windows system bordered by flat, light gray metal paneling.



Proposed addition (north facade)

East façade (back of building) new addition. The new addition extends to the right of the rear, east façade and consists of two-story structure with a primarily blank brick façade, a horizontal entrance/exit with an aluminum and window storefront style system, and a canopy with bright yellow entrance pillars. Above the entrance is a brick façade with horizontal windows divided by dark gray horizontal formed metal paneling. With additional vertical divisions in the brick façade to the right and left of the entrance, using the same dark gray formed metal paneling, some of which include windows and doors.

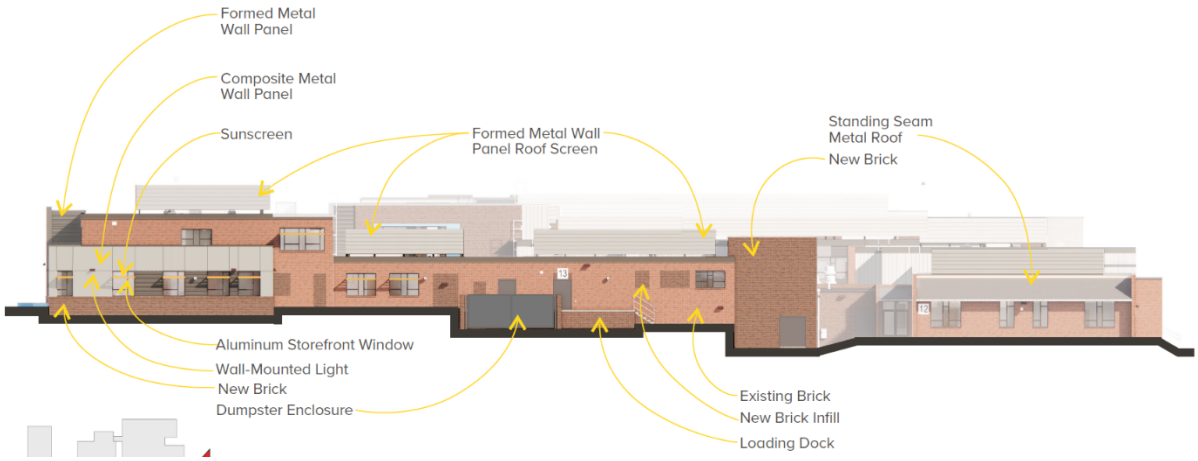


Proposed addition (east facade)

This area of the addition also includes a courtyard / outdoor-indoor area which is located on the left side of the area highlighted in yellow in the above image. Details for this courtyard area are shown on the line elevation drawings in attachment #3.

East façade (back of building) existing structure. Modifications to this façade of the existing structure are minimal and consist of new windows systems, two new entrance canopies/roofs, and new exterior lighting.

South façade (right of entrance) existing structure. The south façade of the existing building includes two areas of modification. When viewing the drawings in elevation, the left corner of the façade connects with the addition to the entrance of the school which was described above. This area includes four large windows divided by dark gray horizontal formed metal paneling. The new portions of this façade are clad in light gray flat metal paneling and brick. Other areas of the existing building that are modified include five additional window groupings, dumpster enclosures, rooftop equipment and screening, an additional standing seam metal-roofed entrance canopy, and a solid brick addition to the rear (right) of the existing building.



Existing with proposed alterations (East Facade)

Review Criteria

Town of Herndon Charter and Design Criteria, Town of Herndon Code. Staff has included the provisions set out in the town code that the ARB and staff are to use as standards when reviewing applications. These should help clarify what the ARB should be addressing when determining whether or not a project is appropriate:

Herndon Town Charter Section 7.4:1(c) Architectural Control Districts:

"*Board of architectural review; purposes. The purpose of the board shall be to ensure that all buildings and landscaping erected in the designated architectural control districts conform to accepted architectural standards for permanent buildings, as contrasted with*

engineering standards designed to satisfy safety requirements only, and exhibit external characteristics as to material, texture, color, lighting, dimensions, line and mass of demonstrated architectural and aesthetic durability; and to prevent the erection in such district of buildings the external characteristics of which are designed to serve as advertisements or commercial displays or buildings which in terms of material, texture, color, dimension, lighting, line or mass exhibit characteristics likely to deteriorate rapidly or to be of short term architectural or aesthetic acceptability, be plainly offensive to human sensibilities or otherwise constitute a reasonably foreseeable detriment to the community."

Design Criteria, Town of Herndon Code Section 58-96.- Design criteria:

"*The board of architectural review and, on appeal, the town council shall use the following standards and criteria in considering applications filed under this article:*

(1) Whether or not the proposed architectural design is suitable for a good suburban community in terms of external architectural features, including signs subject to public view, general design and arrangement, texture, color, line, mass, dimension, material and lighting.
(2) Whether or not the proposed structure, building or improvement is compatible with existing well-designed structures, acceptable to the board, in the vicinity and in the town as a whole.
(3) Whether or not, and to what extent, the proposed structure, building or improvement would promote the general welfare and protect the public health, safety and morals by tending to maintain or augment the town's tax base as a whole, generating business activity, maintaining and creating employment opportunity, preserving historical sites and structures and making the town a more attractive and desirable place in which to live.
(4) Whether or not proposed freestanding buildings use the same or architecturally harmonious materials, color, texture and treatment for all exterior walls; and in the case of partially freestanding buildings, whether or not the same or architecturally harmonious materials, color, texture and treatment are used on all portions of all exterior walls exposed to public view.
(5) Whether or not the combination of architectural elements proposed for a structure, building or improvement, in terms of design, line, mass, dimension, color, material, texture, lighting, landscaping and roofline and height conform to accepted architectural principles for permanent buildings as contrasted with engineering standards designed to satisfy safety requirements only; and exhibit external characteristics of demonstrated architecture and aesthetic durability.

(6)Whether or not, in terms of design, material, texture, color, lighting, landscaping, dimension, line, mass or roof line and height, the proposed structure, building or improvement is designed to serve primarily as an advertisement or commercial display, exhibits exterior characteristics likely to deteriorate rapidly, would be of temporary or short-term architectural or aesthetic acceptability, would be plainly offensive to human sensibilities or would otherwise constitute a reasonable foreseeable detriment to the community."

Staff Analysis:

Zoning Ordinance Compliance

As proposed, the modifications appear to comply with the applicable zoning ordinance regulations. Zoning compliance is also being verified as part of the on-going site plan review. As mentioned previously, the ARB cannot take any official action on this application until the site plan is approved. Staff will provide the board with a draft resolution after the site plan has been approved.

Signage

Though this application shows signage, signage is not included in this review. The sign license applications can be administratively reviewed and will be handled in a separate case.

Materials

The applicant has provided extensive materials specifications information and a physical materials sample board. The materials are generally the same as the Board reviewed at the February 2024 work session apart from a few alterations. The most notable change was a switch from vertical formed metal paneling to a flat metal paneling in light gray. This revision was made in response to the discussion with the Board at the work session regarding the industrial look of the previous cladding.

At the February 2024 work session, the applicant noted that the brick will be an exact match, that the brick and mortar had been tested to ensure this match is accurate, and that the portions of the building using the new brick would not depart from the visual characteristics of the existing brickwork.

Colors

At the February 2024 work session, the applicant discussed color choices used on the exterior of the building including the blue window border and red border on the new

addition's west façade. The applicant stated that these colors correspond to interior design choices and are an exterior reference to interior areas of the elementary school.

Rooftop screening

The rooftop screening element was a subject of conversation at the previous work session and staff noted in the staff memo that from the submitted materials it appeared that the equipment screening was a lighter color than any other element on the façade. The updated elevation drawings and perspective renderings note that the color of the screening corresponds with the color of the flat paneling used throughout the project.

Courtyard elevations

The applicant has provided elevations for the courtyard areas that are included in this project, as requested by staff at the previous work session. These elevations can be found in attachment #3.

HDRB Alternatives:

The following alternatives are available to the ARB for its decision on ARB #24-002:

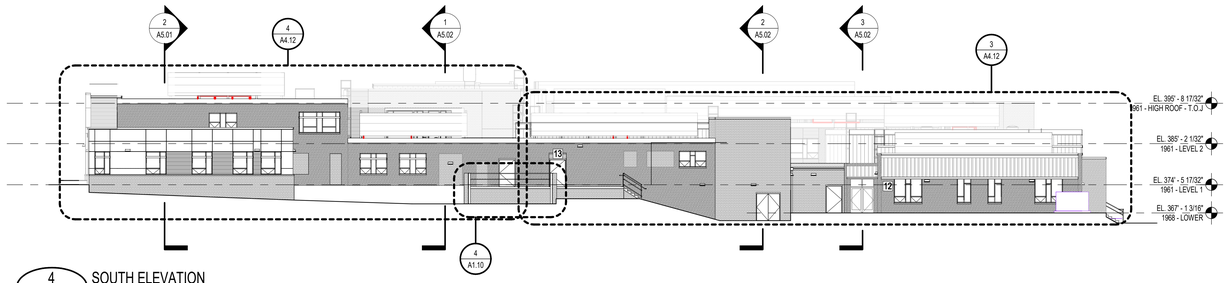
1. Recommendation for approval.
2. Recommendation for approval with conditions.
3. Recommendation for denial.
4. Continuance of the application to July 17, 2024.

Staff Recommendation:

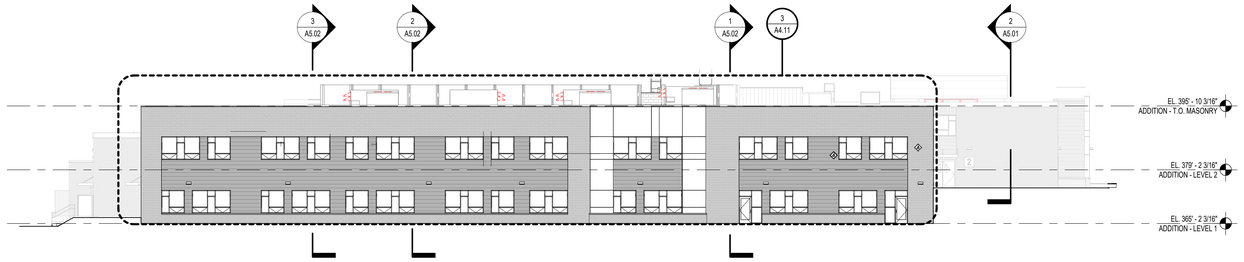
Staff recommends approval of ARB #24-002 for additions and alterations to the Herndon Elementary School with the following condition:

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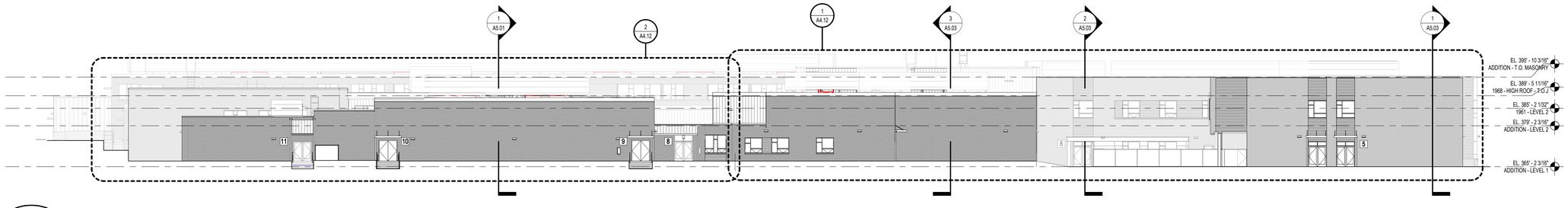
A draft resolution will be provided to the Board prior to the public hearing.



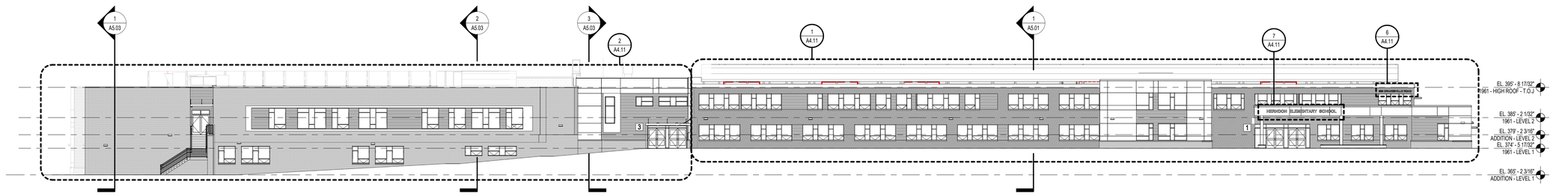
4 A4.01 SOUTH ELEVATION
SCALE: 1/16" = 1'-0"



3 A4.01 NORTH ELEVATION
SCALE: 1/16" = 1'-0"



2 A4.01 EAST ELEVATION
SCALE: 1/16" = 1'-0"



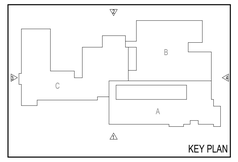
1 A4.01 WEST ELEVATION
SCALE: 1/16" = 1'-0"

0' 4' - 0" 8' - 0" 16' - 0" 32' - 0"
SCALE: 1/16" = 1'-0"

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ISSUANCES		
No.	Drawing Issue Description	Date
	SCHEMATIC DESIGN PRICING	05/31/22
	SCHEMATIC DESIGN SUBMISSION	06/06/22
	DESIGN DEVELOPMENT PRICING	08/24/22
	DESIGN DEVELOPMENT SUBMISSION	09/06/22
	ICD PRICING SET	11/22/22
	ICD SUBMISSION	12/02/22
	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23
A	PERMIT REVISION - TOH	11/30/23



HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

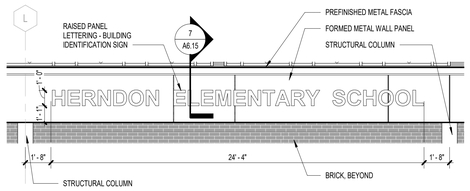
FAIRFAX COUNTY PUBLIC SCHOOLS

EXTERIOR ELEVATIONS

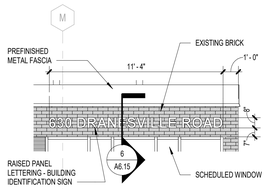
BRENT AMOS Principal-in-Charge	20210381 Project No.
MAUREEN WIECHERT Project Manager	05/25/23 Date
HEIDI LEINBACH Sr Project Architect	
SAEED DORNAJAFI Project Architect	A4.01
SAVANNAH HENLEY Staff Designer	Drawing No.

ISSUED FOR CONSTRUCTION

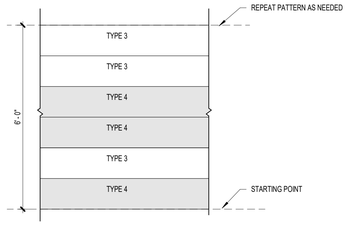
PROJECT NUMBER: 20210381 PROJECT NAME: HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS
SHEET NUMBER: A4.01 - EXTERIOR ELEVATIONS
BIM 360://20210381 FCPS Herndon Elementary School/20210381_v21_FCPS Herndon ES_Central.rvt
5/10/2024 2:24:32 PM



7 A4.11 ENLARGED SIGN - SCHOOL NAME
SCALE: 1/4" = 1'-0"

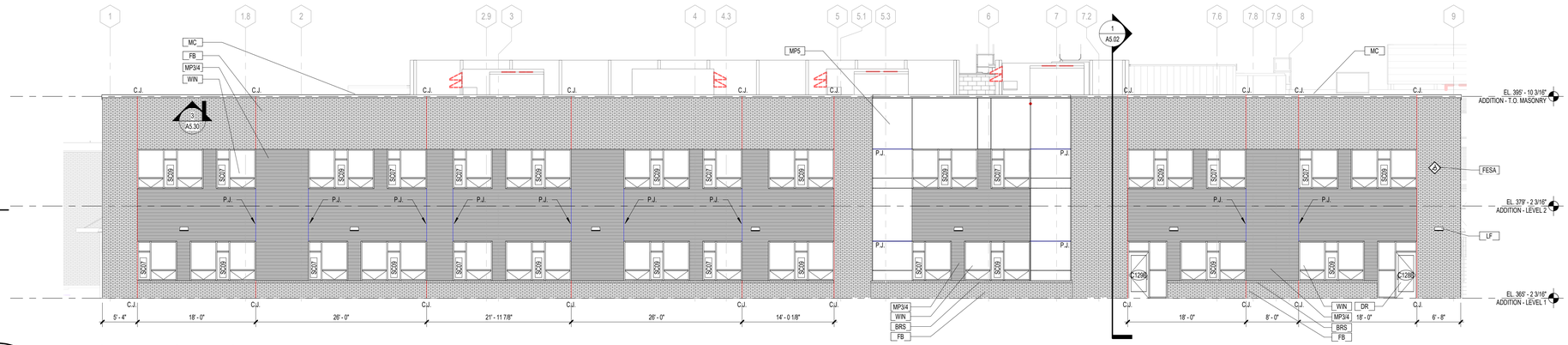


6 A4.11 ENLARGED SIGN - STREET ADDRESS
SCALE: 1/4" = 1'-0"

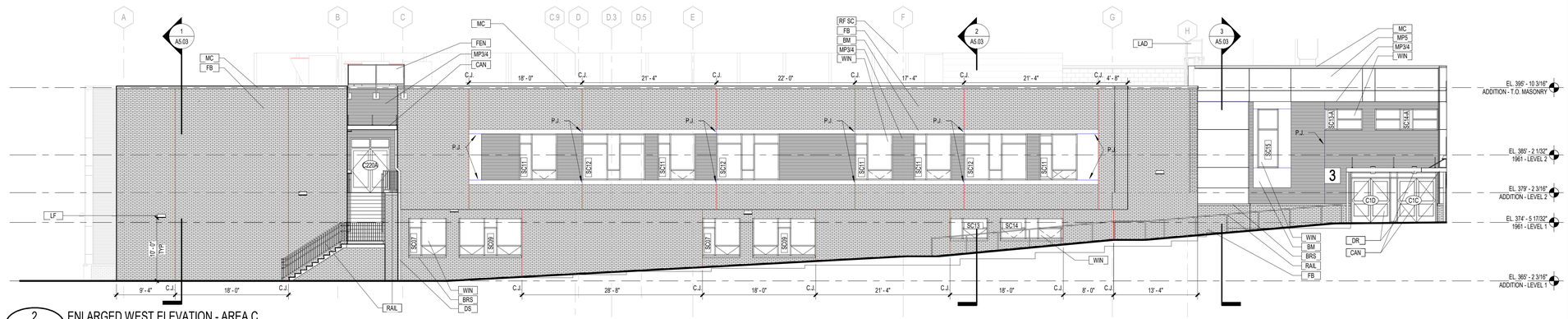


4 A4.11 FORMED METAL WALL PANEL - TYPE 3&4 - REPEATING PATTERN
SCALE: 1/2" = 1'-0"

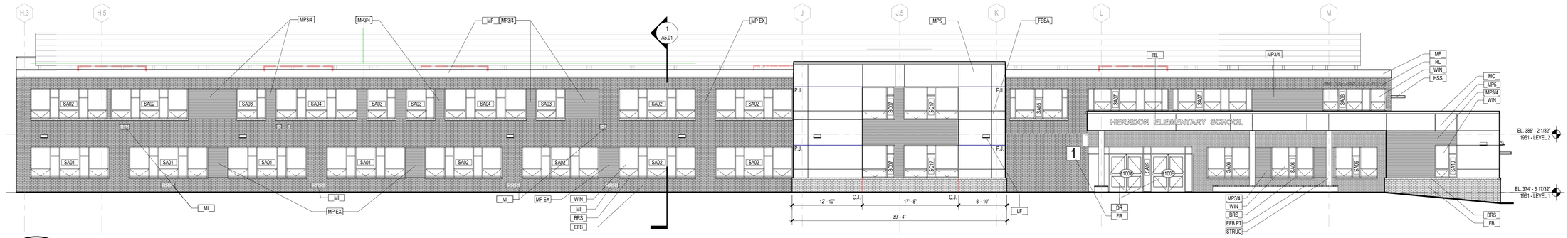
EXTERIOR ELEVATION KEYNOTE LEGEND	
Key Value	Keynote Text
BM	BRAKE METAL
BRS	BRICK ROWLOCK SILL
CAN	PREMANUFACTURED CANOPY
DR	SCHEDULED DOOR AND FRAME
DS	4" X 4" DOWNSPOUT
EFB	EXISTING FACE BRICK
EFB PT	EXISTING FACE BRICK, PAINT.
FB	FACE BRICK, TYP
FEN	FENCE, SEE DETAIL
FESA	FESA SIGN
FR	FIRST RESPONDER SIGNAGE
HSS	HORIZONTAL SUNSHADE
LAD	ROOF LADDER
LF	LIGHT FIXTURE, TYP. SEE ELECTRICAL.
MC	PREFINISHED METAL COPING
MF	PREFINISHED METAL FASCIA
MI	MASONRY INFILL, SEE DETAI 5/A6.15.
MP3/4	FORMED METAL WALL PANEL - TYPE 3 & 4
MP5	ACM WALL PANEL - TYPE 5
MP EX	FORMED METAL WALL PANEL TYPE 3 & 4 OVER EXISTING EXTERIOR WALL
RAIL	SCHEDULED RAILING
RF SC	MECHANICAL ROOF SCREEN
RL	RAISED PANEL LETTERING
STRUC	EXPOSED STRUCTURAL STEEL, PAINT
WIN	SCHEDULED WINDOW, TYP



3 A4.01 A4.11 ENLARGED NORTH ELEVATION - AREA C
SCALE: 1/8" = 1'-0"



2 A4.01 A4.11 ENLARGED WEST ELEVATION - AREA C
SCALE: 1/8" = 1'-0"



1 A4.01 A4.11 ENLARGED WEST ELEVATION - AREA A
SCALE: 1/8" = 1'-0"

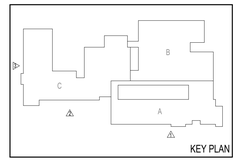
GENERAL NOTE:
1. AT EXISTING FACADES, WALL ASSEMBLIES TO BE PATCHED WHERE EQUIPMENT HAS BEEN REMOVED INCLUDING LOUVERS, HVAC, SECURITY, ELECTRICAL AND PLUMBING EQUIPMENT. REFER TO MEP DRAWINGS FOR ADDITIONAL SCOPE.

0' 4' - 0" 16' - 0"
2' - 0" 8' - 0"

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ISSUANCES		
No.	Drawing Issue Description	Date
	DESIGN DEVELOPMENT PRICING	08/24/22
	DESIGN DEVELOPMENT SUBMISSION	09/06/22
	ICD PRICING SET	11/22/22
	ICD SUBMISSION	12/02/22
	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23
A	PERMIT REVISION - TOH	11/30/23



HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

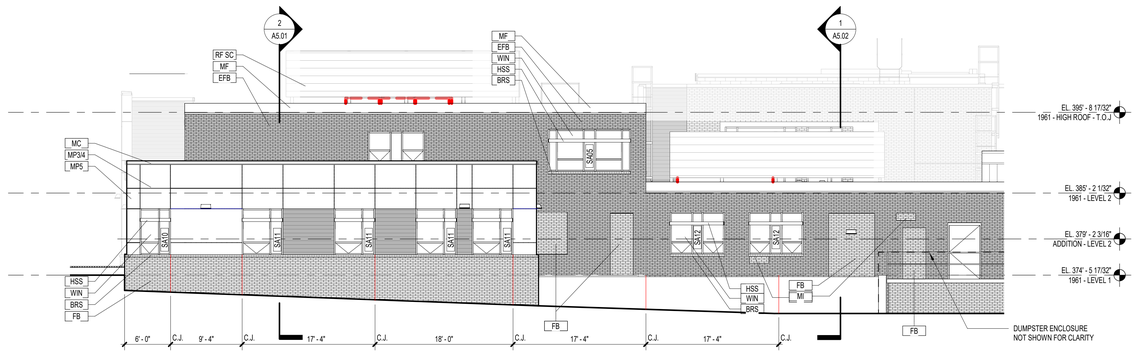
FAIRFAX COUNTY PUBLIC SCHOOLS

BUILDING ELEVATION WEST & NORTH - ENLARGED

BRENT AMOS, Principal-in-Charge	20210381, Project No.
MAUREEN WIECHERT, Project Manager	05/25/23, Date
HEIDI LEINBACH, Sr Project Architect	
SAEED DORNAJAFI, Project Architect	A4.11, Drawing No.
SAVANNAH HENLEY, Staff Designer	

ISSUED FOR CONSTRUCTION

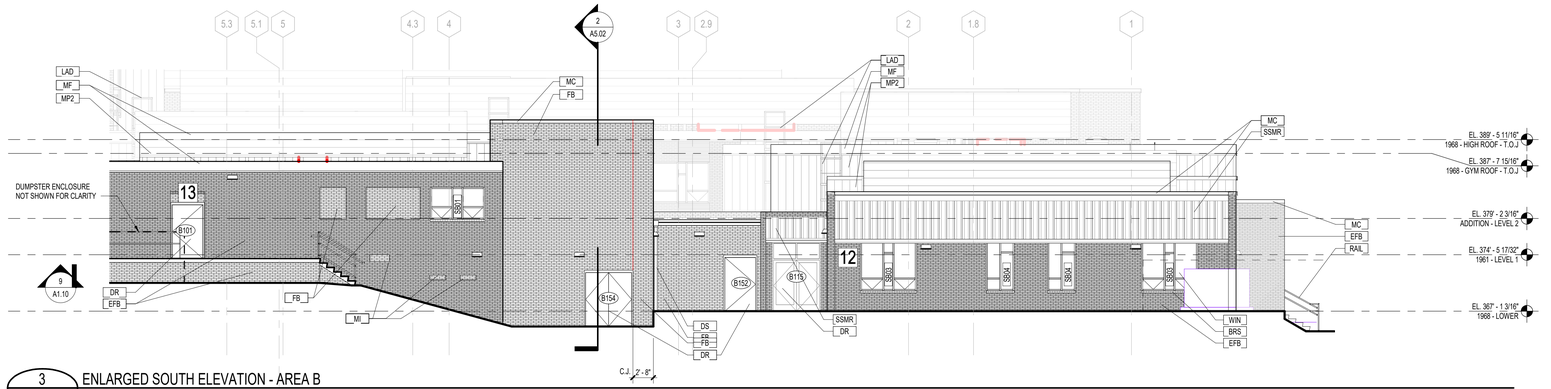
PROJECT NUMBER: 20210381 PROJECT NAME: HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS
SHEET NUMBER: A4.11 - BUILDING ELEVATION WEST & NORTH - ENLARGED
BIM 360://20210381 FCPS Herndon Elementary School/20210381_v21_FCPS Herndon ES_Central.rvt
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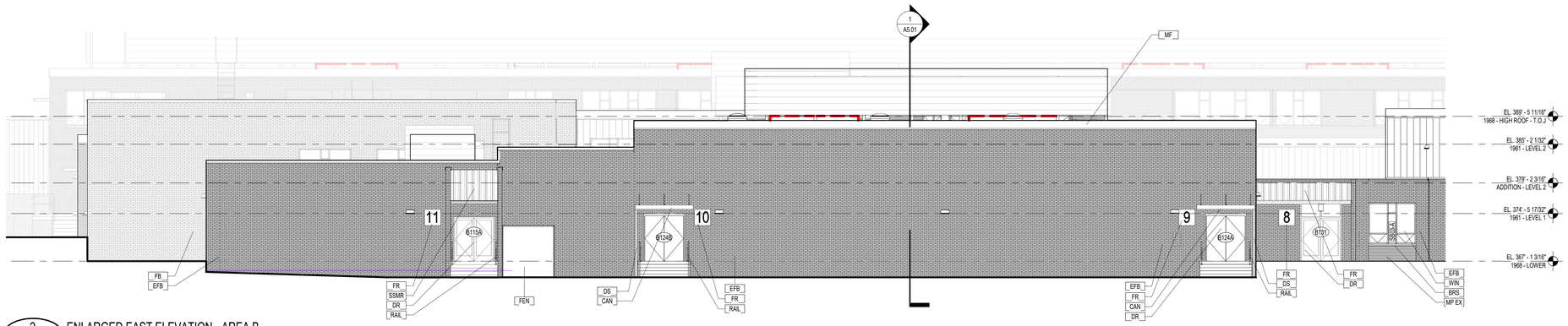
4 A4.12 ENLARGED SOUTH ELEVATION - AREA A
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION KEYNOTE LEGEND	
Key Value	Keynote Text
BRS	BRICK ROWLOCK SILL
CAN	PREMANUFACTURED CANOPY
DR	SCHEDULED DOOR AND FRAME
DS	4" X 4" DOWNSPOUT
EFB	EXISTING FACE BRICK
FB	FACE BRICK, TYP
FEN	FENCE, SEE DETAIL
FR	FIRST RESPONDER SIGNAGE
HSS	HORIZONTAL SUNSHADE
LAD	ROOF LADDER
MC	PREFINISHED METAL COPING
MF	PREFINISHED METAL FASCIA
MI	MASONRY INFILL, SEE DETAI-5/A6.15
MP2	FORMED METAL WALL PANEL - TYPE 2
MP3/4	FORMED METAL WALL PANEL - TYPE 3 & 4
MP5	ACM WALL PANEL - TYPE 5
MP EX	FORMED METAL WALL PANEL TYPE 3 & 4 OVER EXISTING EXTERIOR WALL
RAIL	SCHEDULED RAILING
RF SC	MECHANICAL ROOF SCREEN
SSMR	STANDING SEAM METAL ROOF
STRUC	EXPOSED STRUCTURAL STEEL, PAINT
WIN	SCHEDULED WINDOW, TYP

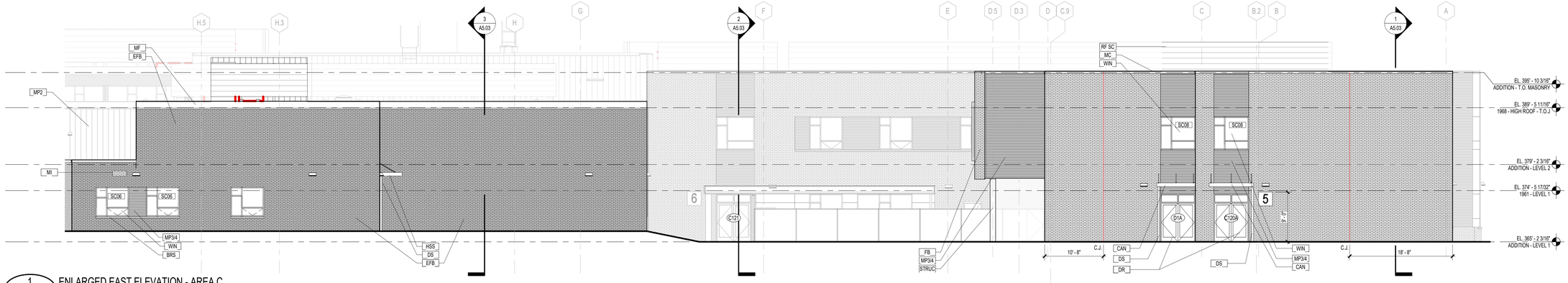
GENERAL NOTE:
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3 A4.12 ENLARGED SOUTH ELEVATION - AREA B
SCALE: 1/8" = 1'-0"



2 A4.12 ENLARGED EAST ELEVATION - AREA B
SCALE: 1/8" = 1'-0"

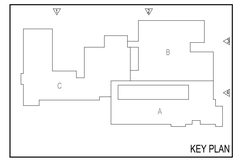


1 A4.12 ENLARGED EAST ELEVATION - AREA C
SCALE: 1/8" = 1'-0"

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	DESIGN DEVELOPMENT SUBMISSION	09/06/22
	ICD PRICING SET	11/22/22
	ICD SUBMISSION	12/02/22
	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23



HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

FAIRFAX COUNTY PUBLIC SCHOOLS

BUILDING ELEVATION EAST & SOUTH - ENLARGED

BRENT AMOS, Principal-in-Charge	20210381, Project No.
MAUREEN WIECHERT, Project Manager	05/25/23, Date
HEIDI LEINBACH, Sr Project Architect	
SAEED DORNAJAFI, Project Architect	
SAVANNAH HENLEY, Staff Designer	

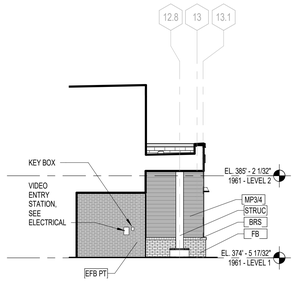
A4.12
Drawing No.

ISSUED FOR CONSTRUCTION

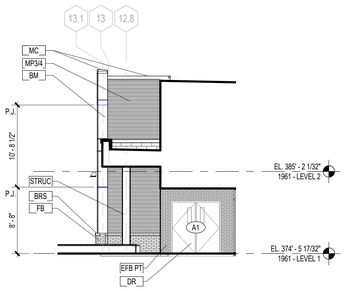
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SHEET NUMBER: A4.12 - BUILDING ELEVATION EAST & SOUTH - ENLARGED
BIM 360://20210381 FCPS Herndon Elementary School/20210381_v21_FCPS Herndon ES_Central.rvt
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EXTERIOR ELEVATION KEYNOTE LEGEND	
Key Value	Keynote Text
BM	BRAKE METAL
BRS	BRICK ROWLOCK SILL
CAN	PREMANUFACTURED CANOPY
DR	SCHEDULED DOOR AND FRAME
DS	4" X 4" DOWNSPOUT
EFB	EXISTING FACE BRICK
EFB PT	EXISTING FACE BRICK, PAINT.
FB	FACE BRICK, TYP
FB PT	FACE BRICK, PAINT
FR	FIRST RESPONDER SIGNAGE
HSS	HORIZONTAL SUNSHADE
LAD	ROOF LADDER
MC	PREFINISHED METAL COPING
MF	PREFINISHED METAL FASCIA
MI	MASONRY INFILL, SEE DETAI 5/A6.15
MP2	FORMED METAL WALL PANEL - TYPE 2
MP3/4	FORMED METAL WALL PANEL - TYPE 3 & 4
MP5	ACM WALL PANEL - TYPE 5
MP EX	FORMED METAL WALL PANEL TYPE 3 & 4 OVER EXISTING EXTERIOR WALL
RF SC	MECHANICAL ROOF SCREEN
STRUC	EXPOSED STRUCTURAL STEEL, PAINT
WIN	SCHEDULED WINDOW, TYP

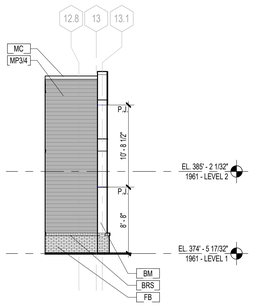
GENERAL NOTE:
1. AT EXISTING FACADES, WALL ASSEMBLIES TO BE PATCHED WHERE EQUIPMENT HAS BEEN REMOVED INCLUDING LOUVERS, HVAC, SECURITY, ELECTRICAL AND PLUMBING EQUIPMENT. REFER TO MEP DRAWINGS FOR ADDITIONAL SCOPE.



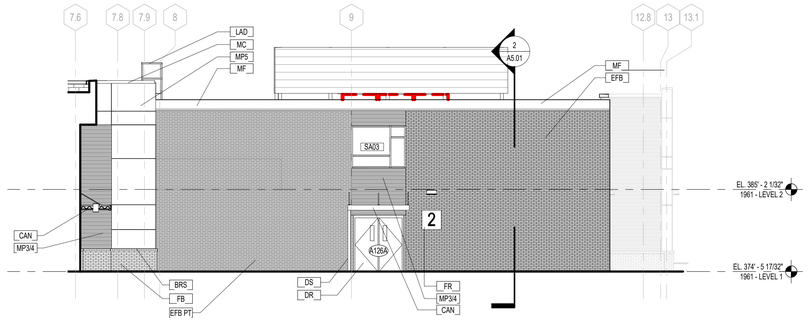
8 A4.20 ADMIN ADDITION - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



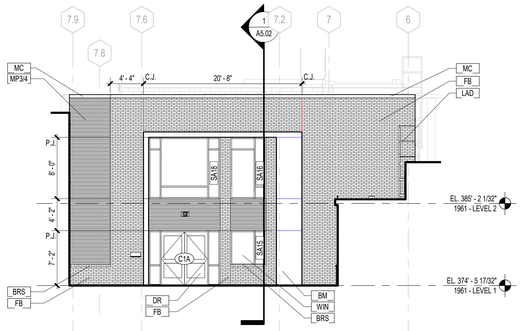
7 A4.20 WEST EXTENSION - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



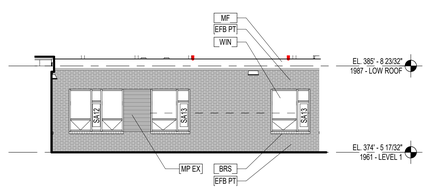
6 A4.20 WEST EXTENSION - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



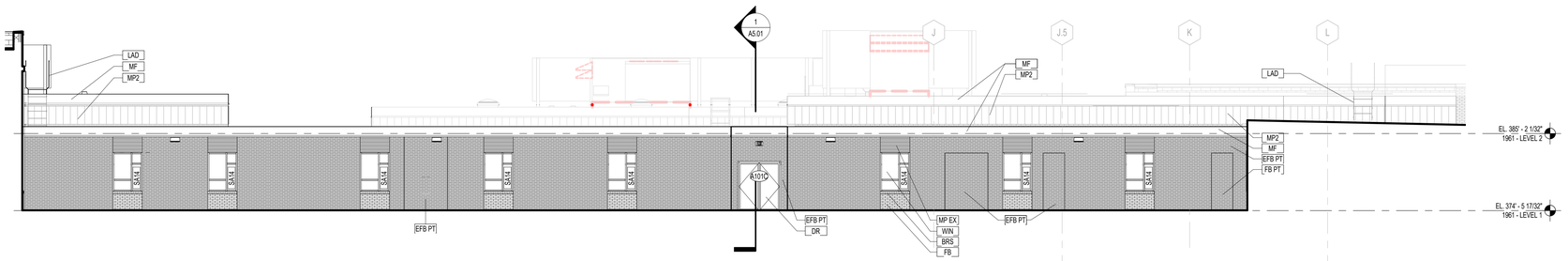
5 A4.20 EXISTING BUILDING SOUTH EXIT
SCALE: 1/8" = 1'-0"



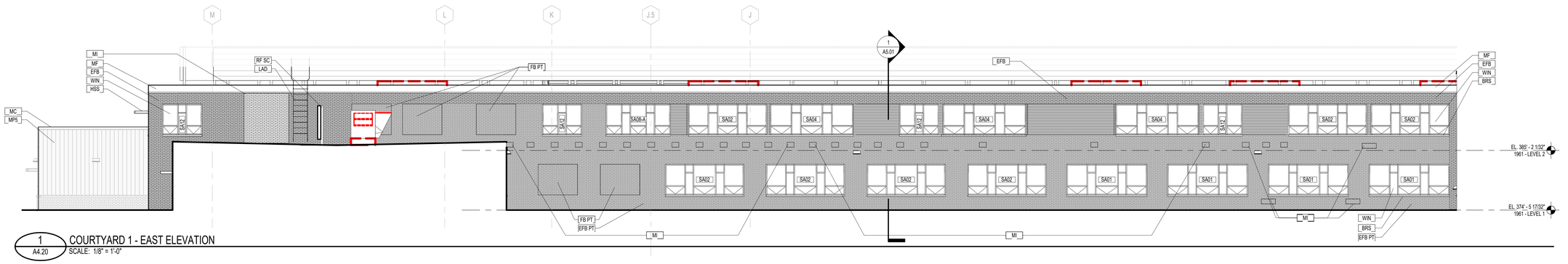
4 A4.20 COURTYARD 1 - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



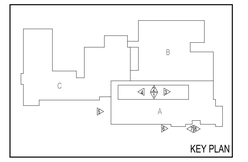
3 A4.20 COURTYARD 1 - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 A4.20 COURTYARD 1 - WEST ELEVATION
SCALE: 1/8" = 1'-0"



1 A4.20 COURTYARD 1 - EAST ELEVATION
SCALE: 1/8" = 1'-0"



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	DESIGN DEVELOPMENT SUBMISSION	09/06/22
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	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23

HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

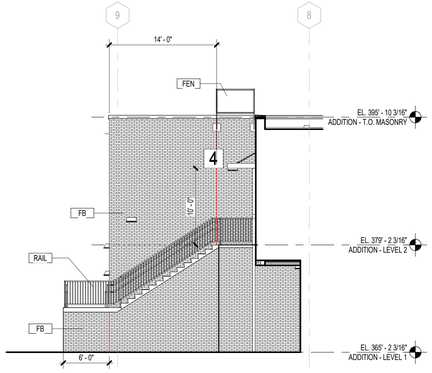
FAIRFAX COUNTY PUBLIC SCHOOLS

PARTIAL EXTERIOR ELEVATIONS - ENLARGED

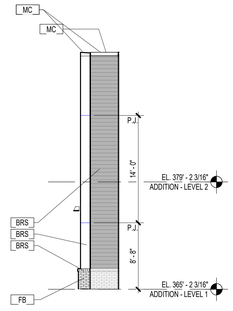
BRENT AMOS, Principal-in-Charge	20210381, Project No.
MAUREEN WIECHERT, Project Manager	05/25/23, Date
HEIDI LEINBACH, Sr Project Architect	
SAEED DORNAJAFI, Project Architect	A4.20, Drawing No.
SAVANNAH HENLEY, Staff Designer	

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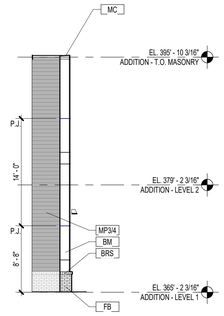
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SHEET NUMBER: A4.20 - PARTIAL EXTERIOR ELEVATIONS - ENLARGED
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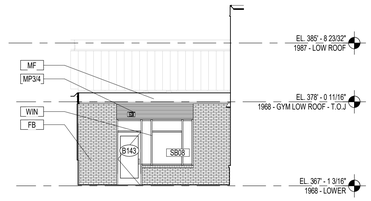
9 A4.21 ADDITION WEST EGRESS STAIR ELEVATION
SCALE: 1/8" = 1'-0"



8 A4.21 RESOURCE CLASSROOM - WEST ELEVATION
SCALE: 1/8" = 1'-0"



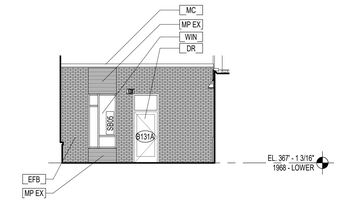
7 A4.21 RESOURCE CLASSROOM - EAST ELEVATION
SCALE: 1/8" = 1'-0"



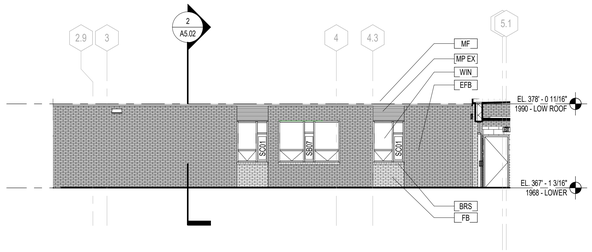
6 A4.21 COURTYARD 2 - EAST ELEVATION
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION KEYNOTE LEGEND	
Key Value	Keynote Text
BM	BRAKE METAL
BRS	BRICK ROWLOCK SILL
DR	SCHEDULED DOOR AND FRAME
EFB	EXISTING FACE BRICK
EFB PT	EXISTING FACE BRICK, PAINT.
FB	FACE BRICK, TYP
FEN	FENCE, SEE DETAIL
FL	FLASHING AND COUNTERFLASHING
LAD	ROOF LADDER
MC	PREFINISHED METAL COPING
MF	PREFINISHED METAL FASCIA
MI	MASONRY INFILL, SEE DETAI 5/A6.15.
MP2	FORMED METAL WALL PANEL - TYPE 2
MP3/4	FORMED METAL WALL PANEL - TYPE 3 & 4
MP EX	FORMED METAL WALL PANEL TYPE 3 & 4 OVER EXISTING EXTERIOR WALL
RAIL	SCHEDULED RAILING
RF SC	MECHANICAL ROOF SCREEN
WIN	SCHEDULED WINDOW, TYP

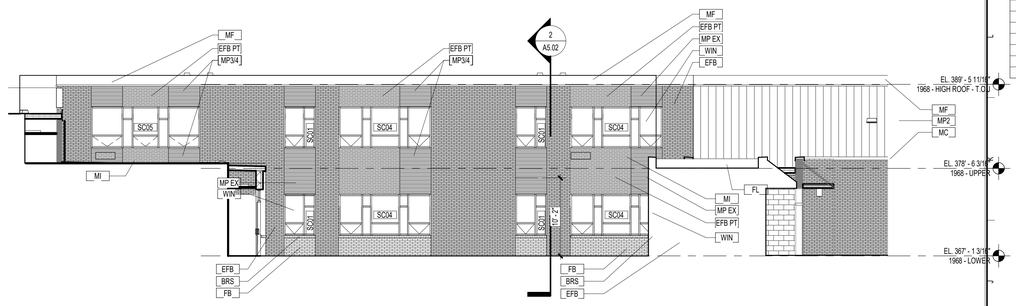
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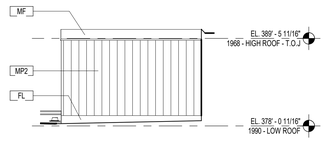
5 A4.21 COURTYARD 2 - WEST ELEVATION
SCALE: 1/8" = 1'-0"



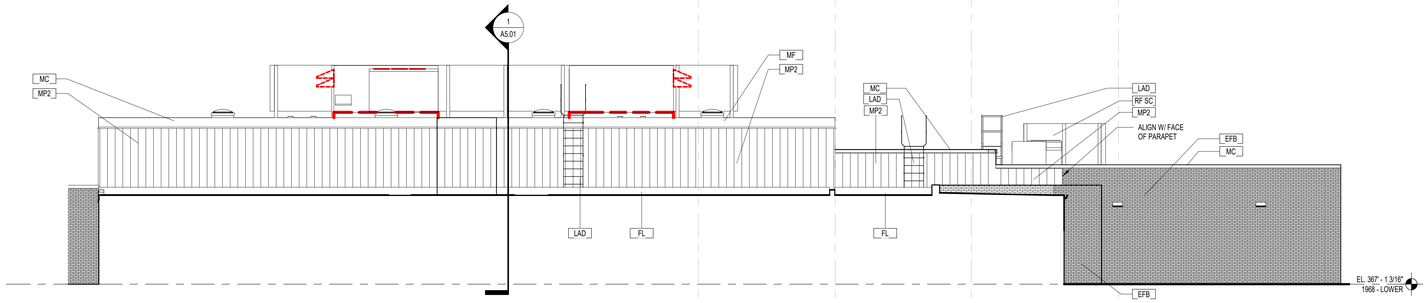
4 A4.21 COURTYARD 2 - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



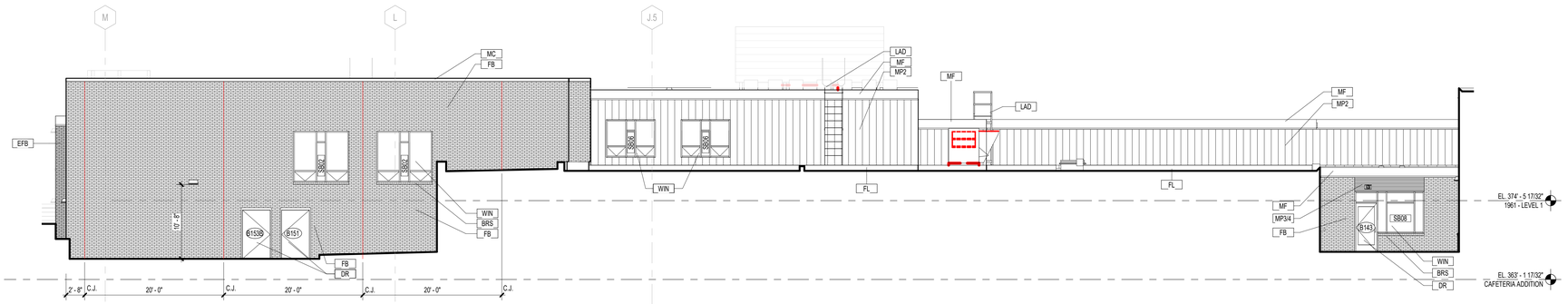
3 A4.21 COURTYARD 2 - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



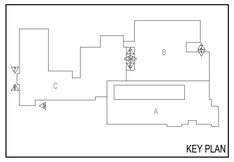
10 A4.21 PARAPET WALL ELEVATION - EAST - AREA C
SCALE: 1/8" = 1'-0"



2 A4.21 WEST ELEVATION - AREA B
SCALE: 1/8" = 1'-0"



1 A4.21 CAFETERIA ADDITION - EAST ELEVATION
SCALE: 1/8" = 1'-0"



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	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23

HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

FAIRFAX COUNTY PUBLIC SCHOOLS

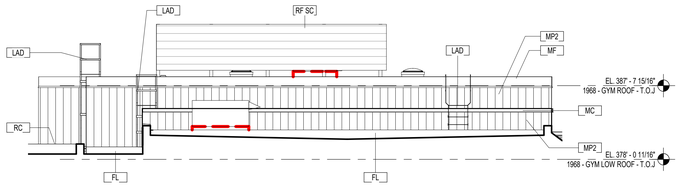
PARTIAL EXTERIOR ELEVATIONS - ENLARGED

BRENT AMOS, Principal-in-Charge	20210381, Project No.
MAUREEN WIECHERT, Project Manager	05/25/23, Date
HEIDI LEINBACH, Sr Project Architect	
SAEED DORNAJAFI, Project Architect	A4.21, Drawing No.
SAVANNAH HENLEY, Staff Designer	

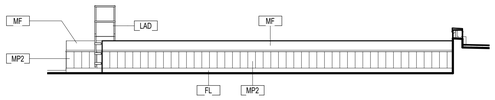
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ISSUED FOR CONSTRUCTION

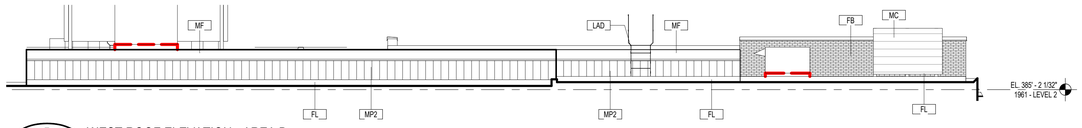
PROJECT NUMBER: 20210381 PROJECT NAME: HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS
SHEET NUMBER: A4.21 - PARTIAL EXTERIOR ELEVATIONS - ENLARGED
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5/10/2024 2:28:43 PM



7 A2.12B|A4.22 ROOF ELEVATION @ GYM/SACC - AREA B - SOUTH
SCALE: 1/8" = 1'-0"



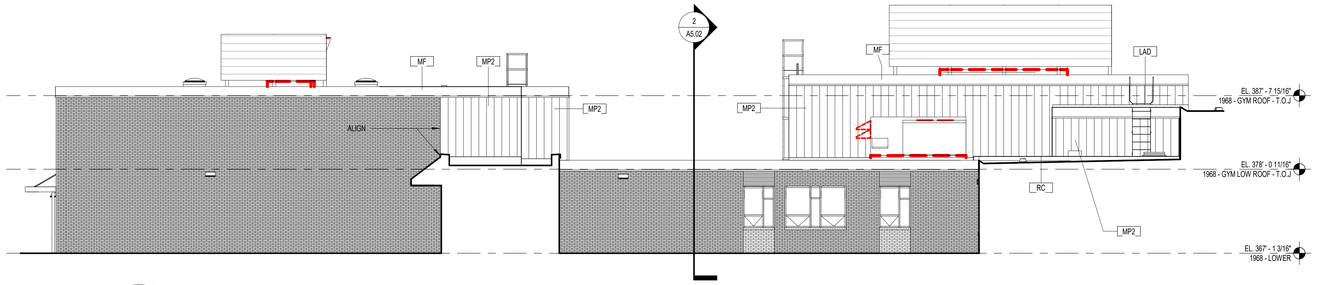
6 A2.02|A4.22 ROOF ELEVATION @ CAFETERIA - AREA B - SOUTH
SCALE: 1/8" = 1'-0"



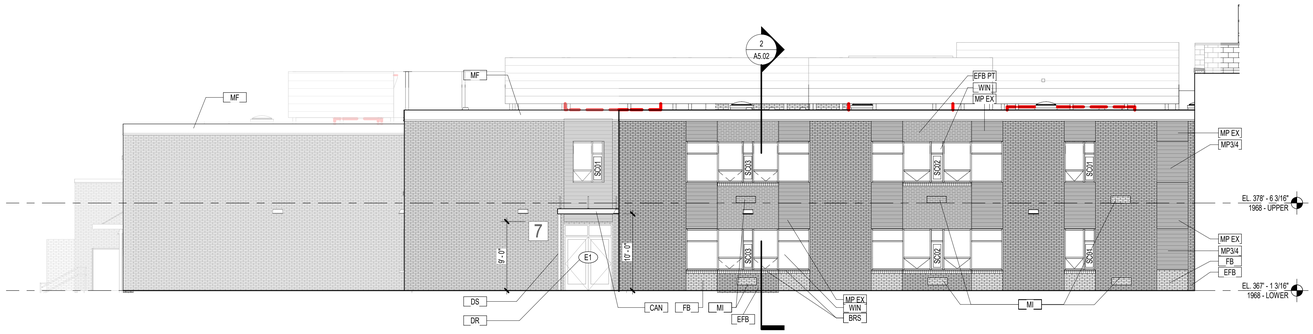
5 A2.02|A4.22 WEST ROOF ELEVATION - AREA B
SCALE: 1/8" = 1'-0"

EXTERIOR ELEVATION KEYNOTE LEGEND	
Key Value	Keynote Text
BM	BRAKE METAL
BRS	BRICK ROWLOCK SILL
CAN	PREMANUFACTURED CANOPY
DR	SCHEDULED DOOR AND FRAME
DS	4" X 4" DOWNSPOUT
EFB	EXISTING FACE BRICK
EFB PT	EXISTING FACE BRICK, PAINT.
FB	FACE BRICK, TYP
FL	FLASHING AND COUNTERFLASHING
FR	FIRST RESPONDER SIGNAGE
LAD	ROOF LADDER
MC	PREFINISHED METAL COPING
MF	PREFINISHED METAL FASCIA
MI	MASONRY INFILL, SEE DETA 5/A6.15
MP2	FORMED METAL WALL PANEL - TYPE 2
MP3/4	FORMED METAL WALL PANEL - TYPE 3 & 4
MP5	ACM WALL PANEL - TYPE 5
MP EX	FORMED METAL WALL PANEL TYPE 3 & 4 OVER EXISTING EXTERIOR WALL
RB	RAIN BARREL
RC	ROOF CURB
RF SC	MECHANICAL ROOF SCREEN
STRUC	EXPOSED STRUCTURAL STEEL, PAINT
WIN	SCHEDULED WINDOW, TYP

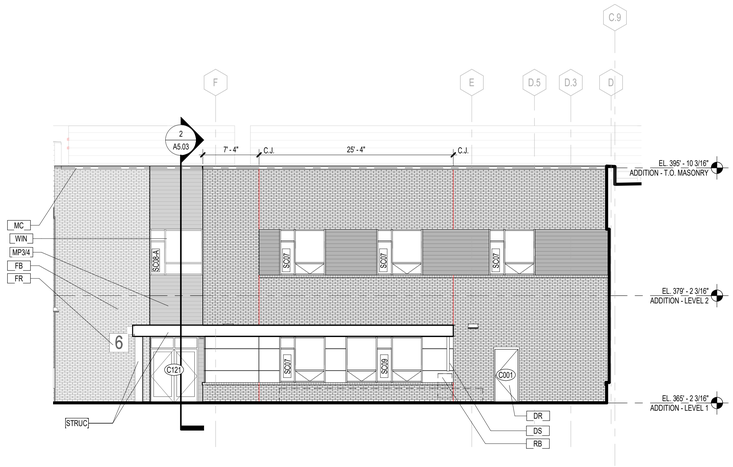
GENERAL NOTE:
1. AT EXISTING FACADES, WALL ASSEMBLIES TO BE PATCHED WHERE EQUIPMENT HAS BEEN REMOVED INCLUDING LOUVERS, HVAC, SECURITY, ELECTRICAL AND PLUMBING EQUIPMENT. REFER TO MEP DRAWINGS FOR ADDITIONAL SCOPE.



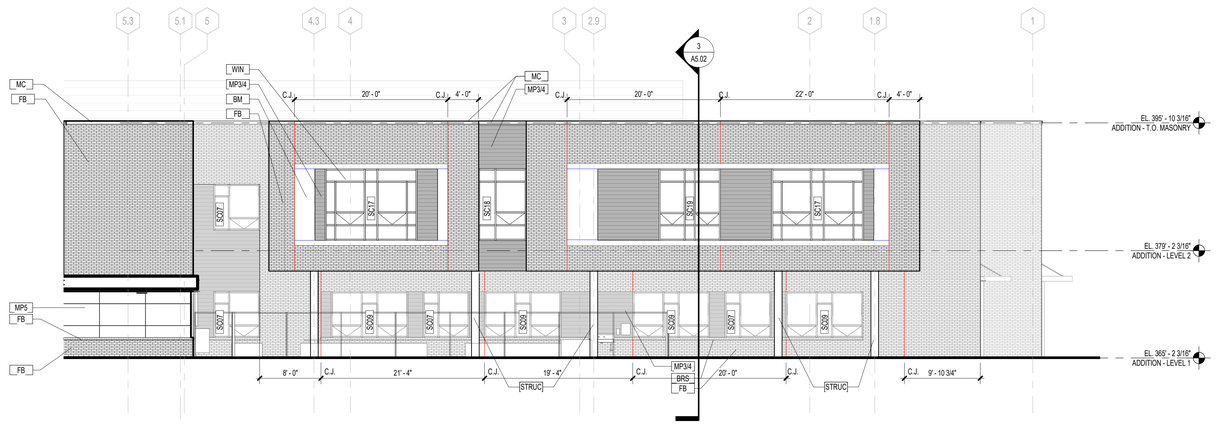
4 A2.01|A4.22 EXTERIOR ELEVATION - NORTH - AREA B
SCALE: 1/8" = 1'-0"



3 A1.11|A4.22 NORTH ELEVATION - AREA C
SCALE: 1/8" = 1'-0"



2 A1.11|A4.22 EAST ELEVATION - AREA C ADDITION
SCALE: 1/8" = 1'-0"



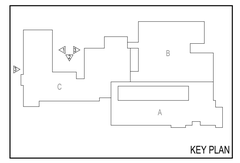
1 A1.11|A4.22 SOUTH ELEVATION - AREA C ADDITION
SCALE: 1/8" = 1'-0"

0' 4' - 0" 16' - 0"
2' - 0" 8' - 0"

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ISSUANCES		
No.	Drawing Issue Description	Date
	DESIGN DEVELOPMENT PRICING	08/24/22
	DESIGN DEVELOPMENT SUBMISSION	09/06/22
	ICD PRICING SET	11/22/22
	ICD SUBMISSION	12/02/22
	FINAL CD PRICING	03/10/23
	FINAL CD SUBMISSION	03/20/23
	ISSUED FOR PERMIT	05/25/23



KEY PLAN

HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS

State ID No. 029-125-00-101

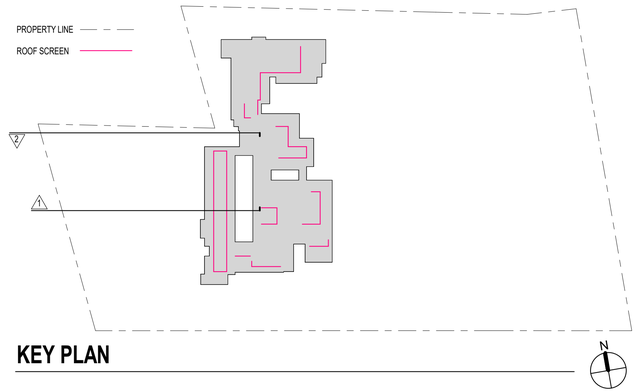
FAIRFAX COUNTY PUBLIC SCHOOLS

PARTIAL EXTERIOR ELEVATIONS - ENLARGED

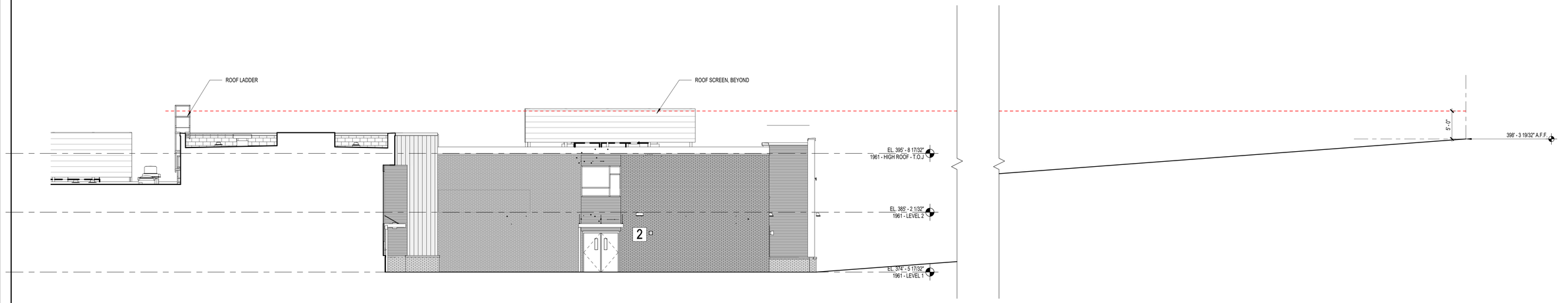
BRENT AMOS, Principal-in-Charge	20210381, Project No.
MAUREEN WIECHERT, Project Manager	05/25/23, Date
HEIDI LEINBACH, Sr Project Architect	
SAEED DORNAJAFI, Project Architect	A4.22, Drawing No.
SAVANNAH HENLEY, Staff Designer	

ISSUED FOR CONSTRUCTION

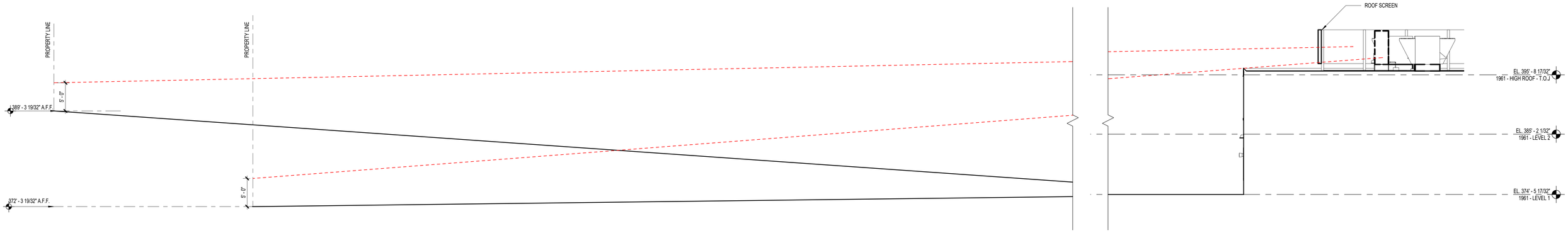
PROJECT NUMBER: 20210381 PROJECT NAME: HERNDON ELEMENTARY SCHOOL RENOVATION AND ADDITIONS
SHEET NUMBER: A4.22 - PARTIAL EXTERIOR ELEVATIONS - ENLARGED
BIM 360://20210381 FCPS Herndon Elementary School/20210381_v21_FCPS Herndon ES_Central.rvt
5/10/2024 2:17:22 PM



KEY PLAN



2 SC1.00 ROOF SCREEN DIAGRAM - WEST - STREET (HIGH)
SCALE: 1/8" = 1'-0"



1 SC1.00 ROOF SCREEN DIAGRAM - WEST - STREET (MID-LOW)
SCALE: 1/8" = 1'-0"

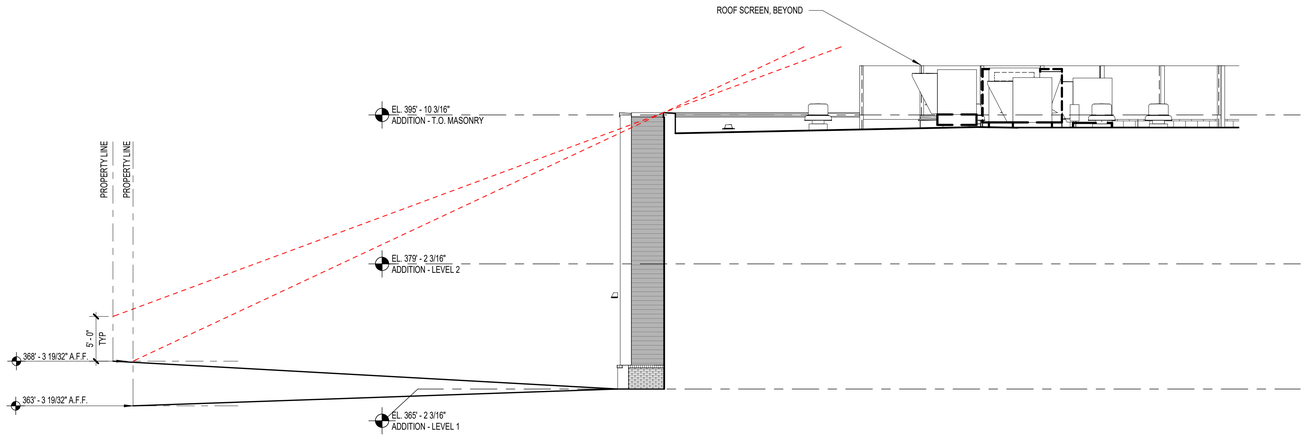
PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - SECTIONS

HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

COOPER CARRY

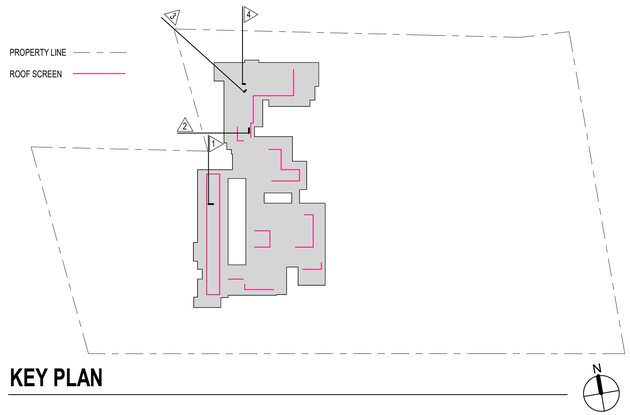
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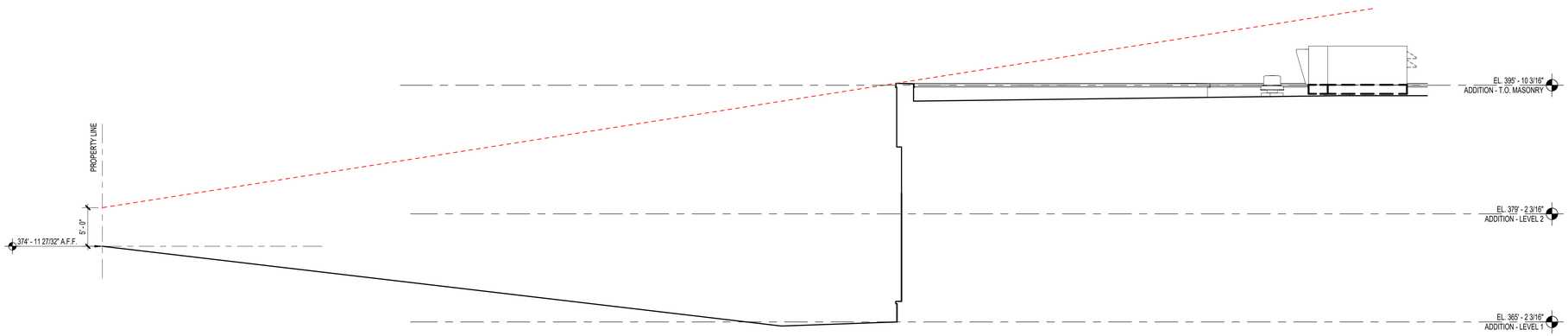
4 SC1.01 ROOF SCREEN DIAGRAM - NORTH - ADDITION

SCALE: 1/8" = 1'-0"

EQUIPMENT CANNOT BE SEEN FROM PROPERTY LINE



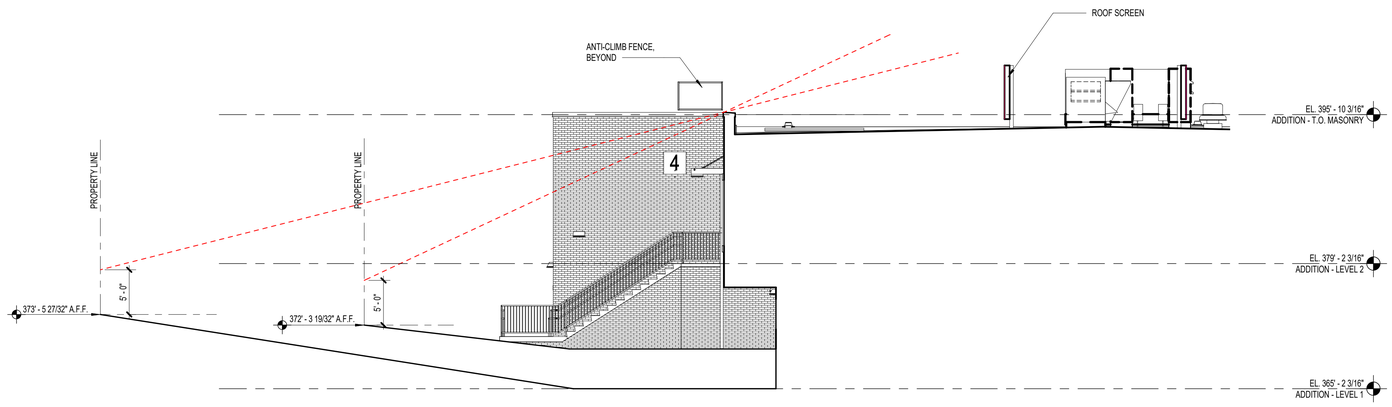
KEY PLAN



3 SC1.01 ROOF SCREEN DIAGRAM - NW CORNER

SCALE: 1/8" = 1'-0"

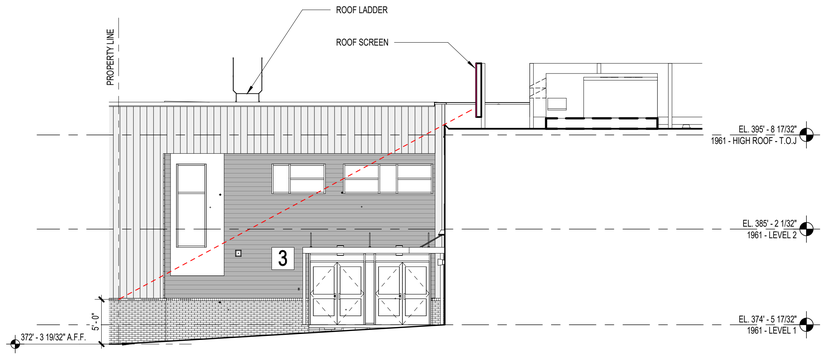
NO ROOF SCREENS PROVIDED - EQUIPMENT CANNOT BE SEEN FROM PROPERTY LINE



2 SC1.01 ROOF SCREEN DIAGRAM - WEST - INTERNAL

SCALE: 1/8" = 1'-0"

EQUIPMENT CANNOT BE SEEN FROM PROPERTY LINE



1 SC1.01 ROOF SCREEN DIAGRAM - NORTH - INTERNAL

SCALE: 1/8" = 1'-0"

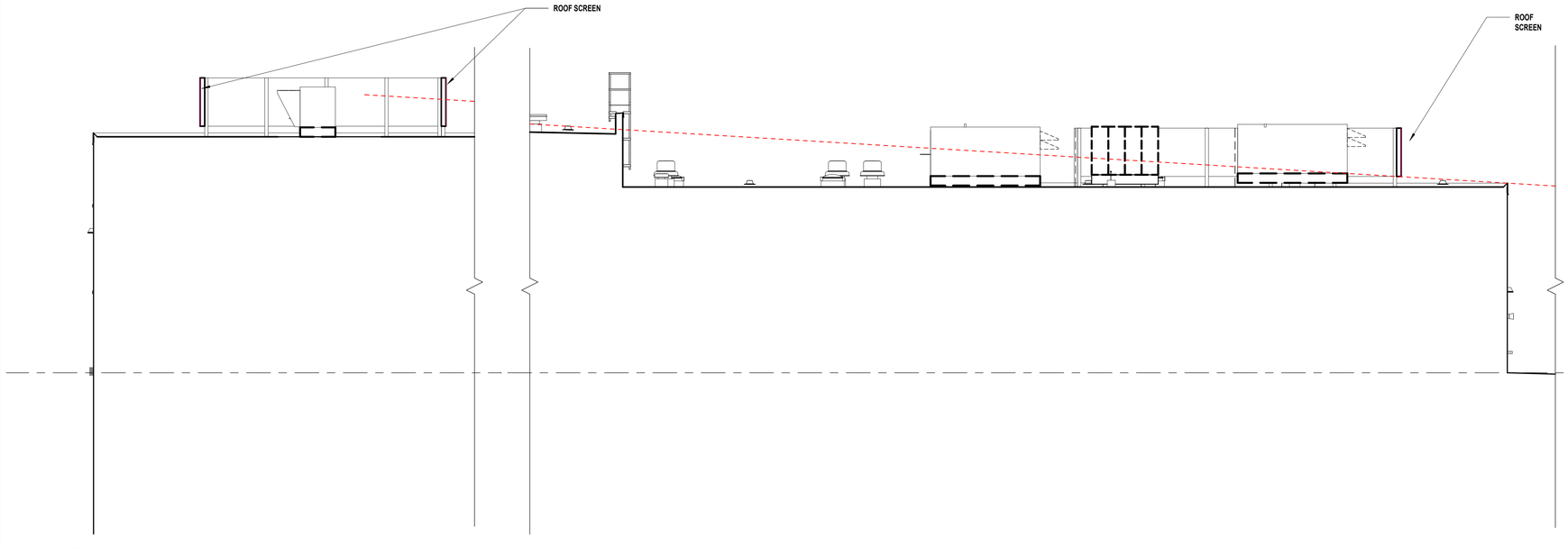
PROJECT N° 20210381 | 02/07/24

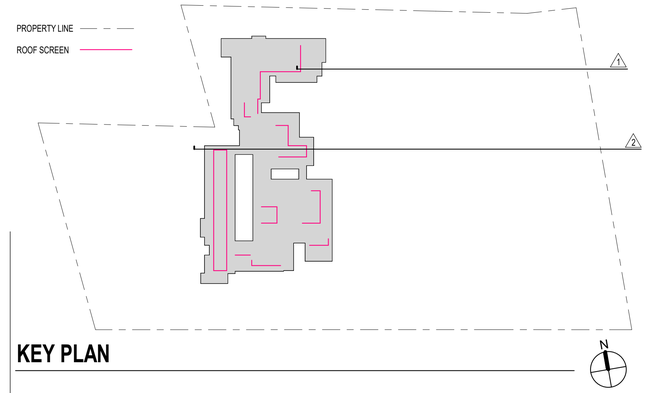
SCREENING DIAGRAMS - SECTIONS

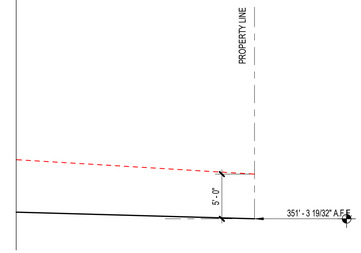
HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

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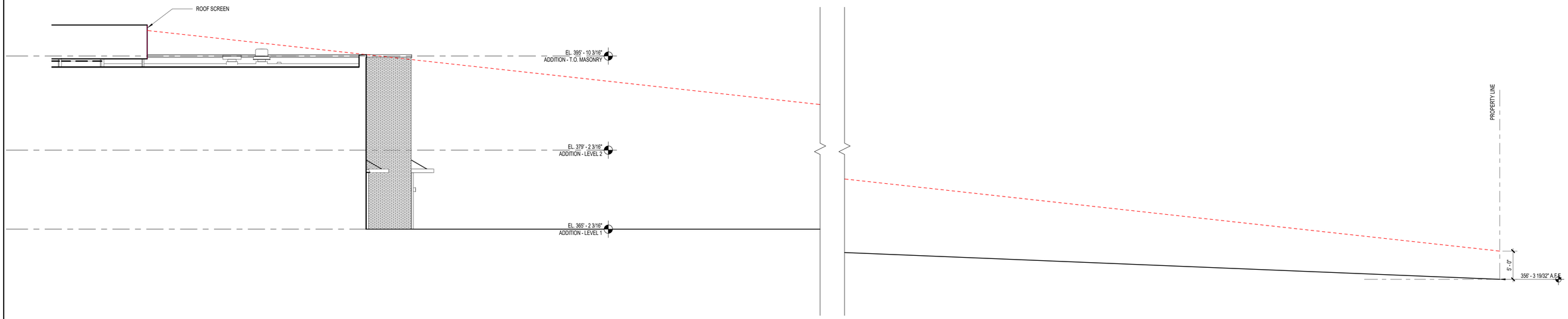
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2 SC1.02 ROOF SCREEN DIAGRAM - EAST 01
SCALE: 1/8" = 1'-0"



1 SC1.02 ROOF SCREEN DIAGRAM - NE
SCALE: 1/8" = 1'-0"

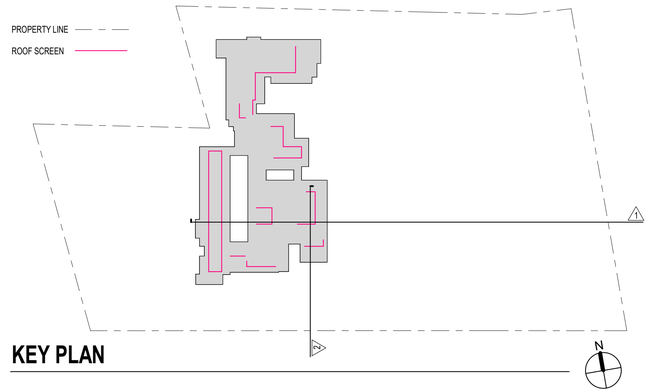
PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - SECTIONS

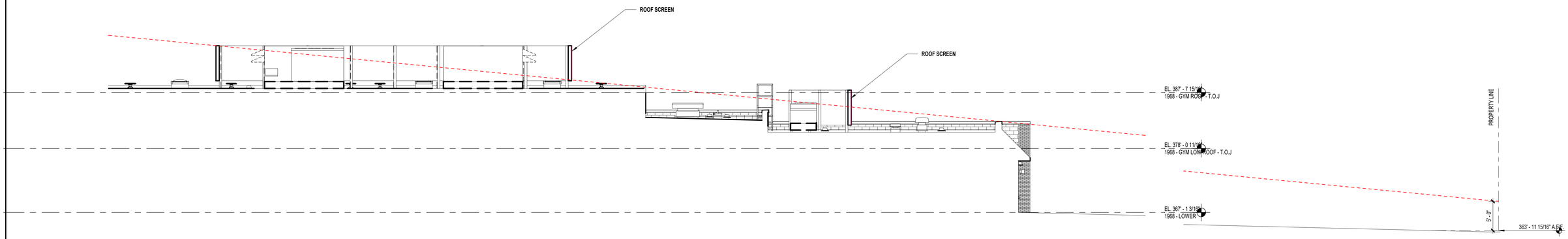
HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

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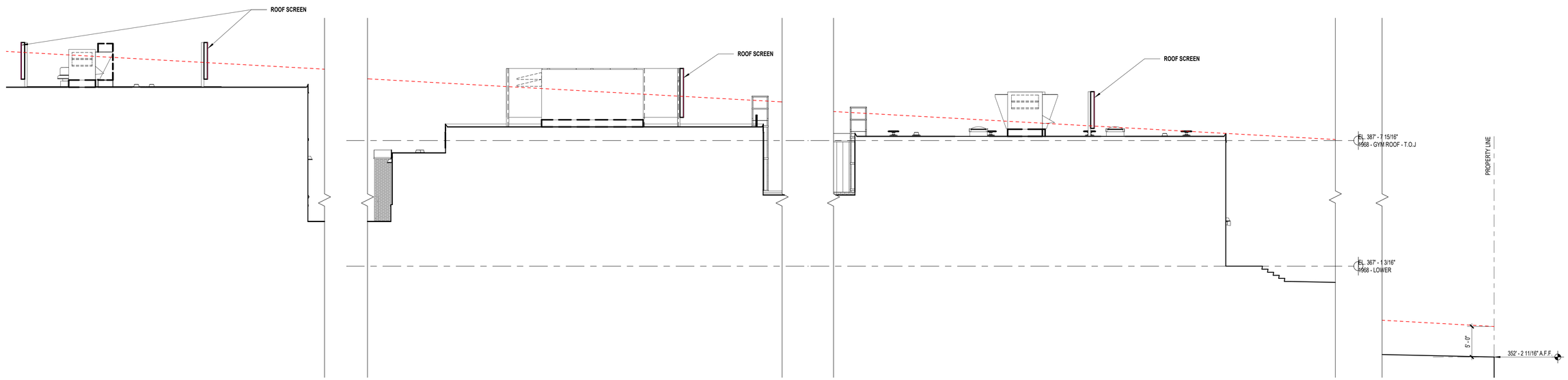
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KEY PLAN



2 SC1.03 ROOF SCREEN DIAGRAM - SOUTH 01
SCALE: 1/8" = 1'-0"



1 SC1.03 ROOF SCREEN DIAGRAM - EAST 02
SCALE: 1/8" = 1'-0"

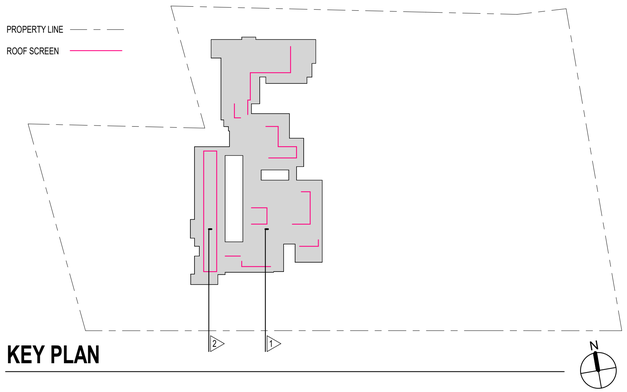
PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - SECTIONS

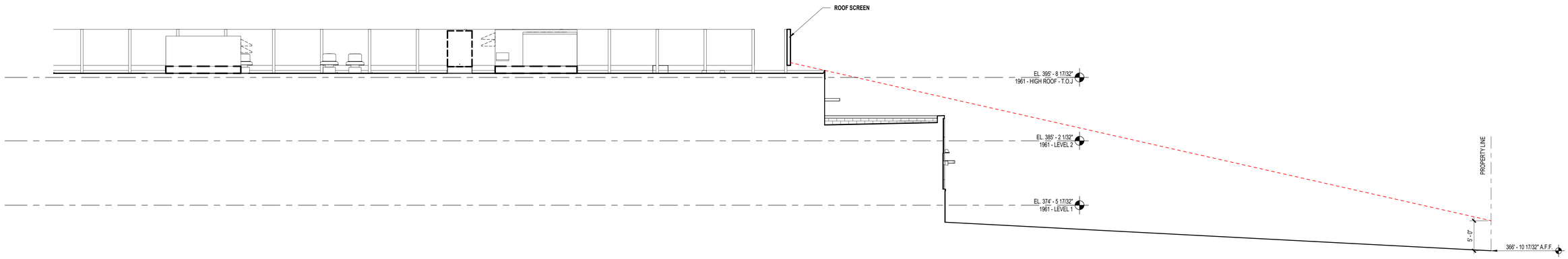
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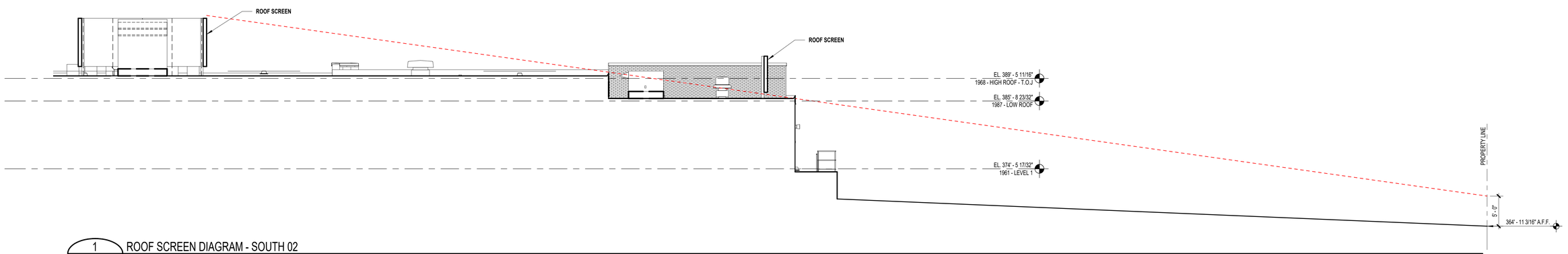


KEY PLAN



2 SC1.04 ROOF SCREEN DIAGRAM - SOUTH 03

SCALE: 1/8" = 1'-0"



1 SC1.04 ROOF SCREEN DIAGRAM - SOUTH 02

SCALE: 1/8" = 1'-0"

PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - SECTIONS

HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

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3 SC2.00 SCREENING VIEW - NW CORNER - STREET
SCALE:



KEY PLAN



2 SC2.00 SCREENING VIEW - STREET (MID)
SCALE:



1 SC2.00 SCREENING VIEW - STREET (LOW)
SCALE:

PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - PERSPECTIVES

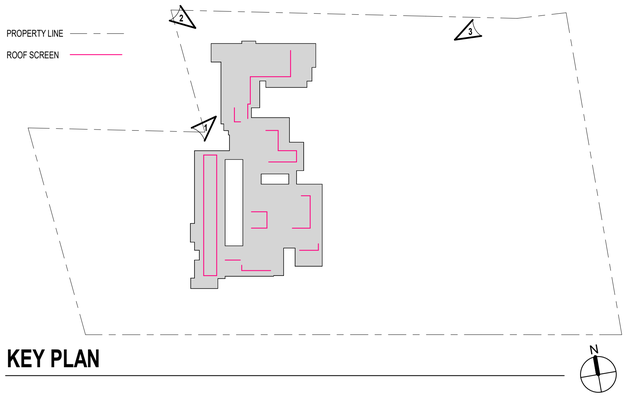
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3 SC2.01 SCREENING VIEW - NE
SCALE:



KEY PLAN



2 SC2.01 SCREENING VIEW - NW CORNER
SCALE:



1 SC2.01 SCREENING VIEW - WEST INSIDE CORNER
SCALE:

PROJECT N° 20210381 | | 02/07/24

SCREENING DIAGRAMS - PERSPECTIVES

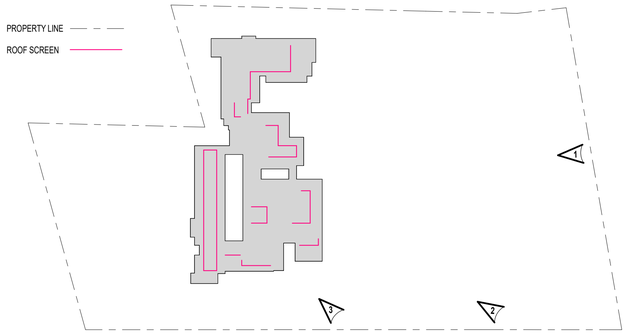
HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

COOPER CARRY

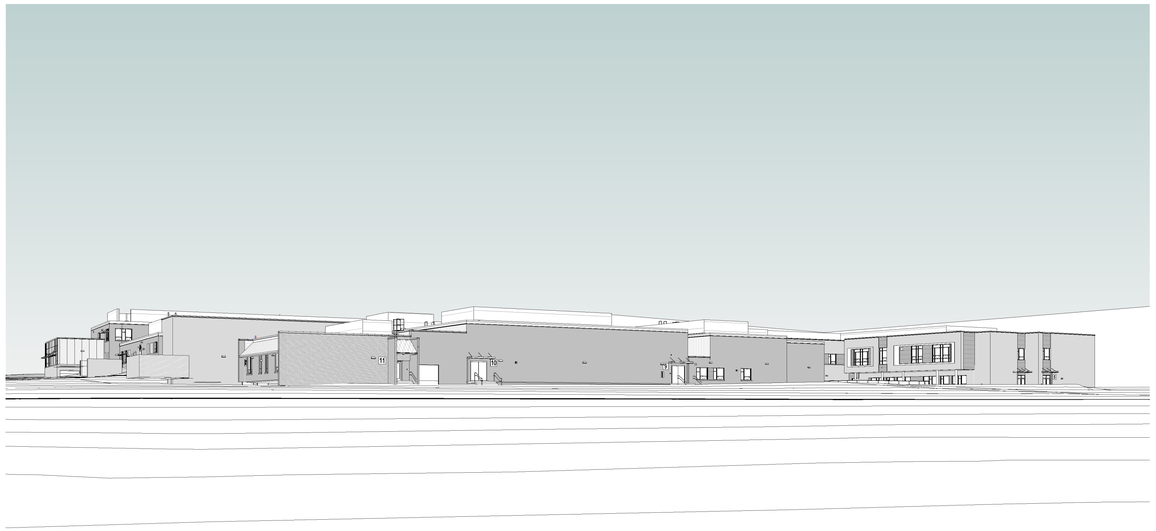
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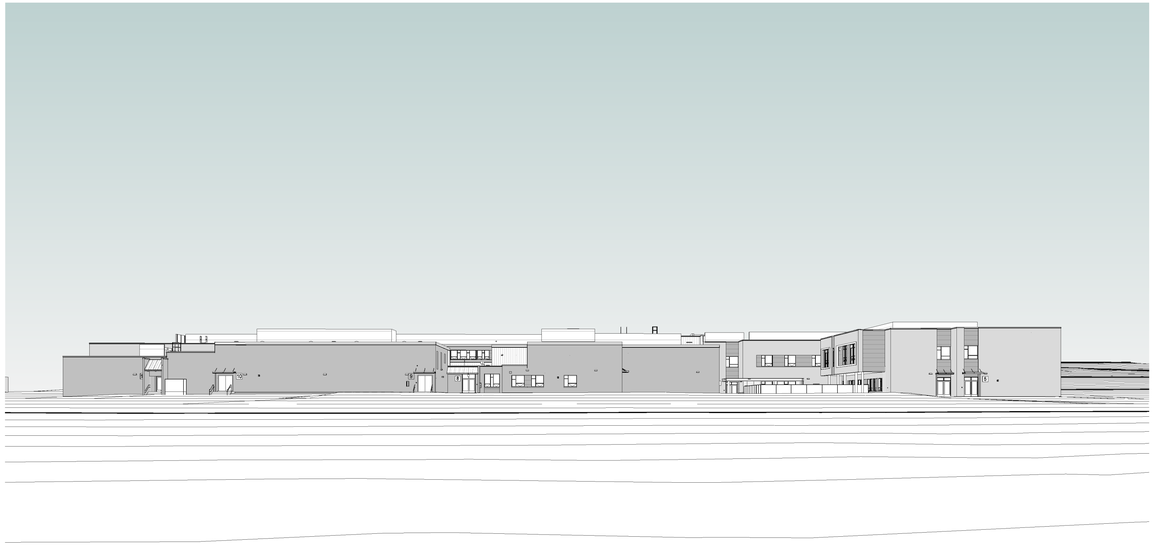
3 SC2.02 SCREENING VIEW - SE 02
SCALE:



KEY PLAN



2 SC2.02 SCREENING VIEW - SE 01
SCALE:



1 SC2.02 SCREENING VIEW - EAST
SCALE:

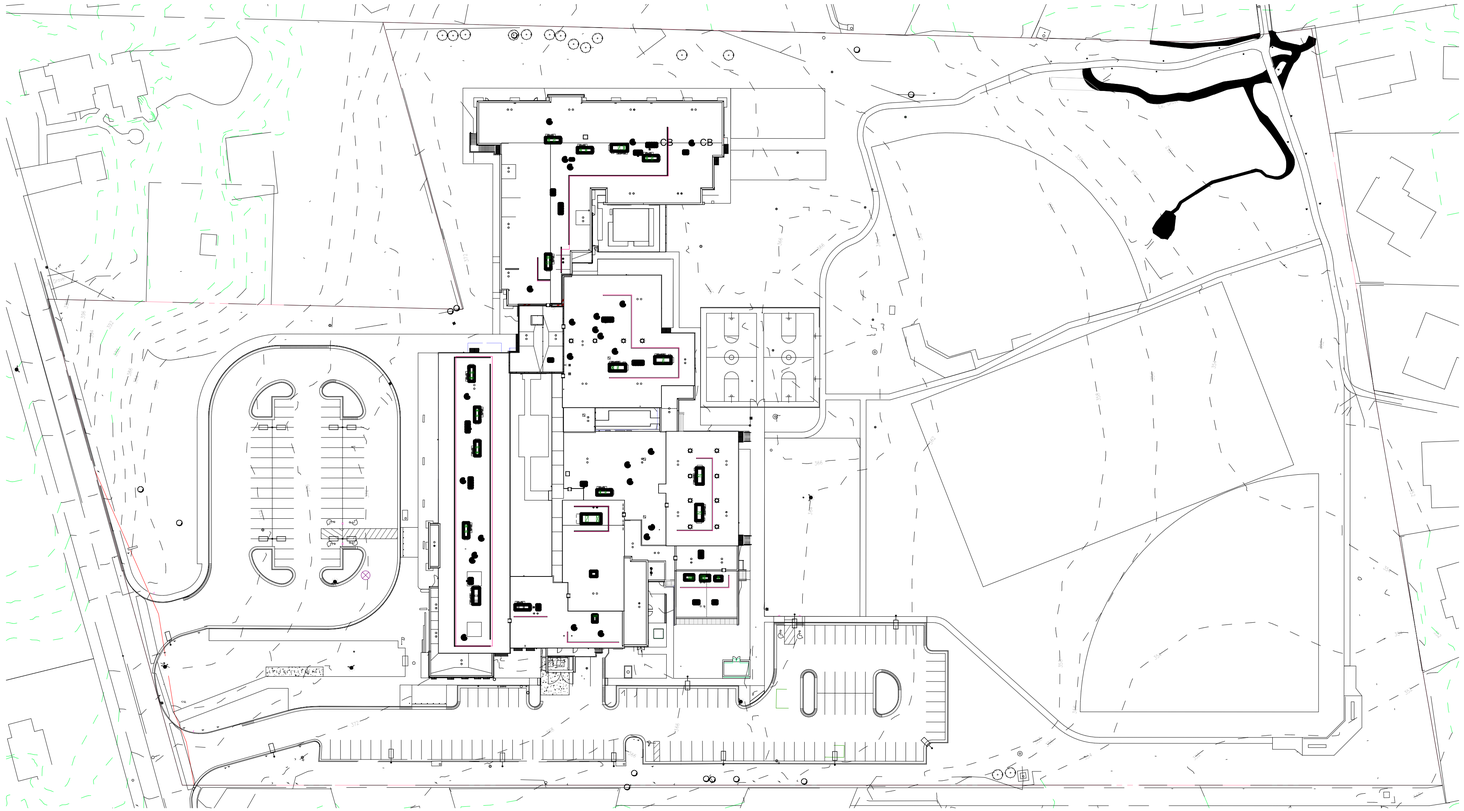
PROJECT N° 20210381 | | 02/07/24

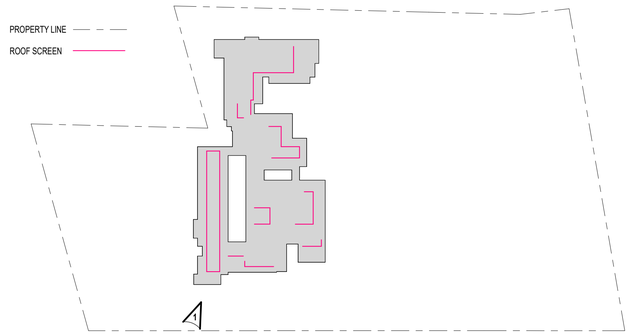
SCREENING DIAGRAMS - PERSPECTIVES

HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

COOPER CARRY

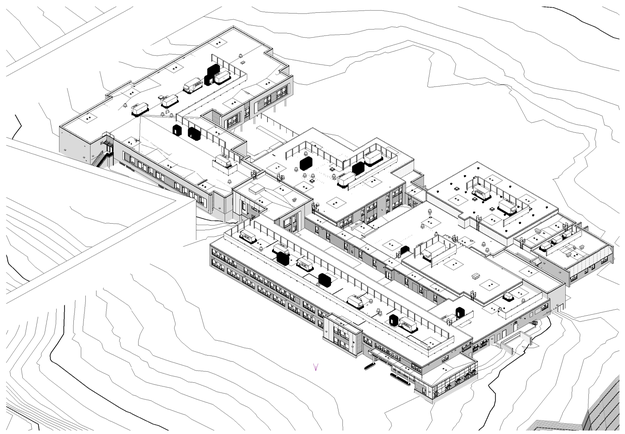
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KEY PLAN

3 SC2.03 OVERALL ROOF PLAN - SCREENING EXHIBIT
SCALE: 1" = 60'-0"



2 SC2.03 SCREENING VIEW - AXON
SCALE:



1 SC2.03 SCREENING VIEW - SOUTH
SCALE:

PROJECT N° 20210381 | 02/07/24

SCREENING DIAGRAMS - PERSPECTIVES

HERNDON ELEMENTARY SCHOOL
RENOVATION AND ADDITIONS

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GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

MATCH LINE - SEE SHEET C.07

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COMMONWEALTH OF VIRGINIA
JOHN D. CUMMINGS
Lic. No. 039407
4/11/2024
PROFESSIONAL ENGINEER

SITE PLAN

HERNDON ELEMENTARY SCHOOL
RENOVATION & ADDITION
DRANESVILLE ELECTION DISTRICT
TOWN OF HERNDON

REVISIONS:

PLAN DATE:	APRIL 11, 2024
DESIGN BY:	AAG/SAW
CHECKED BY:	JDC
ARCHITECT:	Cooper Carry
JURISDICTIONAL PLAN NO.	MJP#23-01
RDA PLAN #:	22029-001
SHEET NUMBER:	C.06

LEGEND

PROPOSED	EXISTING	DESCRIPTION
○	Ⓢ	SANITARY MANHOLE
MH/E	E/A	SANITARY STRUCTURE NUMBER
C/A		SANITARY CLEAN OUT NUMBER
○		SANITARY CLEANOUT
	Ⓣ	TELEPHONE MANHOLE
	☼	LIGHT POLE
⊗	⊗	WATER VALVE
		FIRE HYDRANT
Ⓦ		WATER METER
		STREET SIGN
•	•	BOLLARD
	E/S	STORM SEWER STRUCTURE NUMBER
		HANDICAP SPACE
~	~	FLOW ARROW
		GUY WIRE
+22.85	+222.95	SPOT ELEVATION
W	W	WATERLINE
		LIMITS OF DISTURBANCE
		EXISTING PROPERTY LINE
		EXISTING EDGE OF PAVEMENT
		CURB & GUTTER (CG-6)
		STORM SEWER DRAIN
		TREE LINE
	∅	UTILITY POLE
230 VPD		VEHICLES PER DAY COUNT
TP		TEST PIT REQUIRED
+		PROPOSED TREE
XX		BUS STACKING SPOT
XX		KISS & RIDE STACKING SPOT

ABBREVIATIONS

APPROX.	– APPROXIMATE
A=	– ARC LENGTH
B.O.V.	– BLOW OFF VALVE
B.R.L.	– BUILDING RESTRICTION LINE
℄	– CENTER LINE
C.O.	– CLEAN OUT
CONC.	– CONCRETE
C&G	– CURB AND GUTTER
D.B.	– DEED BOOK
DRN.	– DRAINAGE
D.I.P.	– DUCTILE IRON PIPE
ESMT.	– EASEMENT
E.P.	– EDGE OF PAVEMENT
ENT.	– ENTRANCE
EX.	– EXISTING
ELEV.	– ELEVATION
5'R	– FACE OF CURB RADIUS
F.H.	– FIRE HYDRANT
H.H.	– HAND HOLE
INSTR.#	– INSTRUMENT NUMBER
INV.	– INVERT
LAT.	– LATERAL
L.P.	– LIGHT POLE
L.D.	– LOADING DOCK
L.S.	– LOADING SPACE
M.H.	– MAN HOLE
MEP	– MECHANICAL/ELECTRICAL/PLUMBING
M.L.S.A	– MULCHED LANDSCAPE AREA
N/F	– NOW/FORMERLY
O.D.	– OVERHEAD DOOR
PG.	– PAGE
PVMT.	– PAVEMENT
PVC	– POLYVINYL CHLORIDE
PROP.	– PROPOSED
RCP	– REINFORCED CONCRETE PIPE
RET. WALL	– RETAINING WALL
R/W	– RIGHT OF WAY
SAN.	– SANITARY
SEW.	– SEWER
S/W	– SIDEWALK
SF	– SQUARE FEET
SFD	– SINGLE FAMILY DEVELOPMENT
STM.	– STORM
T.M.	– TAX MAP
TEMP.	– TEMPORARY
T.B.A	– TO BE ABANDONED
T.B.R.	– TO BE REMOVED
TYP.	– TYPICAL
V.A.	– VAN ACCESSIBLE
W/L	– WATERLINE
W/M	– WATERMAIN

NOTES:

1. ALL ON-SITE OUTDOOR LIGHTING SHALL COMPLY WITH ARTICLE 14 SEC. 78-141 OF THE ZONING ORDINANCE.

2. ALL CONSTRUCTION SHALL CONFORM TO FCPS AND TOWN OF HERNDON STANDARDS AND SPECIFICATIONS.

3. SEE ARCHITECTURAL PLANS FOR DETAILED BUILDING DIMENSIONS.

4. TEST PITS SHALL BE REQUESTED A MINIMUM OF 48 HOURS IN ADVANCE FOR THOSE UTILITIES REQUIRING THEM.

5. ANY UTILITY POLES & BOXES, GUY WIRES, OR OTHER ABOVE OR BELOW GROUND UTILITIES THAT CONFLICT WITH THE PROPOSED CONSTRUCTION MAY HAVE TO BE ADJUSTED OR RELOCATED. THE CONTRACTOR IS TO COORDINATE THESE REQUIRED CHANGES WITH THE UTILITY COMPANIES PRIOR TO CONSTRUCTION.

6. CONTRACTOR TO ENSURE POSITIVE DRAINAGE FROM BUILDING.

7. ALTHOUGH NOT ANTICIPATED, SHOULD OFF-SITE GRADING BE REQUIRED IT MUST BE DONE WITHIN A TEMPORARY GRADING EASEMENT.

8. CONTRACTOR TO REMOVE ALL GRAVEL, ASPHALT AND ANY OTHER MATERIAL THAT IS NOT RELATED TO THE FIELDS AND THEN SOD CONTRACTOR STAGING AND TEMPORARY CLASSROOM AREA AFTER CONSTRUCTION.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANYTHING DAMAGED DURING THE CONSTRUCTION PROCESS.

10. CONTRACTOR SHALL MAINTAIN EMERGENCY VEHICLE ACCESS AT ALL TIMES.

11. PROPOSED BUILDING ADDITIONS ARE HATCHED.

12. ALL RADII ARE 5.0' UNLESS OTHERWISE NOTED.

13. FILL TO BE CONDITIONED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT.

14. ALL HANDICAP SPACES SHALL BE CONCRETE WITH A SLOPE NOT EXCEEDING 2% IN ANY DIRECTION.

15. THE EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED UPON AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHOULD ENCOUNTER UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE CONTINUANCE OF SERVICE.

16. THE GRADING/EXCAVATION CONTRACTOR FOR THE SUBJECT SITE IS REQUIRED TO NOTIFY, IN WRITING, THE ASSIGNED SITE INSPECTOR REGARDING ANY EXCESS MATERIAL PROPOSED TO BE HAULED OFFSITE PRIOR TO HAULING. THE NOTIFICATION MUST INDICATE THE QUANTITY OF MATERIAL TO BE MOVED OFFSITE, THE IDENTIFICATION OF THE RECEIVING SITE WHERE THE EXCESS WILL BE TAKEN AND ALL INFORMATION NECESSARY TO SHOW THAT SUCH RECEIVING SITE HAS BEEN PROPERLY PERMITTED AND HAS E&S CONTROLS INSTALLED.

17. CONTRACTOR REQUIRED TO PROVIDE AS-BUILT SURVEY (PROVIDED BY LICENSED SURVEYOR) OF ROUGH GRADING BEFORE FINE GRADING TO ENSURE THAT OVERLAND RELIEF IS IN PLACE.

18. ALL PROPOSED SANITARY SEWER AND LATERALS SHOWN ON PLAN SHALL BE MAINTAINED BY FCPS.

19. ALL CANOPY DRAINS ARE 4" PVC PIPES.

20. WHERE BOLLARDS ARE PROPOSED IN SIDEWALK, CENTER OF ALL BOLLARDS SHALL BE PLACED 1' BEHIND BACK OF CURB.

21. ALL RAMPS AND RISERS/STEPS SHALL HAVE HANDRAILS ON EITHER SIDE OF THE RAMP/RISER/STEP TO MEET ADA REQUIREMENTS.

22. ALL PROPOSED SIDEWALK CONNECTIONS AT ALL BUILDING ENTRANCES SHALL HAVE A 5-FOOT LANDING SLOPED AT 2% ADJACENT TO THE DOOR.

23. ALL PROPOSED TREE PROTECTION AREAS ARE PROHIBITED FROM DISTURBANCE INCLUDING, BUT NOT LIMITED TO: GRADING, CLEARING, STORAGE OF MATERIAL, DUMPING OF MATERIAL, AND PARKING OR TRANSPORTATION OF VEHICLES AND EQUIPMENT.

24. A STORMWATER MANAGEMENT/BMP FACILITY MAINTENANCE AGREEMENT WILL BE COMPLETED AND RECORDED IN FAIRFAX COUNTY LAND RECORDS PRIOR TO PLAN APPROVAL.

25. THE SURVEYOR CERTIFIES THAT THE TITLE OF THE OWNER OF THE TRACT AS RECORDED IN FAIRFAX COUNTY DEED BOOK 01949 AT PAGE 0233.

26. ALL ON-SITE STORM SEWER PIPES ARE MAINTAINED BY FCPS UNLESS OTHERWISE SPECIFIED.

27. RDA FOUND AND BUILT THE RECORD PLATS/DESCRIPTIONS FOR BOTH THE SCHOOL AND THE SUBDIVISION AND BEST-FIT PLACED THOSE SHAPES ON THE MONUMENTS FOUND FOR EACH RESPECTIVE PARCEL/GROUP OF PARCELS. VERY RARELY DOES A BOUNDARY FIT PERFECTLY WITH ITS ADJOINING PARCEL. IN ALMOST EVERY CASE THE SURVEYOR WILL CLEAN UP OVERLAPPING/CONTINUOUS LINES HOLD THE SUBJECT PARCEL LINES OF THE SITE SURVEY (IN THIS CASE THE SCHOOL). HOWEVER, THE DIFFERENCE BETWEEN THE SUBDIVISION AND SCHOOL WAS SIGNIFICANT ENOUGH AND SUPPORTED BY FIELD RECOVERED MONUMENTS THAT RDA ELECTED TO SHOW BOTH PROPERTY LINES AND THE RESULTING GAP. SHOWING THE GAP ON THE PLAN DOES NOT MEAN IT REALLY EXISTS ONLY NOTES THE DISCREPANCY BETWEEN THE RECORD DEED DATA AND THE MONUMENTS FOUND IN THE FIELD. NO SPITE PARCELS EXISTS ADJACENT TO HERNDON ELEMENTARY SCHOOL.

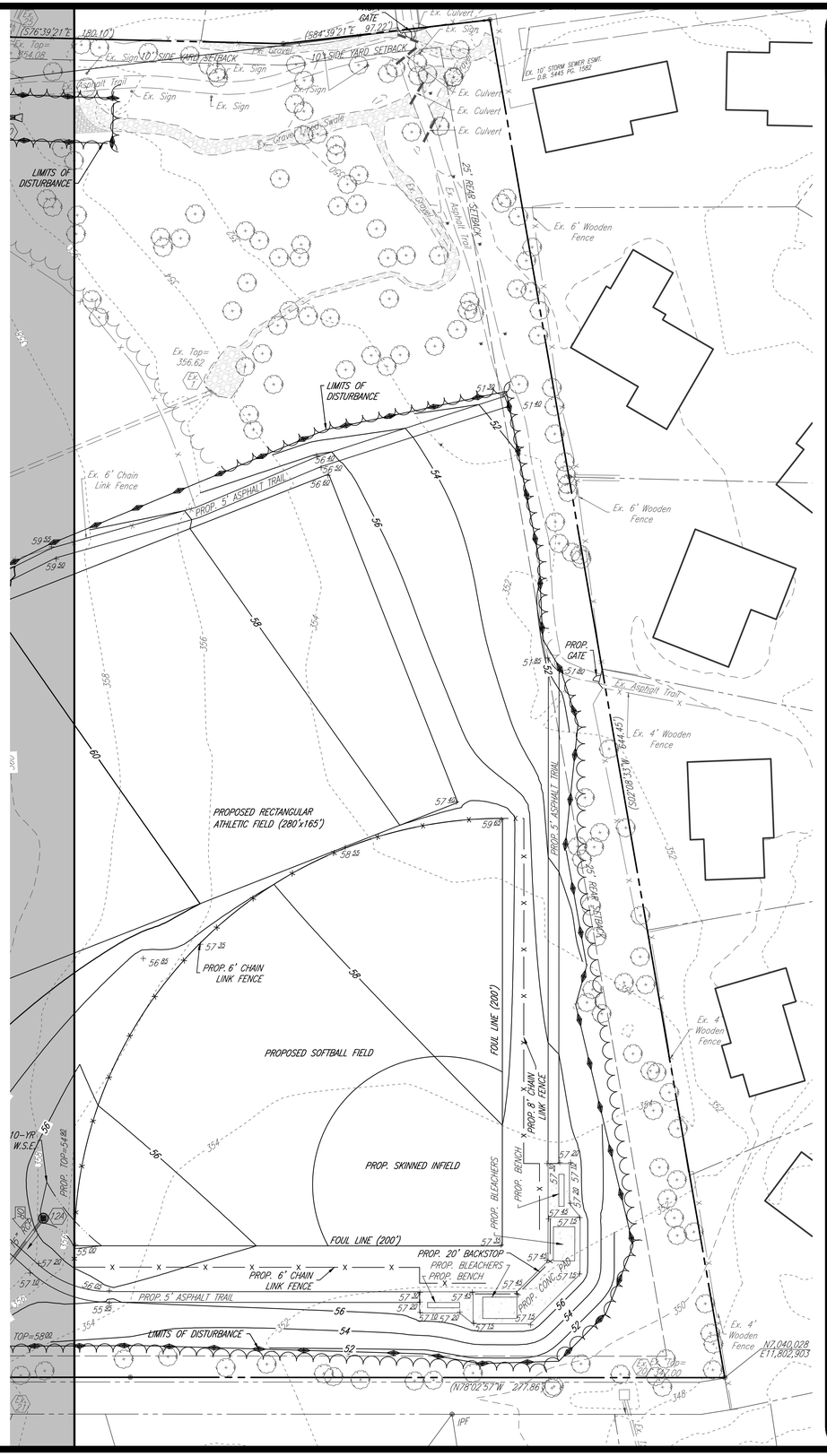
28. RESTORE ALL PAVEMENT MARKINGS IF DAMAGED OR PAVED OVER DURING CONSTRUCTION.

29. PROPOSED GENERATOR TO UTILIZE NATURAL GAS AND NOT REQUIRE A STORAGE TANK. GENERATOR WILL MEET ALL REQUIREMENTS SET BY THE FIRE MARSHAL.

30. MAXIMUM SOUND LEVELS WILL BE REVIEWED AT THE TIME OF BUILDING PERMITS.

31. THE COLONIAL STREET LIGHTS SHOWN ON THE FRONTAGE OF ARE FOR INFORMATIONAL PURPOSES ONLY. DOMINION SHALL DESIGN AND INSTALL THESE LIGHTS DURING THE CONSTRUCTION OF THE EXPANSION OF THE SCHOOL. THE GENERAL CONTRACTOR FOR THE SCHOOL SHALL NOT INCLUDE THE COLONIAL LIGHTS IN THEIR BID.

32. ALL PROPOSED FIXTURES ARE 30K LED, NO EXISTING FIXTURES ARE TO REMAIN POST CONSTRUCTION.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

Rinker Design Associates
11100 Endeavor Court, Suite 200, Manassas, VA 20109
Telephone: (703) 368-7373 www.rdacivil.com
Engineering * Surveying * Transportation * Environmental Services

COMMONWEALTH OF VIRGINIA
JOHN D. CUMMINGS
Lic. No. 039407
4/11/2024
PROFESSIONAL ENGINEER

SITE PLAN

HERNDON ELEMENTARY SCHOOL RENOVATION & ADDITION
DRANESVILLE ELECTION DISTRICT
TOWN OF HERNDON

REVISIONS:

PLAN DATE:	APRIL 11, 2024
DESIGN BY:	AAG/SAW
CHECKED BY:	JDC
ARCHITECT:	Cooper Carry
JURISDICTIONAL PLAN NO.	MJP#23-01
RDA PLAN #:	22029-001
SHEET NUMBER:	C.07

FCPS HERNDON ELEMENTARY SCHOOL

ARCHITECTURAL REVIEW BOARD WORK SESSION

EXTERIOR MATERIALS PRODUCT DATA

Herndon, VA

June 12, 2024

Fairfax County PUBLIC SCHOOLS
ENGAGE • INSPIRE • THRIVE

TOWN OF Herndon VIRGINIA

COOPER CARRY

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7. ROOF FASCIA
8. PAINTED COLUMNS
9. BENCH
10. SIGNAGE

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1. BRICK

- Material: Modular Face Brick
- Basis-of-Design Product: Continental Brick 450
- The proposed brick will be used on new consturction. It matches the brick on the latest building addition at the SE corner of the building, constructed in 1990. This brick is also close match to the existing 1960's brick.
- Infill and patches in the 1960's building will be salvaged brick from the same era.





Brick match to the 1960’s building



Mortar color match

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1.B BRICK PAINT

- Material: Acrylic Latex Paint on existing brick
- Acceptable high performance paint manufacturers:

  PPG

  Sherwin Williams
- Paint includes 2 finish coats over 1 primer coat
- The proposed paint color is intended to update the entry and accentuate the entrance.

PPG Half Dome





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2.A WINDOWS AND ENTRANCE FRAMING

- Material: Aluminum-Framed Storefront
- Basis-of-Design Product: Kawneer, Trifab 451T, 2” sight-line, inswing hopper vents
- Acceptable Manufacturers:

  EFCO Corporation

  US Aluminum
- Storefront window system is proposed all windows and entrances with sidelites.
- The aluminum will be factory-finished with a fluoropolymer finish in the manufacturer’s standard gray color.

Charcoal







Design + Performance Versatility with Unmatched Fabrication Flexibility



Geisinger Professional Building
Jenkins Township, Pennsylvania
ARCHITECT
Mericle Commercial Real Estate Services
Wilkes-Barre, Pennsylvania
GLAZING CONTRACTOR
Sterling Glass, Inc., Scranton, Pennsylvania
PHOTOGRAPHER
© Perzel Photography Group

Trifab® VersaGlaze® is built on the proven and successful Trifab® platform – with all the versatility its name implies. There are enough framing system choices, fabrication methods, design options and performance levels to please the most discerning building owner, architect and installer. The 4.5" depth Trifab® VersaGlaze® Framing System family is available with non-thermal, thermal and ultra-thermal performance levels. The ultra-thermal Trifab® 451UT Framing System, is designed for the most demanding thermal performance and employs a dual Isolock® thermal break.

AESTHETICS

Trifab® VersaGlaze® Framing Systems offer designers a choice of front-, center-, back- or multi-plane glass applications. Structural silicone glazing (SSG) and weatherseal glazing options further expand designers' choices, allowing for a greater range of possibilities for specific project requirements and architectural styles. All systems have a 4-1/2" frame depth; Trifab® VersaGlaze® 450 has 1-3/4" sightlines, while Trifab® VersaGlaze® 451/451T and Trifab® 451UT have 2" sightlines.

With seamless incorporation of Kawneer entrances or windows, including GLASSvent® visually frameless ventilators, Trifab® framing can be used on almost any project. These framing systems can also be packaged with Kawneer curtain walls and overhead glazing, thereby providing a full range of proven, and tested, quality products for the owner, architect and installer from a single-source supplier.

ECONOMY

Trifab® VersaGlaze® 450/451/451T/451UT Framing Systems offer a variety of fabrication choices to suit your project:

- **Screw Spline** – for economical continuous runs utilizing two-piece vertical members that provide the option to pre-assemble units with controlled shop labor costs and smaller field crews for handling and installation. (available for all systems)
- **Shear Block** – for punched openings or continuous runs using tubular moldings with shear block clips that provide tight joints for transporting large pre-assembled multi-lite units. (available for 450/451/451T systems)
- **Stick** – for fast, easy field fabrication. Field measurements and material cuts can be done when metal is on the jobsite. (available for 450/451/451T systems)
- **Pre-glazed** – The combination of screw spline construction with pre-glazing in the shop accelerates installation and reduces field labor time while minimizing disruption to the surrounding area or existing tenants. Making it an exceptional choice for new or retrofit applications, particularly in urban areas or where space is limited. (available for 451/451T/451UT framing)



Brighton Landing
Cambridge, Massachusetts
ARCHITECT
ADD Inc., Cambridge, Massachusetts
GLAZING CONTRACTOR
Ipswich Bay Glass Company,Inc., Rowley, Massachusetts
PHOTOGRAPHER
© Gordon Schenck, Jr.

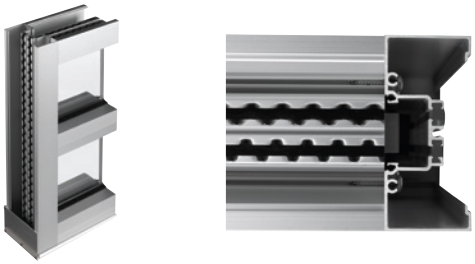
All systems can be flush glazed from either the inside or outside. The weatherseal option provides an alternative to SSG vertical mullions for Trifab® VersaGlaze® 450/451/451T. This ABS/ASA rigid polymer extrusion allows complete inside glazing and creates a flush glass appearance on the building exterior without the added labor of scaffolding or swing stages. Additionally, high-performance flashing options are engineered to eliminate perimeter sill fasteners and associated blind seals.

FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum and painted finishes in fluoropolymer (AAMA 2605) and solvent-free powder coatings (AAMA 2604) offer a variety of color choices.

PERFORMANCE

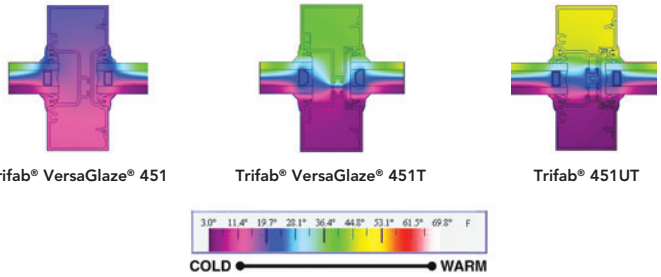
Kawneer's Isolock® thermal break technology creates a composite section, prevents dry shrinkage and is available on Trifab® VersaGlaze® 451T. For even greater thermal performance, a dual Isolock® thermal break is used on Trifab® 451UT.



Trifab® 451UT uses a dual Isolock® thermal break (right) and features a new high-performance sill design, which incorporates a screw-applied end dam (left), ensuring positive engagement and tight joints between the sill flashing and end dam.

U-factor, CRF values and STC ratings for Trifab® framing systems vary depending upon the glass plane application. Project-specific U-factors can be determined for each individual project. (See the Kawneer Architectural Manual or Kawneer.com for additional information.)

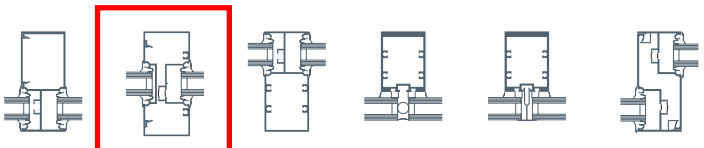
Thermal simulations showing temperature variations from exterior/cold side to interior/warm side.



Trifab® VersaGlaze® 451 | **Trifab® VersaGlaze® 451T** | **Trifab® 451UT**

PERFORMANCE TEST STANDARDS

Air Infiltration	ASTM E283
Water	AAMA 501, ASTM E331
Structural	ASTM E330
Thermal	AAMA 1503
Thermal Break	AAMA 505, AAMA TIR-A8
Acoustical	AAMA 1801, ASTM E1425



Front | **Center** | **Back** | **SSG** | **Weatherseal** | **Multi-Plane**

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Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
770.449.5555
kawneer.com

KAWNEER

ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

Features

- Trifab® VersaGlaze® 451/451T is 4-1/2" (114.3) deep with a 2" (50.8) sightline
- Front, Center, Back or Multi-Plane glass applications
- Flush glazed from either the inside or outside
- Screw Spline, Shear Block, Stick or Continuous Head and Sill fabrication
- Screw Spline Pre-Glazed option
- SSG / Weatherseal option
- IsoLock® lanced and debridged thermal break option with Trifab® VersaGlaze® 451T
- Infill options up to 1-1/8" (28.6) thickness
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices

Optional Features

- Acoustical rating per AAMA 1801 and ASTM E 1425
- Project specific U-factors (See Thermal Charts)
- Integrates with Versoleil® SunShade Outrigger System and Horizontal Single Blade System
- Profit$Maker® Plus die sets available

Product Applications

- Storefront, Ribbon Window, Punched Openings or Pre-Glazed
- Single-span
- Integrated entrance framing allowing Kawneer standard entrances or other specialty entrances to be incorporated
- Kawneer windows or GLASSvent® Windows for Storefront Framing are easily incorporated

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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For specific product applications,
consult your Kawneer representative.

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AIR/VAPOR BARRIER TIE-IN OPTION 62
CHARTS (WIND LOAD, DEADLOAD, END REACTION & THERMAL) ...63-111

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

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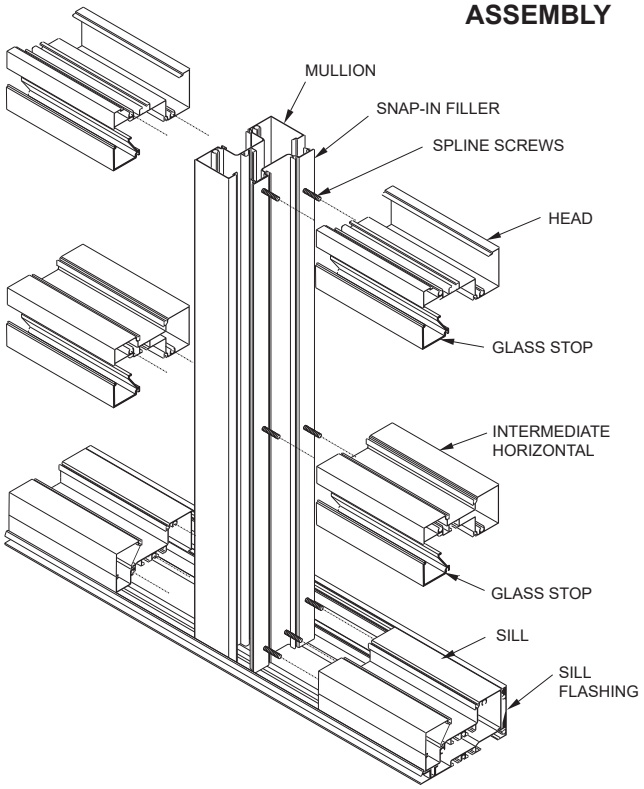
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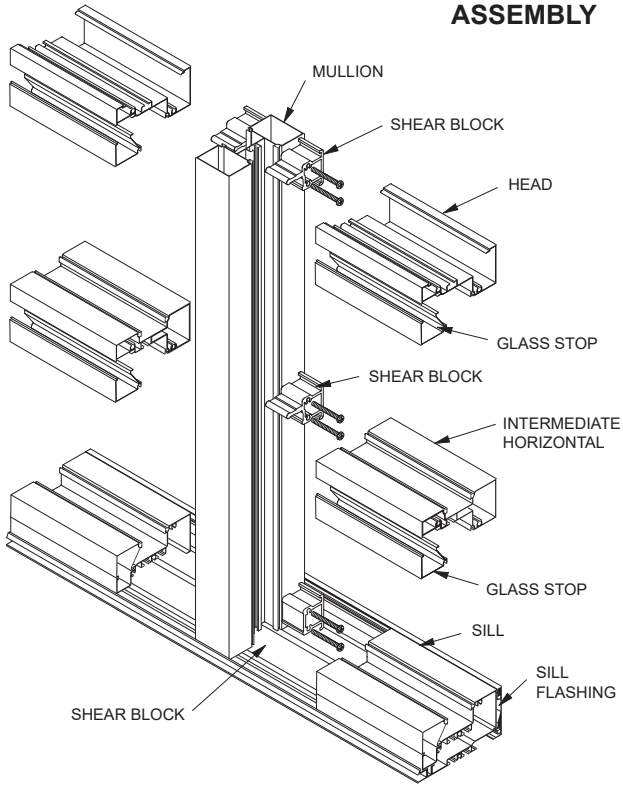
The split vertical in the **Screw Spline** system allows a frame to be installed from unitized assemblies. Screws are driven through the back of the verticals into splines extruded in the horizontal framing members. The Individual units are then snapped together to form a complete frame.

SCREW SPLINE ASSEMBLY

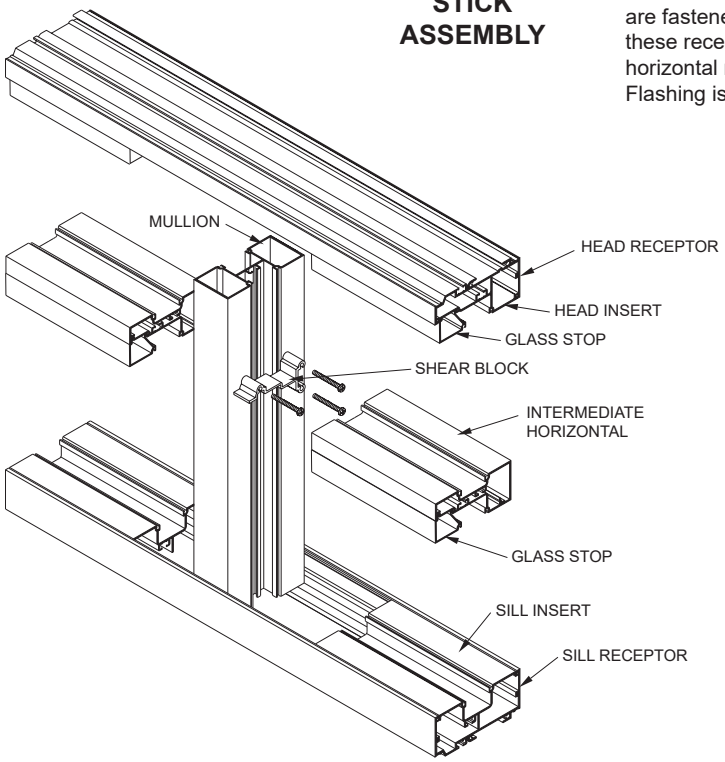


The **Shear Block** system of fabrication allows a frame to be pre-assembled as a single unit. Horizontals are attached to the verticals with shear blocks.

SHEAR BLOCK ASSEMBLY



STICK ASSEMBLY



The **Stick** system allows on-site construction. Head and sill receptors are fastened to the surround. Vertical mullions are then installed in these receptors and are held in place by snap-in inserts. Intermediate horizontal members are attached to the verticals with shear blocks. Flashing is not required.

NOTE:
If the end reaction of the mullion (mullion spacing (ft.) times height (ft.) times specified wind load (psf) divided by two) is more than 500 lbs., the optional mullion anchors must be used. (See page 18)

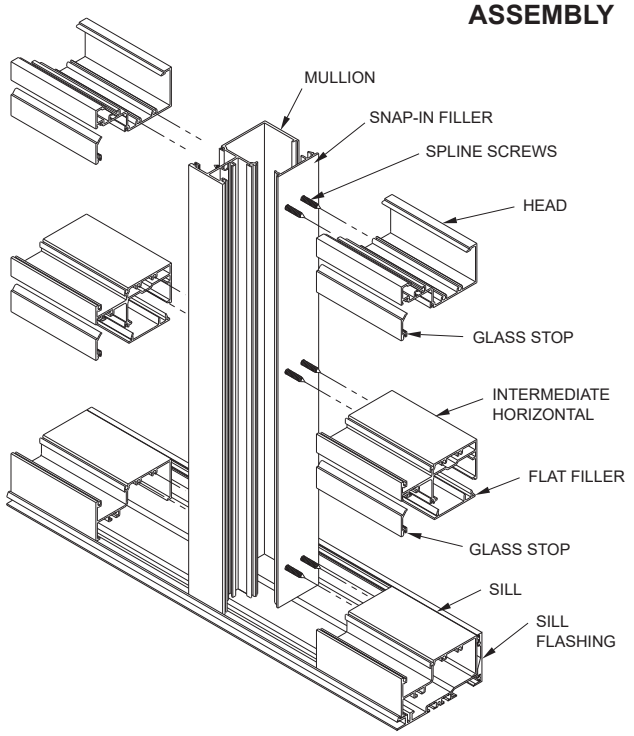
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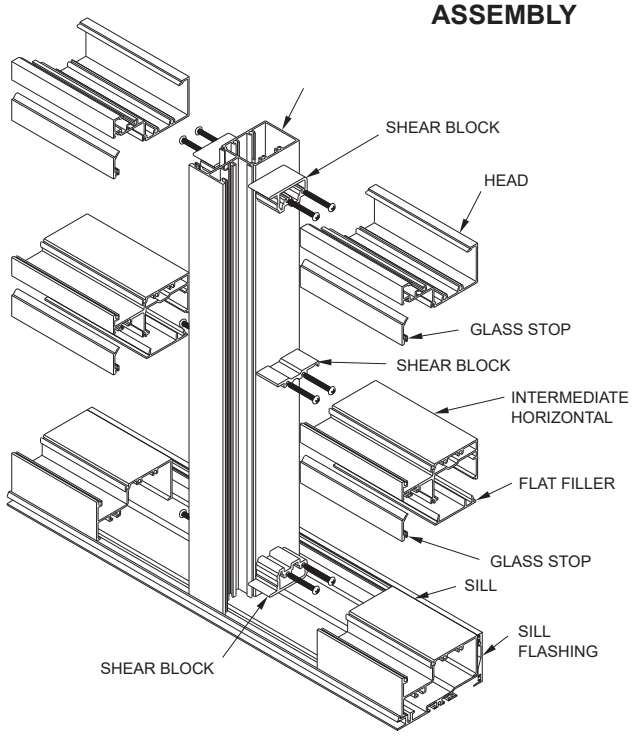
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SCREW SPLINE ASSEMBLY

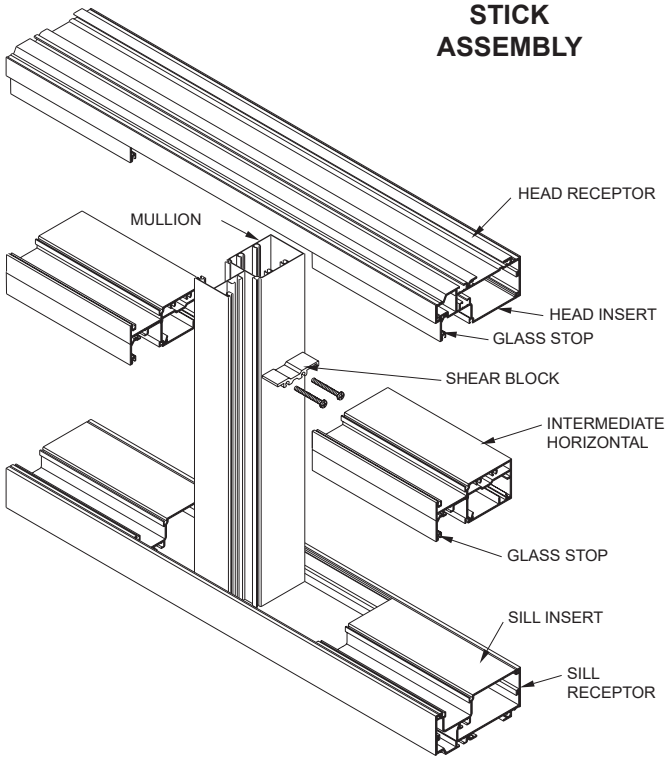


The **Shear Block** system of fabrication allows a frame to be pre-assembled as a single unit. Horizontals are attached to the verticals with shear blocks.

SHEAR BLOCK ASSEMBLY



STICK ASSEMBLY



The **Stick** system allows on-site construction. Head and sill receptors are fastened to the surround. Vertical mullions are then installed in these receptors and are held in place by snap-in inserts. Intermediate horizontal members are attached to the verticals with shear blocks. Flashing is not required.

NOTE:
If the end reaction of the mullion (mullion spacing (ft.) times height (ft.) times specified wind load (psf) divided by two) is more than 500 lbs., the optional mullion anchors must be used. (See page 40)

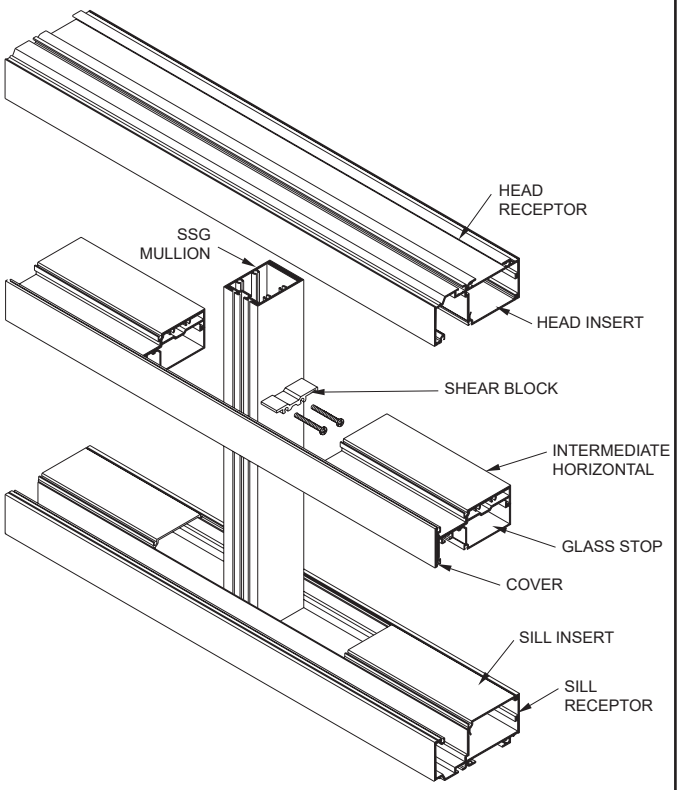
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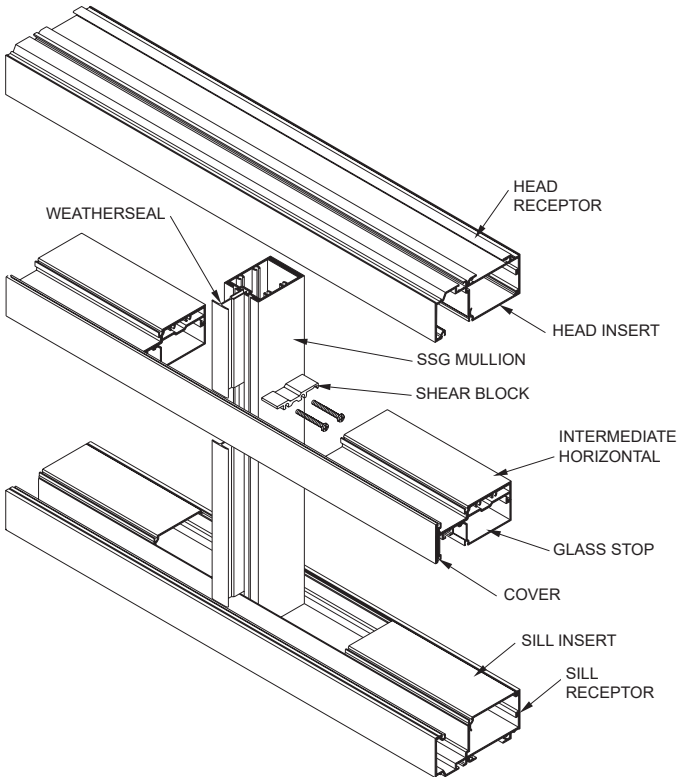
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The **Stick** system allows on-site construction. Head and sill receptors are fastened to the surround. Vertical mullions are then installed in these receptors and are held in place by snap-in inserts. Intermediate horizontal members are attached to the verticals with shear blocks. Flashing is not required.

STICK ASSEMBLY (SSG)



STICK ASSEMBLY (WEATHERSEAL)



NOTE:
If the end reaction of the mullion (mullion spacing (ft.) times height (ft.) times specified wind load (psf) divided by two) is more than 500 lbs., the optional mullion anchors must be used. (See page 40)

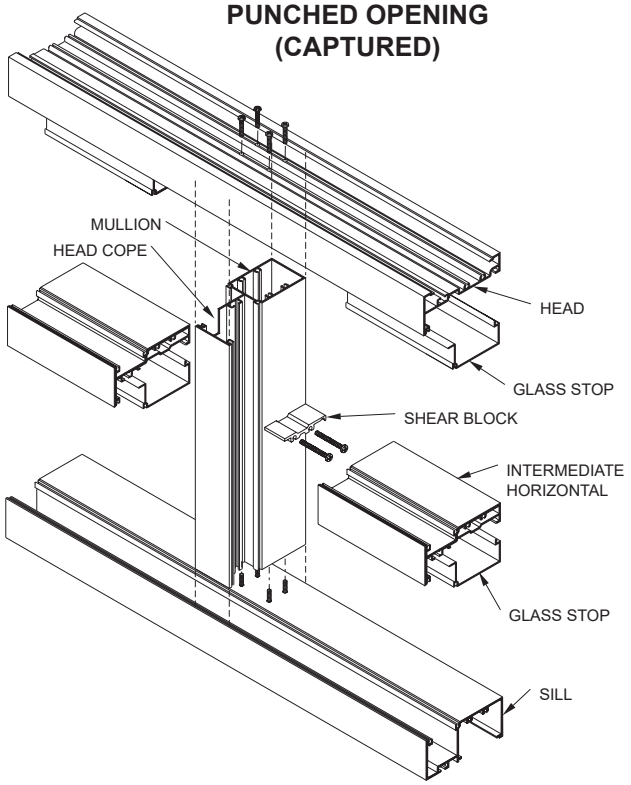
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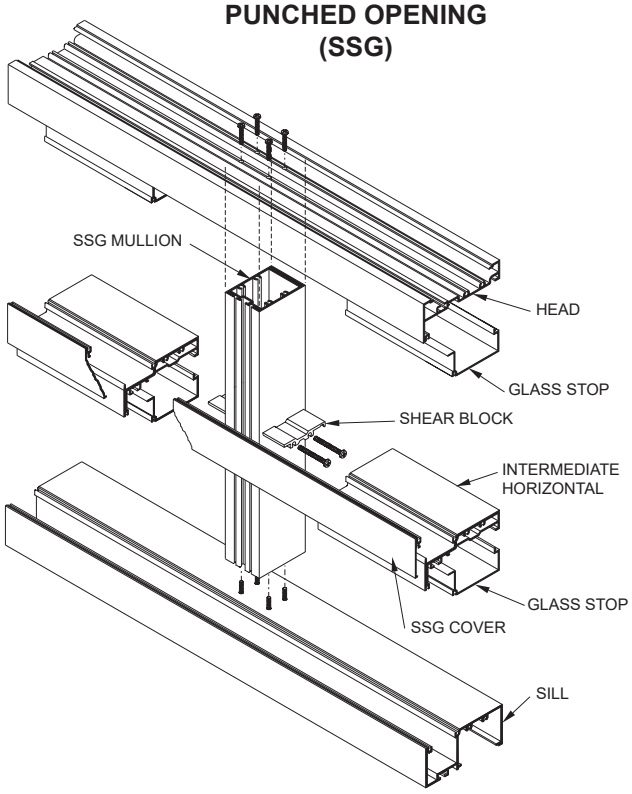
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The **CONTINUOUS HEAD AND SILL** punched opening fabrication allows a frame to be pre-assembled and installed as a single unit. Screws are driven through the back of the head and sill members into splines extruded in the vertical framing members. Intermediate horizontals are attached to the verticals with shear blocks.

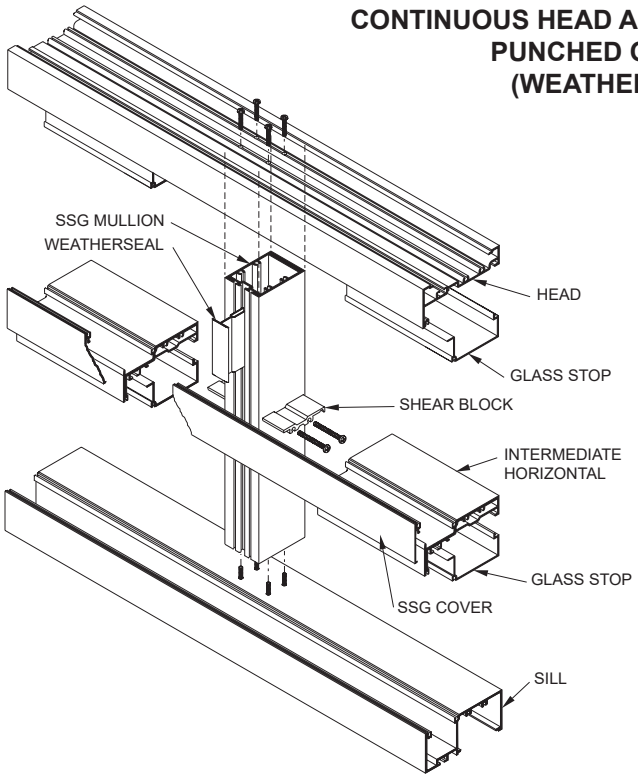
CONTINUOUS HEAD AND SILL ASSEMBLY PUNCHED OPENING (CAPTURED)



CONTINUOUS HEAD AND SILL ASSEMBLY PUNCHED OPENING (SSG)



CONTINUOUS HEAD AND SILL ASSEMBLY PUNCHED OPENING (WEATHERSEAL)



The **Punched Opening** fabrication allows a frame to be pre-punched and installed as a single unit. screws are driven through the back of the head and sill members into splines extruded in the vertical framing members. Intermediate horizontals are attached to the verticals with shear blocks.

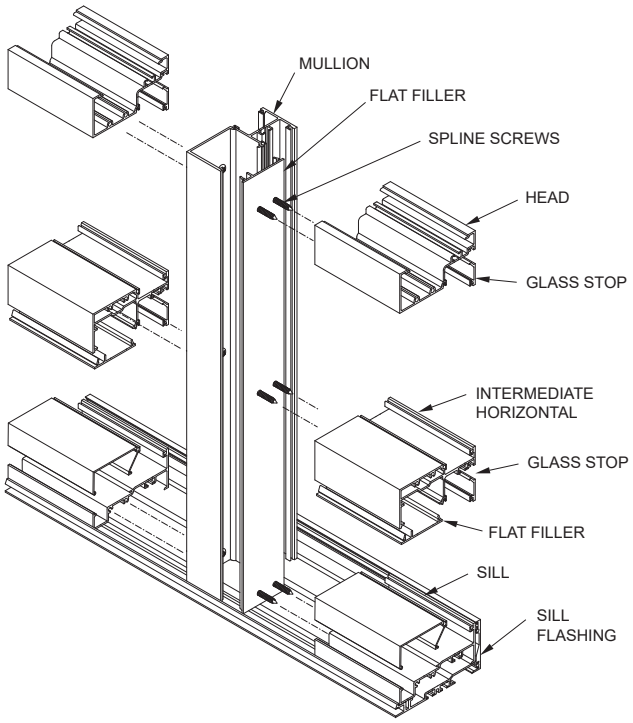
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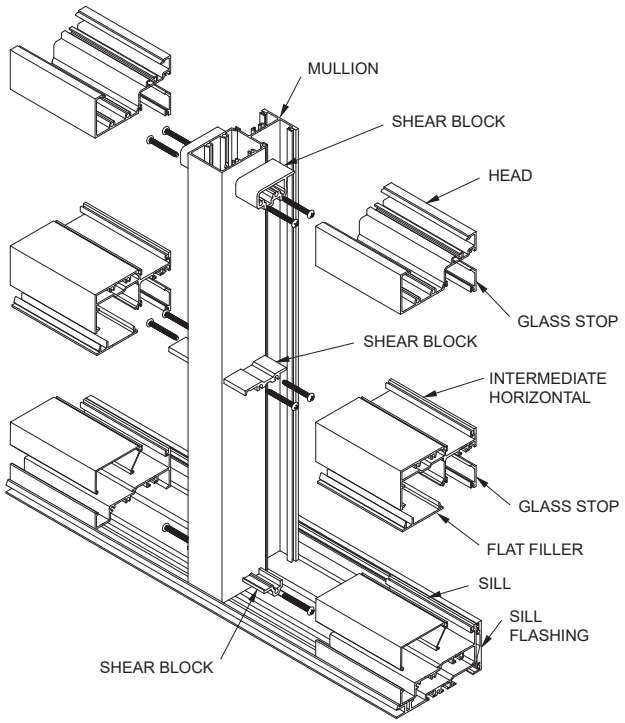
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SCREW SPLINE ASSEMBLY

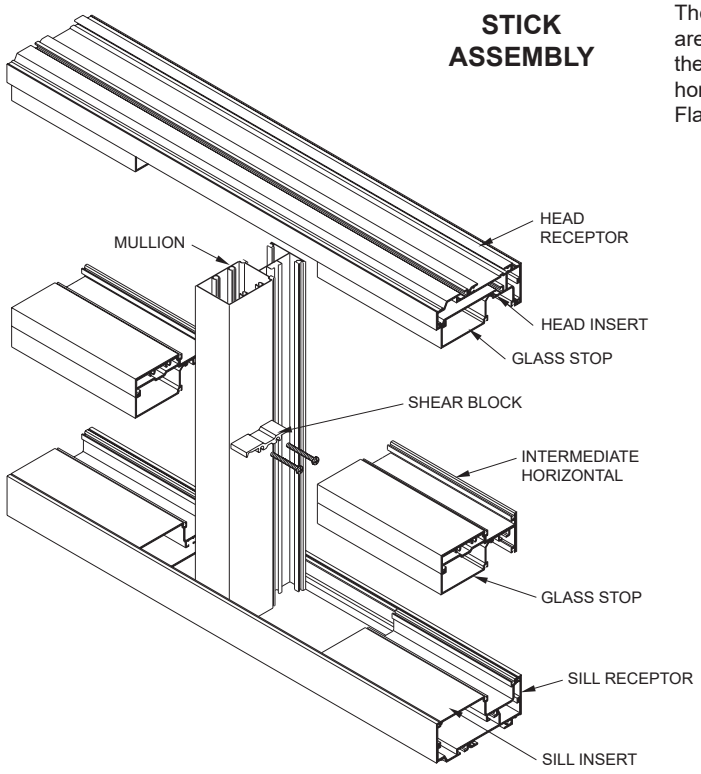


The **Shear Block** system of fabrication allows a frame to be pre-assembled as a single unit. Horizontals are attached to the verticals with shear blocks.

SHEAR BLOCK ASSEMBLY



STICK ASSEMBLY



The **Stick** system allows on-site construction. Head and sill receptors are fastened to the surround. Vertical mullions are then installed in these receptors and are held in place by snap-in inserts. Intermediate horizontal members are attached to the verticals with shear blocks. Flashing is not required.

NOTE:
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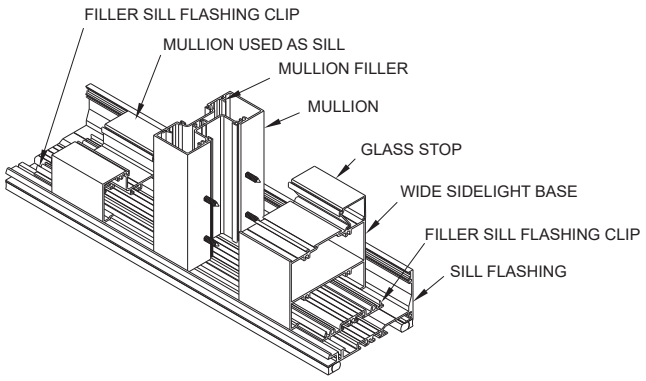
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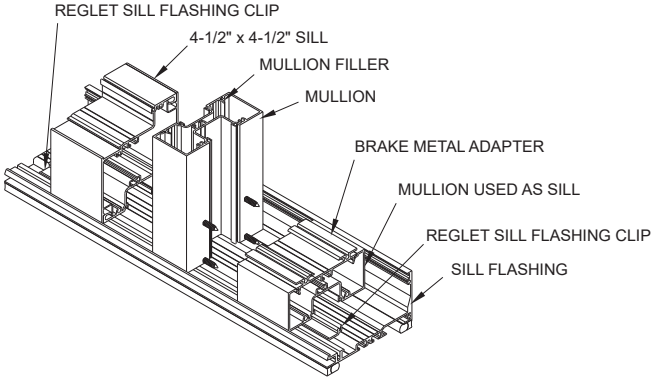
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SCREW SPLINE ASSEMBLY

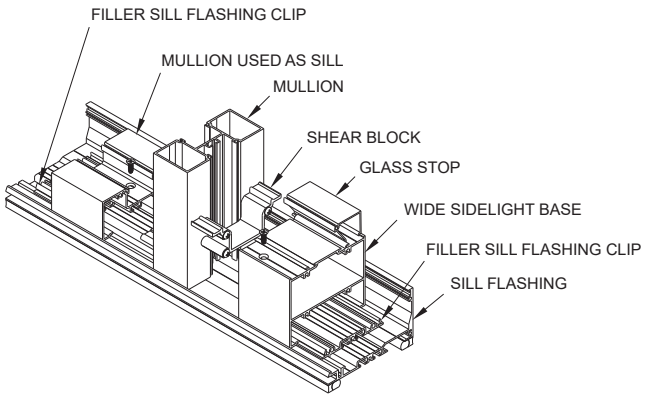
The split vertical in the **Screw Spline** system allows a frame to be installed from unitized assemblies. Screws are driven through the back of the verticals into splines extruded in the horizontal framing members. The Individual units are then snapped together to form a complete frame.

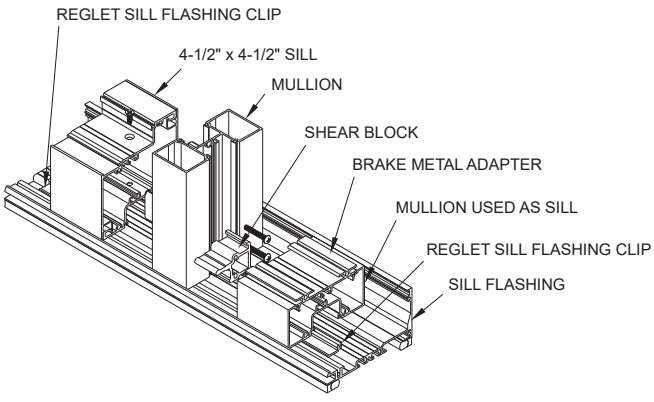




SHEAR BLOCK ASSEMBLY

The **Shear Block** system of fabrication allows a frame to be pre-assembled as a single unit. Horizontals are attached to the verticals with shear blocks.





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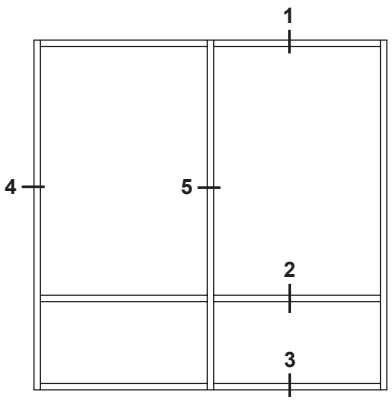
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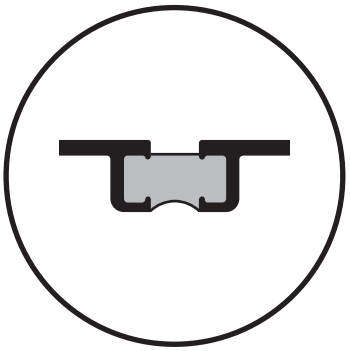
Trifab® VersaGlaze® 451/451T Framing System

BASIC FRAMING DETAILS (CENTER - Outside Glazed - Stops Up)

Additional information and CAD details are available at www.kawneer.com

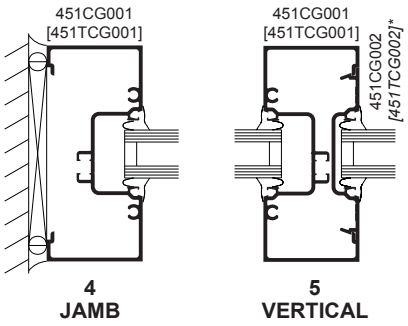


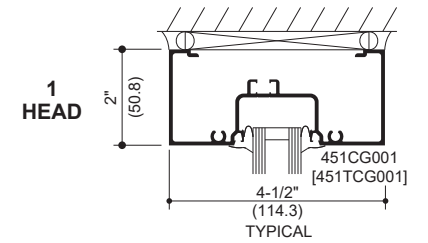
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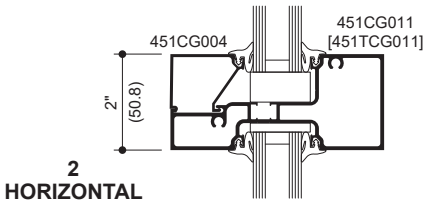


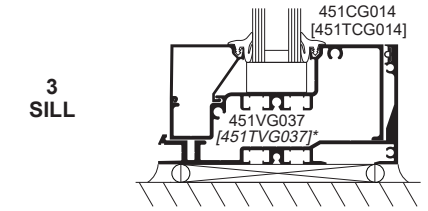
NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

SCREW SPLINE



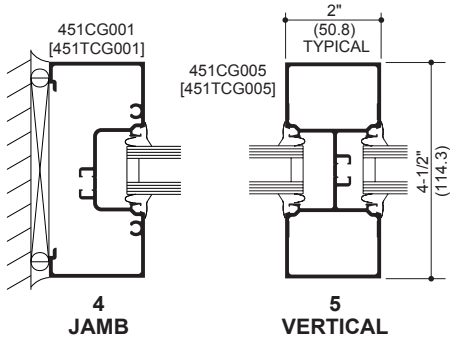


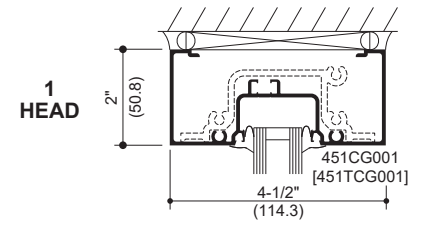


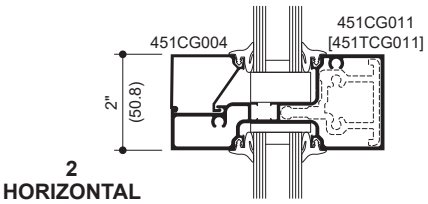


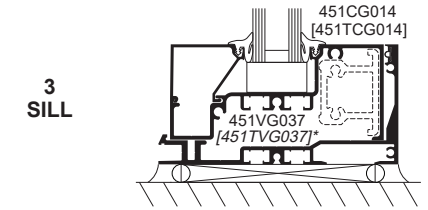
* HP Sill Flashing shown with optional gasket.

SHEAR BLOCK



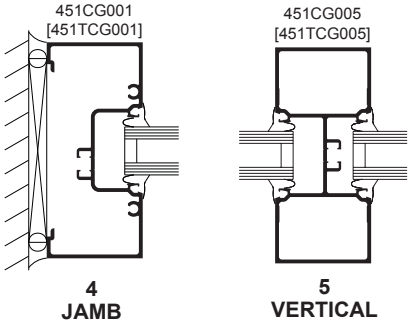


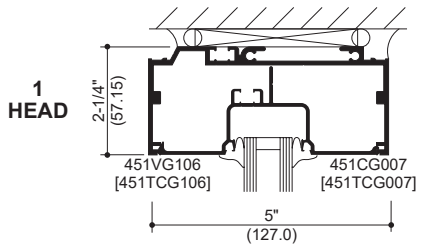


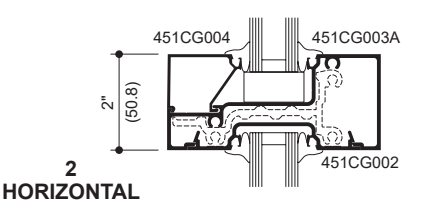


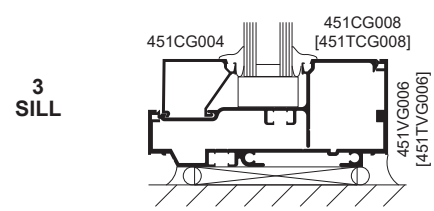
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STICK







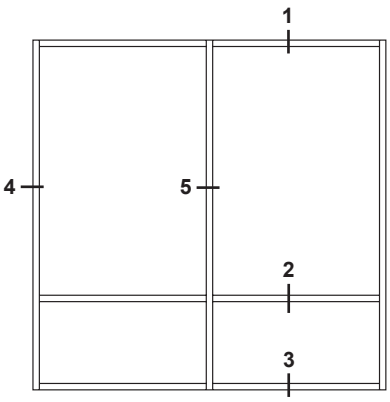


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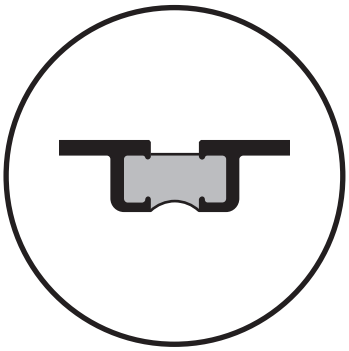
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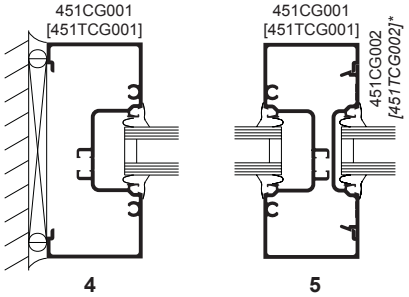


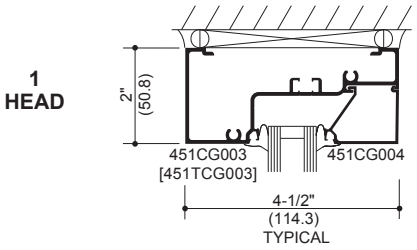
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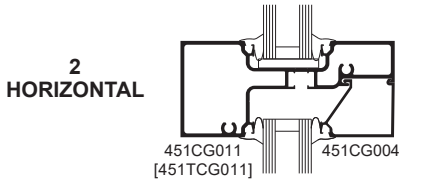


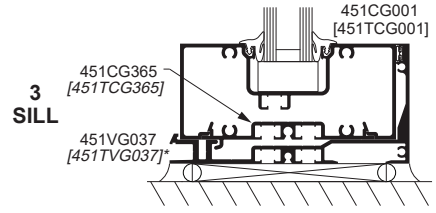
NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

SCREW SPLINE



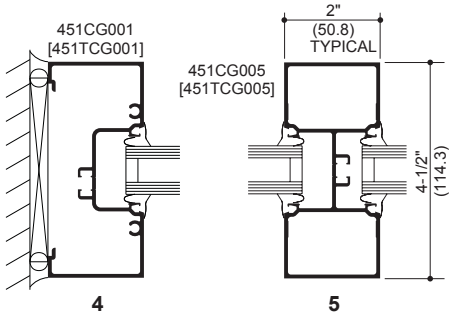


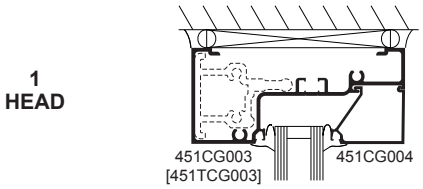


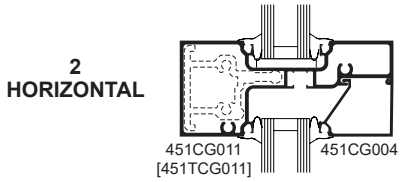


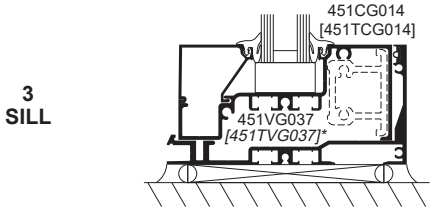
* HP Sill Flashing shown with optional gasket.

SHEAR BLOCK



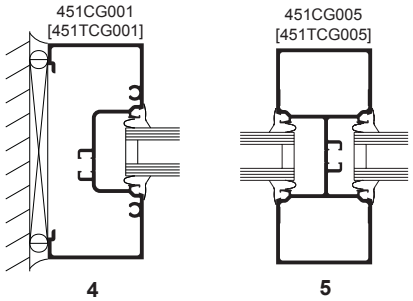


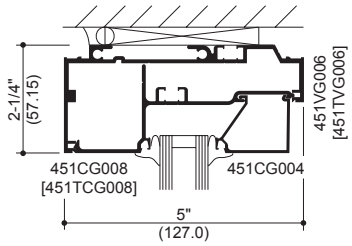


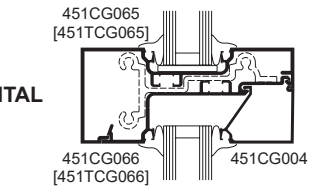


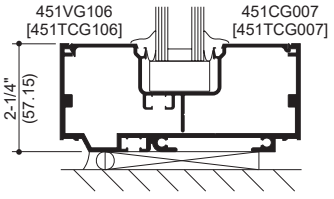
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STICK









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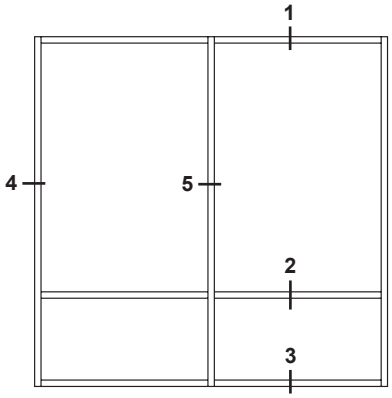
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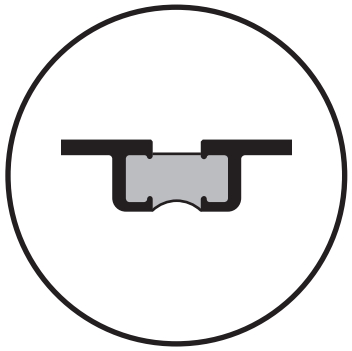
Trifab® VersaGlaze® 451/451T Framing System

BASIC FRAMING DETAILS (CENTER - Outside Glazed - Stops Down)

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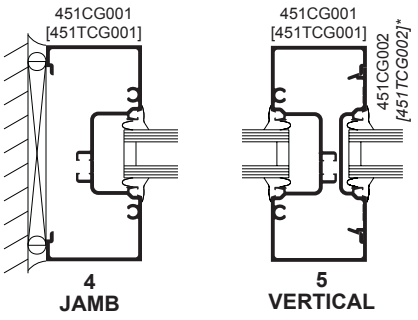


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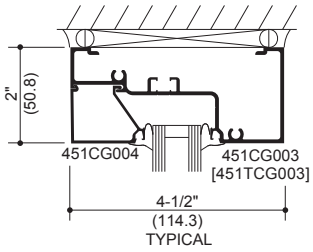


NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

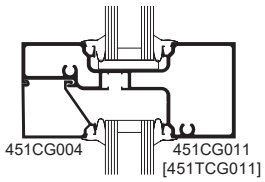
SCREW SPLINE



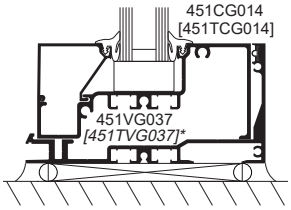
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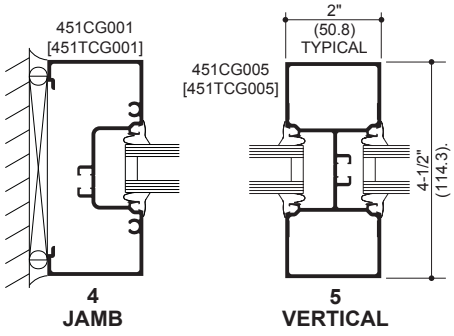


3 SILL

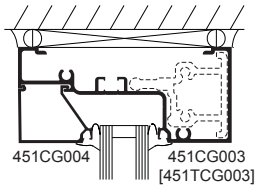


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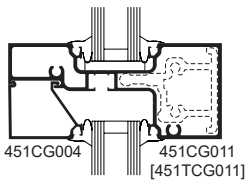
SHEAR BLOCK



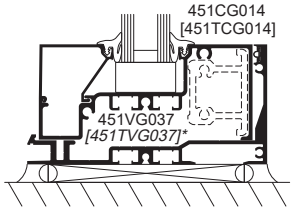
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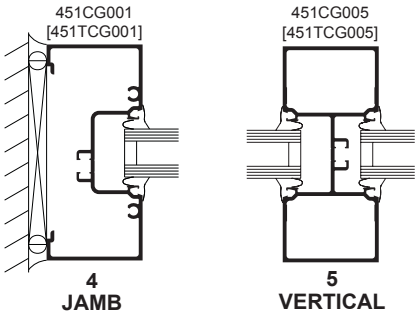


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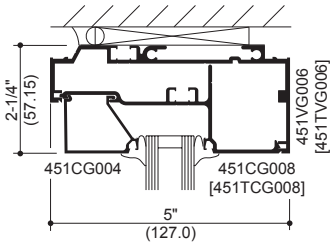


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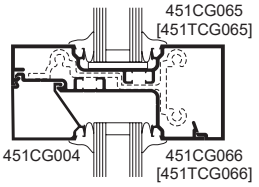
STICK



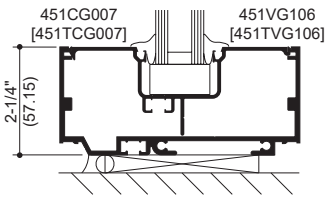
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2 HORIZONTAL



3 SILL

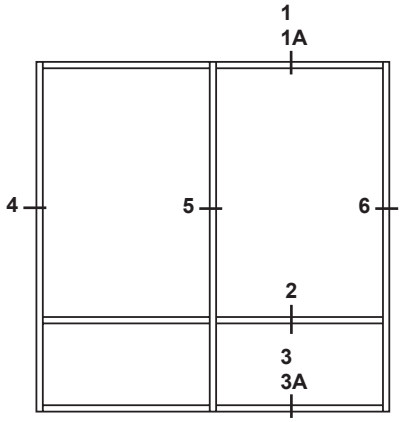


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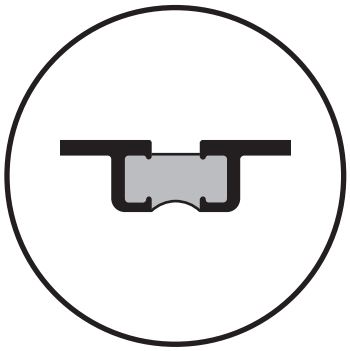
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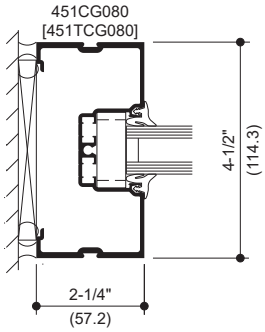


ELEVATION IS NUMBER KEYED TO DETAILS

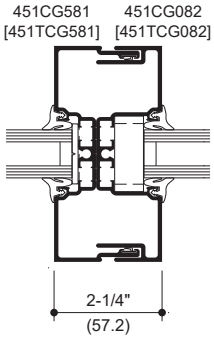


NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

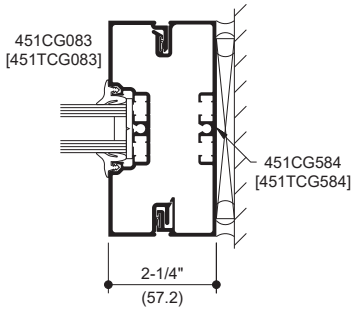
SCREW SPLINE



4 JAMB

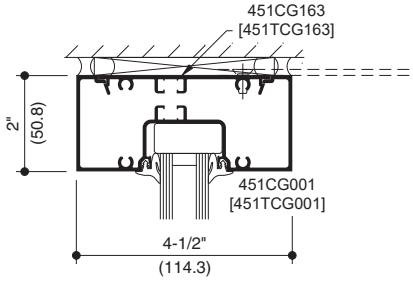


5 VERTICAL

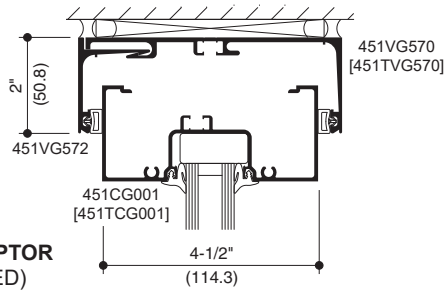


6 JAMB

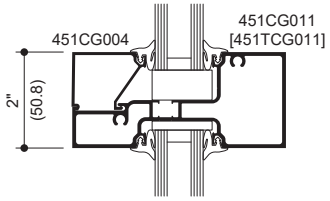
1 HEAD



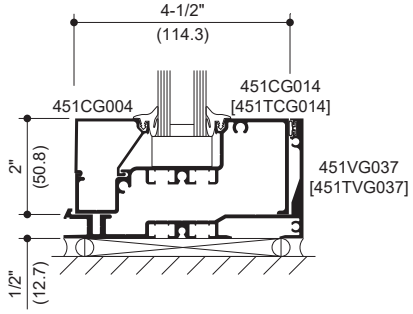
1A STANDARD HEAD COMPENSATING RECEPTOR (EXTERIOR INSTALLED)



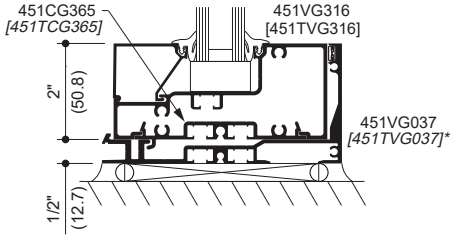
2 HORIZONTAL



3 SILL



3A SILL

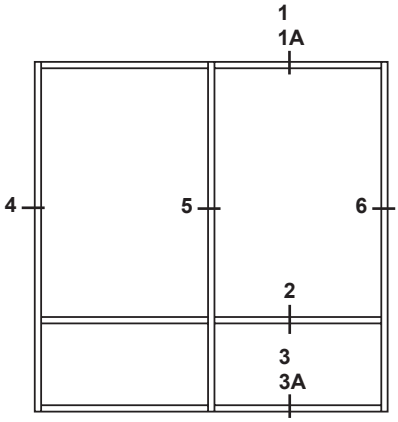


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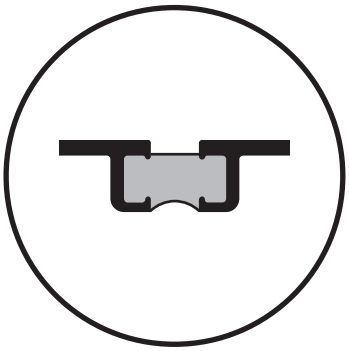
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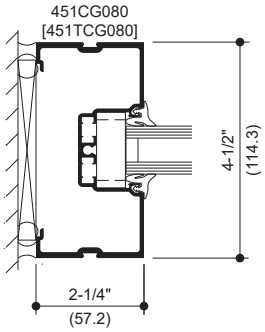


ELEVATION IS NUMBER KEYED TO DETAILS

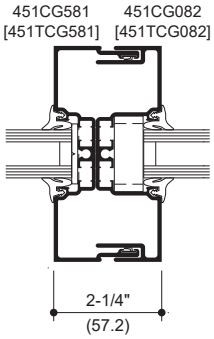


NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

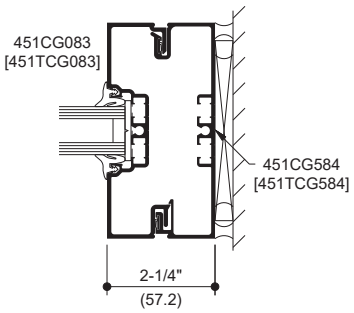
SCREW SPLINE



4 JAMB

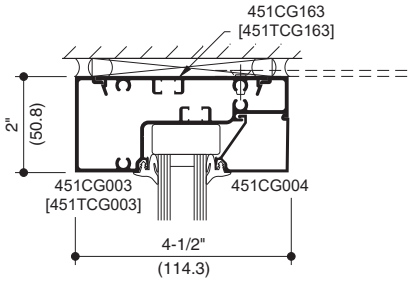


5 VERTICAL

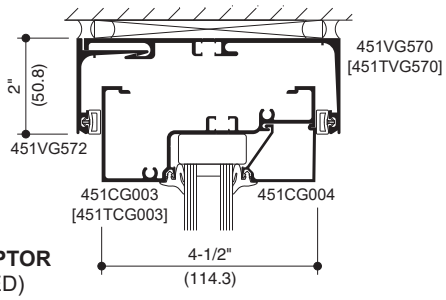


6 JAMB

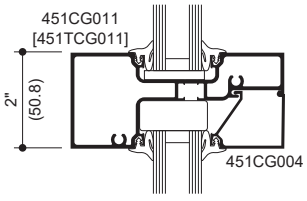
1 HEAD



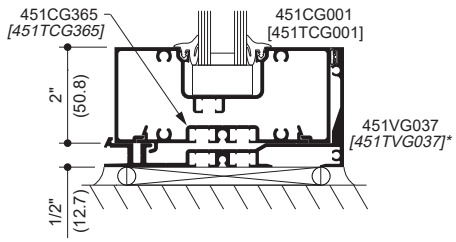
1A STANDARD HEAD COMPENSATING RECEPTOR (EXTERIOR INSTALLED)



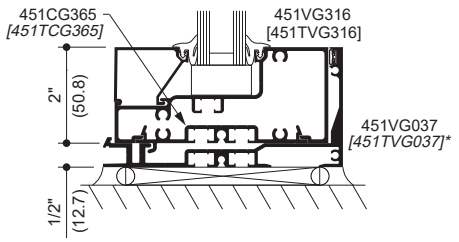
2 HORIZONTAL



3 SILL



3A SILL



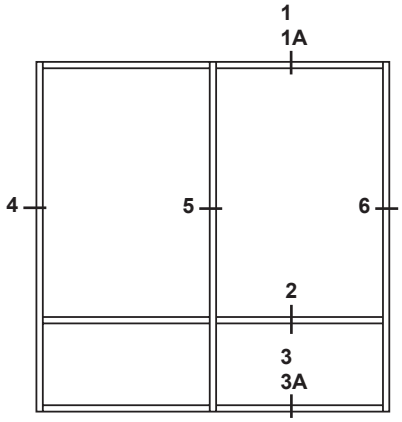
* HP Sill Flashing shown with optional gasket.

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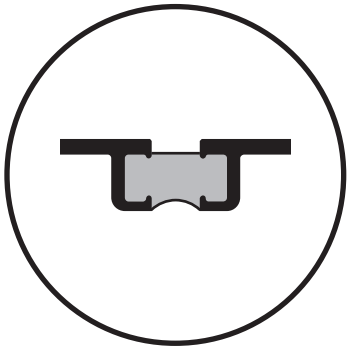
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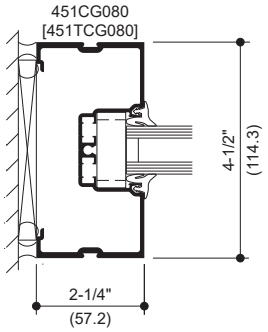


ELEVATION IS NUMBER KEYED TO DETAILS

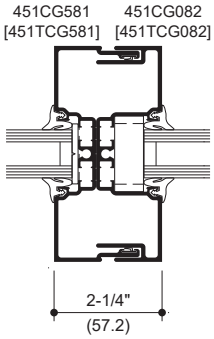


NUMBERS IN BRACKETS ARE THERMALLY BROKEN MEMBERS

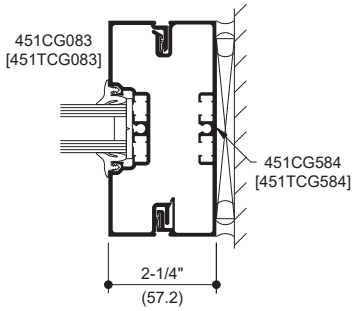
SCREW SPLINE



4 JAMB

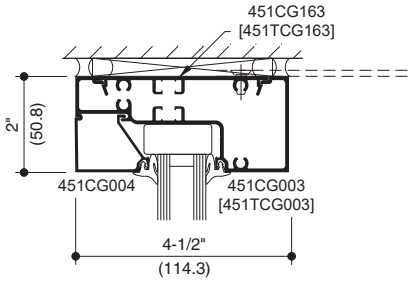


5 VERTICAL

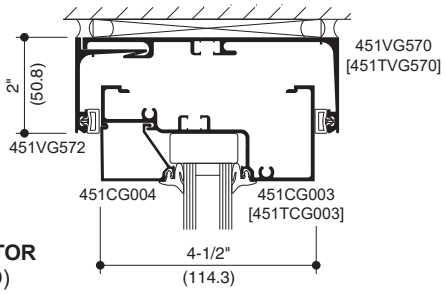


6 JAMB

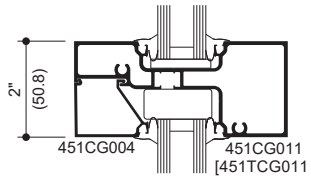
1 HEAD



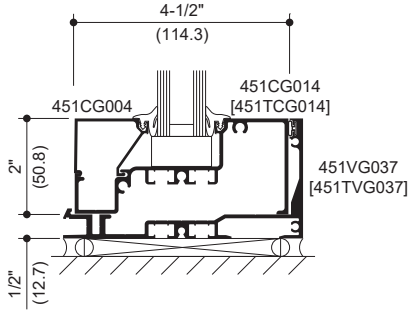
1A STANDARD HEAD COMPENSATING RECEPTOR (EXTERIOR INSTALLED)



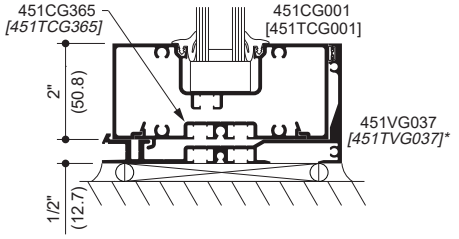
2 HORIZONTAL



3 SILL



3A SILL



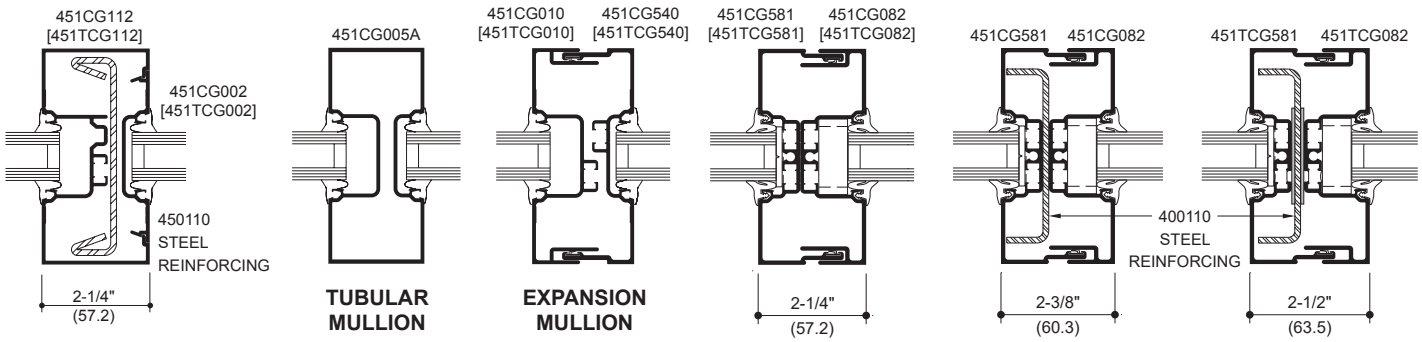
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PRE-GLAZED EXPANSION MULLIONS



SPLIT MULLION W/ STEEL

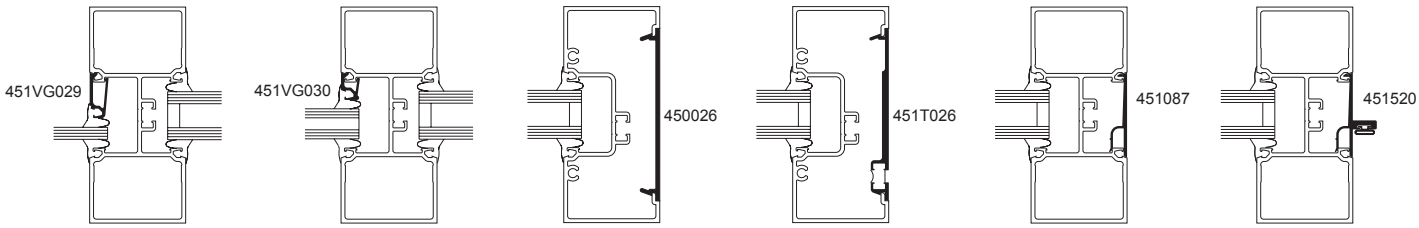
TUBULAR MULLION

EXPANSION MULLION

451/451T

451 W/ STEEL

451T W/ STEEL



1/4" (6.4) INFILL SNAP-IN ADAPTOR

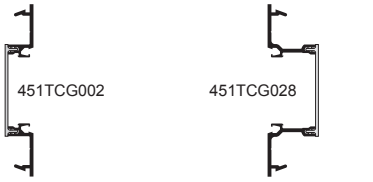
5/8" (15.9) INFILL SNAP-IN ADAPTOR

SNAP-IN FLAT FILLER

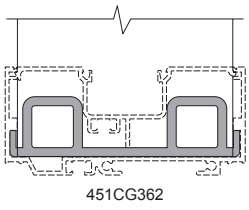
THERMAL FLAT FILLER

SNAP-IN FLAT POCKET FILLER

SNAP-IN DOOR STOP



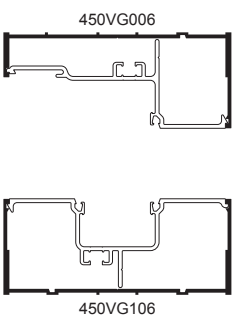
THERMAL POCKET FILLERS



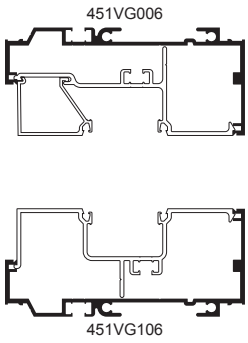
MULLION ANCHOR

NOTE:
If the end reaction of the mullion (mullion spacing (ft.) times height (ft) times specified wind load (psf), divided by two) is more than 500 LBS., the optional mullion anchor must be used. Consult Application Engineering.

NOTE:
Mullion Anchor not used with Lightweight Receptor.



OPTIONAL LIGHTWEIGHT CAN RECEPTORS



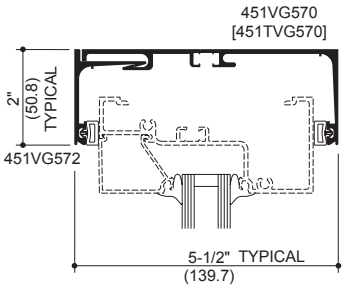
OPTIONAL UNEQUAL LEG CAN RECEPTORS

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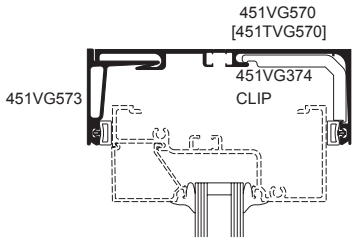
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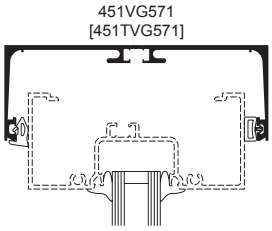
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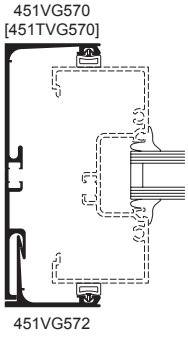
STANDARD HEAD COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)



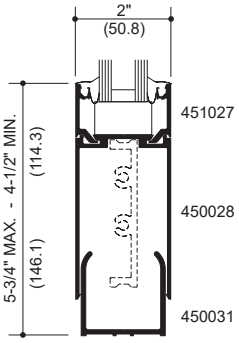
HEAVY WEIGHT HEAD COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)



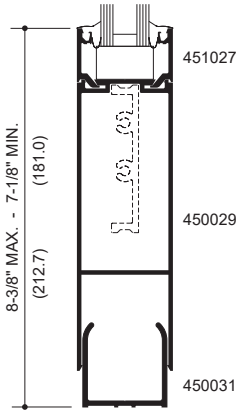
ONE PIECE HEAD COMPENSATING RECEPTOR



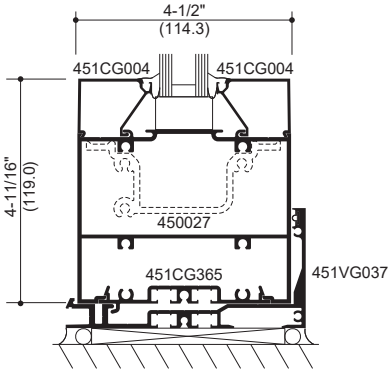
JAMB COMPENSATING RECEPTOR
(EXTERIOR INSTALLED)



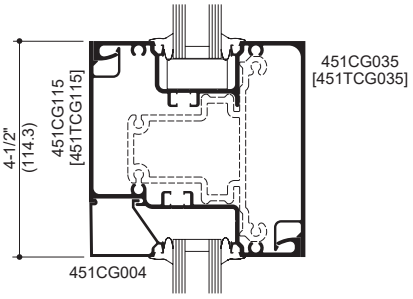
***NARROW SIDELITE BASE**



***NARROW SIDELITE BASE**



SIDELITE BASE



4-1/2" (114.3) x 4-1/2" (114.3) HORIZONTAL

SIDELITE BASES ARE NON-THERMAL APPLICATIONS

*NARROW SIDELITE BASES REQUIRE THE USE OF NON-THERMAL 2-PIECE VERTICALS ONLY.

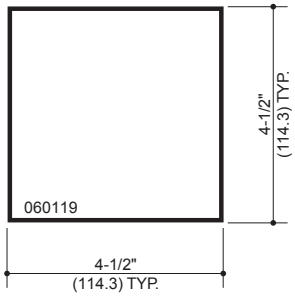
NOTE: SIDELITE BASES SHOWN ARE FOR USE WITH SCREW SPLINE AND SHEAR BLOCK SYSTEMS ONLY.

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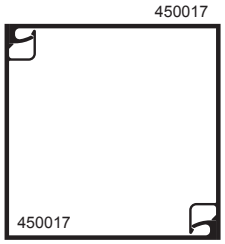
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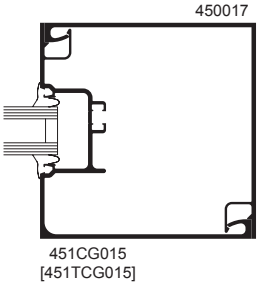
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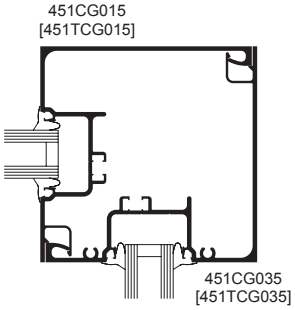
4-1/2" X 4-1/2" TUBE



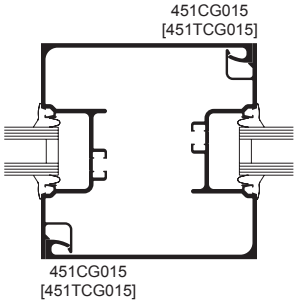
TWO PIECE NO POCKET CORNER



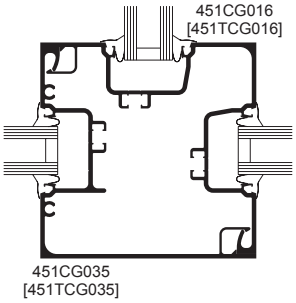
ONE POCKET CORNER



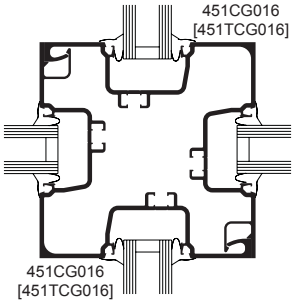
TWO POCKET 90° CORNER



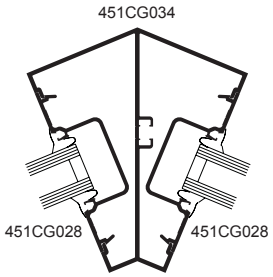
TWO POCKET CORNER POST



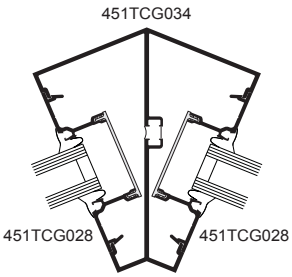
THREE POCKET 90° CORNER



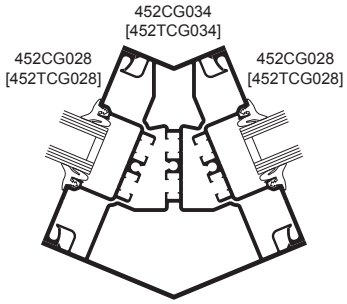
FOUR POCKET 90° CORNER



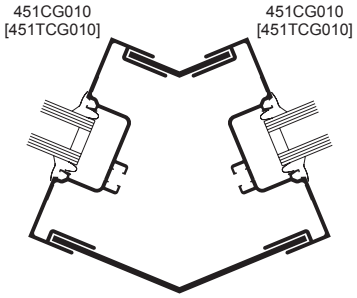
135° CORNER (NON-THERMAL)



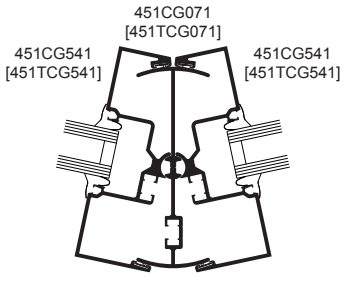
135° CORNER (THERMAL)



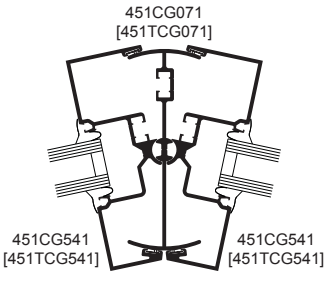
135° CORNER



VARIABLE DEGREE BRAKE METAL CORNER



155° TO 180° PIVOT MULLION (OUTSIDE CORNER)



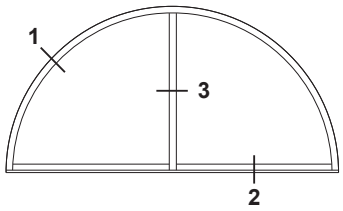
155° TO 180° PIVOT MULLION (INSIDE CORNER)

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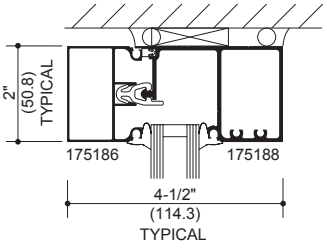
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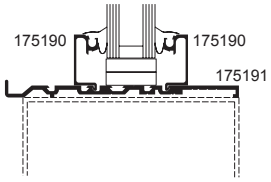


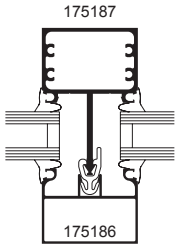
CURVING DETAILS
(Center Plane Only)

1

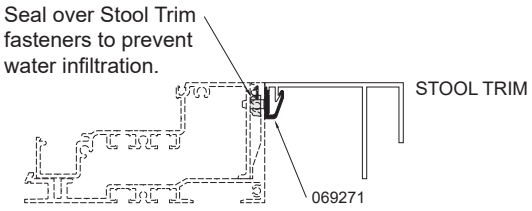


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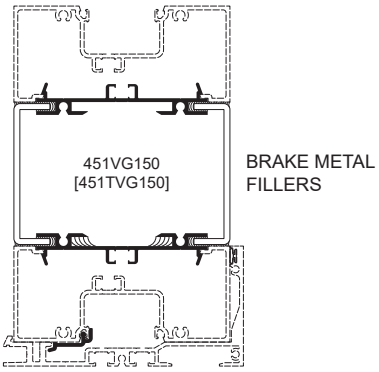




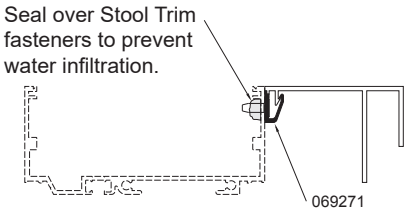
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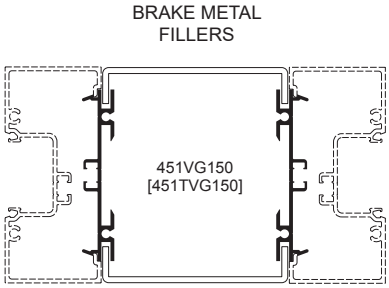
STOOL TRIM CLIP
WITH HIGH PERFORMANCE
FLASHING



BRAKE METAL
ADAPTOR AT HORIZONTAL



STOOL TRIM CLIP
FOR STICK ASSEMBLY



BRAKE METAL
ADAPTOR AT VERTICAL

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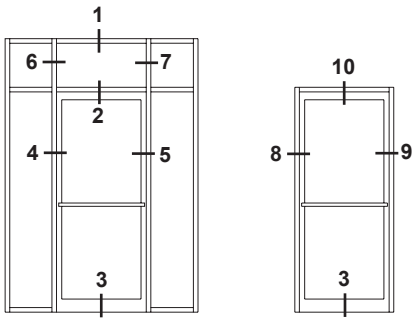
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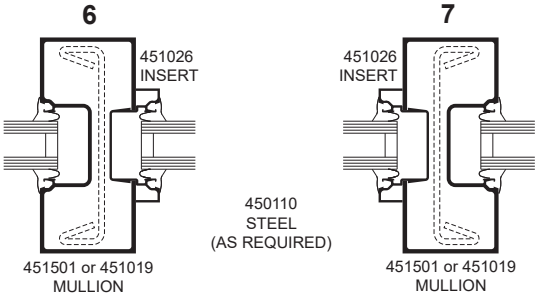
Trifab® VersaGlaze® 451 FRAMING INCORPORATING KAWNEER® "190" DOORS.

DOOR FRAMING NON-THERMAL ONLY

NOTE: OTHER TYPES OF KAWNEER DOORS MAY BE USED WITH THIS FRAMING SYSTEM. SEE ENTRANCE DETAILS FOR ADDITIONAL INFORMATION.

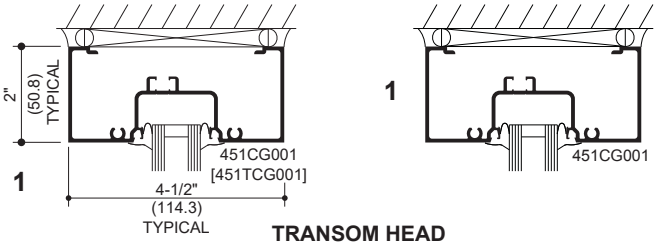


ELEVATIONS ARE NUMBER KEYED TO DETAILS

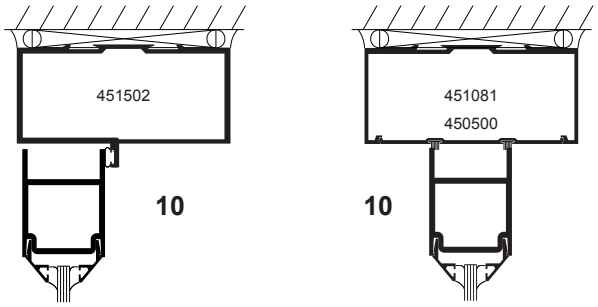


TRANSOM JAMBS

Transom area for both double or single acting doors with glass surround. Jambs above transom bar are routed out to accept glass holding insert with or without steel reinforcing.

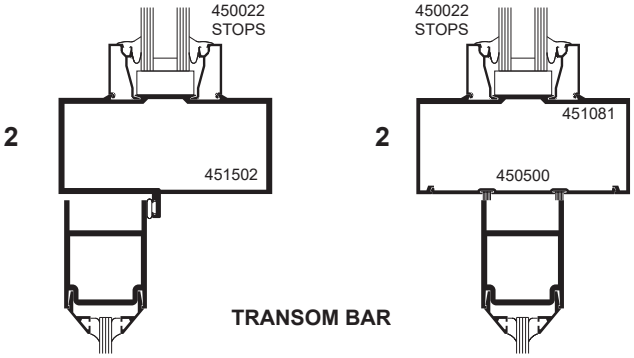


TRANSOM HEAD

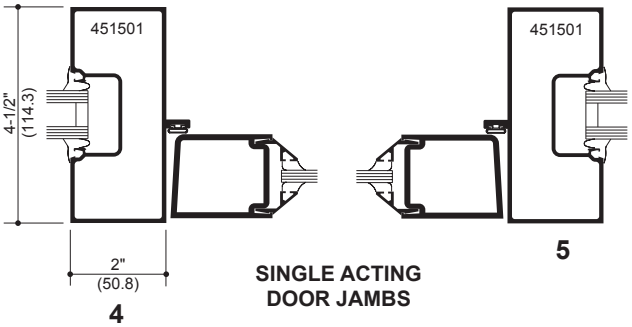


SINGLE ACTING HEADER

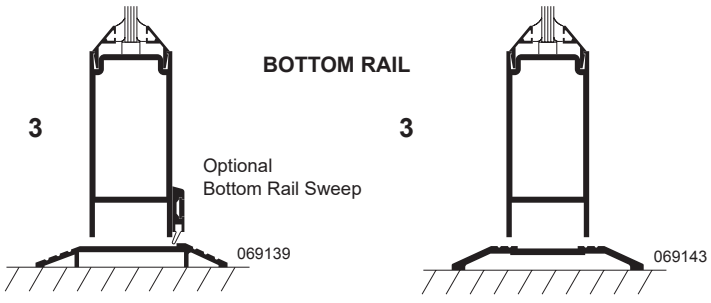
DOUBLE ACTING HEADER



TRANSOM BAR

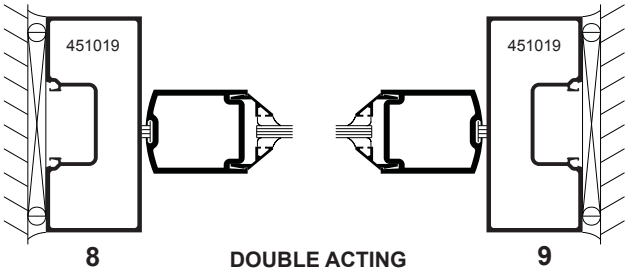


SINGLE ACTING DOOR JAMBS



SINGLE ACTING

DOUBLE ACTING



DOUBLE ACTING DOOR JAMBS

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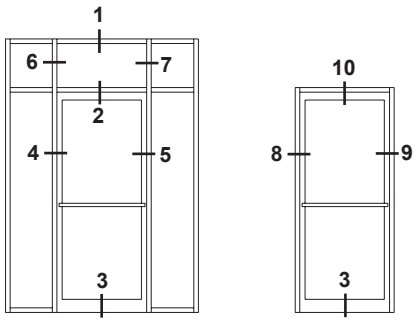
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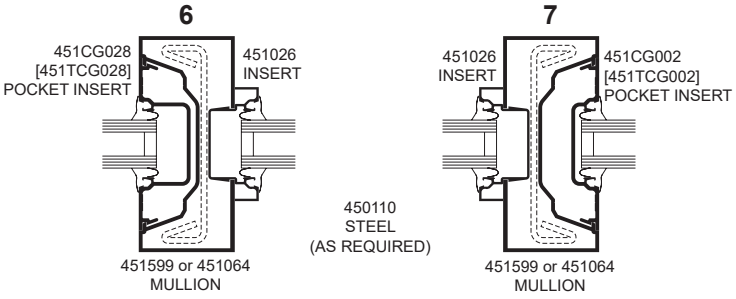
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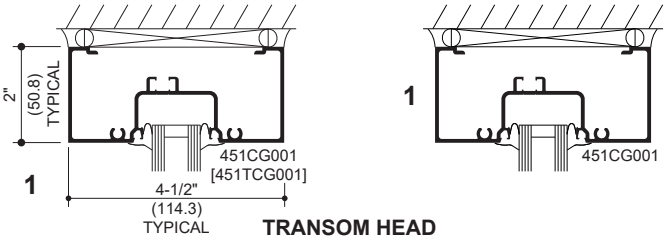


ELEVATIONS ARE NUMBER KEYED TO DETAILS

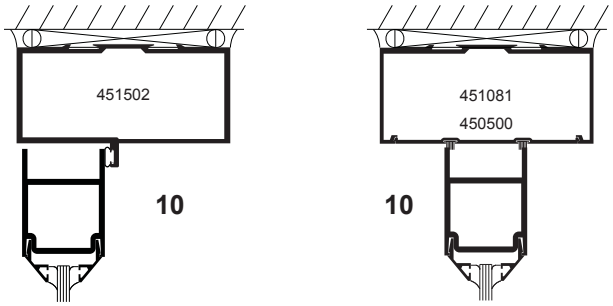


TRANSOM JAMBS

Transom area for both double or single acting doors with glass surround. Jambs above transom bar are routed out to accept glass holding insert with or without steel reinforcing.

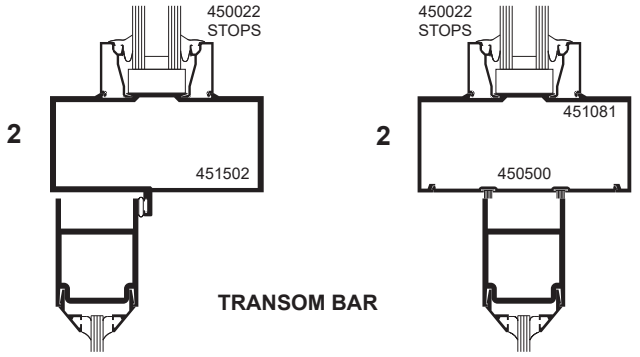


TRANSOM HEAD

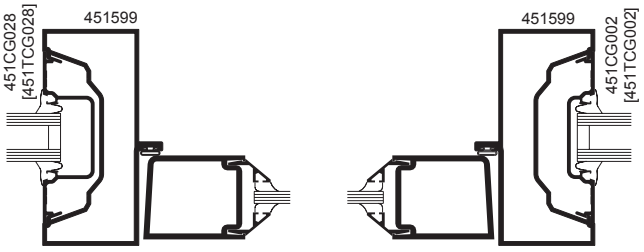


SINGLE ACTING HEADER

DOUBLE ACTING HEADER

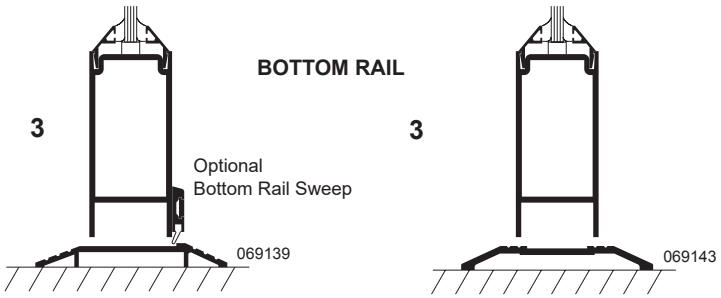


TRANSOM BAR



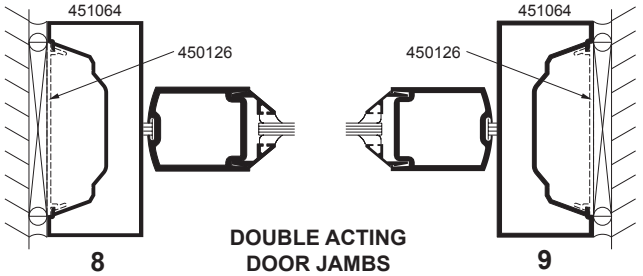
SINGLE ACTING DOOR JAMBS

NOTE: Sidelite mullions must be oriented to provide at least one (1) deep vertical pocket per lite to facilitate glazing.



SINGLE ACTING

DOUBLE ACTING



DOUBLE ACTING DOOR JAMBS

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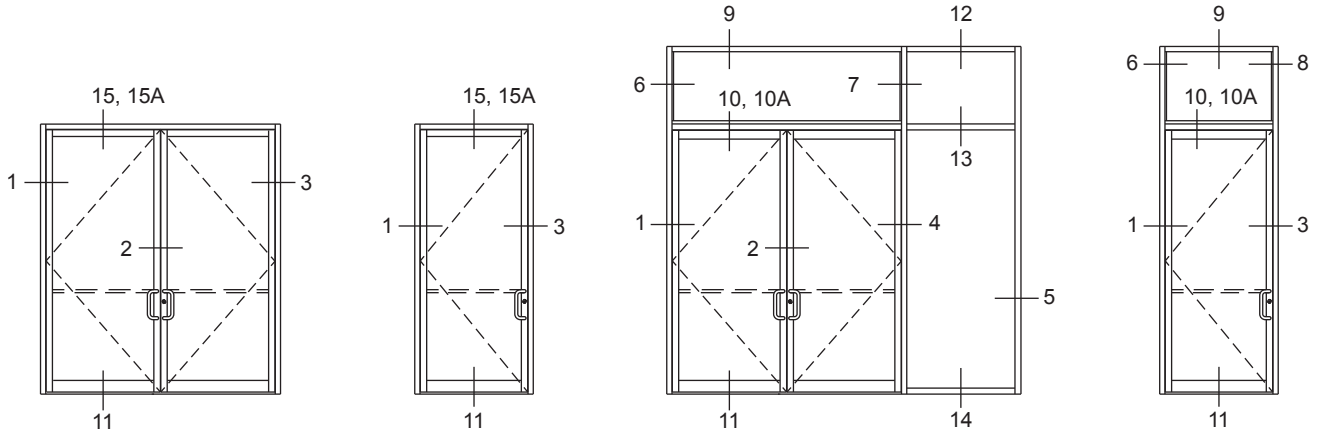
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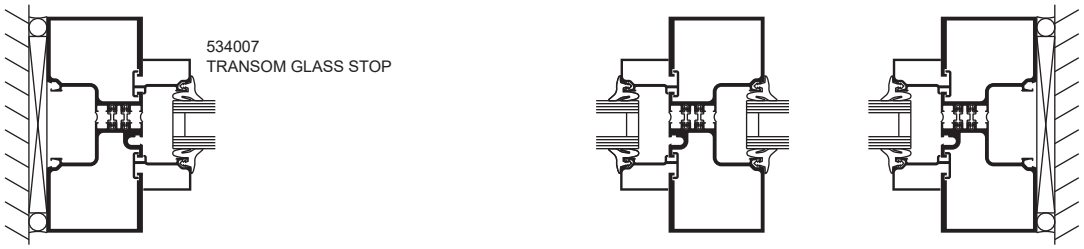
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NOTE:

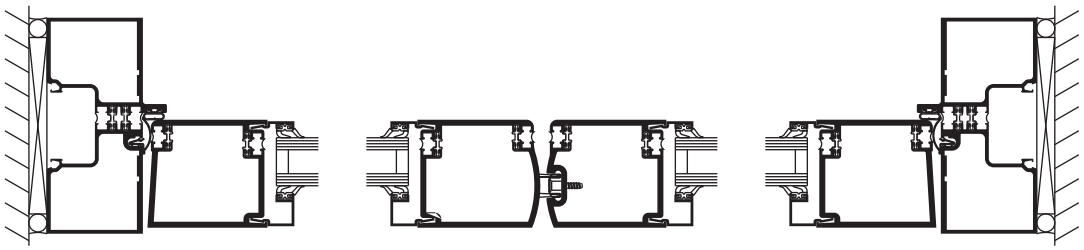
1. SERIES 250T NARROW STILE DOORS ARE DETAILED, MEDIUM STILE 350T DOORS AND WIDE STILE 500T DOORS ALSO MAY BE USED.

2. TRIFAB® VERSAGLAZE® 451T CENTER, 2" x 4-1/2" (50.8 x 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED.



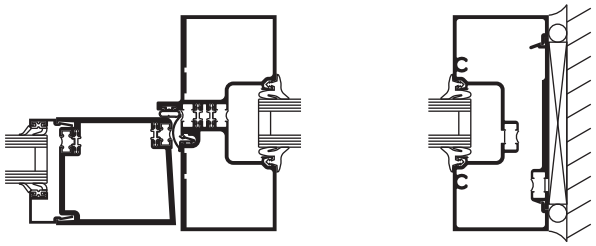


6 7 8



1 2 3

SINGLE ACTING DOORS



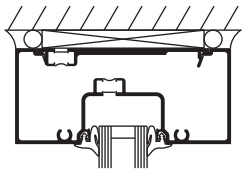
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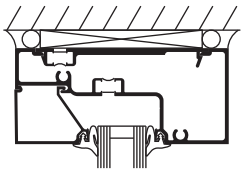
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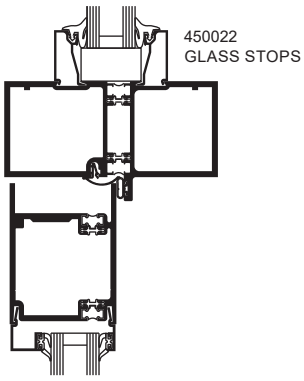


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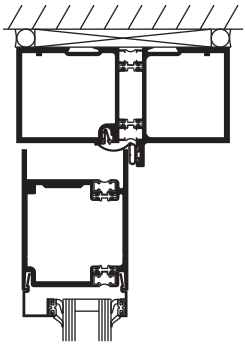


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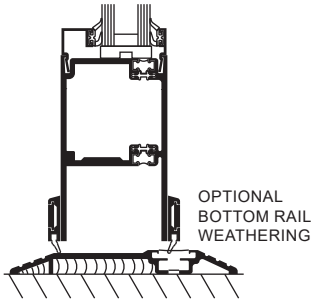
SINGLE ACTING DOORS



10



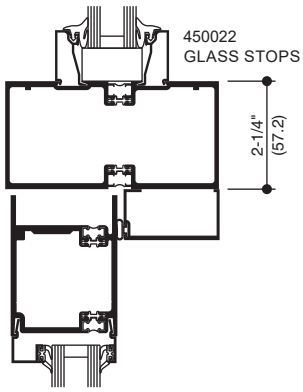
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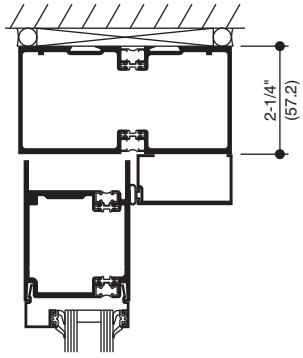
11

SURFACE OVERHEAD CLOSER

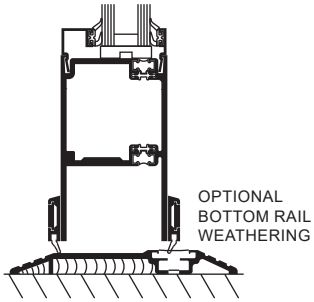
COC WITH SINGLE ACTING OFFSET ARM



10A

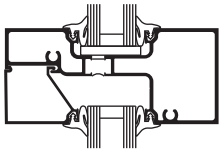


15A

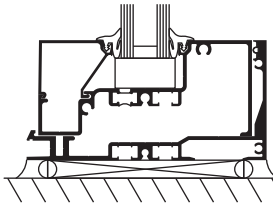


11

CONSEALED OVERHEAD CLOSER



13



14

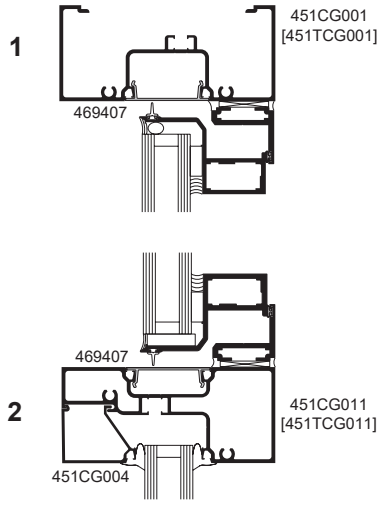
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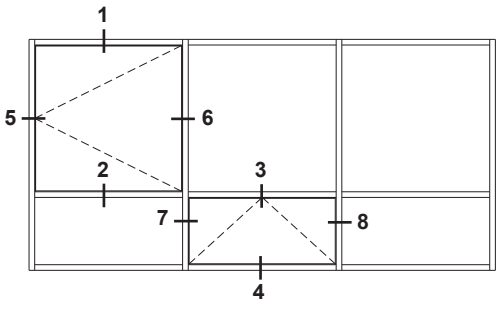
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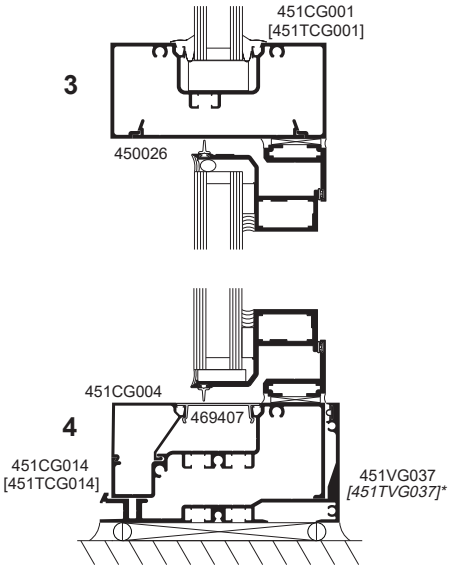
OUTSWING CASEMENT VERTICAL SECTION



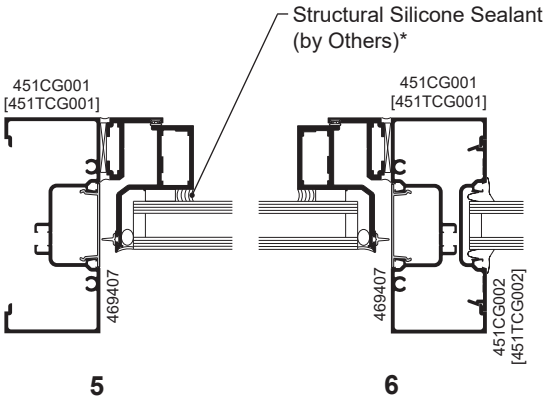


ELEVATION IS NUMBER KEYED TO DETAILS

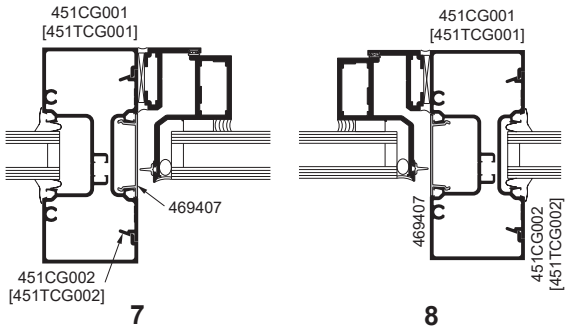
PROJECT-OUT VERTICAL SECTION



OUTSWING CASEMENT HORIZONTAL SECTION



PROJECT-OUT HORIZONTAL SECTION



NOTE: Black spacer is recommended when 1" (25.4) insulating glass is used.

*** INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

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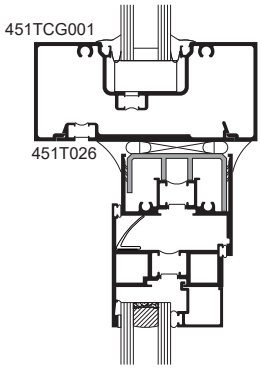
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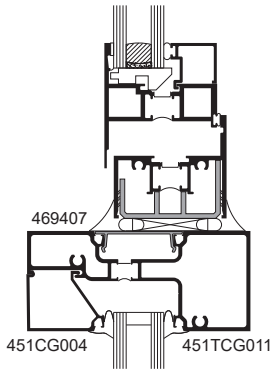
Additional information and CAD details are available at www.kawneer.com

PROJECT-OUT VERTICAL SECTION

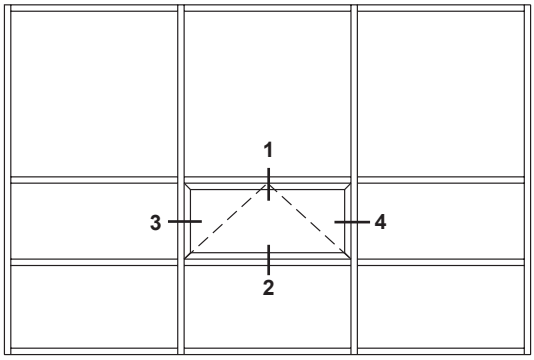
1



2

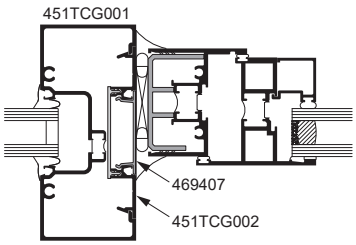


8225TL THERMAL WINDOWS SHOWN
NOTE: OTHER VENT TYPES CAN BE ACCOMMODATED, CONSULT YOUR KAWNEER REPRESENTATIVE FOR OTHER OPTIONS

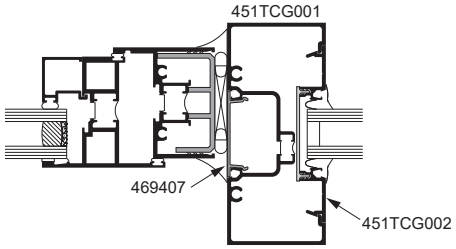


ELEVATION IS NUMBER KEYED TO DETAILS

PROJECT-OUT HORIZONTAL SECTION



3



4

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Windows that Open Design Possibilities



20 Fulton East Apartments
Grand Rapids, Michigan
ARCHITECT
Pappageorge Haymes Partners, Chicago, Illinois
GLAZING CONTRACTOR
Vos Glass, Grand Rapids, Michigan
PHOTOGRAPHY
© Perzel Photography Group

8225TL Thermal Windows combine design flexibility and high performance. This is fenestration for today. Windows that offer engineering and superior aesthetics – true lasting value combined with the elements of design excellence.

These windows address all-important issues of form, function and performance. Architects, building owners and occupants alike will find their new window expectations fulfilled in the 8225TL, because behind these windows stands the Kawneer tradition of leadership in architectural aluminum window systems.

AESTHETICS

The choices offered by these windows translate into design flexibility: 8225TL Thermal Windows come in a variety of operable and fixed versions. These are windows for every building application and for every design possibility.

Cast white bronze locking hardware lends superior strength and an attractive appearance to 8225TL Thermal Windows. Because details count, panning systems and muntins are a basic part of the product offering, as well as dual glazing and venetian blinds. They answer individual needs of new office, school and hospital architecture, as well as a range of retrofit options.

PERFORMANCE

The pressure-equalized ventilators feature mitered, clipped, sealed and staked corner joinery that securely supports even the largest recommended window size, while the screw spline jointed frames are secured with two stainless steel fasteners in extruded screw ports to ensure strong, watertight joints. Standard factory silicone glazing also assures that only the highest-quality glazing methods, procedures and materials are used.

8225TL Thermal Windows' superior thermal performance stems from Kawneer's IsoLock™ thermal break with a 3/8" (9.5 mm) separation that effectively separates the interior of the window from the exterior in both frame and vent members. The IsoLock™ difference is a lanced design that creates a positive interlock between the polyurethane and aluminum components of a pour-and-debridge thermal break. With IsoLock™, the two materials act as a single composite element, thus protecting from any possibility of shrinkage of the polyurethane from frame members.

The windows have a vent and frame design that retards air infiltration and provides water resistance under the most severe weather conditions. For added performance, fixed over project-out window configurations are large and small missile impact tested, and they meet or exceed AAMA/WDMA/CSA 101/I.S. 2/A440 performance standards.

CLASS & GRADES

Fixed	F-HC100 / F-AW100
Project-In	AP-HC90 / AP-AW90
Project-Out	AP-HC90 / AP-AW90
Inswing Casement	C-HC90 / C-AW90
Outswing Casement	C-HC90 / C-AW90

Choose Kawneer 8225TL Thermal Windows for:

- design flexibility and performance
- the advantage of Kawneer single-source responsibility
- value that lasts well into the future
- fully engineered and tested designs





North Schuylkill Elementary School
Ashland, Pennsylvania
ARCHITECT
EI Associates, Harrisburg, Pennsylvania
GLAZING CONTRACTOR
Empire Paint & Glass, Pottsville, Pennsylvania



Pennsylvania State University – Dickinson School of Law, Lewis Katz Building
University Park, Pennsylvania
ARCHITECT
Polshek Partnership Architects, LLP, New York, New York
GLAZING CONTRACTOR
D-M Products, Inc., Bethel Park, Pennsylvania

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Form Number 17-2241.A
IsoLock™ is a trademark of Kawneer Company, Inc.

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Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
770.449.5555
kawneer.com

KAWNEER

ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

FIXED WINDOW 3-8
PROJECT-IN WINDOW 9-14
PROJECT-OUT WINDOW 15-22
INSWING CASEMENT WINDOW 23-30
OUTSWING CASEMENT WINDOW 31-37
RECEPTORS AND SUB SILLS 38
ANCHORING 39
PANNINGS 40
CURTAIN WALL ADAPTERS 41
WIND LOAD CHARTS 42-45
THERMAL CHARTS 46-61

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

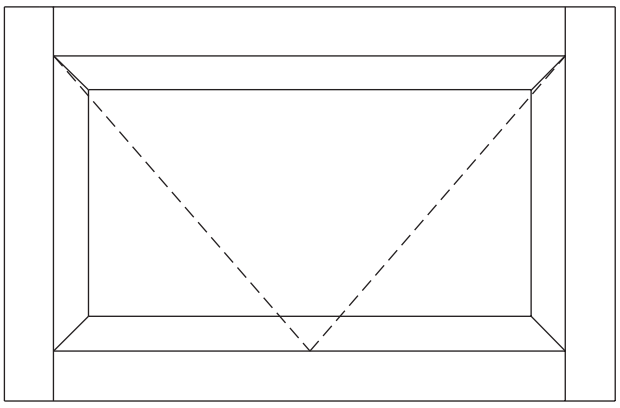
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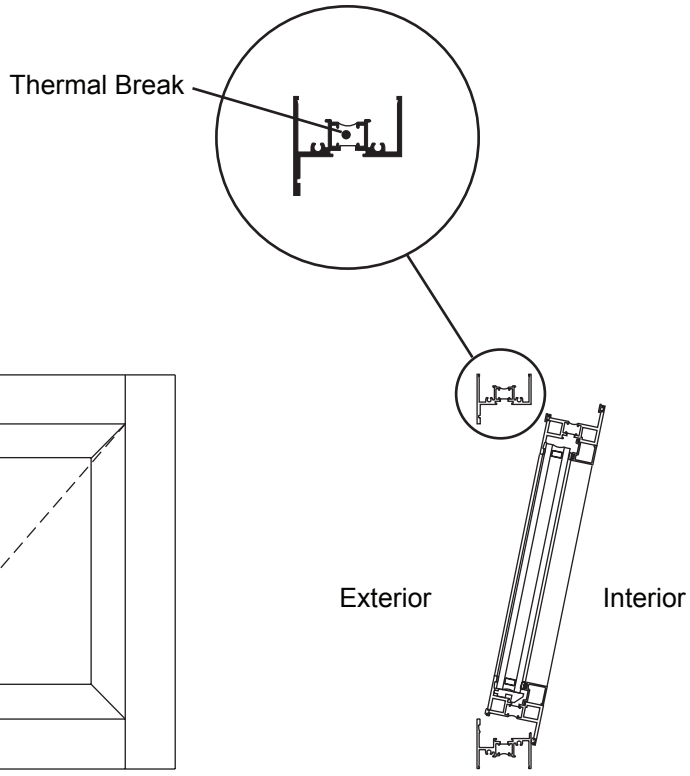
m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.
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Features

- Architectural Grade Window
- IsoLock™ Thermal Break
- Mitered, Clipped and Staked Vent Corner Joinery
- Screw and Spline Frame Corner Joinery
- Factory Silicone Glazed
- Interior Applied Glazing Bead with Bulb Gasket
- Architectural Anodized Finishes and Applied Coatings
- Two Year Manufacturer's Warranty
- Compatible with Storefront and Curtain Wall Systems





Project-in Window

For specific product applications,
consult your Kawneer representative.

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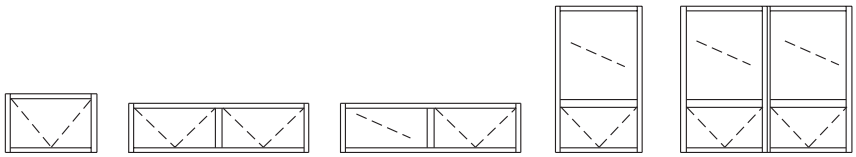
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8225TL Thermal Windows

PROJECT-IN WINDOW

MARCH, 2019

EC 97911-197

CLASS and GRADE	Architectual Grade AP-HC90 / AP-AW90 / AP-PG90-AP
TESTING STANDARD	AAMA / WDMA / CSA 101 / I.S. 2 / A440 (NAFS)
FRAME DEPTH	2-1/4" Overall Frame Depth
TYPICAL WALL THICKNESS	.090 and .125 Nominal
TYPICAL MAXIMUM SIZE	60" x 48"
TYPICAL MINIMUM SIZE	17" x 17"
TYPICAL CONFIGURATIONS	
STANDARD INFILL OPTIONS	1"
STANDARD HARDWARE	Stainless Steel 4-Bar Hinges Cast White Bronze Cam Locks
OPTIONAL HARDWARE	Access Control Locks Limit Stop Pole and Pole Ring
OTHER OPTIONS	Unequal Leg Frames Exterior and/or Interior Applied Muntins Insect Screens Perimeters and Sills Exterior Pannings and Interior Trims Structural Mullions Vertically or Horizontally Stacked Access Panels and Blinds Silicone Field Glazing upon Request

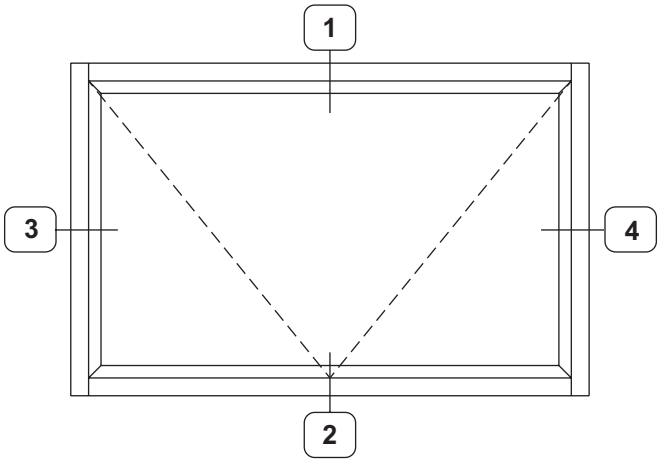
NO INSECT SCREENS ON WINDOWS VISIBLE FROM PUBLIC RGHT OF WAY

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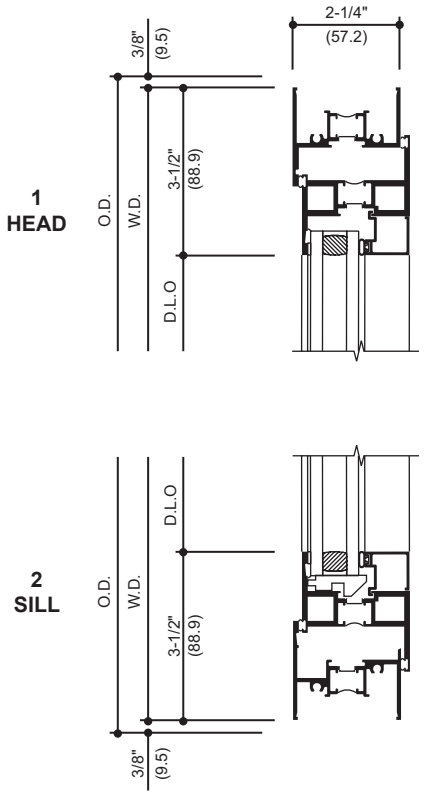
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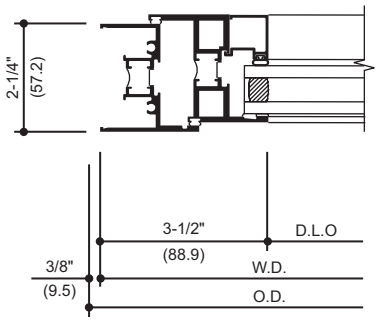
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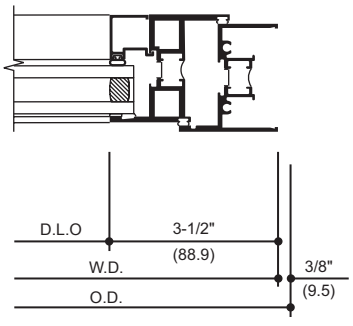


TYPICAL ELEVATION





3
JAMB



4
JAMB

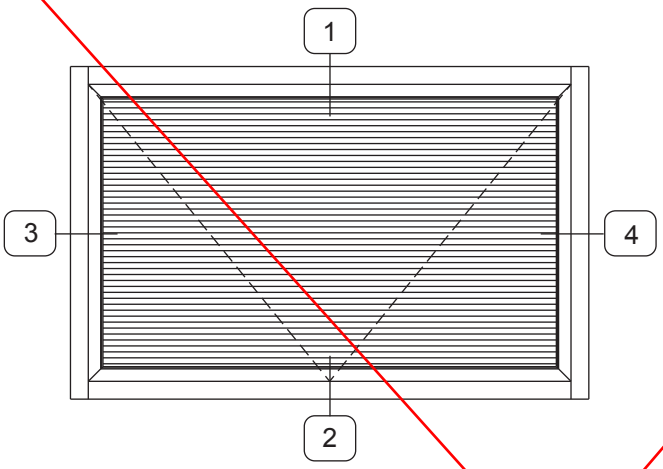
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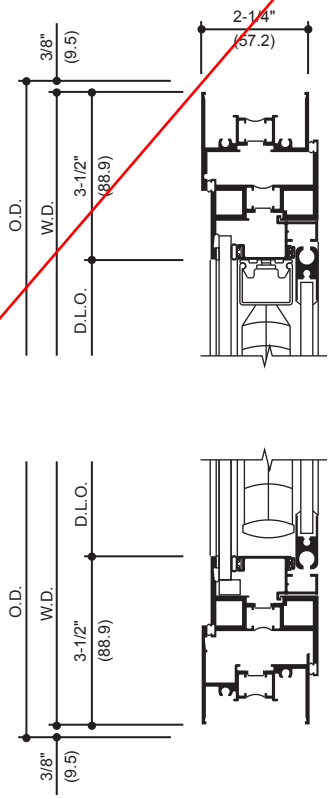
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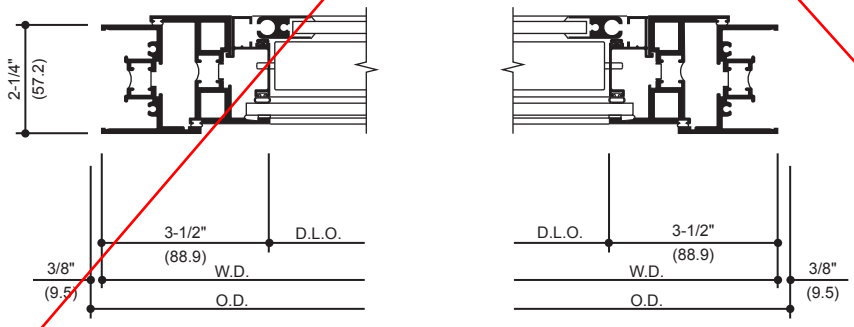
Additional information and CAD details are available at www.kawneer.com

ACCESS PANEL WITH BLINDS



TYPICAL ELEVATION





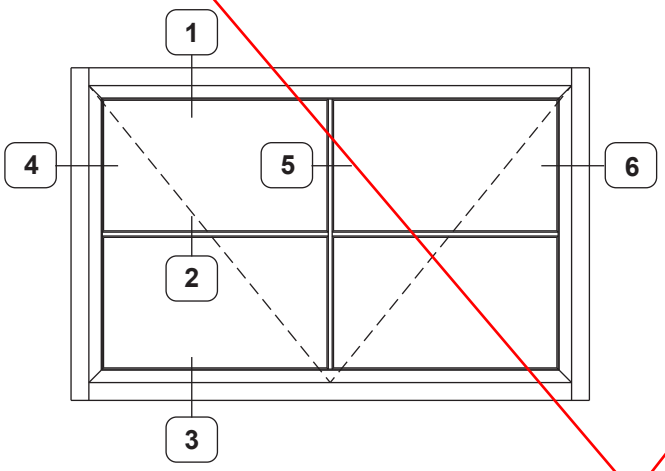
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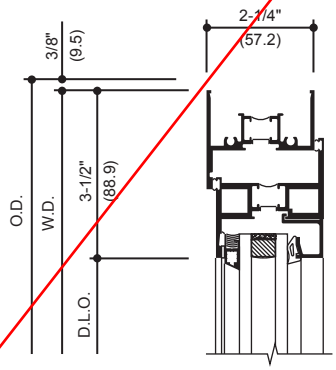
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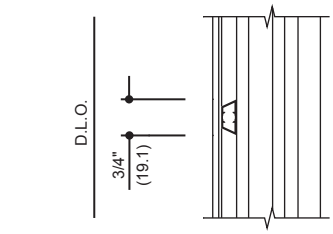
MUNTIN GRIDS



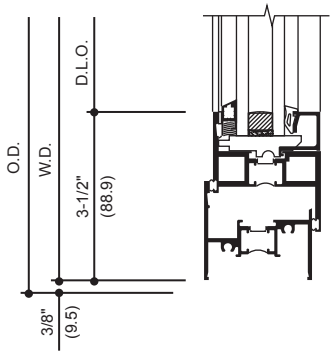
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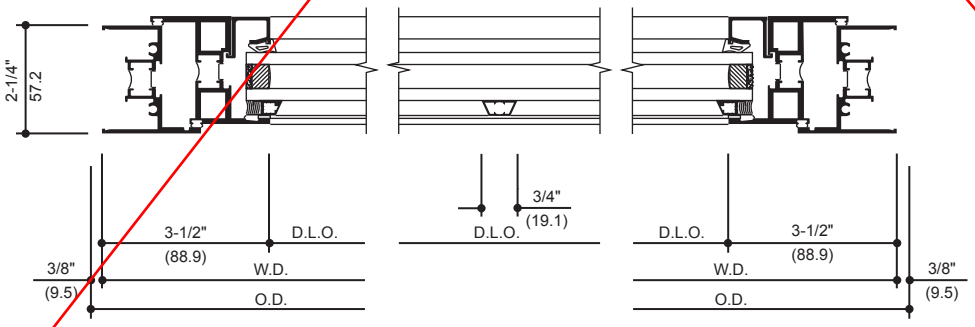
1 HEAD



2 APPLIED MUNTIN



3 SILL



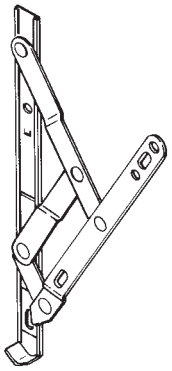
4 JAMB | **5 APPLIED MUNTIN** | **6 JAMB**

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STAINLESS STEEL 4 BAR HINGES



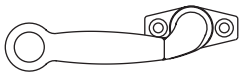
A standard hinge for ventilators providing approximately 45° to 60° openings depending on size. An optional limit stop is available to restrict hinge travel and limit vent opening.

STANDARD CAM HANDLE



Cast white bronze cam handles are standard for the manual operation and locking of ventilators.

CAM HANDLE WITH POLE RING



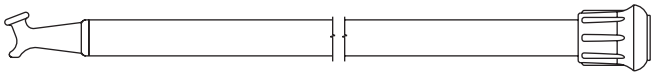
Cast white bronze cam handles with pole ring provide manual operation of ventilators located above reach.
These handles are operated with a sash pole.

POLE RING



Cast white bronze pole ring is used in conjunction with locking hardware for sash pole operation of ventilators.

SASH POLE

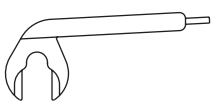


HANGER FOR SASH POLE



A 3/4" diameter aluminum sash pole with a cast white bronze pull down hook and black rubber tip.
Available in 6 ft. and 12 ft. lengths with optional cast white bronze Pole Hanger.

ACCESS CONTROL LOCK





In lieu of the standard cam handles cast white bronze access control locks are offered for managed control of vent operations. Lock is operated with a manganese bronze removable handle.

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PERMAFLUOR™ ARCHITECTURAL FINISHES

High-Performing Paints That Let You Design In Vibrant Living Color

KAWNEER


BLACK


BOYSENBERRY


HARTFORD GREEN


SANDSTONE


CLASSIC BRONZE


MILITARY BLUE

BONE WHITE

COLONIAL WHITE


ANTIQUE BRONZE


DOVE GRAY


DARK IVY


CHARCOAL


REDWOOD


SEA WOLF


MEDIUM BRONZE

There's a painted finish as expressive and enduring as the buildings you design. Permafluor™ Architectural Coatings combine beauty and successful performance as only a 70% fluoropolymer-based coating can.

Permafluor™ colors add life to your architectural expressions. Fifteen standard colors and a limitless pallet of custom colors can satisfy your creative needs. The standard colors are always in stock at Kawneer paint facilities for fast turnaround while the Permafluor™ custom colors can be formulated to meet your needs.

This is a paint that endures along with your architectural statement. Permafluor™ is formulated to maintain integrity for years. Outstanding durability translates to substantial maintenance savings over the life of the building.

Thousands of buildings throughout the world are a testament to the lasting beauty and performance of Kawneer standard Permafluor™ Architectural Coatings.

KAWNEER #22 STOCK PERMAFLUOR™ ARCHITECTURAL COATINGS

The 15 standard Permafluor™ colors shown on this chart are Kawneer #22 stock coatings. They are stocked at Kawneer paint facilities for fast turnaround of painted projects.

The following specifications are required for the proper application and end-use results of Permafluor™. Performance properties represent minimum results when Permafluor™ is applied according to specifications.

SPECIFICATIONS THAT MEET AAMA 2605 REQUIREMENTS

Permafluor™ coating will meet or exceed test requirements of AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

The following are guidelines for specifying and applying Permafluor™ coatings:

Pretreatment – The aluminum shall be thoroughly cleaned using a multi-stage cleaning process to remove organic and inorganic surface soils and residual oxides. Apply a chemical conversion coating to which organic coatings will firmly adhere.

Primer – The cleaned and treated substrate shall be primed to a thickness of 0.2 – 0.3 mils using approved factory application methods.

Paint – The Permafluor™ paint system shall contain 70% PVDF (Hylar 5000® or Kynar 500®) resin and durable ceramic pigments. It shall be factory applied and oven baked for a topcoat film thickness of 1.0 mil minimum. Clear topcoat, if required, shall be applied at 0.4 – 0.8 mils.

PERFORMANCE TABLE

Criteria	Performance
AAMA 2605	Meets or exceeds
Substrate	Aluminum only
Pretreatment	Multi-stage cleaning and conversion coating
Dry Film Thickness (ASTM D7091)	1.2 mils
Specular Gloss (ASTM D523)	Low and medium
Dry Film Hardness (ASTM D3363)	F min.
Impact Resistance	1/10" deformation No loss of adhesion
Abrasion Resistance (ASTM D968)	Coefficient of 40 minimum
Salt Spray (ASTM G85 Annex A5)	Hours: 2,000 Scribe or cut edges: Rating 7 Field: Rating 8
Humidity Resistance (ASTM D2247 or ASTM D4585)	Hours: 4,000 Few No. 8 blisters max.
10 Years South Florida	Color change: 5ΔE (Hunter) units max. Chalk resistance: Rating 8 max.
10% Muriatic Acid Spot Test	15 min. No blistering or visual change
Mortar (Alkali) Resistance	24-hour spot test, no visual change
72-Hour Detergent Immersion (@ 100°F)	No loss of adhesion
Boiling Water Adhesion	No removal of film after 20 min. exposure

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Note: These color samples are as close as possible to actual colors offered within the limitations of printing techniques. Final color specification will be as per approved color samples. Permafluor™ finishes are formulated for Kawneer Company, Inc.

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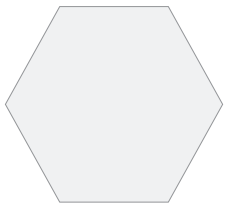
ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

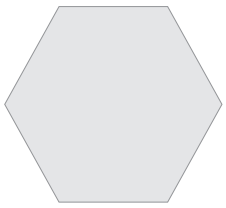
COATINGS
FINISHES
COLORS

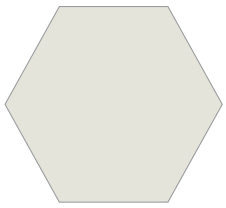
ALTERNATE MANUFACTURER COLOR SELECTION

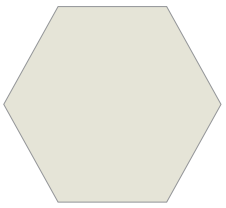
ULTRAPON (70% PVDF)

STANDARD


Bone White

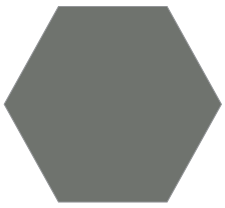

White

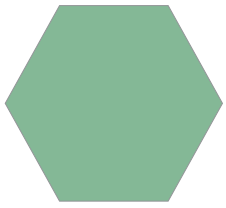

Antique White

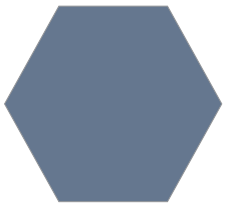

Herring Bone

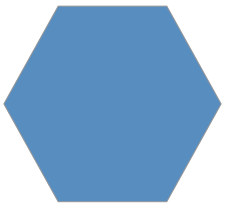

Mesa Brown

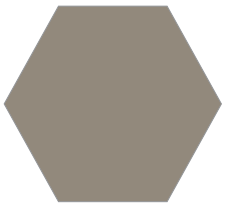

Mineral Brown

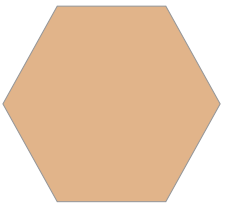

Gray


Aged Copper


Legacy Blue


Denim Blue


Light Brown

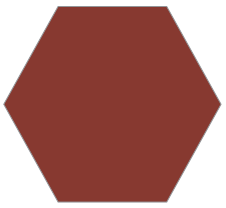

Pueblo Tan

FEATURED


Ivy


Hartford Green

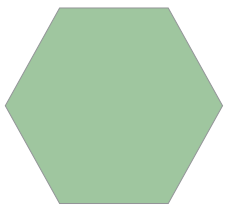

Blue Sky


Brick Red


Black

ULTRA-ESCENT II (70% PVDF MICA*)

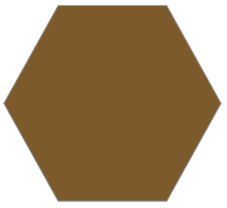
STANDARD


Weathered Copper

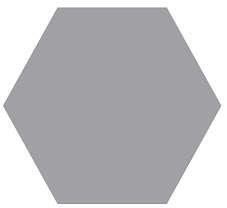

Slate


Raw Sienna

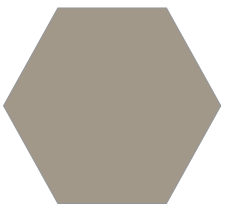

Gun Barrel

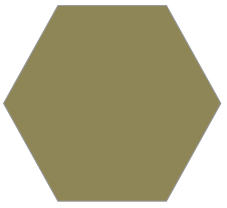

Saddle Bronze

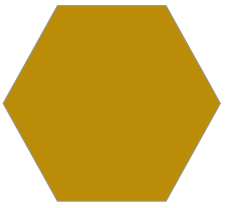
FEATURED


Warm Silver


Sea Spray


Asti


Champagne


Aztec Gold

[1] The color samples shown are not the actual paint. These paint colors represent the production colors as closely as possible within the limitations of color-chip reproduction.
[2] Additional charges may apply to exotic colors that require a clear topcoat, metallic colors, custom color matches
* Color variation is inherent in, and should be expected with Mica/Ultra-Escent II paint finishes. Laboratory-prepared samples will appear different from production-run material.

ANODIZE



Clear | Champagne | Light Bronze | Medium Bronze | Dark Bronze | Black

FINISH GUIDE

	AAMA Code	Application	Benefits	Content
PAINT	AAMA 2605	• Full sun and high-pollution environments • Salt-spray environment / coastal	• Superior resistance to fading and chalking • Longest finish life • 5 year standard warranty / custom warranties available • Custom finishes available / endless color options • Outstanding color consistency	• 70% Polyvinylidene Fluoride (PVDF) resin-based coating • 2-Coat standard / 3-Coat available
ANODIZE	AAMA 611	• Full sun and/or high-pollution environments • Salt-spray environment / coastal • Intended for continous outdoor exposure	• Optimizes cost/benefit ratio • Economical • Superior wear and abrasion resistance • Ease of maintenance • 3-year standard warranty / custom warranties available	• 2-Step electrolytic anodizing process • Class 1 coating has a mil thickness of 0.7 or greater



Saint Jude Children's Research Hospital
Memphis, Tennessee

Architect: Smith Group
Contractor: Skanksa USA
Erector: BHN Corporation
EFCO Products: Series D300, Series 403, Series 810I / 810G, System 5600 2 1/2", System 5900, E-Shade™
Finish: Ultrapon 70% PVDF - Custom

3 The color samples shown are not the actual anodize colors. These anodize colors represent the production colors as closely as possible within the limitations of color-chip reproduction.
4 Actual coating samples on aluminum are available upon request and are suggested as the best method of determining paint or anodize colors for a project.

Your EFCO representative has the knowledge and experience to assist you with finding the best selection of paint and coatings. For more information visit www.efcocorp.com, or call EFCO at 1-800-221-4169.

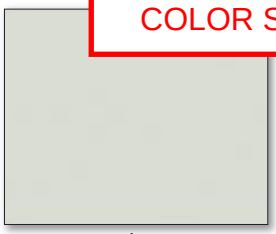
U.S. Aluminum
Color Selection Guide

PPG Coatings Protected

ALTERNATE MANUFACTURER COLOR SELECTION

DURANAR® Coatings

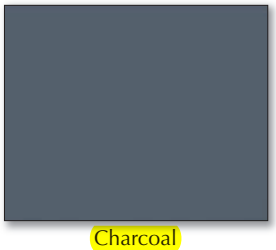

Black
UC70570


Sandstone
UC74743


Redwood
UC74955

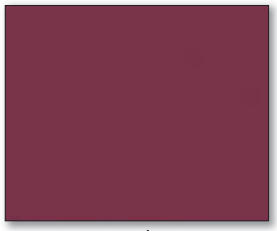

Regal Blue
UC70566


Bone White
UC43350


Charcoal
UC74712


Aged Copper
UC74956


Stone Gray
UC74945


Boysenberry
UC70571


Military Blue
UC70533


Classic Bronze
UC74957


Teal
UC70567


Hartford Green
UC70572


Pueblo Tan
UC74756


Ivy
UC70569


Stone White
UC74946

DURANAR® SUNSTORM™ Coatings


Asti
UC70390F


Sea Spray
UC115881F


Gold
UC70542F


Warm Silver
UC70093F


Medium Bronze
UC106692F


Light Bronze
UC106690F


Champagne
UC70202F

These color samples are as close as possible to the actual colors offered within the limitations of color chip reproduction.

For more than 50 years, **U.S. Aluminum** has been designing and manufacturing quality architectural aluminum products for the nonresidential construction market. Projects throughout North America are proof that U.S. Aluminum has the manufacturing, engineering, and service capabilities to make your next project a success. Our complete product line includes: doors, entrances, storefronts, impact resistant systems, window walls, curtain walls, sunshades, and commercial windows. Custom systems can be designed to meet specific project requirements. Supplying architects, engineers, and building owners with quality products, on time, is what U.S. Aluminum is all about. Give us a call today to see for yourself that U.S. Aluminum is clearly THE SOLID CHOICE.

PAINT SPECIFICATIONS

DURANAR® Coatings

Duranar® Coatings contain 70% Kynar 500® or Hylar 5000® fluoropolymer resin, and superior performance pigmentation for the best color retention. This coating exceeds the performance requirements of specification AAMA 2605, and offers exceptional fade and chalking resistance for high-rise or high profile projects.

- Minimum of 70% fluoropolymer resin for premium performance in solid colors
- Two coat system: Corrosion inhibiting primer at 0.2 mil. and durable high performance topcoat at 1.0 mil. Minimum total dry thickness or 1.2 mil.
- Hardness: F minimum
- Gloss: Medium (25-35 @ 60˚)
- Meets or exceeds AAMA 2605 specification

DURANAR® SUNSTORM™ Coatings

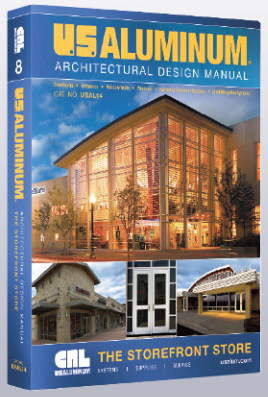
Duranar® Sunstorm™ Coatings contain 70% Kynar 500® or Hylar 5000® fluoropolymer resin for superior performance in pearlescent colors. This coating exceeds the performance requirements of specification AAMA 2605, and offers exceptional fade and chalking resistance for high-rise or high profile projects.

- Minimum of 70% fluoropolymer resin for premium performance pearlescent colors
- Two coat system: Corrosion inhibiting primer at 0.2 mil. and durable high performance topcoat at 1.0 mil. Minimum total dry thickness or 1.2 mil.
- Hardness: F minimum
- Gloss: Medium (25-35 @ 60˚)
- Meets or exceeds AAMA 2605 specification

The 23 standard colors shown are the most popular colors being specified in today's architectural structures. Custom colors can be mixed and matched as required.

Kynar 500® is a registered trademark of Arkema, Inc. - Hylar 5000® is a registered trademark of Solvay Solexis, Inc. -Duranar, Sunstorm, and the PPG logo are trademarks of PPG Industries Ohio, Inc.

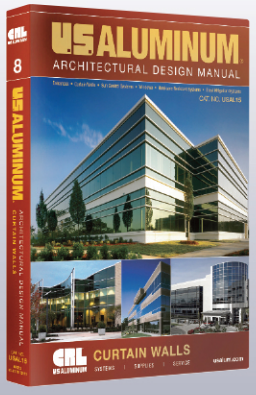
STOREFRONT AND CURTAIN WALL DESIGN MANUALS



ARCHITECTURAL DESIGN MANUAL

STOREFRONTS

- Entrances
- Storefronts
- Curtain Walls
- Sun Control Systems
- Windows
- Hurricane Resistant Systems
- Blast Resistant Systems



ARCHITECTURAL DESIGN MANUAL

CURTAIN WALLS

- Curtain Walls
- Entrances
- Sun Control Systems
- Windows
- Hurricane Resistant Systems
- Blast Resistant Systems

A wealth of experience, coupled with the large selection of architectural aluminum products enables you to design, create and build with complete confidence.

AVDB3210_10/14

CRL U.S. ALUMINUM
usalum.com

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2.B STOREFRONT DOORS

- Material: Aluminum-Framed Storefront Doors
- Basis-of-Design Product: Kawneer 500 Wide Stile Entrance
- Acceptable Manufacturers:

  EFCO Corporation

  US Aluminum
- Storefront doors are proposed at the entrances visible and facing Dranesville Road.
- The aluminum will be factory-finished with a fluoropolymer finish in the manufacturer's standard gray color to match the window framing.



Charcoal

KAWNEER

Single-Source Packages Generate Versatile First Impressions



Curtis Culwell Center
Garland, Texas
ARCHITECT
HKS, Inc., Dallas, Texas
GLAZING CONTRACTOR
B & B Glass, Inc., Dallas, Texas
PHOTOGRAPHER
© Blake Marvin – HKS

Tough yet attractive, Kawneer's Standard Entrances are designed as a single-source package of door, door frame and hardware that is easily adaptable to custom requirements. Designed to complement new or remodel construction as well as modern or traditional architecture, they are engineered, constructed and tested to make a good first impression while withstanding the rigors of constant use by occupants and visitors.

PERFORMANCE

To resist both lever arm and torsion forces that constantly act on any door, all three entrances feature welded corner construction with Sigma deep penetration and fillet welds plus mechanical fastenings at each corner – a total of 16 welds per door. Each door corner comes with a limited lifetime warranty, good for the life of the door under normal use. It is transferable from building owner to owner and is in addition to the standard two-year warranty covering material and workmanship of each Kawneer door.



1. Thermoplastic elastomer weatherstrip in blade stop of frame jambs, header or transom bar.
2. Integral polymeric fin attached to adjustable astragal, creating an air barrier between pairs of doors.
3. Optional surface-applied bottom weatherstrip with flexible blade gasket. Extruded raised lip on threshold to provide continuous contact for bottom weatherstrip.
4. Standard 1/4" beveled glass stops to sheet water and dirt off without leaving residue.
5. Available in all finishes offered by Kawneer.

ECONOMY

Kawneer's bulb neoprene weatherstripping forms a positive seal around the door frame and provides a substantial reduction in air infiltration, resulting in improved comfort and economies in heating and cooling costs. The system is wear- and temperature-resistant and replaces conventional weatherproofing. The bottom weatherstrip at the interior contains a flexible blade gasket to meet and contact the threshold, enhancing the air and water infiltration performance characteristics.

190 NARROW STILE ENTRANCE

- Is engineered for moderate traffic in applications such as stores, offices and apartment buildings
- Vertical stile measures 2-1/8", top rail 2-1/4" and bottom rail 3-7/8"
- Results in a slim look that meets virtually all construction requirements

350 MEDIUM STILE ENTRANCE

- Provides extra strength for applications such as schools, institutions and other high-traffic applications
- Vertical stiles and top rails measure 3-1/2"
- Bottom rail measures 6-1/2" for extra durability

500 WIDE STILE ENTRANCE

- Creates a monumental visual statement for applications such as banks, libraries and public buildings
- Vertical stiles and top rail measures 5"; bottom rail measures 6-1/2"
- Results in superior strength for buildings experiencing heavy traffic conditions

GENERAL

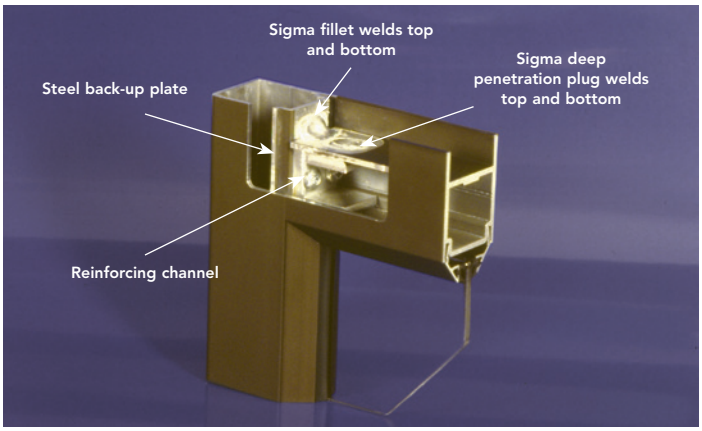
- Heights vary up to 10'; widths range from approximately 3' to 4'
- Door frame face widths range to a maximum of 4", while depths range to 6"
- Door operation is single- or double-acting with maximum security locks or touch bar panics standard
- Architect's classic 1" round, bent bar push/pull hardware is available in various finishes and sizes
- Infills range from 1/4" to 1"

FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum finishes are available in clear and Permanodic® color choices.

Painted finishes, including fluoropolymer, that meet AAMA 2605 are offered in many standard choices and an unlimited number of specially designed colors.

Solvent-free powder coatings add the "green" element with high performance, durability and scratch resistance that meet the standards of AAMA 2604.



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Form Number 17-2225.B
Permanodic® is a registered trademark of Kawneer Company, Inc.

Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
770.449.5555
kawneer.com

KAWNEER

ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

Features

- ~~190 narrow stile has 2-1/8" (54) vertical stile, 2-1/4" (57.2) top and 3-7/8" (98.4) bottom rail~~
- ~~350 medium stile has 3-1/2" (88.9) vertical stile, 3-1/2" (88.9) top and 6-1/2" (165.1) bottom rail~~
- 500 wide stile has 5" (127) vertical stile, 5" (127) top and 6-1/2" (165.1) bottom rail
- Door is 1-3/4" (44.5) deep
- Dual moment welded corner construction
- Single or double acting
- Infills range from 1/4" (6.4) to 1" (25.4)
- Offset pivots, butt hinges, continuous geared hinge or center pivots
- MS locks or panic hardware
- Surface mounted or concealed closers
- Architects Classic push/pulls
- Adjustable astragal utilizing pile weathering with polymeric fin at meeting stiles
- Polymeric bulb weatherstripping in door frames
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices

Optional Features

- Paneline® exit device or Paneline® MEL exit device
- Wide variety of bottom rail and cross rail

Product Applications

- ~~190 narrow stile - engineered for moderate traffic in applications such as offices and stores~~
- ~~350 medium stile - provides extra strength for schools, institutions and other high~~ traffic applications
- 500 wide stile - creates a monumental visual statement for banks, libraries or buildings that experience heavy traffic conditions

For specific product applications,
consult your Kawneer representative.

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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BOTTOM RAILS 21
THERMAL CHARTS 22-40

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

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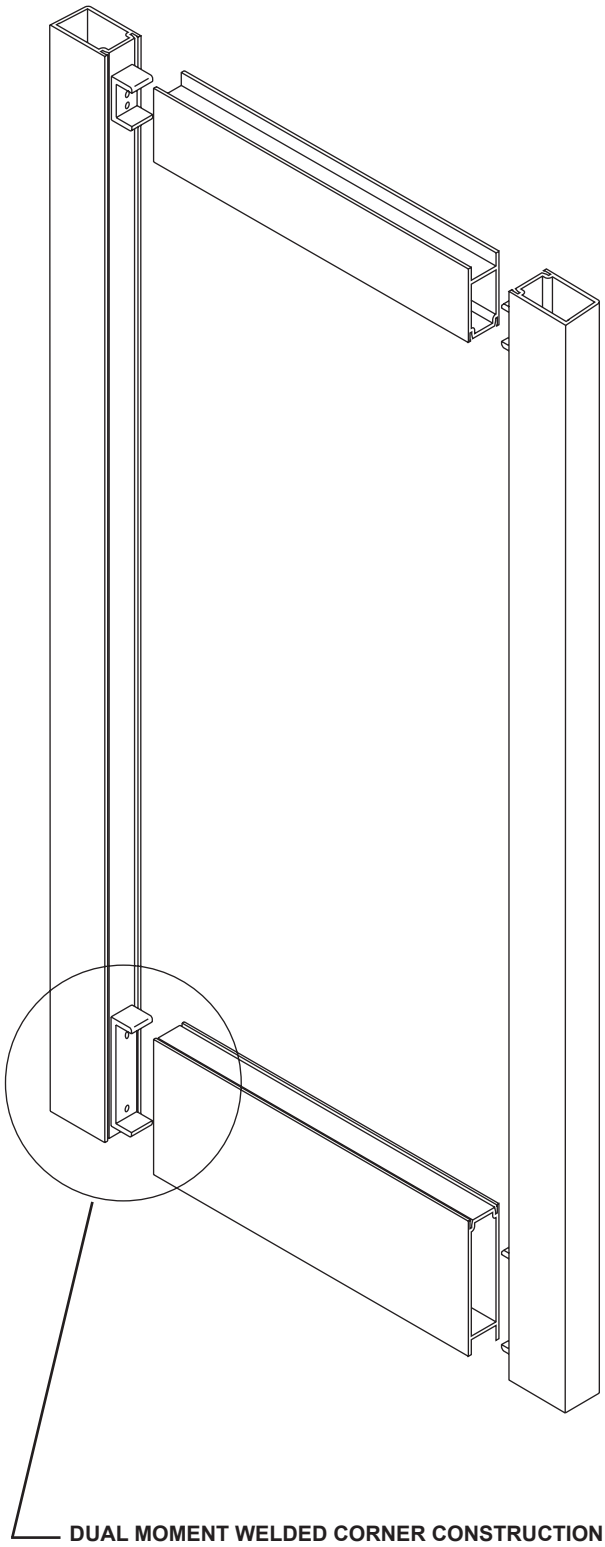
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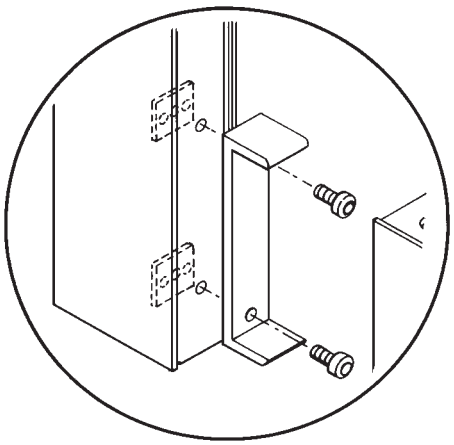
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190/350/500 Standard Entrances

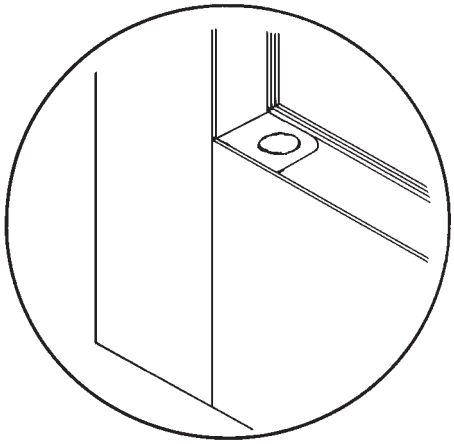
PICTORIAL VIEW



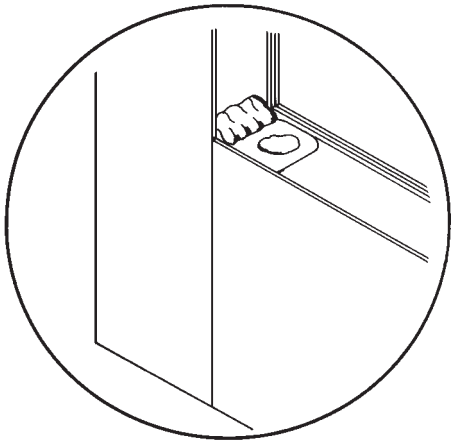
DUAL MOMENT WELDED CORNER CONSTRUCTION



#1 MECHANICAL FASTENING is accomplished by attaching a 5/16" (7.9) thick extruded aluminum channel clip to the vertical stile with 1/4"-20 heat strengthened bolts and 3/16" thick steel nut plates for a high strength welding base for attachment horizontal member.



#2 SIGMA* DEEP PENETRATION PLUG WELDS are made top and bottom after the horizontal is properly positioned over the channel clip to help provide the strongest door corner joint currently available.



#3 SIGMA* FILLET WELDS along both top and bottom webs of the rail extrusion complete the welded corner construction.

*** An arc welding process known as Shielded Inert Gas Metal Arc (SIGMA) or also known as Metal Inert Gas (MIG).**

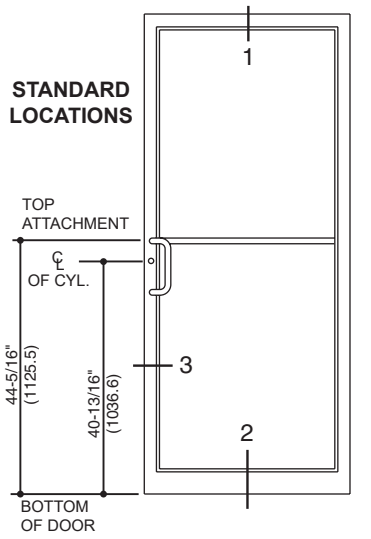
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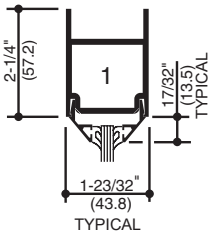
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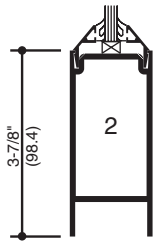
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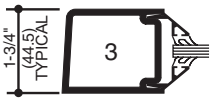
Additional information and CAD details are available at www.kawneer.com

190 NARROW STILE

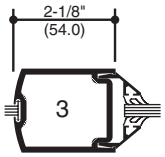






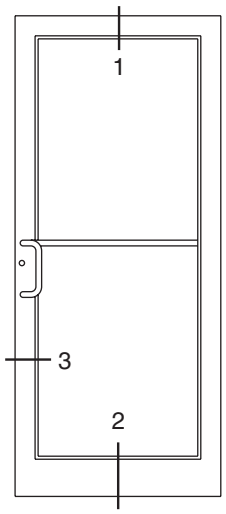


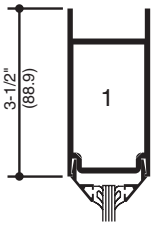
SINGLE ACTING

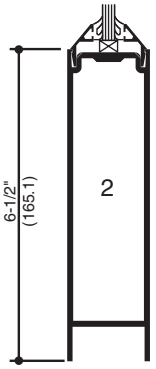


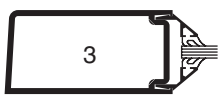
DOUBLE ACTING

350 MEDIUM STILE

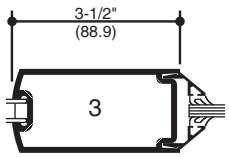






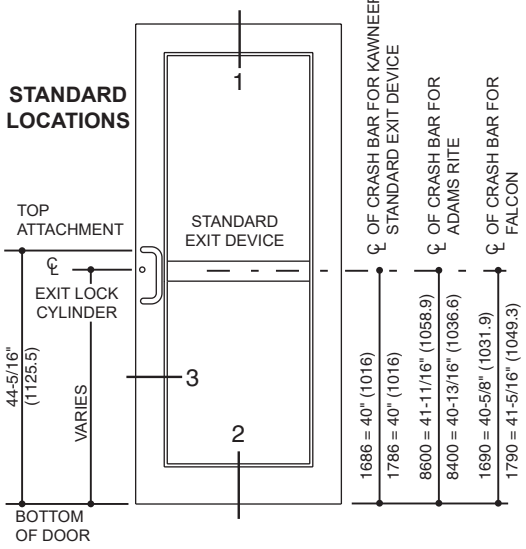


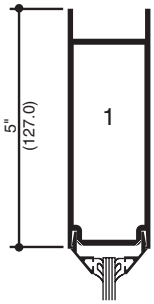
SINGLE ACTING

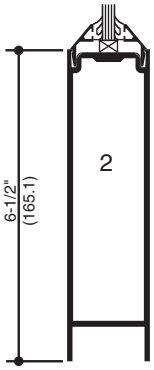


DOUBLE ACTING

500 WIDE STILE

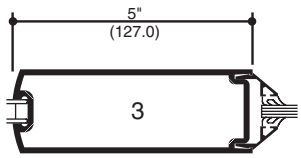








SINGLE ACTING



DOUBLE ACTING

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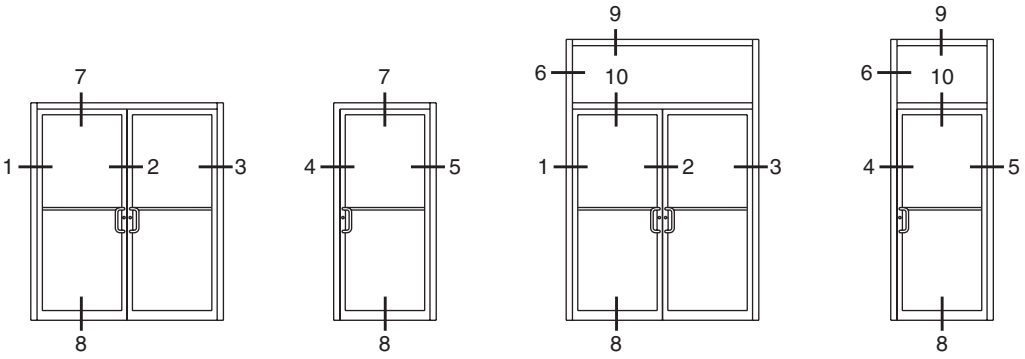
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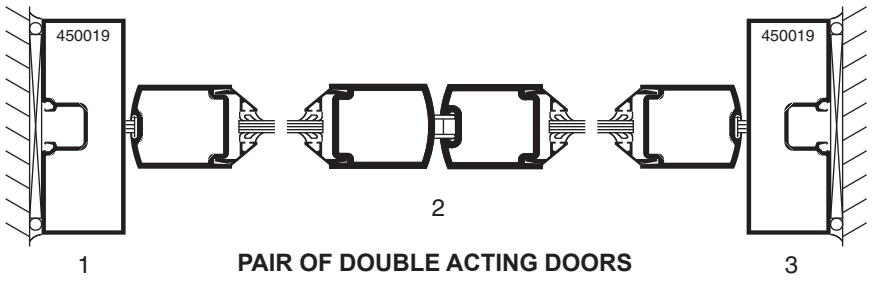
Additional information and CAD details are available at www.kawneer.com

NOTE:

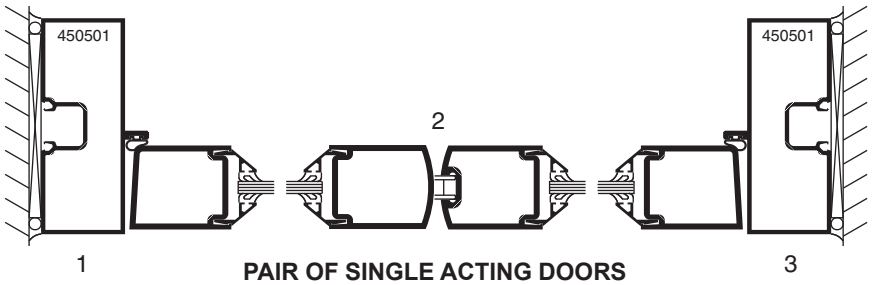
1. SERIES 190 NARROW STILE DOORS ARE DETAILED, MEDIUM STILE 350 DOORS AND WIDE STILE 500 DOORS ALSO MAY BE USED.

2. TRIFAB® VERSAGLAZE® 450 CENTER, 1-3/4" X 4-1/2" (44.5 X 114.3) FRAMING IS DETAILED WITH THE DOORS FOR REFERENCE. OTHER KAWNEER FRAMING SERIES OR CURTAIN WALL SYSTEMS MAY BE USED. REFER TO THE CATALOG INDEX FOR THE APPROPRIATE DETAIL SECTION.

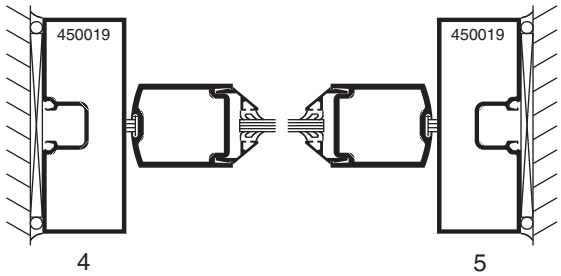




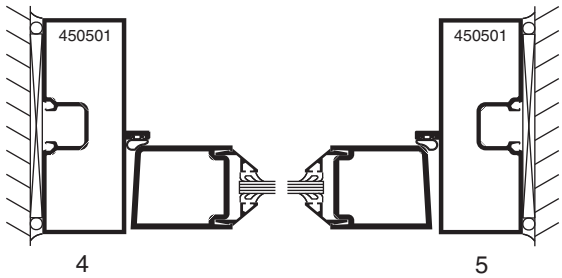
PAIR OF DOUBLE ACTING DOORS



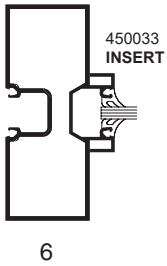
PAIR OF SINGLE ACTING DOORS



DOUBLE ACTING DOOR



SINGLE ACTING DOOR



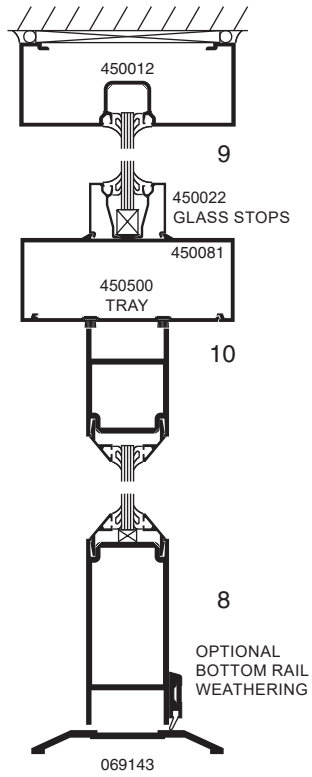
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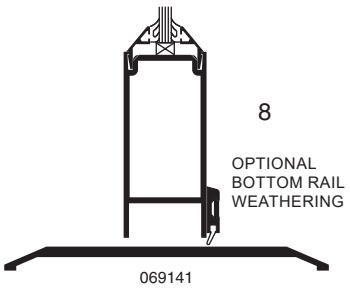
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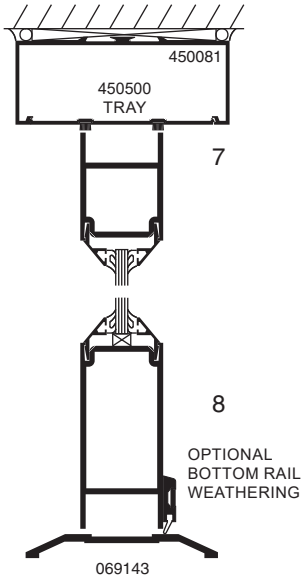
DOUBLE ACTING DOORS



OVERHEAD CLOSER

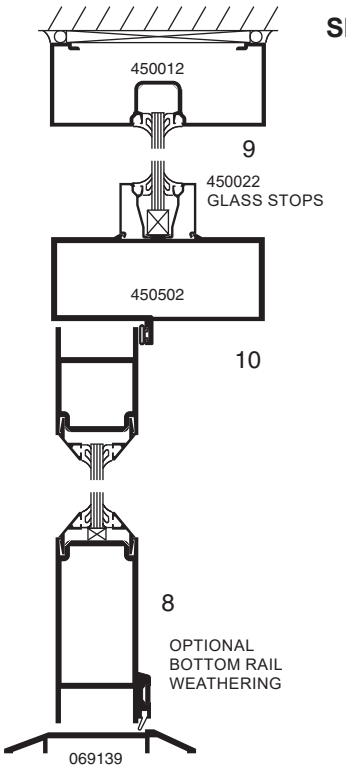


FLOOR CLOSER

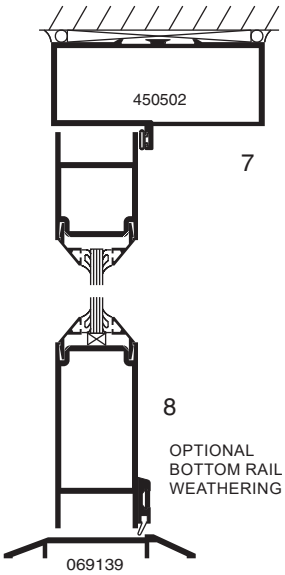


OVERHEAD CLOSER

SINGLE ACTING DOORS

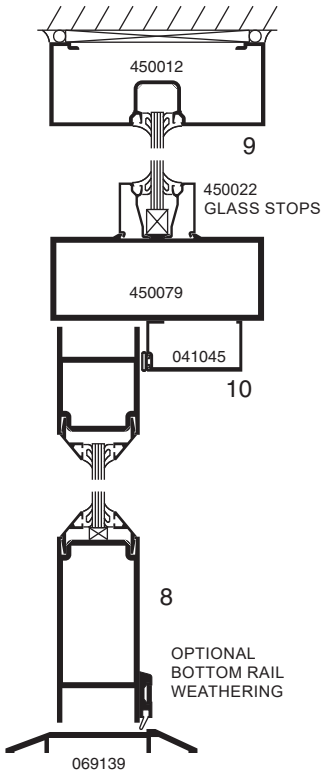


OVERHEAD CLOSER

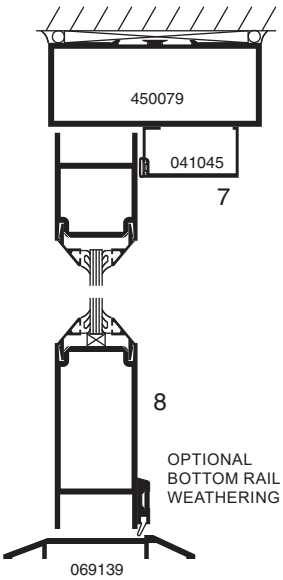


OVERHEAD CLOSER

COC WITH SINGLE ACTING OFFSET ARM



OVERHEAD CLOSER



OVERHEAD CLOSER

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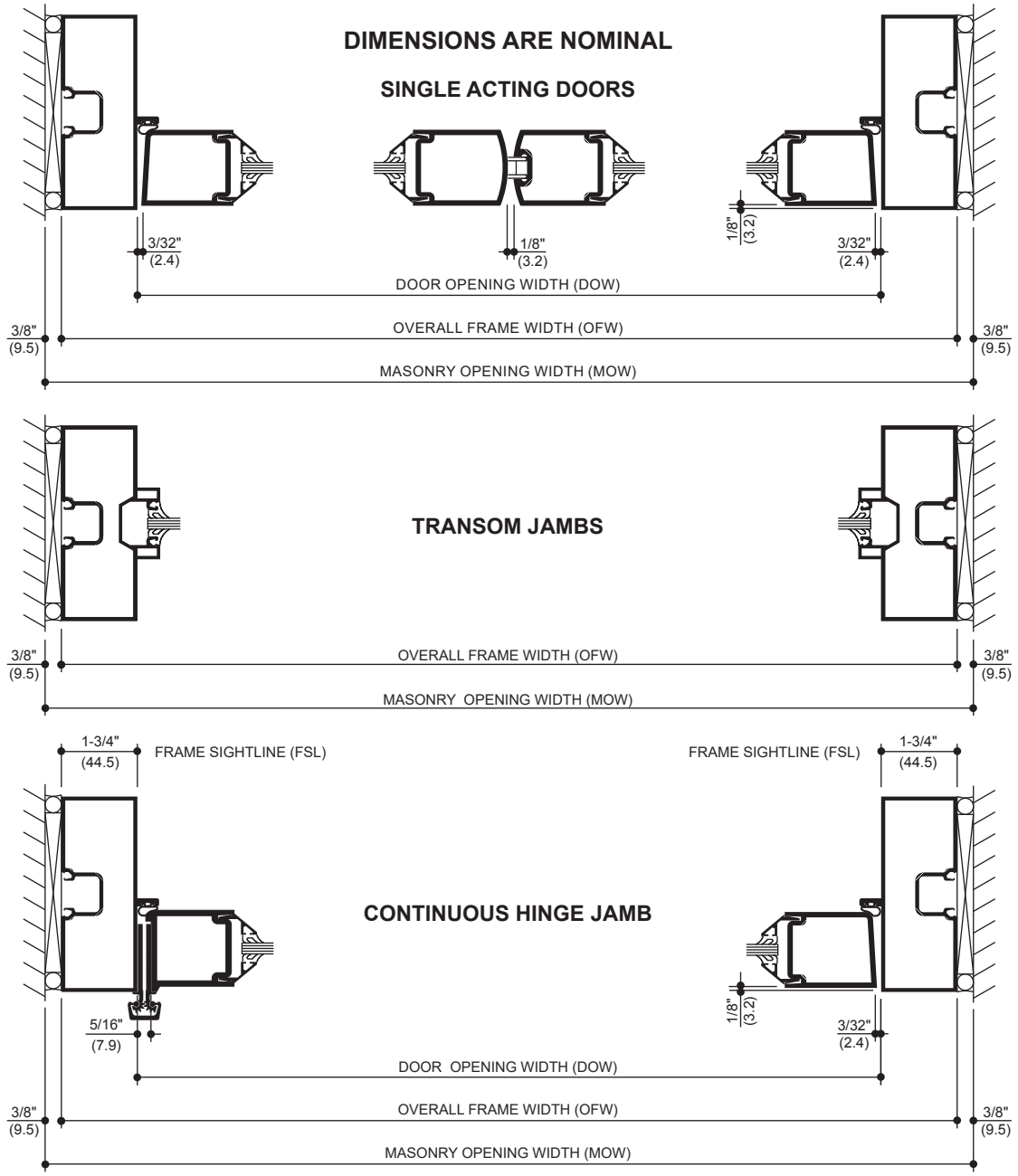
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Trifab® VersaGlaze® 450 center door frames shown, Trifab® VersaGlaze® 451 center door frames similar.



STANDARD SIZES (TRIFAB® 400 & TRIFAB® VG 450 CENTER FRAMES)

WITH AND WITHOUT TRANSOM

Door Opening Dimension (DOW)		**Overall Frame Dimension** (OFW)		**Masonry Opening Dimension** (MOW)	
3' 0"	(914)	3' 3-1/2"	(1,003)	3' 4-1/4"	(1,022)
3' 6"	(1,067)	3' 9-1/2"	(1,156)	3' 10-1/4"	(1,175)
6' 0"	(1,829)	6' 3-3/4"	(1,924)	6' 4-1/4"	(1,937)

STANDARD SIZES (TRIFAB® VG 451 CENTER FRAMES)

WITH AND WITHOUT TRANSOM

Door Opening Dimension (DOW)		**Overall Frame Dimension** (OFW)		**Masonry Opening Dimension** (MOW)	
3' 0"	(914)	3' 4"	(1,016)	3' 4-3/4"	(1,035)
3' 6"	(1,067)	3' 10"	(1,168)	3' 10-3/4"	(1,187)
6' 0"	(1,829)	6' 4"	(1,930)	6' 4-3/4"	(1,949)

WITH AND WITHOUT TRANSOM

OFW = DOW + 2 FSL

MOW = OFW + 3/4"

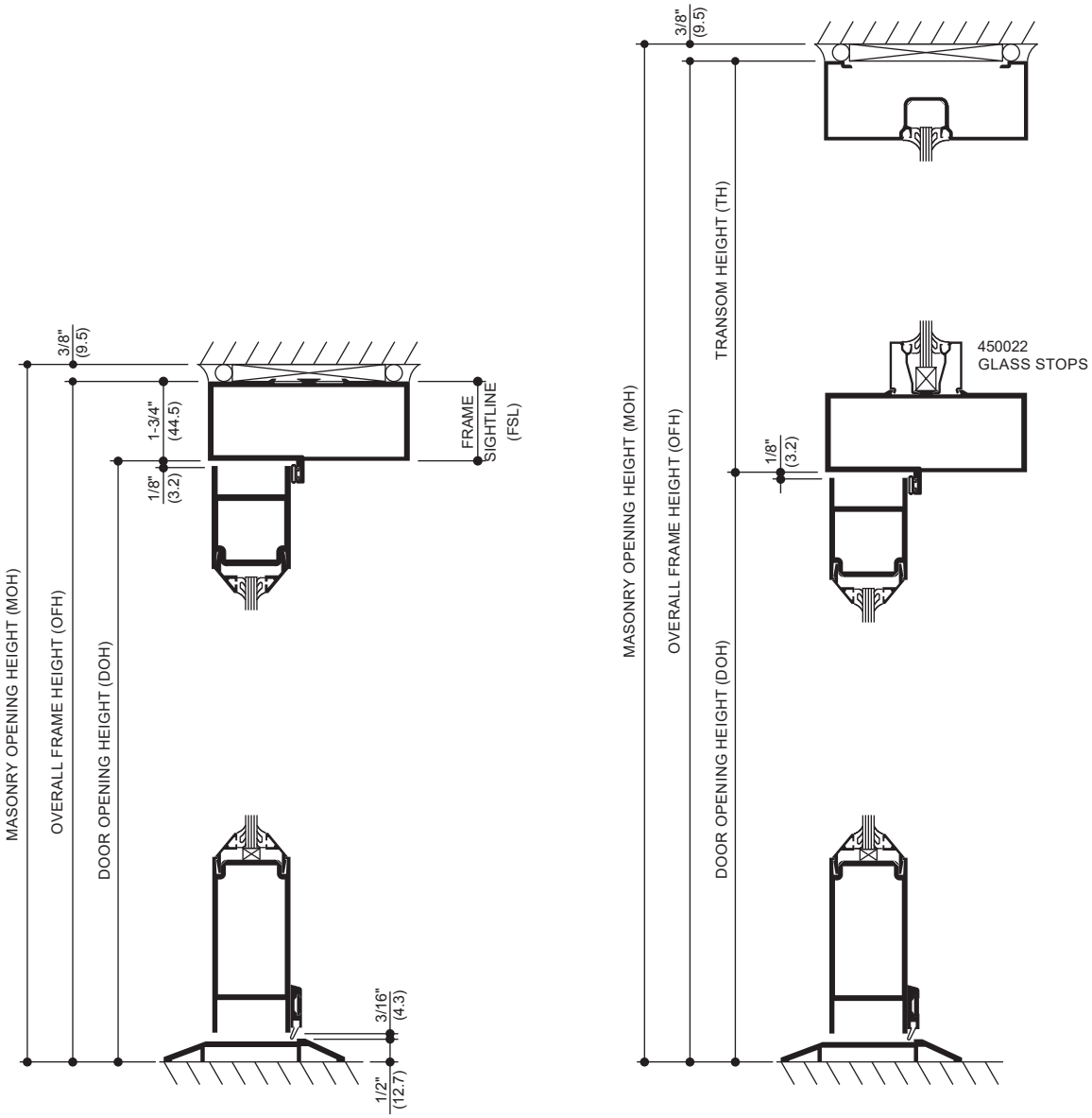
Note: Dimensions shown above reflect A1 Price Book standard stock door frame height with transom at 10' 3-1/2" (3,137).

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STANDARD SIZES (TRIFAB® 400 & TRIFAB® VG 450 CENTER FRAMES)					
WITHOUT TRANSOM					
Door Opening Dimension (DOH)		**Overall Frame Dimension** (OFH)		**Masonry Opening Dimension** (MOH)	
7' 0"	(2,134)	7' 1-3/4"	(2,178)	7' 2-1/8"	(2,188)
7' 0"	(2,134)	7' 1-3/4"	(2,178)	7' 2-1/8"	(2,188)
7' 0"	(2,134)	7' 1-3/4"	(2,178)	7' 2-1/8"	(2,188)

STANDARD SIZES (TRIFAB® VG 451 CENTER FRAMES)					
WITHOUT TRANSOM					
Door Opening Dimension (DOH)		**Overall Frame Dimension** (OFH)		**Masonry Opening Dimension** (MOH)	
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)
7' 0"	(2,134)	7' 2"	(2,184)	7' 2-3/8"	(2,194)

WITHOUT TRANSOM

OFH = DOH + FSL
MOH = OFH + 3/8"

WITH TRANSOM

OFH = DOH +TH
MOH = OFH + 3/8"

Note: Dimensions shown above reflect A1 Price Book standard stock door frame height with transom at 10' 3-1/2" (3,137).

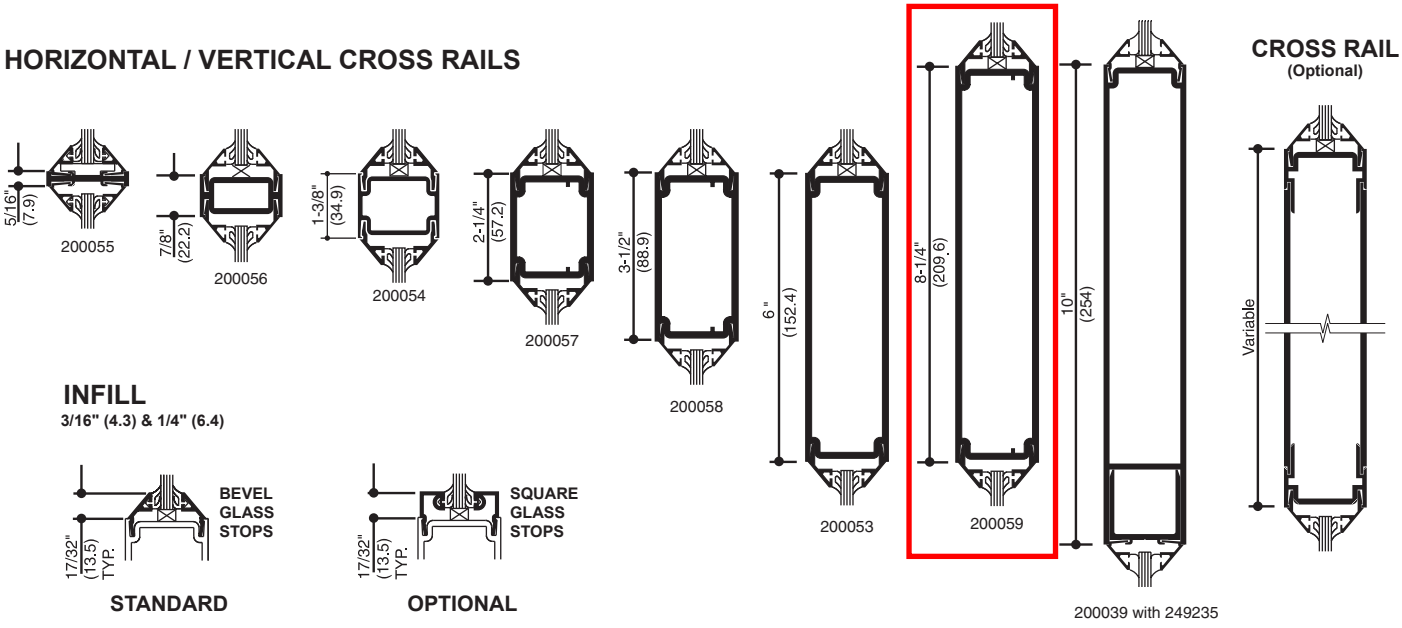
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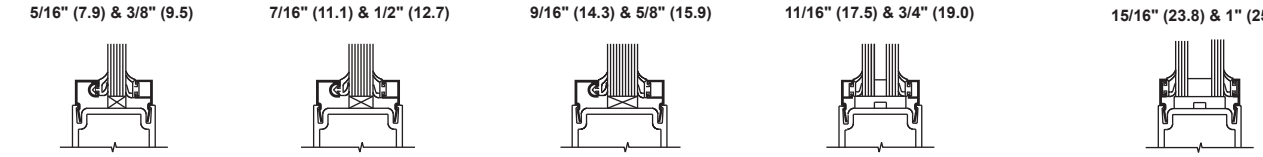
Additional information and CAD details are available at www.kawneer.com

HORIZONTAL / VERTICAL CROSS RAILS

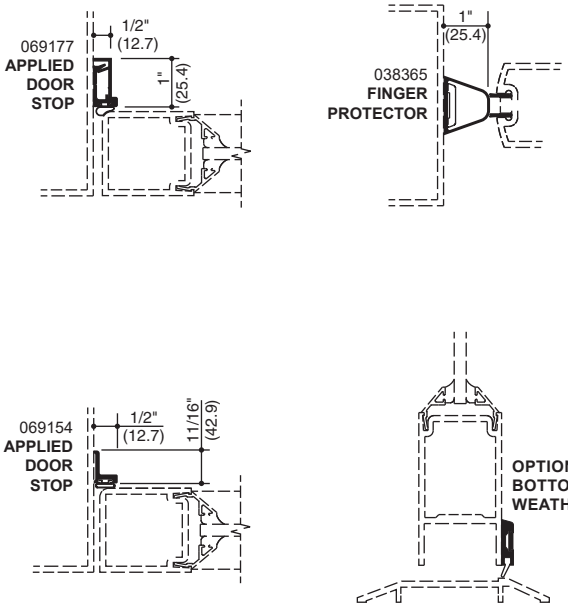


INFILL
3/16" (4.3) & 1/4" (6.4)

INFILL OPTIONS



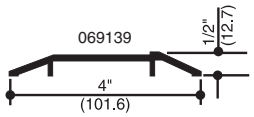
ACCESSORY ITEMS



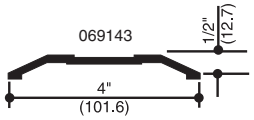
THRESHOLDS

APPLICATION

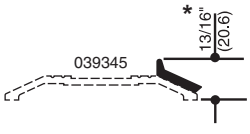
FOR SINGLE ACTING DOOR



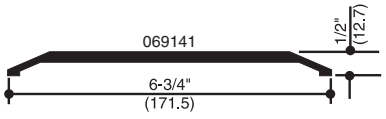
FOR CENTER HUNG CONCEALED CLOSER



APPLIED STOP FOR SINGLE ACTING DOOR



FOR CENTER HUNG FLOOR CLOSERS



***SOME BUILDING CODES LIMIT THRESHOLD HEIGHT TO 1/2" (12.7) MAX.**

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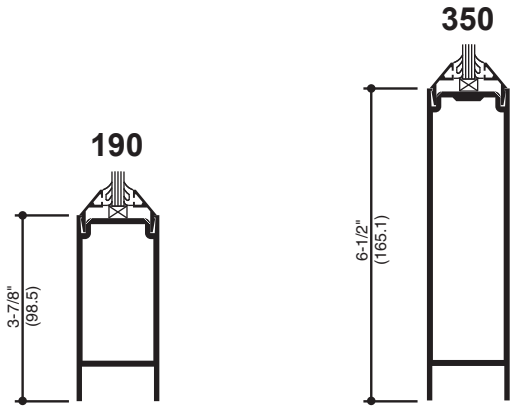
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STANDARD BOTTOM RAILS

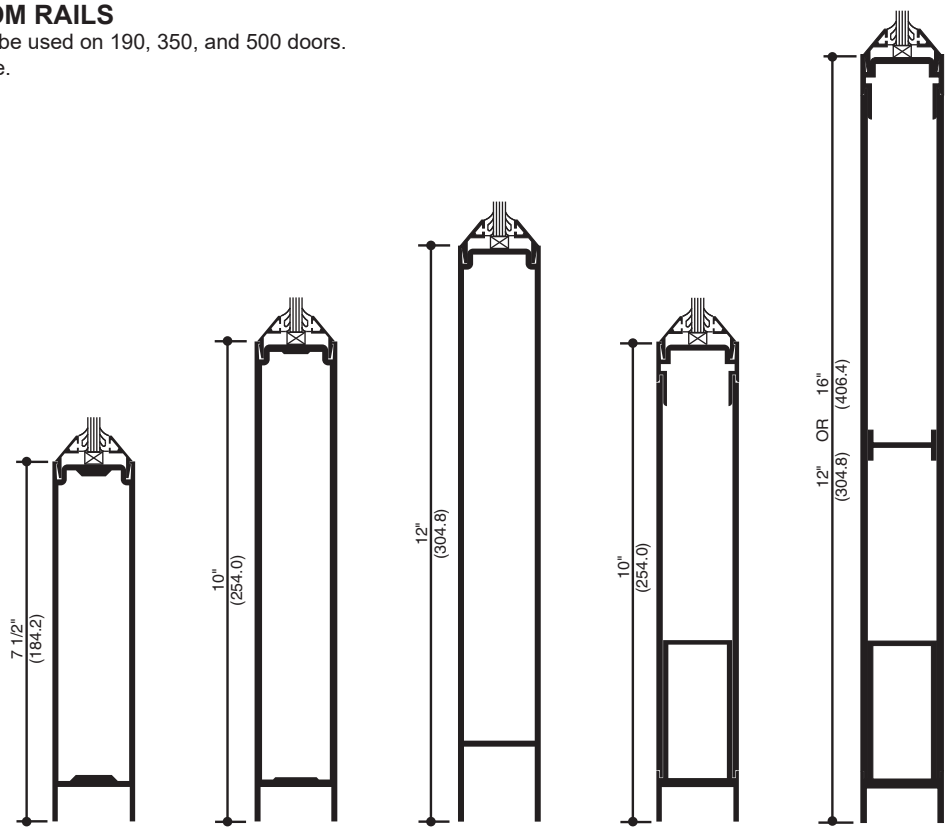
Rail heights shown may be used on 190, 350, and 500 doors.



NOTE:
See Page 19 for available Horizontal Intermediate Members.

OPTIONAL BOTTOM RAILS

Rail heights shown may be used on 190, 350, and 500 doors.
Custom heights available.



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PERMAFLUOR™ ARCHITECTURAL FINISHES

High-Performing Paints That Let You Design In Vibrant Living Color

KAWNEER


BLACK


BOYSENBERRY


HARTFORD GREEN


SANDSTONE


CLASSIC BRONZE


MILITARY BLUE

BONE WHITE

COLONIAL WHITE


ANTIQUE BRONZE


DOVE GRAY


DARK IVY


CHARCOAL


REDWOOD


SEA WOLF


MEDIUM BRONZE

There's a painted finish as expressive and enduring as the buildings you design. Permafluor™ Architectural Coatings combine beauty and successful performance as only a 70% fluoropolymer-based coating can.

Permafluor™ colors add life to your architectural expressions. Fifteen standard colors and a limitless pallet of custom colors can satisfy your creative needs. The standard colors are always in stock at Kawneer paint facilities for fast turnaround while the Permafluor™ custom colors can be formulated to meet your needs.

This is a paint that endures along with your architectural statement. Permafluor™ is formulated to maintain integrity for years. Outstanding durability translates to substantial maintenance savings over the life of the building.

Thousands of buildings throughout the world are a testament to the lasting beauty and performance of Kawneer standard Permafluor™ Architectural Coatings.

KAWNEER #22 STOCK PERMAFLUOR™ ARCHITECTURAL COATINGS

The 15 standard Permafluor™ colors shown on this chart are Kawneer #22 stock coatings. They are stocked at Kawneer paint facilities for fast turnaround of painted projects.

The following specifications are required for the proper application and end-use results of Permafluor™. Performance properties represent minimum results when Permafluor™ is applied according to specifications.

SPECIFICATIONS THAT MEET AAMA 2605 REQUIREMENTS

Permafluor™ coating will meet or exceed test requirements of AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

The following are guidelines for specifying and applying Permafluor™ coatings:

Pretreatment – The aluminum shall be thoroughly cleaned using a multi-stage cleaning process to remove organic and inorganic surface soils and residual oxides. Apply a chemical conversion coating to which organic coatings will firmly adhere.

Primer – The cleaned and treated substrate shall be primed to a thickness of 0.2 – 0.3 mils using approved factory application methods.

Paint – The Permafluor™ paint system shall contain 70% PVDF (Hylar 5000® or Kynar 500®) resin and durable ceramic pigments. It shall be factory applied and oven baked for a topcoat film thickness of 1.0 mil minimum. Clear topcoat, if required, shall be applied at 0.4 – 0.8 mils.

PERFORMANCE TABLE

Criteria	Performance
AAMA 2605	Meets or exceeds
Substrate	Aluminum only
Pretreatment	Multi-stage cleaning and conversion coating
Dry Film Thickness (ASTM D7091)	1.2 mils
Specular Gloss (ASTM D523)	Low and medium
Dry Film Hardness (ASTM D3363)	F min.
Impact Resistance	1/10" deformation No loss of adhesion
Abrasion Resistance (ASTM D968)	Coefficient of 40 minimum
Salt Spray (ASTM G85 Annex A5)	Hours: 2,000 Scribe or cut edges: Rating 7 Field: Rating 8
Humidity Resistance (ASTM D2247 or ASTM D4585)	Hours: 4,000 Few No. 8 blisters max.
10 Years South Florida	Color change: 5ΔE (Hunter) units max. Chalk resistance: Rating 8 max.
10% Muriatic Acid Spot Test	15 min. No blistering or visual change
Mortar (Alkali) Resistance	24-hour spot test, no visual change
72-Hour Detergent Immersion (@ 100°F)	No loss of adhesion
Boiling Water Adhesion	No removal of film after 20 min. exposure

Hylar 5000® is a registered trademark of Solvay Solexis, Inc., Kynar 500® is a registered trademark of Arkema Inc.

Note: These color samples are as close as possible to actual colors offered within the limitations of printing techniques. Final color specification will be as per approved color samples. Permafluor™ finishes are formulated for Kawneer Company, Inc.

Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
770.449.5555
kawneer.com

KAWNEER

ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

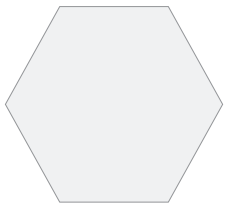
© Kawneer Company, Inc. 2007-2018
Form Number 14-2195.C
Permafluor™ is a trademark of Kawneer Company, Inc.

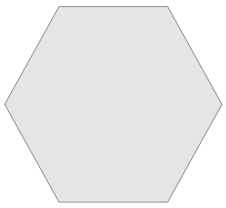
COATINGS
FINISHES
COLORS

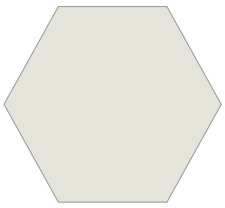
ALTERNATE MANUFACTURER COLOR SELECTION

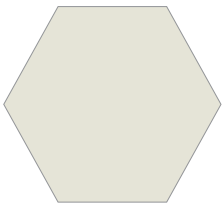
ULTRAPON (70% PVDF)

STANDARD


Bone White

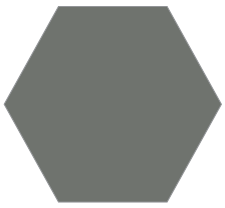

White

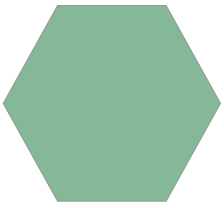

Antique White

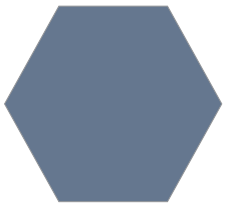

Herring Bone

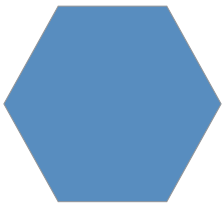

Mesa Brown

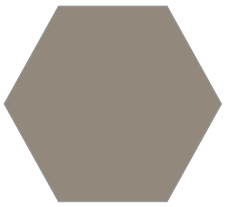

Mineral Brown

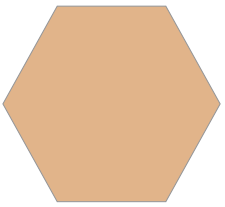

Gray


Aged Copper


Legacy Blue


Denim Blue


Light Brown

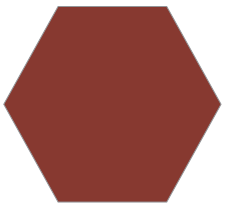

Pueblo Tan

FEATURED


Ivy


Hartford Green

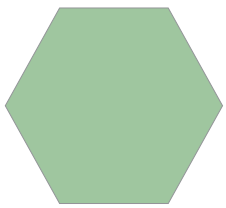

Blue Sky


Brick Red


Black

ULTRA-ESCENT II (70% PVDF MICA*)

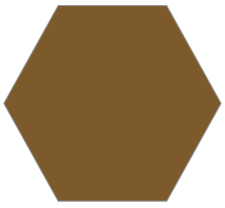
STANDARD


Weathered Copper

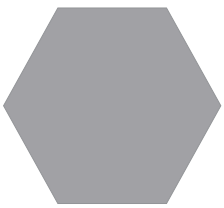

Slate


Raw Sienna

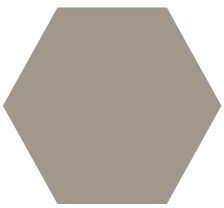

Gun Barrel


Saddle Bronze

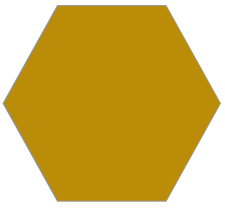
FEATURED


Warm Silver


Sea Spray


Asti


Champagne


Aztec Gold

[1] The color samples shown are not the actual paint. These paint colors represent the production colors as closely as possible within the limitations of color-chip reproduction.
[2] Additional charges may apply to exotic colors that require a clear topcoat, metallic colors, custom color matches
* Color variation is inherent in, and should be expected with Mica/Ultra-Escent II paint finishes. Laboratory-prepared samples will appear different from production-run material.

ANODIZE



Clear | Champagne | Light Bronze | Medium Bronze | Dark Bronze | Black

FINISH GUIDE

	AAMA Code	Application	Benefits	Content
PAINT	AAMA 2605	• Full sun and high-pollution environments • Salt-spray environment / coastal	• Superior resistance to fading and chalking • Longest finish life • 5 year standard warranty / custom warranties available • Custom finishes available / endless color options • Outstanding color consistency	• 70% Polyvinylidene Fluoride (PVDF) resin-based coating • 2-Coat standard / 3-Coat available
ANODIZE	AAMA 611	• Full sun and/or high-pollution environments • Salt-spray environment / coastal • Intended for continous outdoor exposure	• Optimizes cost/benefit ratio • Economical • Superior wear and abrasion resistance • Ease of maintenance • 3-year standard warranty / custom warranties available	• 2-Step electrolytic anodizing process • Class 1 coating has a mil thickness of 0.7 or greater



Saint Jude Children's Research Hospital
Memphis, Tennessee

Architect: Smith Group
Contractor: Skanksa USA
Erector: BHN Corporation
EFCO Products: Series D300, Series 403, Series 810I / 810G, System 5600 2 1/2", System 5900, E-Shade™
Finish: Ultrapon 70% PVDF - Custom

3 The color samples shown are not the actual anodize colors. These anodize colors represent the production colors as closely as possible within the limitations of color-chip reproduction.
4 Actual coating samples on aluminum are available upon request and are suggested as the best method of determining paint or anodize colors for a project.

Your EFCO representative has the knowledge and experience to assist you with finding the best selection of paint and coatings. For more information visit www.efcocorp.com, or call EFCO at 1-800-221-4169.

U.S. Aluminum
Color Selection Guide

PPG Coatings Protected

ALTERNATE MANUFACTURER COLOR SELECTION

DURANAR® Coatings

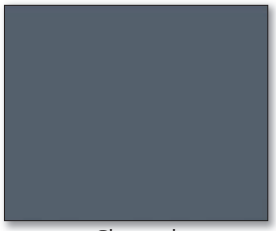

Black
UC70570


Sandstone
UC74745


Redwood
UC74955

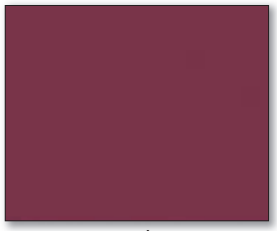

Regal Blue
UC70566


Bone White
UC43350


Charcoal
UC74712


Aged Copper
UC74956


Stone Gray
UC74945


Boysenberry
UC70571


Military Blue
UC70533


Classic Bronze
UC74957


Teal
UC70567


Hartford Green
UC70572


Pueblo Tan
UC74756


Ivy
UC70569


Stone White
UC74946

DURANAR® SUNSTORM™ Coatings


Asti
UC70390F


Sea Spray
UC115881F


Gold
UC70542F


Warm Silver
UC70093F


Medium Bronze
UC106692F


Light Bronze
UC106690F


Champagne
UC70202F

These color samples are as close as possible to the actual colors offered within the limitations of color chip reproduction.

For more than 50 years, **U.S. Aluminum** has been designing and manufacturing quality architectural aluminum products for the nonresidential construction market. Projects throughout North America are proof that U.S. Aluminum has the manufacturing, engineering, and service capabilities to make your next project a success. Our complete product line includes: doors, entrances, storefronts, impact resistant systems, window walls, curtain walls, sunshades, and commercial windows. Custom systems can be designed to meet specific project requirements. Supplying architects, engineers, and building owners with quality products, on time, is what U.S. Aluminum is all about. Give us a call today to see for yourself that U.S. Aluminum is clearly THE SOLID CHOICE.

PAINT SPECIFICATIONS

DURANAR® Coatings

Duranar® Coatings contain 70% Kynar 500® or Hylar 5000® fluoropolymer resin, and superior performance pigmentation for the best color retention. This coating exceeds the performance requirements of specification AAMA 2605, and offers exceptional fade and chalking resistance for high-rise or high profile projects.

- Minimum of 70% fluoropolymer resin for premium performance in solid colors
- Two coat system: Corrosion inhibiting primer at 0.2 mil. and durable high performance topcoat at 1.0 mil. Minimum total dry thickness or 1.2 mil.
- Hardness: F minimum
- Gloss: Medium (25-35 @ 60˚)
- Meets or exceeds AAMA 2605 specification

DURANAR® SUNSTORM™ Coatings

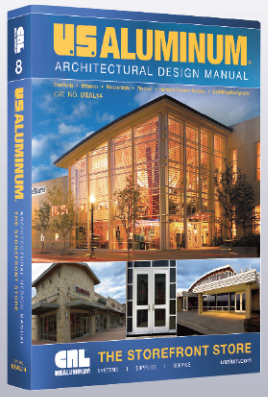
Duranar® Sunstorm™ Coatings contain 70% Kynar 500® or Hylar 5000® fluoropolymer resin for superior performance in pearlescent colors. This coating exceeds the performance requirements of specification AAMA 2605, and offers exceptional fade and chalking resistance for high-rise or high profile projects.

- Minimum of 70% fluoropolymer resin for premium performance pearlescent colors
- Two coat system: Corrosion inhibiting primer at 0.2 mil. and durable high performance topcoat at 1.0 mil. Minimum total dry thickness or 1.2 mil.
- Hardness: F minimum
- Gloss: Medium (25-35 @ 60˚)
- Meets or exceeds AAMA 2605 specification

The 23 standard colors shown are the most popular colors being specified in today's architectural structures. Custom colors can be mixed and matched as required.

Kynar 500® is a registered trademark of Arkema, Inc. - Hylar 5000® is a registered trademark of Solvay Solexis, Inc. -Duranar, Sunstorm, and the PPG logo are trademarks of PPG Industries Ohio, Inc.

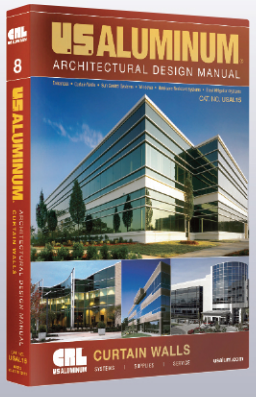
STOREFRONT AND CURTAIN WALL DESIGN MANUALS



ARCHITECTURAL DESIGN MANUAL

STOREFRONTS

- Entrances
- Storefronts
- Curtain Walls
- Sun Control Systems
- Windows
- Hurricane Resistant Systems
- Blast Resistant Systems



ARCHITECTURAL DESIGN MANUAL

CURTAIN WALLS

- Curtain Walls
- Entrances
- Sun Control Systems
- Windows
- Hurricane Resistant Systems
- Blast Resistant Systems

A wealth of experience, coupled with the large selection of architectural aluminum products enables you to design, create and build with complete confidence.

AVDB3210_10/14

CRL U.S. ALUMINUM
usalum.com

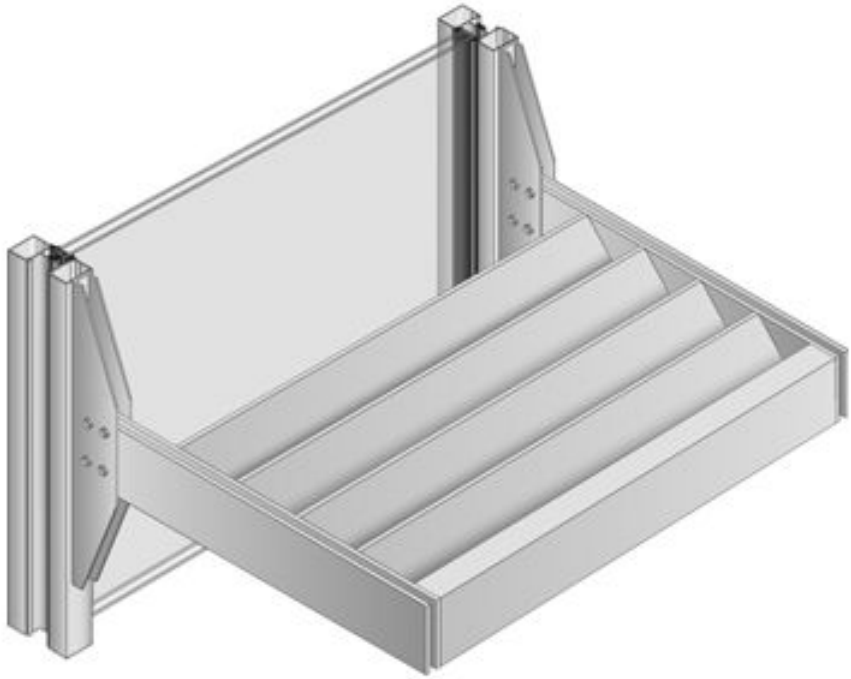
2.C SUNSHADE

- Material: Aluminum Horizontal Sunshde
- Basis-of-Design Product: Kawneer Versoleil
- Acceptable Manufacturers:

  EFCO Corporation

  US Aluminum - C.R. Laurence
- Sunshades are proposed on the south facing windows of the administration addition.
- The aluminum will be factory-finished with a fluoropolymer finish a custom color to match the painted structural columns.

Match columns



KAWNEER

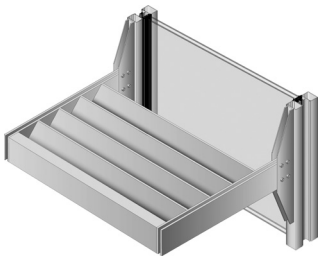
A Versatile Combination of Aesthetics, Performance and Energy Conservation



Kawneer's Outrigger and Single Blade Systems for Storefront are the latest addition to our versatile Versoleil™ SunShade platform. Market demand for energy conservation in commercial building design is increasing, and the use of sunshades continues to move down the building. The addition of storefront options to Kawneer's innovative Versoleil™ SunShade offering provides more solutions for maximizing shading and energy-saving potential. The Outrigger System's combinations of support arms, louver blades and fascia caps provide increased aesthetic choices, and the Single Blade System's common component design and blade options offer versatility in both form and function. Whether it's the Outrigger System or the Single Blade System, Versoleil™ SunShades provide a pre-engineered, easy-to-install option for multiple storefront system applications.

ENHANCED VERSATILITY

Versoleil™ SunShade Outrigger and Single Blade Systems for Storefront include options in several configurations that enhance aesthetics while increasing the comfort and efficiency of the building. Both the Outrigger System and Single Blade System options deliver an unmatched breadth and depth of application – all from a single-source supplier. Not only are Versoleil™ SunShades tough performers, engineered and tested to withstand combined wind, snow and dead loads, they can also help contribute to Leadership in Energy and Environmental Design (LEED®) certification. Versoleil™ SunShades continue to set the industry standard for form and function.



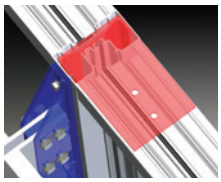
OUTRIGGER SYSTEM

The Outrigger System's innovative construction allows designers to mix and match components while maintaining aesthetic consistency between the curtain wall and storefront elements of the building façade. The system's standard 30" depth with outrigger arm, blade and fascia options address specific project needs and provide superior shading capabilities that reduce solar heat gain to help maximize energy savings and reduce glare.

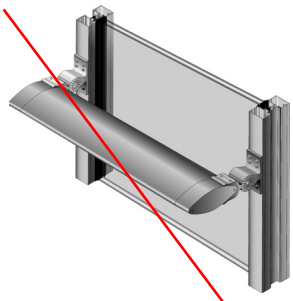
Versoleil™ Outrigger SunShade Blade Options
(From left) circular, airfoil, arch, planar, flare, wave, infinity, diamond/square



Beyond shading interiors and conserving energy, Versoleil™ SunShades add aesthetic appeal to any building envelope. The Outrigger System gives architects increased design freedom with the ability to be seamlessly incorporated into multiple Kawneer storefront framing systems. Sleek blade designs that marry functionality with aesthetics include circular, airfoil, arch, planar, flare, wave, infinity and diamond/square. Standard outrigger 30" depth options with matching fascia includes round, square, wedge and curved.

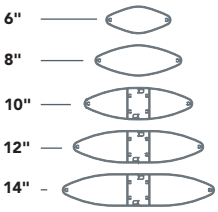


Welding a plate to internal steel (shown in red) provides for secure attachment of the sunshade via mounting brackets (shown in blue) to the framing system. Additionally, the welded plate solidifies attachment of the framing system to the building structure. (Trifab™ VersaGlaze™ 451T Screw Spline Framing System shown – other storefront systems are similar.)

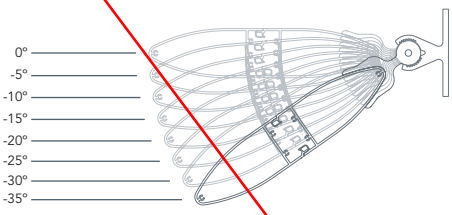


SINGLE BLADE SYSTEM

The Versoleil™ SunShade Single Blade System adds aesthetic appeal to any building envelope. Seamlessly incorporated into multiple storefront framing systems in horizontal configurations, the Single Blade System gives architects increased flexibility and several combinations to craft their vision. Its unique, highly configurable design with sleek airfoil-shaped blades, eight different horizontal blade angle settings and depth selections of 6", 8", 10", 12" and 14" provides nearly endless possibilities to create dramatic effects, sightlines and shade lines.



Blade Sizes



Horizontal blade angle settings: 8 different angles ranging from 0° to -35° with 5° increments.

The innovative design allows for variation of blade angles during installation based on sun angle and building orientation. To maximize energy-saving potential, reduce solar heat gain and increase occupant comfort and productivity, blades can be oriented horizontally, mounted perpendicular to the façade or tilted to specific angles.

PERFORMANCE

Versoleil™ SunShades are tough performers and have been engineered and tested to withstand both wind loads and snow loads. For design solutions regarding loading, attachment and anchor conditions, please consult with your Kawneer representative.

Calculating the shading performance of Versoleil™ SunShades is easier with Kawneer's Solector® Sun Shading Estimator. Located on Kawneer.com and developed for use early in the design phase, the easy-to-use tool can compare shading performance of two scenarios using Versoleil™ SunShades on a façade.

SUSTAINABILITY

When Versoleil™ SunShades are strategically placed, they allow for maximum daylighting while minimizing direct sunlight penetration and reducing solar heat gain. In addition to increased sun control and energy savings, Versoleil™ SunShades can help earn LEED® credits in multiple categories.

FOR THE FINISHING TOUCH

Architectural Class I anodized aluminum finishes are available in clear and color choices. Painted finishes, including fluoropolymer, that meet AAMA 2605 standards and solvent-free powder coatings that meet AAMA 2604 standards are available in a variety of color choices.

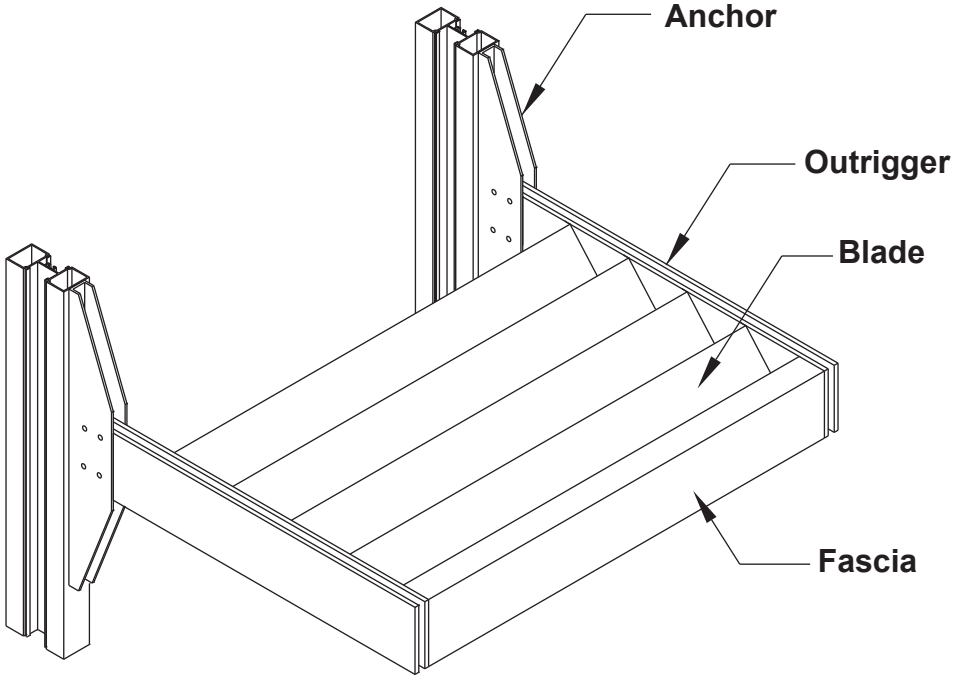
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Form Number 17-2292.A
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Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
770.449.5555
kawneer.com

KAWNEER

ARCHITECTURAL SYSTEMS | ENTRANCES + FRAMING | CURTAIN WALLS | WINDOWS

Versoleil® SunShade - Outrigger System



Features

- Standard designs
- Screw Spline assembly
- Used with Trifab® VersaGlaze® 451/451T
  - Shear Block - 2" vertical mullion, center glazed
- Used with Trifab® VersaGlaze® 451/451T/451UT/601/601T/601UT
  - Screw Spline - 2-1/4" vertical mullion, center glazed
- Helps reduce building energy consumption
- Permanodic® anodized finishes option
- Painted finishes in standard and custom choices
- Shading performance can be analyzed by Solector® Sun Shading Estimator Tool

For specific product applications,
consult your Kawneer representative.

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.

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Architects - Most extrusions illustrated in this catalog are standard products for Kawneer. These concepts have been expanded and modified to afford you design freedom. Some miscellaneous details are non-standard and are intended to demonstrate how the system can be modified to expand design flexibility. Please contact your Kawneer representative for further assistance.

TRIFAB® VG 451/451T FRAMING
- **Shear Block Assembly.....4**

TRIFAB® VG 451/451T/451UT FRAMING
- **Screw Spline Assembly.....5**

TRIFAB® 601/601T/601UT FRAMING
- **Screw Spline Assembly.....6**

SUNSHADE COMBINATIONS.....7, 8

DESIGN GUIDELINES.....9

Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI) units are found in these details:

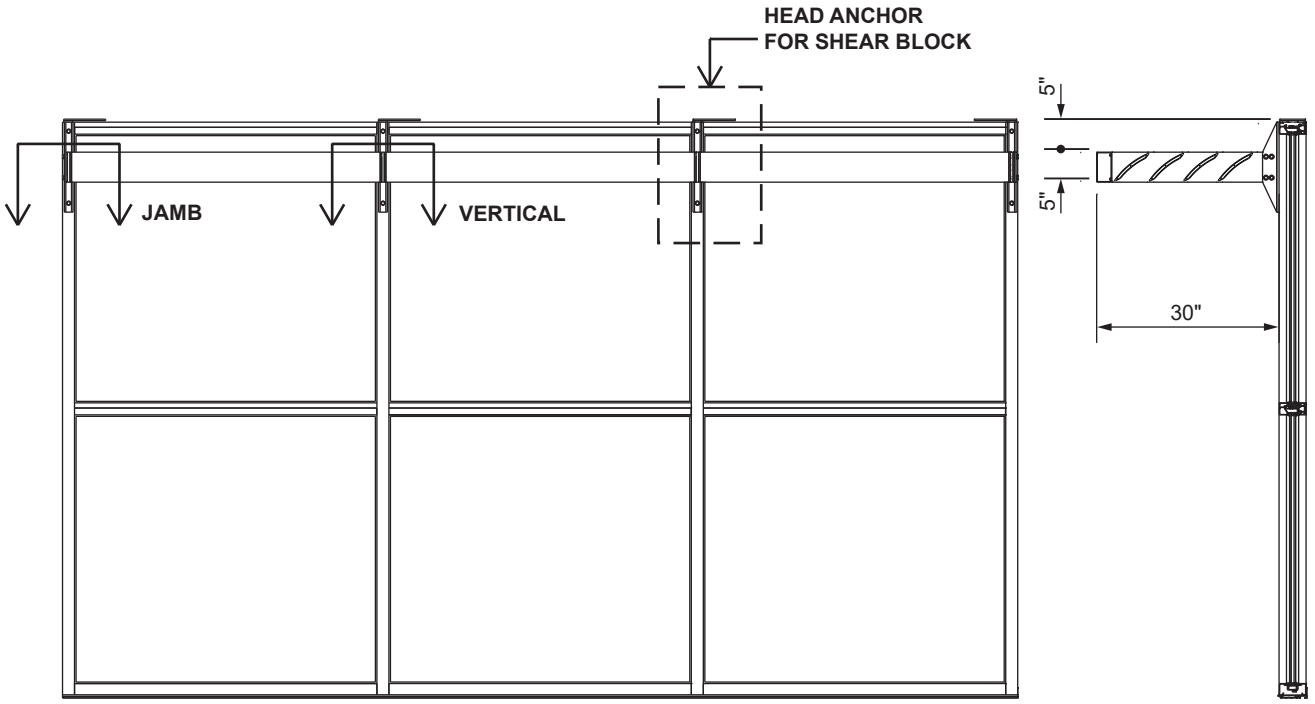
m – meter
cm – centimeter
mm – millimeter
s – second
Pa – pascal
MPa – megapascal

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

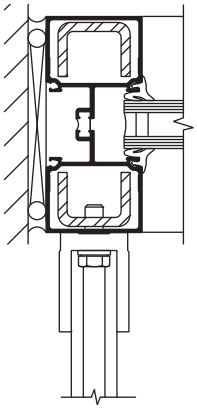
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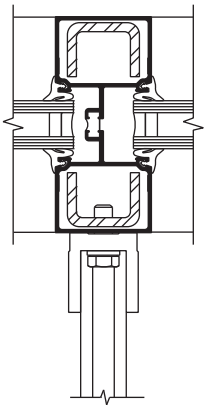
NOTE: For standard storefront applications the outrigger is limited to 30".
Details shown with 30" square outrigger, arch blade and rectangular fascia.



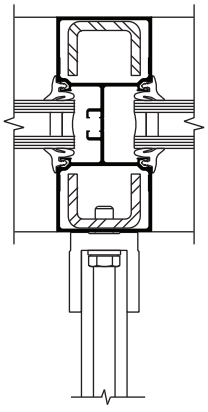
NOTE:
Horizontal SunShades are not recommended directly over entrances and walkways to eliminate any risk of injury due to falling ice or snow.



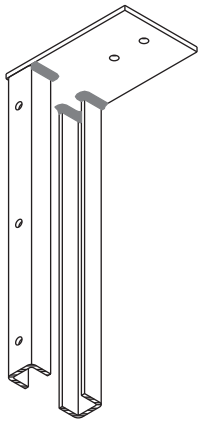
TRIFAB® VG 451T JAMB (TF VG 451 SIMILAR)



451T VERTICAL



451 VERTICAL



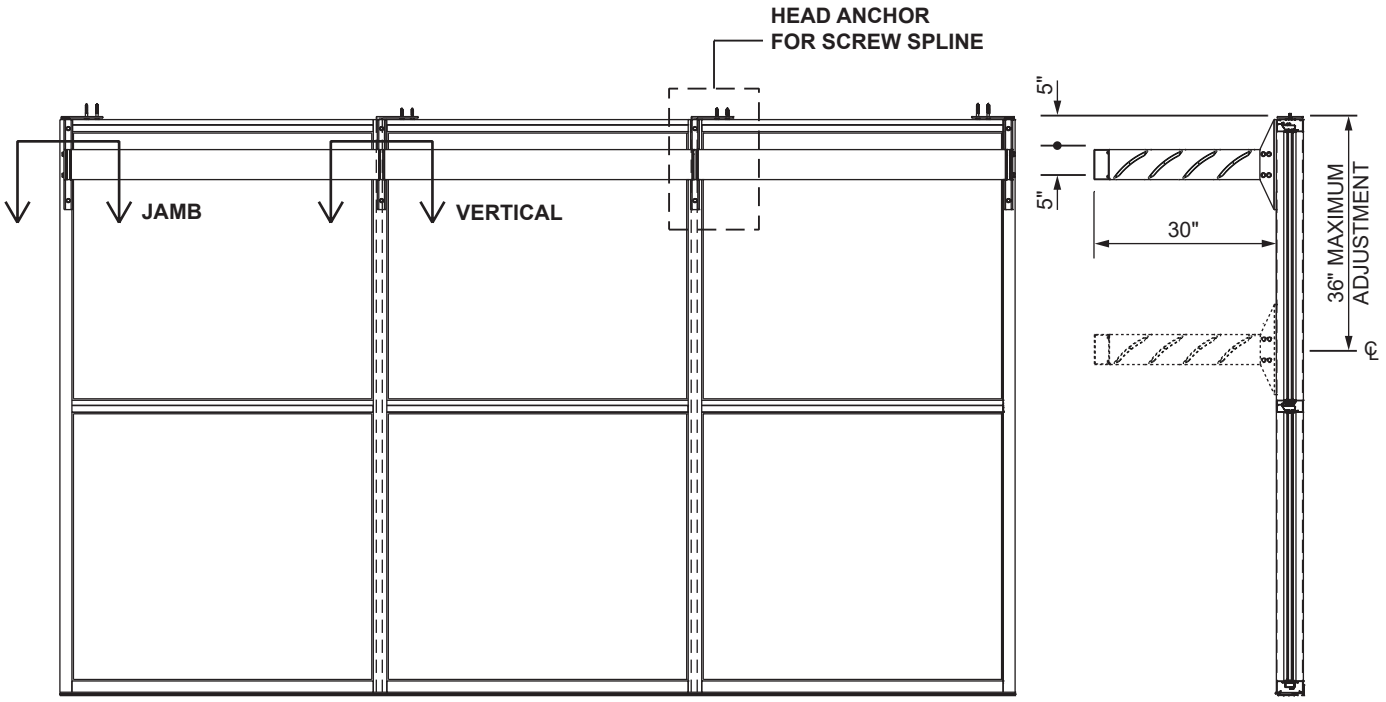
HEAD ANCHOR FOR SHEAR BLOCK FRAMING

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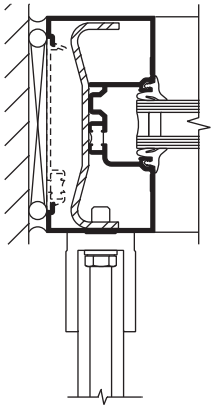
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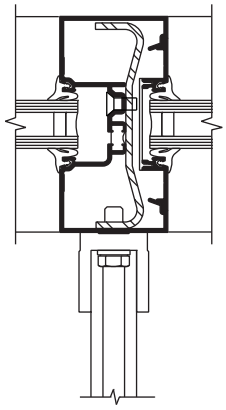
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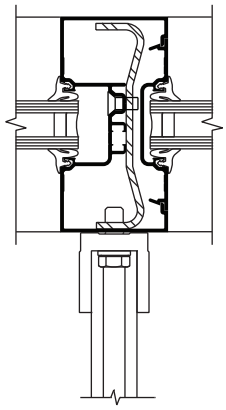
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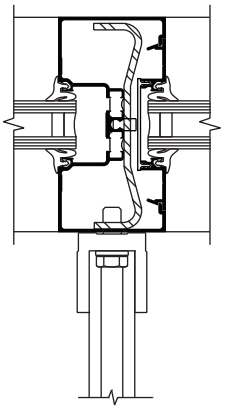
TRIFAB® VG 451T JAMB (TF VG 451 & 451UT SIMILAR)



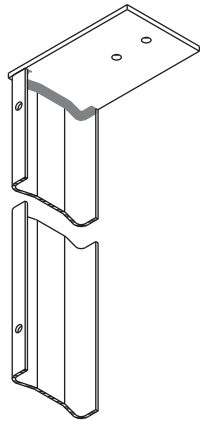
451T VERTICAL



451 VERTICAL



451UT VERTICAL



HEAD ANCHOR FOR SCREW SPLINE FRAMING

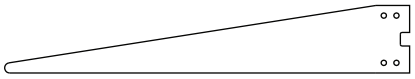
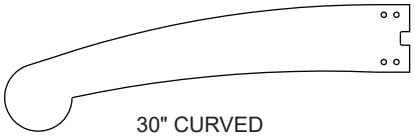
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Versoleil® SunShade - Outrigger System

OUTRIGGER / FASCIA / BLADE COMBINATIONS - STOREFRONT

STANDARD OUTRIGGERS	STANDARD FASCIAS	STANDARD BLADES
 30" SQUARE	 RECTANGULAR	 INFINITY  FLARE  ARCH  CIRCULAR
 30" ROUNDED	 BULLNOSE	 AIRFOIL  DIAMOND  PLANAR  SQUARE  WAVE
 30" WEDGE	 ANGULAR	 CIRCULAR
 30" CURVED	 CIRCULAR	 CIRCULAR  SQUARE  DIAMOND

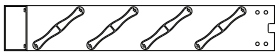
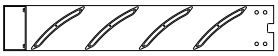
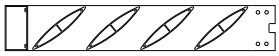
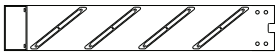
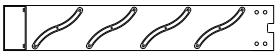
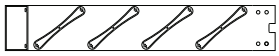
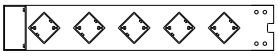
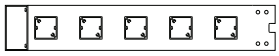
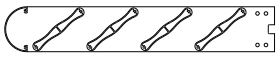
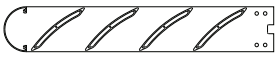
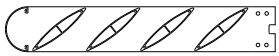
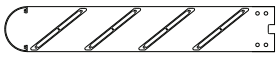
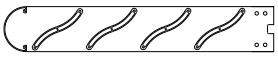
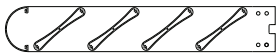
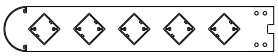
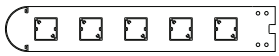
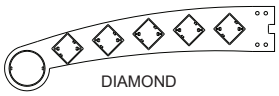
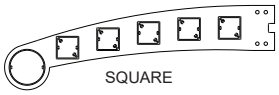
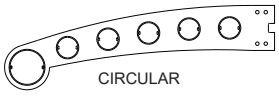
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Versoleil® SunShade - Outrigger System

OUTRIGGER / FASCIA / BLADE COMBINATIONS - STOREFRONT

30" SQUARE OUTRIGGER	 INFINITY	 ARCH	 AIRFOIL
	 PLANAR	 WAVE	 FLARE
	 CIRCULAR	 DIAMOND	 SQUARE
30" ROUNDED OUTRIGGER	 INFINITY	 ARCH	 AIRFOIL
	 PLANAR	 WAVE	 FLARE
	 CIRCULAR	 DIAMOND	 SQUARE
30" CURVED OUTRIGGER	 DIAMOND		
	 SQUARE		
	 CIRCULAR		
30" WEDGE OUTRIGGER	 CIRCULAR		

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PRODUCT NOTES:

1. Maximum outrigger projection for storefront framing should not exceed 30".

2. Anchors are painted only, and can be painted to match anodized finishes.
   Louvers and fascias can be painted or anodized.

3. Standard outriggers, louvers and fascias can be mixed and matched at the designers choosing.

4. Some modification or customization of standard components can be accomodated.
   Please contact your Kawneer Representative for assistance.

5. Due to the wide variety of building codes, load restrictions, and deflection criteria, the use of SunShades on storefront should be analyzed and approved by Kawneer Application Engineers on a project specific basis.

6. If Versoleil® SunShade does not meet your aesthetic or performance needs, please contact your Kawneer Representative for assistance in designing a custom sunshade.

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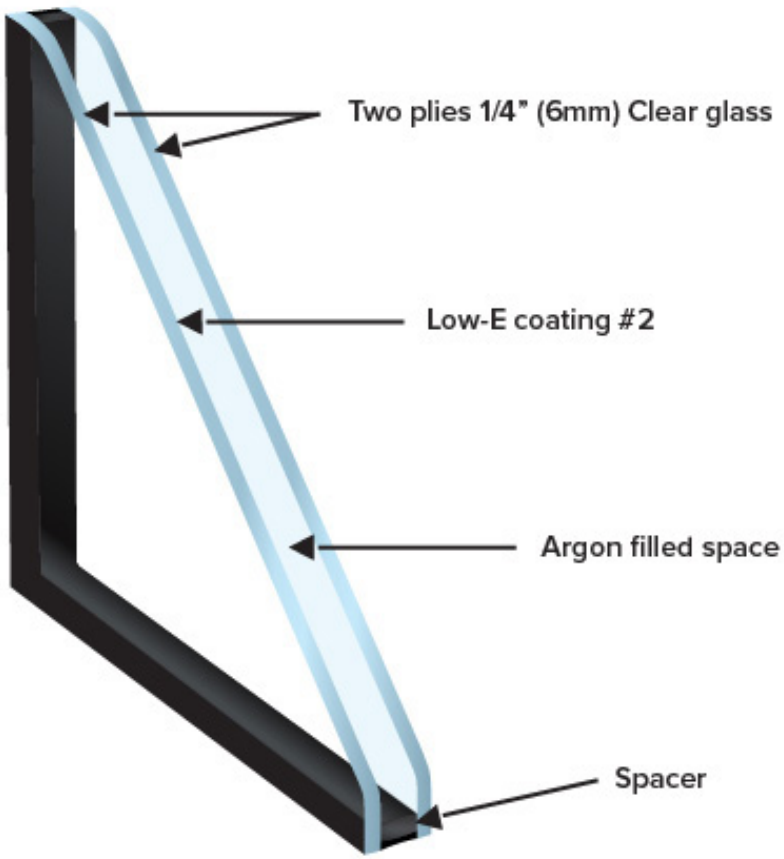
3. GLAZING

- Material: Clear, insulated, low-e glass
- Glazing Products:

  Sunguard SN54 by Guardian Industries

  PPG Solarban 70XL

  Viracon VNE1-63
- Clear vision glazing will be used at all windows and glass within storefront doors.



GUARDIAN GLASS
See what's possible™

SunGuard® SN 54

SN 54 on Clear



Strike a balance between color neutrality and solar control

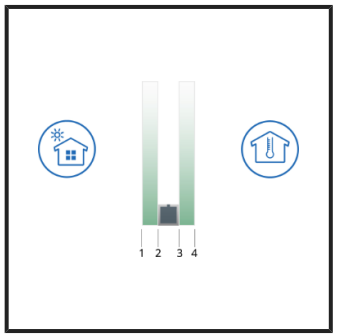
SunGuard SuperNeutral 54 coated glass can capture the right look, let light shine and help keep energy costs low. This solution helps reduce glare to make views more beautiful, offers a neutral outdoor appearance and blends with a wide range of architectural features.

Product Information

Substrate **Base Glass/Thickness**	Clear Float/5-12 mm Guardian UltraClear/6-10 mm	Guardian CrystalGray/6-10 mm Gray/6 mm	 Green/6 mm
Applications	Windows / Skylights / Facades / Roof window / Curtain walls / Doors		
Manufacturing options	Heat Strengthened / Heat Soaked / Annealed / Tempered / Bent / Laminated		
Recommended Coating Positions	Double glazed: #2 surface Triple Glazed: #2 surface		
Maximum Size	130"x240"		
Edge Deletion	Yes		
Glass type	Low E		
Glass functions	Solar control / Thermal insulation		
Fabrication options	Must be used in an Insulating Glass Unit		
Appearance	Clear		

GUARDIAN GLASS

See what's possible™



Double Glazed



Triple Glazed

Visible Light				Ultraviolet	Solar Energy						Thermal Properties		Light to Solar Gain (LSG)
Transmittance	Reflectance		General Color Rendering Index (Ra)	Trans UV(τuv %)	Transmittance	Reflectance		Absorptance	Solar Heat Gain Coefficient (SHGC)	Shading Coefficient (sc)	U-Value		
Visible (τv %)	pv % out	pv % in			Solar (τe %)	ρe % out	ρe % in	Solar (αe %)			Winter Night (Btu/hr·ft²·F)	Summer Day (Btu/hr·ft²·F)	
Double Glazed: 6-12.7-6 SunGuard® SN 54 on Clear Float #2, Clear Float, 90% Argon Fill													
54	14	20	96.3	16	24	34	41	42	0.28	0.32	0.240	0.213	1.95
Triple Glazed: 6-12.7-6-12.7-6 SunGuard® SN 54 on Clear Float #2, Clear Float, Clear Float, 90% Argon Fill													
49	17	25	94.8	13	21	35	34	44	0.26	0.29	0.181	0.175	1.93

The performance values shown are nominal and subject to variations due to manufacturing tolerances. Spectra-photometric values according to NFRC2010 / US Standard.

www.guardianglass.com

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1-855-58-GLASS (45277)
2300 Harmon Road, Auburn Hills, Michigan 48326

Published Date: 03-Jan-2024

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Product Data Sheet

SOLARBAN® 70
Solar Control Low-E Glass

Aesthetic Description

Solarban® 70 glass (formerly *Solarban*® 70XL glass) is a solar control, low-e glass that brilliantly combines the clear appearance of transparent, color-neutral glass with an exceptional combination of solar control and visible light transmittance (VLT).

The world's first triple-silver, magnetron sputter vacuum deposition (MSVD) coating, *Solarban*® 70 glass expands the design possibilities for buildings in two important ways. First, *Solarban*® 70 glass enables architects to incorporate vast areas of vision glass into their designs without a corresponding increase in cooling equipment capacity.

Second, architects can specify a clear aesthetic while achieving solar control performance that was once attainable only through the use of tinted glass and a solar control, low-e coating in an insulated glass unit (IGU).

Performance Options

When coupled with conventional clear glass in a one-inch IGU, *Solarban*® 70 glass achieves a Visible Light Transmittance (VLT of 64 percent and a Solar Heat Gain Coefficient (SHGC) of 0.27 to produce a Light to Solar Gain (LSG) ratio of 2.37, making it one of the industry's highest-performing glasses.

The clear aesthetic of *Solarban*® 70 glass also makes the product exceptionally versatile, offering architects an extensive array of performance and appearance options. For instance, for projects that require advanced solar control performance, *Solarban*® 70 glass can be coated on the second (#2) surface of nearly all of



The Cirque
Location: Dallas, TX | Product: *Solarban*® 70XL Glass | Architect of Record: PageSoutherlandPage | Design Architect: Gromatzky Dupree & Associates | Glass Fabricator: Trulite Glass and Aluminum Solutions | Glazing Contractor: Haley-Greer

Vitro Architectural Glass' (formerly PPG glass) wide range of tinted glasses to produce SHGCs as low as 0.19 and LSG ratios ranging from 1.68 to 2.15.

For more color and reflectivity choices, *Solarban*® 70 glass may be specified on the third (#3) surface of an IGU behind a tinted lite or in combination with *Solarcool*® reflective or *Vistacool*® subtly reflective color-enhanced glasses.

Supporting Sustainable Design

Vitro Architectural Glass provides abundant opportunities for architects and building owners to realize their sustainability objectives.

Energy Use & Operating Cost Reduction: High-performance glasses by Vitro are engineered to facilitate downsized mechanical equipment costs, leading to reduced long-term energy costs. Visit **tools.vitroglazings.com** for glass comparison and configuration tools for analyzing glass products.

Sustainability Documentation: Vitro Architectural Glass is the first U.S. float glass manufacturer to have its entire selection of products recognized by the *Cradle to Cradle Certified™* program, and the first in North America to publish third-party verified Environmental Product Declarations (EPDs) for its Flat Glass and Processed Glass products.

For additional credit opportunities and supporting documentation, visit **vitroglazings.com/LEED**

LEED® Credit Opportunities

Possible Points	LEED Credit	*Solarban*® 70 Feature	Path/Option Satisfied
18	**Energy & Atmosphere (EA)** Optimize Energy Performance	Excellent SHGC, U-value and Tvis performance	Whole Building Energy Simulation (Option 1) or Prescriptive Compliance: ASHRAE Advanced Energy Design Guide (Option 2)
5	**Innovation (IN)** Innovation in Design	Exceeds minimum performance mandated by local energy codes	Innovation (Option 1), Pilot (Option 2) and Exemplary Performance (Option 3)
3	**Indoor Environmental Quality (EQ)** Daylight	Exhibits high light transmission	Simulation: Spatial Daylight Autonomy and Annual Sunlight Exposure (Option 1), Simulation: Illuminance Calculations (Option 2) or Measurement (Option 3)

Solarban® 70 Glass

Insulating Glass Unit Performance Comparisons | 1-inch (25mm) units with 1/2-inch (13mm) airspace and two 1/4-inch (6mm) lites							
Glass Type: Outdoor Lite: Coating if Any (Surface) Glass + Indoor Lite: Coating if Any (Surface) Glass	Visible Light Transmittance (VLT) %	Visible Light Reflectance		(BTU/hr°ft²°F) NFRC U-Value		Solar Heat Gain Coefficient (SHGC)	Light to Solar Gain (LSG)
		Exterior %	Interior %	Winter Nighttime	Winter Argon		
***Solarban*® 70 Solar Control Low-E Glass**							
Solarban® 70 (2) + Clear	64	13	14	0.28	0.24	0.27	2.37
Solarban® 70 (2) *Solexia*® + Clear	56	11	14	0.28	0.24	0.26	2.15
Solarban® 70 (2) *Atlantica*® + Clear	49	10	13	0.28	0.24	0.23	2.13
Solarban® 70 (2) *Azuria*® + Clear	50	10	13	0.28	0.24	0.24	2.08
Solarban® 70 (2) *Solarblue*® + Clear	41	8	13	0.28	0.24	0.22	1.86
Solarban® 70 (2) *Pacifica*® + Clear	31	7	13	0.28	0.24	0.19	1.63
Solarban® 70 (2) *Solarbronze*® + Clear	39	8	13	0.28	0.24	0.20	1.95
Solarban® 70 (2) *Optigray*® + Clear	46	9	13	0.28	0.24	0.23	2.00
Solarban® 70 (2) *Solargray*® + Clear	32	7	13	0.28	0.24	0.19	1.68
Solexia® + *Solarban*® 70 (3) Clear	56	11	12	0.28	0.24	0.32	1.75
Atlantica® + *Solarban*® 70 (3) Clear	48	9	11	0.28	0.24	0.28	1.71
Azuria® + *Solarban*® 70 (3) Clear	49	9	11	0.28	0.24	0.29	1.69
Solarblue® + *Solarban*® 70 (3) Clear	41	8	12	0.28	0.24	0.27	1.52
Pacifica® + *Solarban*® 70 (3) Clear	31	6	10	0.28	0.24	0.22	1.41
Solarbronze® + *Solarban*® 70 (3) Clear	38	8	11	0.28	0.24	0.26	1.46
Optigray® + *Solarban*® 70 (3) Clear	46	9	12	0.28	0.24	0.28	1.64
Solargray® + *Solarban*® 70 (3) Clear	32	7	11	0.28	0.24	0.24	1.33
Graylite® II + *Solarban*® 70 (3) Clear	6	4	10	0.28	0.24	0.11	0.55
Vistacool*® and *Solarcool*® with *Solarban*® 70 Solar Control Low-E (3)							
Vistacool® (2) *Azuria*® + *Solarban*® 70 (3)	38	21	23	0.28	0.24	0.24	1.58
Vistacool® (2) *Pacifica*® + *Solarban*® 70 (3)	24	11	22	0.28	0.24	0.19	1.26
Solarcool® (2) *Azuria*® + *Solarban*® 70 (3)	19	19	27	0.28	0.24	0.16	1.19
Solarcool®(2) *Solarblue*® + *Solarban*® 70 (3)	16	14	28	0.28	0.24	0.15	1.07
Solarcool®(2) *Pacifica*® + *Solarban*® 70 (3)	12	10	27	0.28	0.24	0.13	0.92
Solarcool®(2) *Solarbronze*® + *Solarban*® 70 (3)	15	14	27	0.28	0.24	0.15	1.00
Solarcool®(2) *Solargray*® + *Solarban*® 70 (3)	13	11	27	0.28	0.24	0.14	0.93

**Solarban*® 70 glass for annealed applications is applied to *Starphire*® glass, heat treated applications will require either clear or *Starphire*® glass depending on manufacturing process.

All performance data calculated using LBNL Window 7.3 software and represents center of glass performance data. For detailed information on the methodologies used to calculate the aesthetic and performance values in this table, please visit vitroglazings.com or request our Architectural Glass Catalog.

Fabrication and Availability

Solarban® 70 glass is available exclusively through the *Vitro Certified*™ Network. *Vitro Certified*™ Fabricators can meet tight construction deadlines and accelerate the delivery of replacement glass before, during and after construction. *Solarban*® 70 glass is manufactured using the sputter-coating process and is available for annealed, heat-strengthened and tempered applications.

Additional Resources

To obtain samples of any Vitro Glass product, call **1-855-VTRO-GLS (877-6457)** or visit **samples.vitroglazings.com**. For videos, design insights and technical education, visit the Vitro Glass Education Center at **glassed.vitroglazings.com**. For glass comparison and configuration tools, visit **tools.vitroglazings.com.**

For more information about *Solarban*® low-e glass and other *Cradle to Cradle Certified*™ architectural glasses by Vitro Glass, visit **vitroglazings.com**, or call **1-855-VTRO-GLS (887-6457).**

©2022 Vitro Architectural Glass. All rights reserved. *Atlantica*®, *Azuria*®, *Graylite*®, *Optigray*®, *Pacifica*®, *Solarban*®, the *Solarban*® logo, *Solarblue*®, *Solarbronze*®, *Solarcool*®, *Solargray*®, *Solexia*®, *Starphire*® and *Vistacool*® are registered trademarks owned by Vitro. *Vitro Certified*™ is a trademark owned by Vitro. *Cradle to Cradle Certified*™ is a trademark licensed by the Cradle to Cradle Products Innovation Institute. LEED® —an acronym for Leadership in Energy and Environmental Design—is a registered trademark of the U.S. Green Building Council. Printed in the USA. 7097 (04/22)

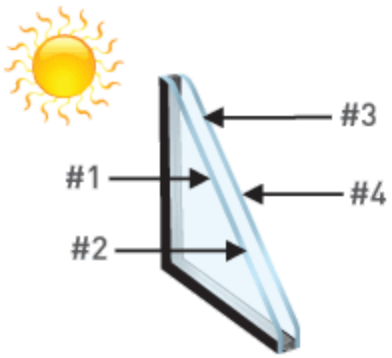
VIRACON®

1" (25mm) Insulating VNE1-63

PERFORMANCE DATA

Transmittance	
Visible Light	62%
Solar Energy	24%
UV	5%
Reflectance	
Visible Light-Exterior	10%
Visible Light-Interior	10%
Solar Energy	37%
NRFC U-Value	
Winter	0.25 (hr x sqft x °F)
Summer	0.21 (hr x sqft x °F)
Shading Coefficient	0.32
Relative Heat Gain	68Btu/(hr x sqft)
Solar Heat Gain Coefficient (SHGC)	0.28
LSG	2.21

Makeup



1/4" (6mm) clear with VNE-63 #2
1/2" (13.2mm) space - argon filled
1/4" (6mm) clear

Viracon's solar and optical performance data is center of glass data based on the National Fenestration Rating Council measurement standards, calculated using Lawrence Berkeley National Laboratory's (LBNL) WINDOW 7 software.

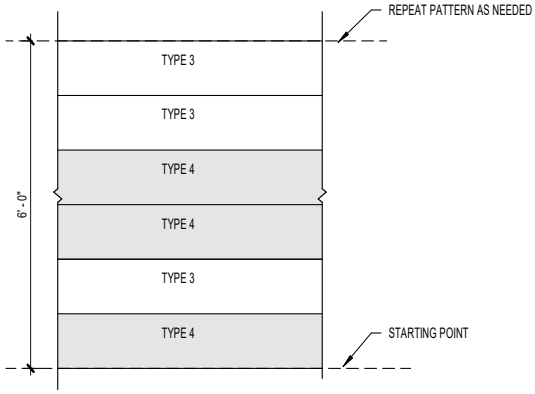
Winter and Summer U-Values are the only performance values available for spandrel glazing. The U-Values for spandrel glazing are the same as the corresponding vision unit. The spandrel color does not impact U-Value.

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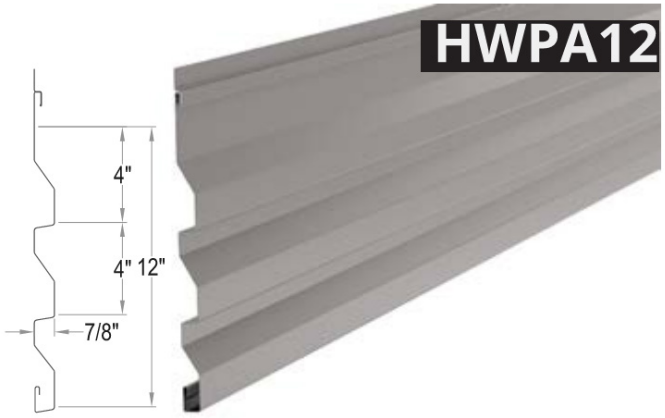
4. FORMED METAL WALL PANEL (HORIZONTAL)

- Material: Factory-formed aluminum wall panels
- Basis-of-Design Product: Dimensional Metals Inc.
- Acceptable Manufacturers: Peterson Aluminum Corporation, PAC-Clad
- Horizontal formed metal wall panel is proposed between and around windows to compliment the horizontal form of the original 1960's structure. HWPH12 & HWPA12 profiles will alternate in a repeating pattern to create interest and variety.
- The aluminum will be factory-finished with a fluoropolymer finish in the manufacturer's standard dark gray color.

Wall Panel Pattern



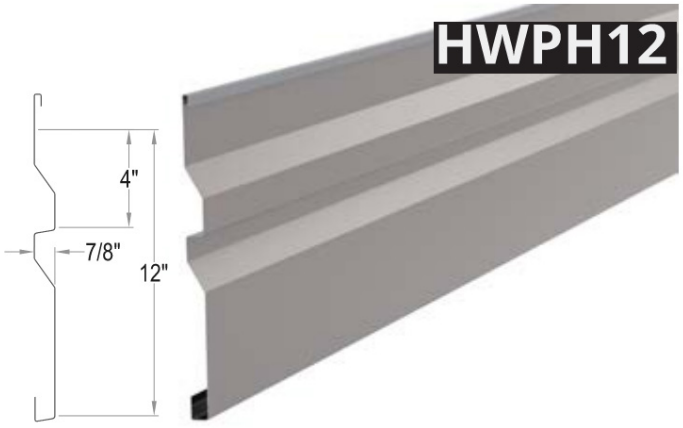
Type 3



Charcoal Grey



Type 4




DMI
DIMENSIONAL METALS, INC.
PROVEN. DEPENDABLE. SUSTAINABLE.
METAL ENVELOPE SYSTEMS SINCE 1988



Harriet Tubman Underground Railroad Visitor Center
Dorchester County, MD
GWWO Architects
East Coast Exteriors

CONTENTS

4 WALL SYSTEMS

10 ROOF SYSTEMS

18 SOFFIT SYSTEMS

20 FS-1 EDGE METALS

21 WATER CONTROL

22 RHEINZINK®

23 ACCESSORIES



DMI OHIO

We care about the success of each and every project.

Since 1988 Dimensional Metals, Inc. (DMI) has specialized in the manufacturing of architectural metal roof and wall panel systems as well as fabricated architectural sheet metal for the construction industry. We are backed by more than 30 years of sheet metal fabrication experience which helps us ensure the success of each project.

The determining factors in the success of any architectural sheet metal system are a combination of proper design, engineering, fabrication, and installation. Unique to our organization is an expert level of product and application knowledge. This provides understanding and direction to design professionals and end-users of our systems.

With our primary focus on the highest quality, customer satisfaction, value, and individual project success, our team:

- Ensures shorter lead times than industry standards
- Utilizes SMACNA-based, time-tested and industry-proven architectural details
- Designs with UL-90 classified roof deck assemblies and ASTM air, water, and structural tested systems
- Manufactures with steel coils that are made-in-the-USA and only painted with KYNAR® PVDF finishes
- Utilizes the most technologically advanced in-house CNC operated manufacturing equipment available today
- Capitalizes on our knowledgeable personnel who are qualified to solve even the most challenging design requirements
- Boasts a full-service engineering department, generating professional quality shop drawings, engineered uplift calculations, and company employed field inspection services as required
- Gives building owners and design professionals confidence that they are receiving the best quality with our Total System Warranties, which are considered the most in-depth warranties available in the industry

WALL SYSTEMS

Our selection of Concealed and Exposed Fastener Wall Panels deliver the clean lines and contemporary aesthetics that you desire while meeting your engineering and design needs.



LINK 59
Cleveland, OH
GLSD Architects, LLC
Advanced Roofing Systems

DMI TOTAL SYSTEM WARRANTIES

DMI is one of the only manufacturers to offer watertightness warranties for our wall panels and wall tiles. Our Wall Warranties are backed-up by our full-service Engineering Department, generating project specific shop drawings. Quality control is monitored by a minimum of two on-site inspections by our Field Technical Inspectors. DMI Wall Warranties give building owners and design professionals confidence that they are receiving the highest quality and most complete warranty available in the industry.



FLUSH SYSTEMS

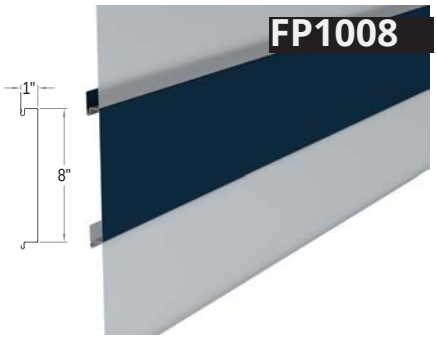
Materials: 24 ga., 22 ga., 20 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm) RHEINZINK®
16 oz., 20 oz. Copper

Panel Coverage: 8", 11" and 12"
(custom widths are available)

Panel Depth: 1" and 1-1/2"

Panel Lengths Offered: 4'-0" up to 20'-0"

FP1008



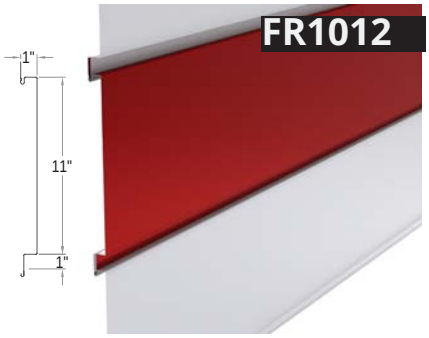
FP1012



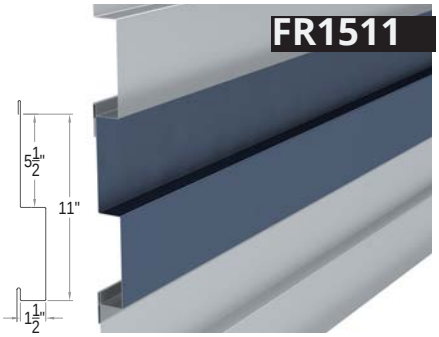
FP1511



FR1012



FR1511



Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure



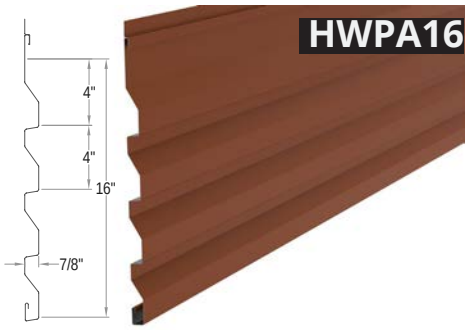
WEFALD RESIDENCE HALL AT KSU
Manhattan, KS
Treanor Architects
Missouri Builders Service

16" HORIZONTAL WALL PANEL

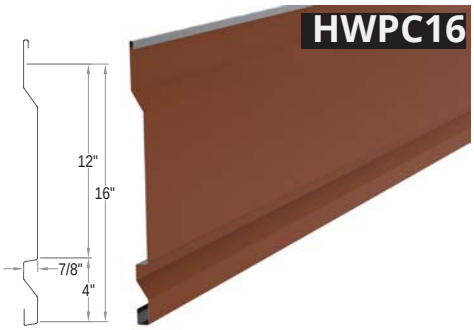


Materials: 24 ga., 22 ga., 20 ga.,18 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1.0mm) RHEINZINK®
16 oz., 20 oz. Copper
Panel Coverage: 16"
Panel Depth: 7/8"
Minimum Panel Length: 4'-0"

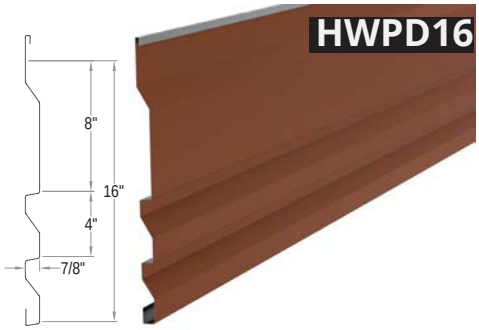
HWPA16



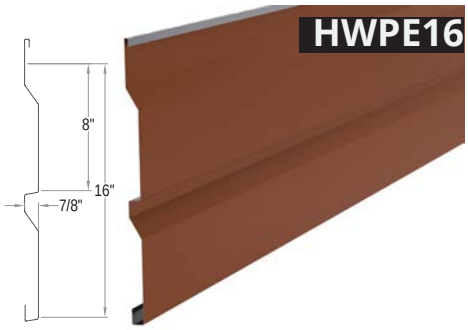
HWPC16



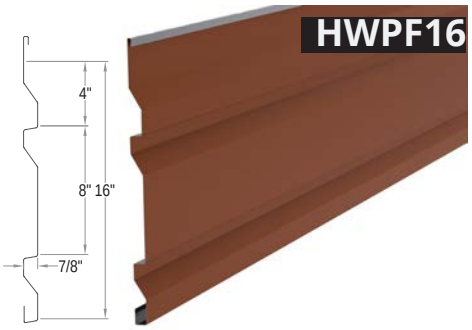
HWPD16



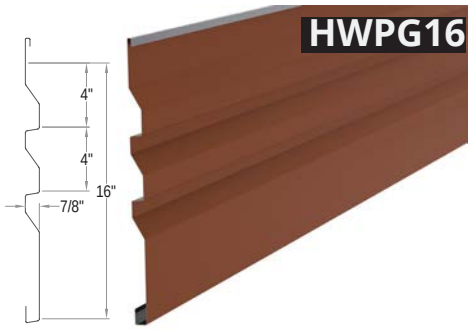
HWPE16



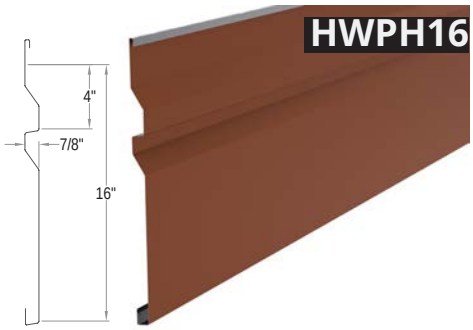
HWPF16



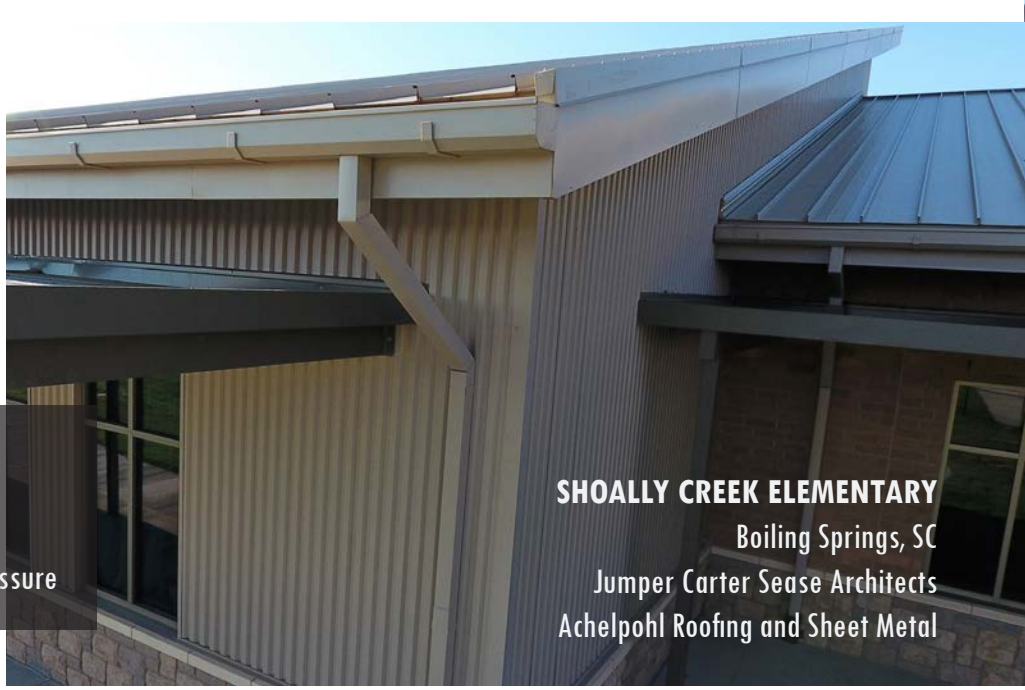
HWPG16



HWPH16



Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure

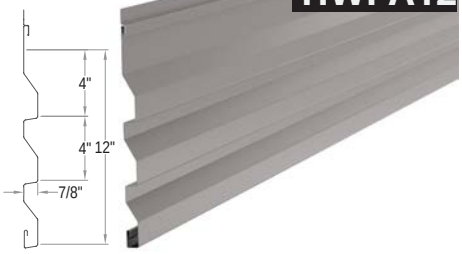


SHOALLY CREEK ELEMENTARY
Boiling Springs, SC
Jumper Carter Sease Architects
Achelpohl Roofing and Sheet Metal

12" HORIZONTAL WALL PANEL

Materials: 24 ga., 22 ga., 20 ga.,18 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1.0mm) RHEINZINK®
16 oz., 20 oz. Copper
Panel Coverage: 12"
Panel Depth: 7/8"
Minimum Panel Length: 4'-0"

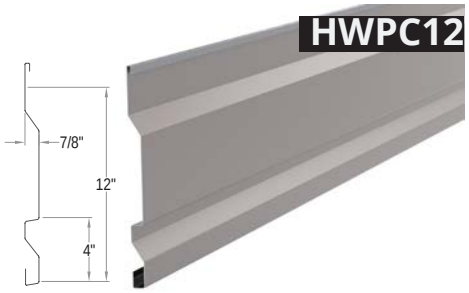
HWPA12



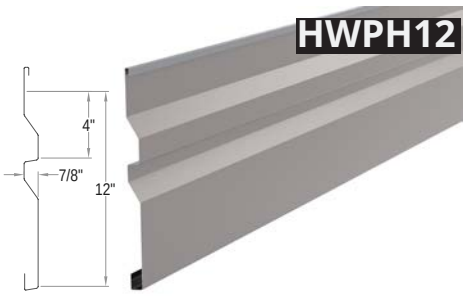
HWPB12



HWPC12



HWPH12





SHEET METAL WORKS LOCAL 268 UNION HALL
Caseyville, IL
Hurford Architects
BeloMan

Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure

58 Klema Drive North
Reynoldsburg, OH 43068
740.927.3633

160 Outerbelt Street
Columbus, OH 43213
614.407.EDGE

819 South Salisbury GQ Avenue
Salisbury, NC 28146
704.279.9691

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DMIMETALS.COM

FOR MORE INFORMATION

DMI
DIMENSIONAL METALS, INC.

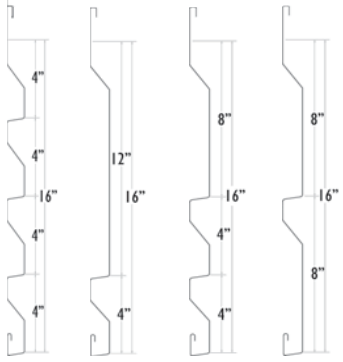
800.828.1510
www.dmimetals.com
sales@dmimetals.com

HORIZONTAL WALL PANEL SERIES HWP

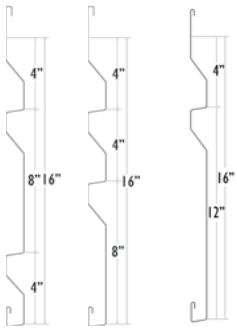


16" WIDTHS

HWPA16 HWPC16 HWPD16 HWPE16

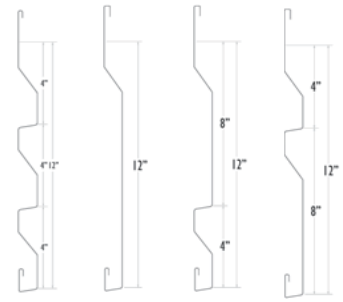


HWPF16 HWPG16 HWPH16



12" WIDTHS

HWPA12 HWPB12 HWPC12 HWPH12



HORIZONTAL WALL PANEL HWP is a single skin panel which can be used in a wide range of applications. The product is a directional system by design. The HWP series offers a very flexible panel design and works well for both new construction and retrofit applications. The wide range of profiles can be mixed and matched giving your building a distinct custom look.

ASSEMBLIES

The HWP series can be applied over substrates including: open framing, rigid insulation, hat channels and various solid substrates including plywood sheathing.

PRODUCT USES AND APPLICATIONS

Product uses include walls, soffits, vertical fascia, equipment screens, curtain walls and as a visual design element giving your building a unique aesthetic appearance.

PRODUCT OFFERING

24 ga., 22 ga., 20 ga. Steel, .032, .040, .050 Aluminum, 24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1.0mm) RHEINZINK®, and 16 oz., 20 oz. Copper

- HWP_12 series at 12" o.c. width
- HWP_16 series at 16" o.c. width

7/8" Panel Depth
Minimum panel length is 4'0"
22 ga. & 20 ga. Steel and .040 & .050 aluminum are not stocked in all colors.
Minimum order quantities and extended lead times may accompany panel orders when utilizing these substrates.

PERFORMANCE TESTED

- ASTM E283 Air Leakage
- ASTM E331 Water Penetration

HWP ADVANTAGES

- Contributes to enhanced visual impact
- Can be installed horizontally, vertically or diagonally
- Gives your existing building a clean, contemporary look
- Common interlocking engagement hem allows for mixing and matching of various HWP series profiles
- Inside and outside mitered corners available
- Warranties Available: For total confidence

HWP SUBMITTAL



PROJECT NAME: _____

ARCHITECT: _____

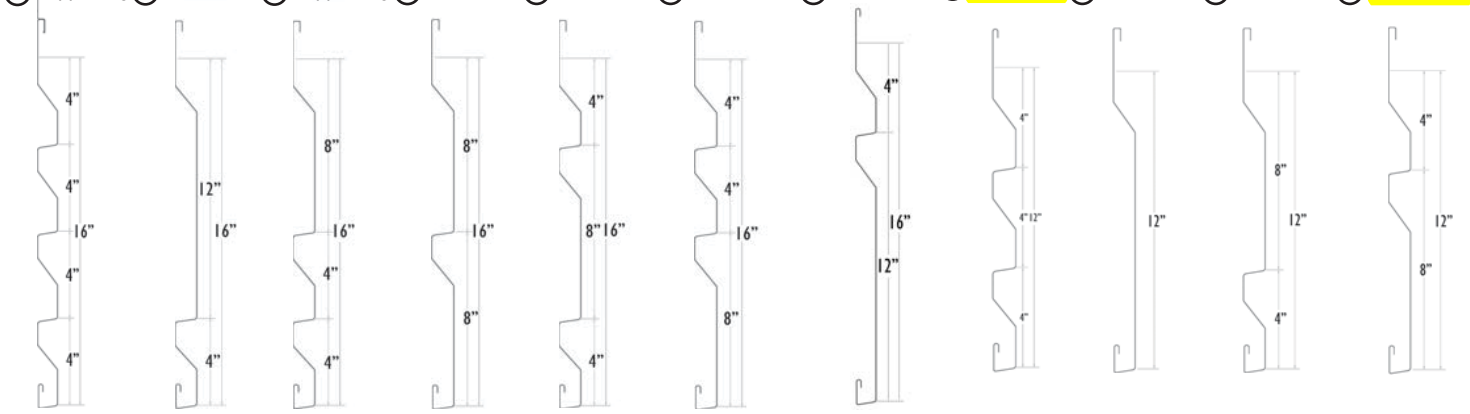
INSTALLING CONTRACTOR: _____

GENERAL CONTRACTOR: _____

SPECIFICATION SECTION: _____

PROFILE

○ HWPA16 ○ HWPC16 ○ HWPD16 ○ HWPE16 ○ HWPF16 ○ HWPG16 ○ HWPH16 ◉ HWPA12 ○ HWPB12 ○ HWPC12 ○ HWPH12



DynaClad® Standard Colors (IN ALPHABETICAL ORDER)	STOCKED AT DMI					
	24 GAGE GALVALUME	22 GAGE GALVALUME	.032 ALUM. 3105 H14	.040 ALUM. 3105 H14	.050 ALUM. 3105 H14	.063 ALUM. 3105 H14
AGED COPPER*	●		●			
BEIGE	●		●	●	●	
BRITE RED*	●		●	●		
BROWN	●		●	●		
BURGUNDY	●		●			
CHAMPAGNE*	●		●			
CHARCOAL GREY	●		●	●		
CLASSIC BRONZE	●		●	●		
COBALT BLUE	●		●			
COLONIAL RED	●		●	●		
DARK BRONZE	●	●	●	●	●	●
DOVE GREY	●		●	●		
EVERGREEN	●		●	●		
HARTFORD GREEN	●		●			
HEMLOCK GREEN	●		●			
LEAF GREEN	●		●			
MATTE BLACK	●		●	●		
METALLIC COPPER*	●		●			
METALLIC SILVER*	●		●			
MUSKET GREY	●		●	●		
PATINA COPPER	●		●	●		
PUTTY	●	●	●	●	●	
ROYAL BLUE	●		●	●		
SANDSTONE	●	●	●	●	●	
SEAPORT	●		●	●		
SLATE BLUE	●		●			
SLATE GREY	●		●	●	●	
SPARTAN BRONZE	●		●	●		
STONE	●		●	●		
TERRA COTTA	●		●			
WEATHERED ZINC*	●		●			
WHITE	●	●	●	●	●	●
MILL FINISHED ALUM.			●	●	●	●
ACRYLUME®	●	●				
CLEAR ANODIZED			●	●		

SUBSTRATE

- ○ 24 GA. GALVALUME
- ○ 22 GA. GALVALUME
- ○ 20 GA. G-90
- ○ .032 ALUMINUM
- ◉ .040 ALUMINUM
- ○ .050 ALUMINUM
- ○ 16 OZ. COPPER
- ○ 20 OZ. COPPER
- ○ 24 GA. (.7MM) RHEINZINK®
- ○ 22 GA. (.8MM) RHEINZINK®
- ○ 20 GA. (1.0MM) RHEINZINK®

EMBOSSED

- ○ YES
- ◉ NO

Consult DMI for minimum quantities, upcharges, set up fees and extended lead times

STANDARD FINISHES (NA ON COPPER)

- ◉ DYNACLAD® PVDF: _____
- ○ ACRYLIC COATED GALVALUME (ACRYLUME)
- ○ MILL FINISH ALUMINUM
- ○ CLEAR ANODIZED ALUMINUM
- ○ PREPATINA BLUE-GREY
- ○ PREPATINA GRAPHITE-GREY

PREMIUM FINISHES*

- ○ DYNACLAD® METALLIC PVDF: _____
- ○ DYNACLAD® BRITE RED PVDF
- ○ DYNACLAD® STANDARD COLOR PVDF W/CLEARCOAT (3-COAT): _____
- ○ DYNACLAD® METALLIC COLOR PVDF W/CLEARCOAT (3-COAT): _____
- ○ CUSTOM COLOR: _____

**Premium Colors subject to minimum quantities, extended lead times and upcharges. Consult DMI for details.*

WARRANTY

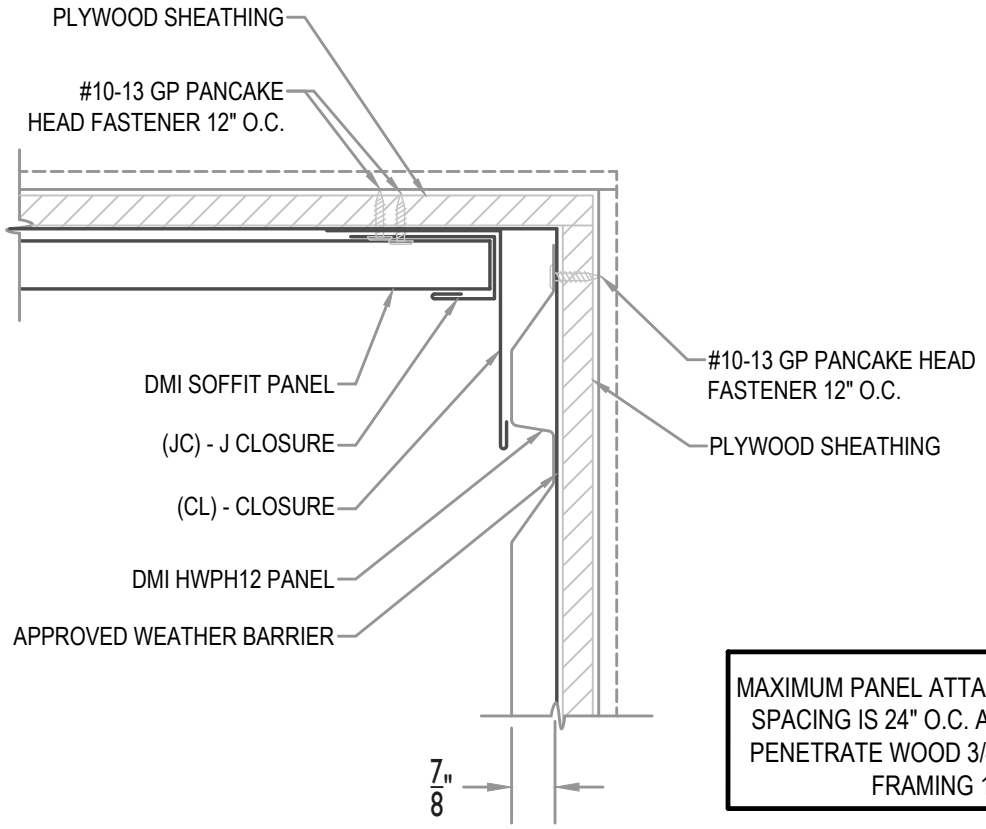
- ☐ DYNACLAD® PAINT FINISH
- ☐ GALVALUME 20 YEAR - 6 MONTH (SUBSTRATE)
- ☐ WALL PANEL WEATHERTIGHTNESS _____

**Warranties not available for Rhenzink®*

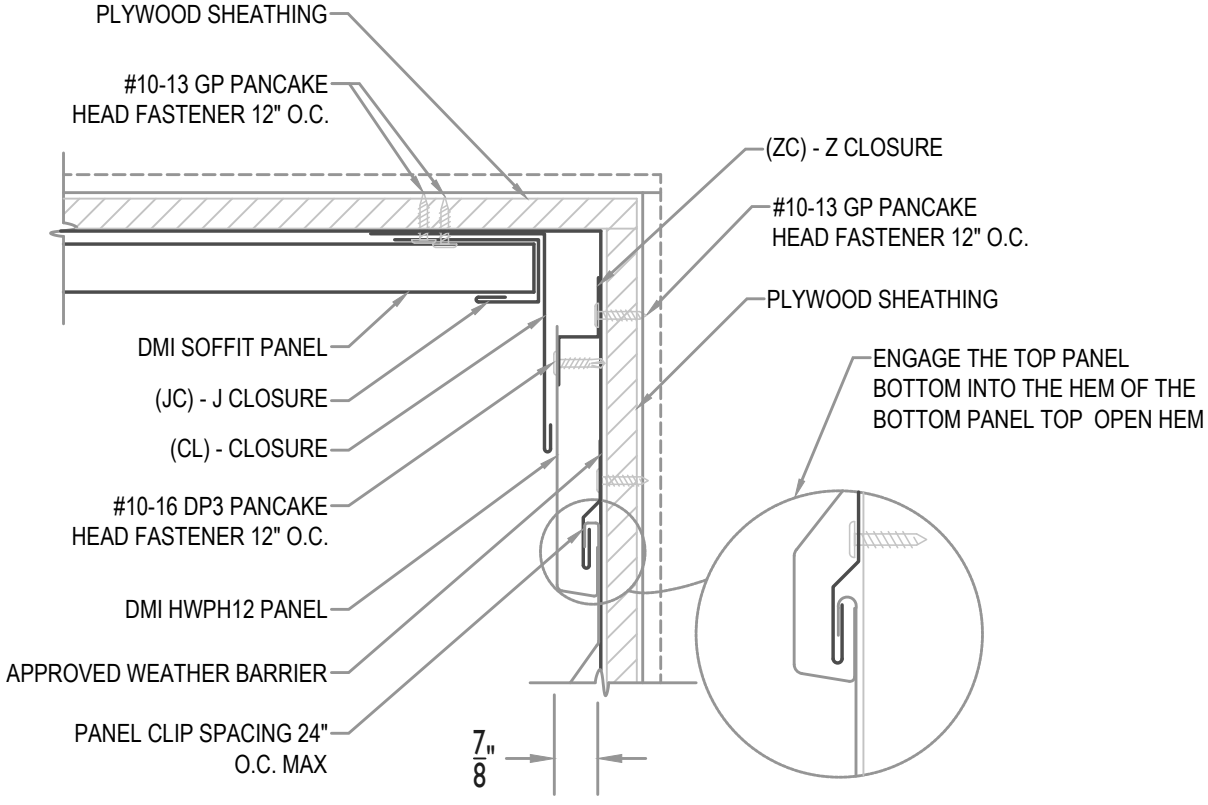
Non-Stock colors available subject to minimum quantities, additional lead times and upcharges.

** Denotes Premium Color - subject to additional costs.*

Dimensional Metals, Inc. has specialized in the manufacturing of Architectural Metal Panel Systems and Fabricated Architectural Sheet Metal for the construction industry since 1988. We use the most technologically advanced Fixed Base Roll-Forming Equipment to deliver complete in-house quality control over the manufacture of our products.



MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

SOFFIT TO WALL PANEL

Detail: HWPH12-H-01-00

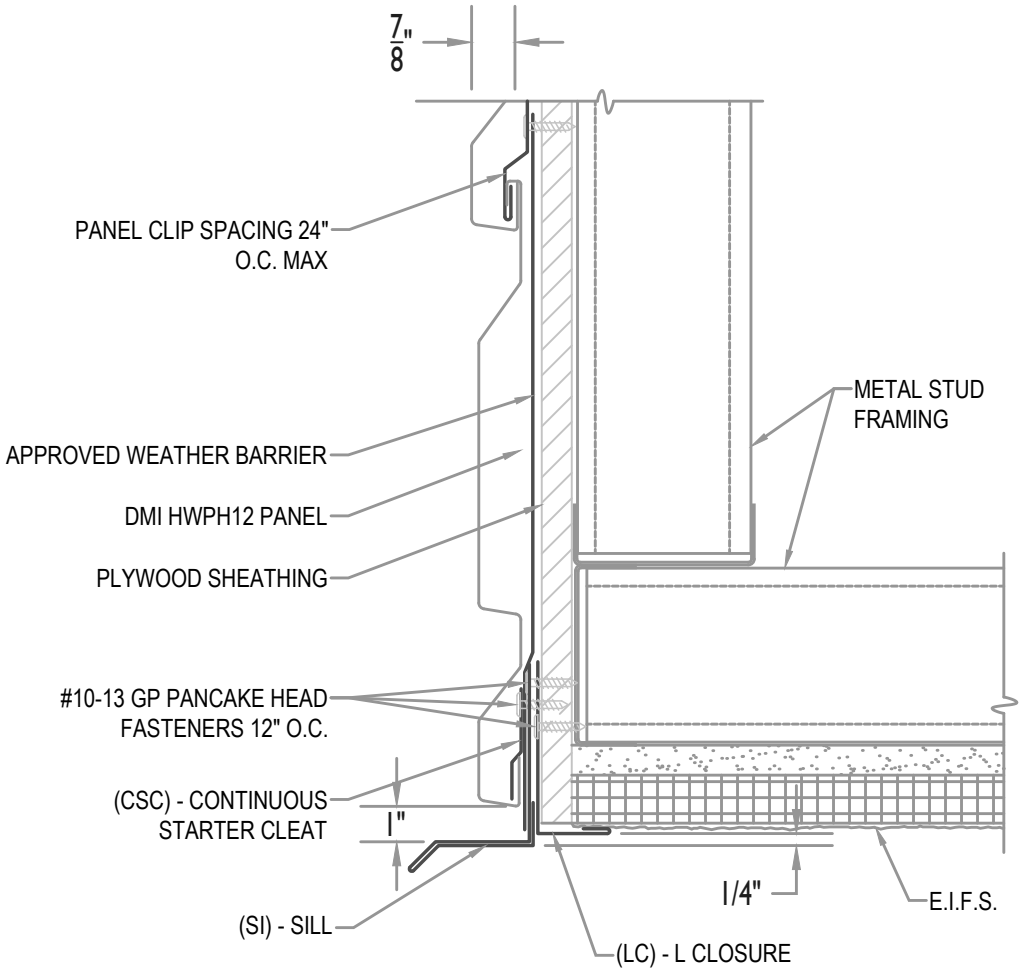
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

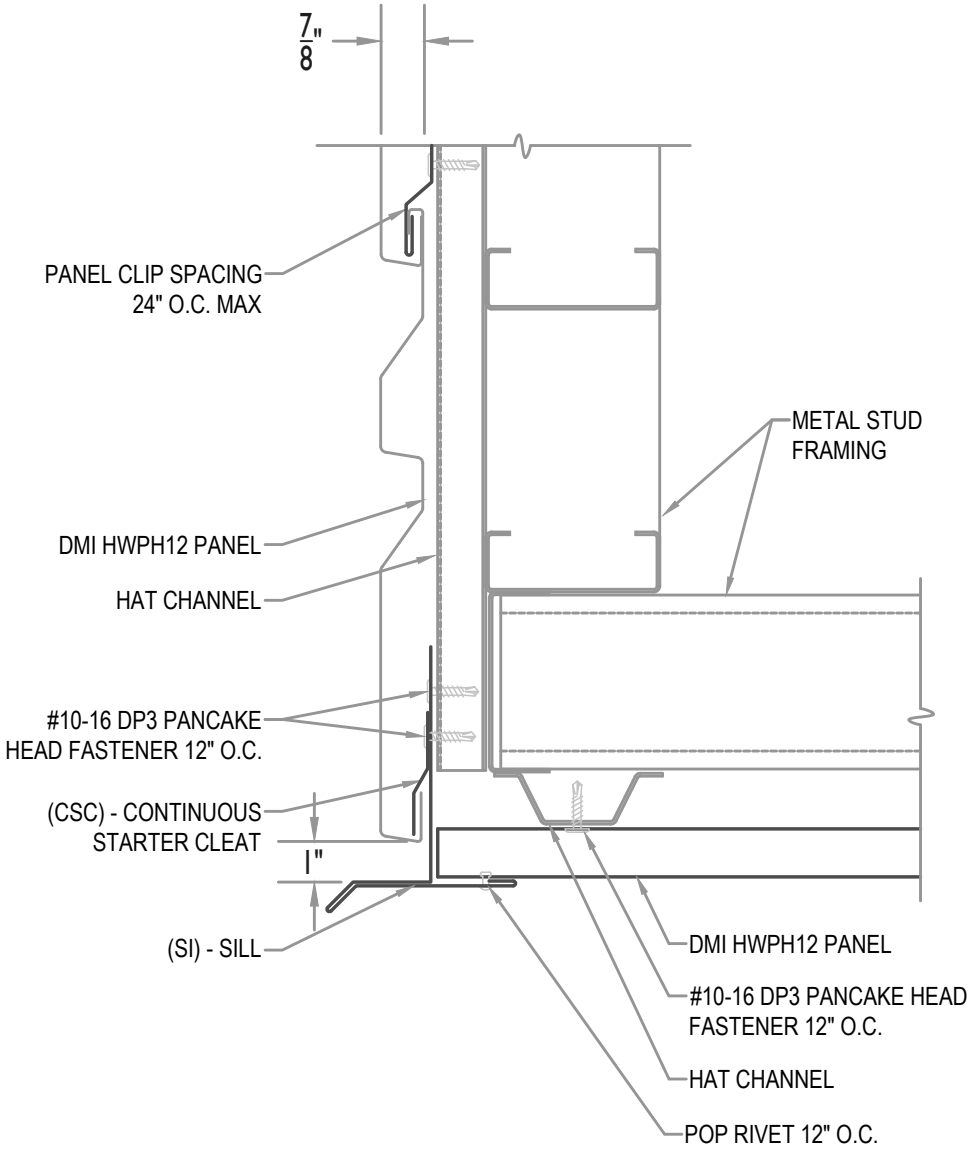
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WALL PANEL W/ (EIFS SOFFIT)

Detail: HWPH12-H-02-00

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DIMENSIONAL METALS, INC.

WALL PANEL W/ (PANEL SOFFIT)

Detail: HWPH12-H-02-01

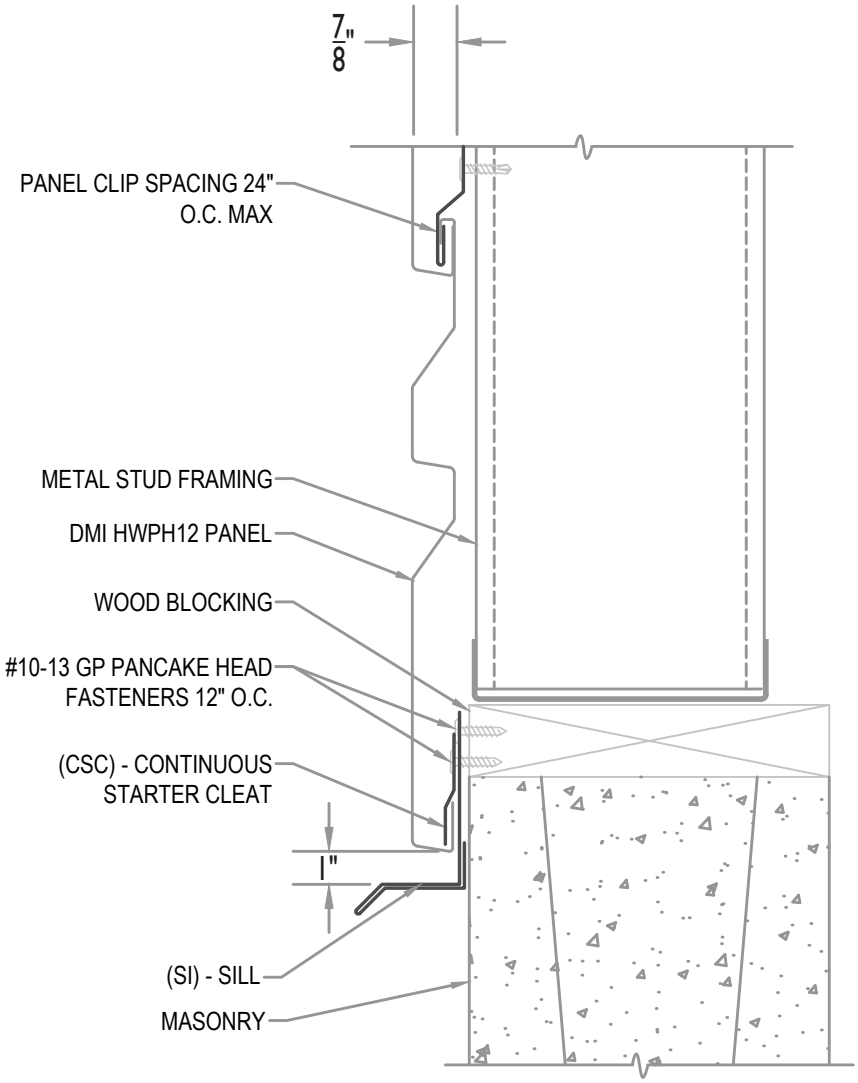
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

WALL PANEL W/ SILL (AT BLOCK)

Detail: HWPH12-H-02-02

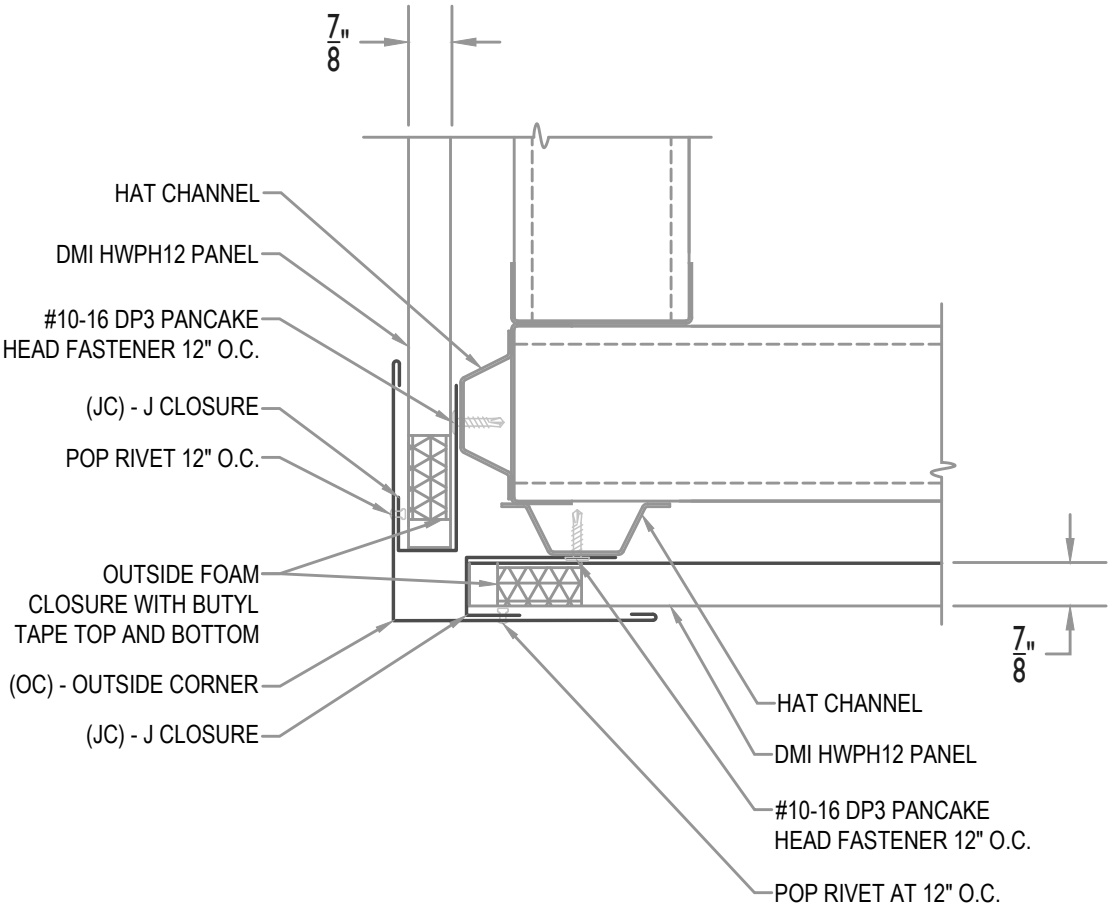
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

OUTSIDE CORNER

Detail: HWPH12-H-03-00

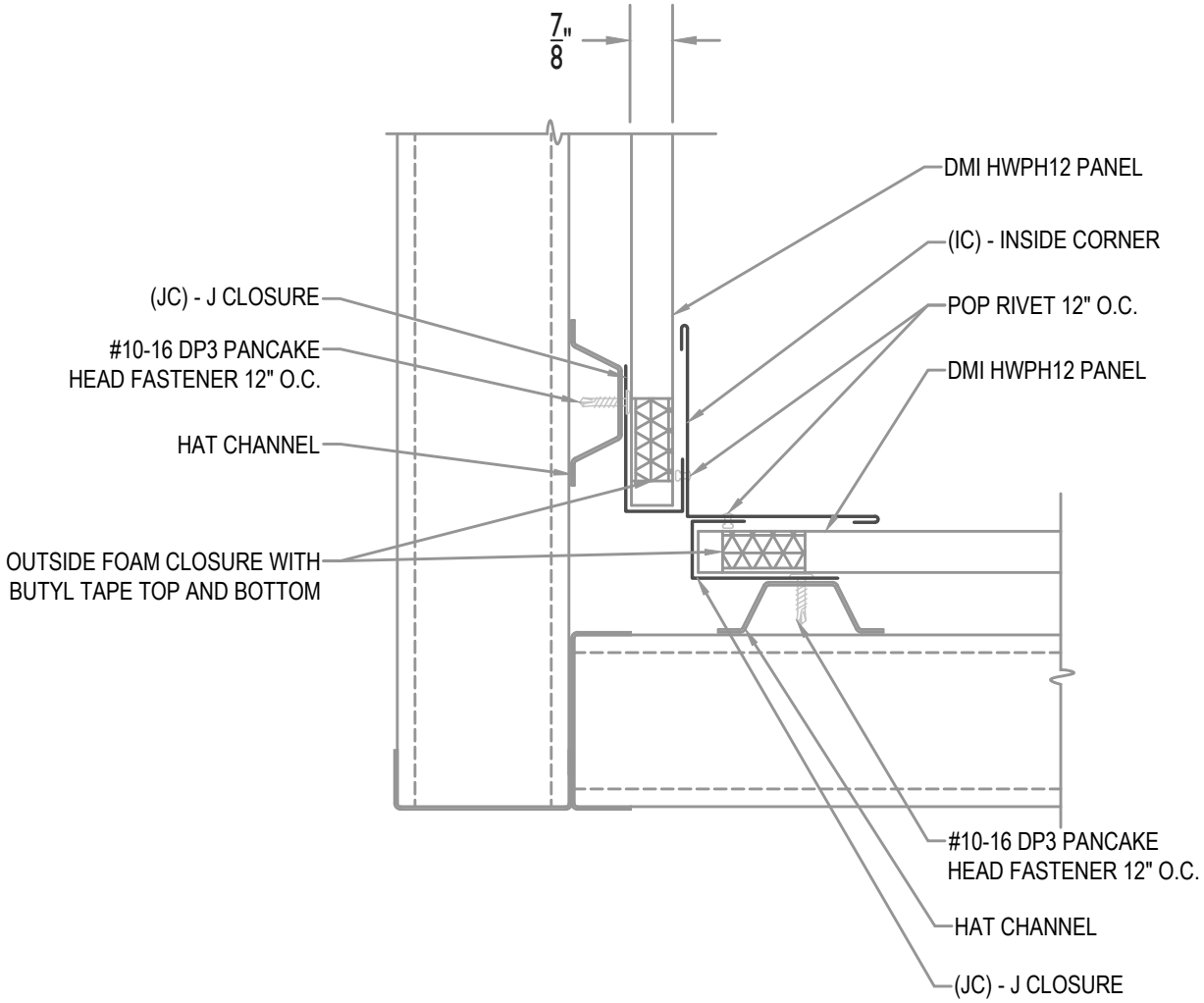
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.

DMI DIMENSIONAL METALS, INC.

INSIDE CORNER

Detail: *HWPH12-H-03-01*

●**PROVEN** ● **DEPENDABLE** ● **SUSTAINABLE**●

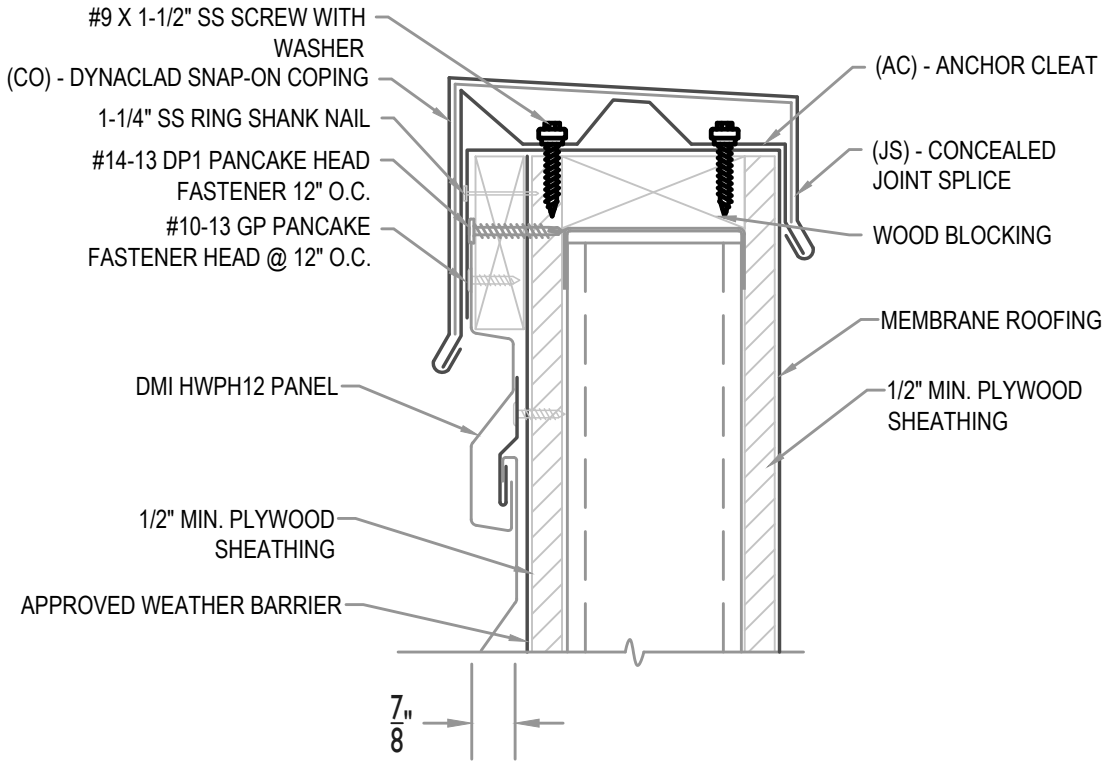
METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date: 04/19

Scale: 3"=1'-0"

SEE DMI DYNACLAD EDGE INSTALLATION GUIDE FOR COMPLETE FASTENING AND INSTALLATION INFORMATION FOR ES-1 RATED SNAP-ON COPING



MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.

DMI DIMENSIONAL METALS, INC.

COPING WITH WOOD SUBSTRATE

Detail: HWPH12-H-04-00

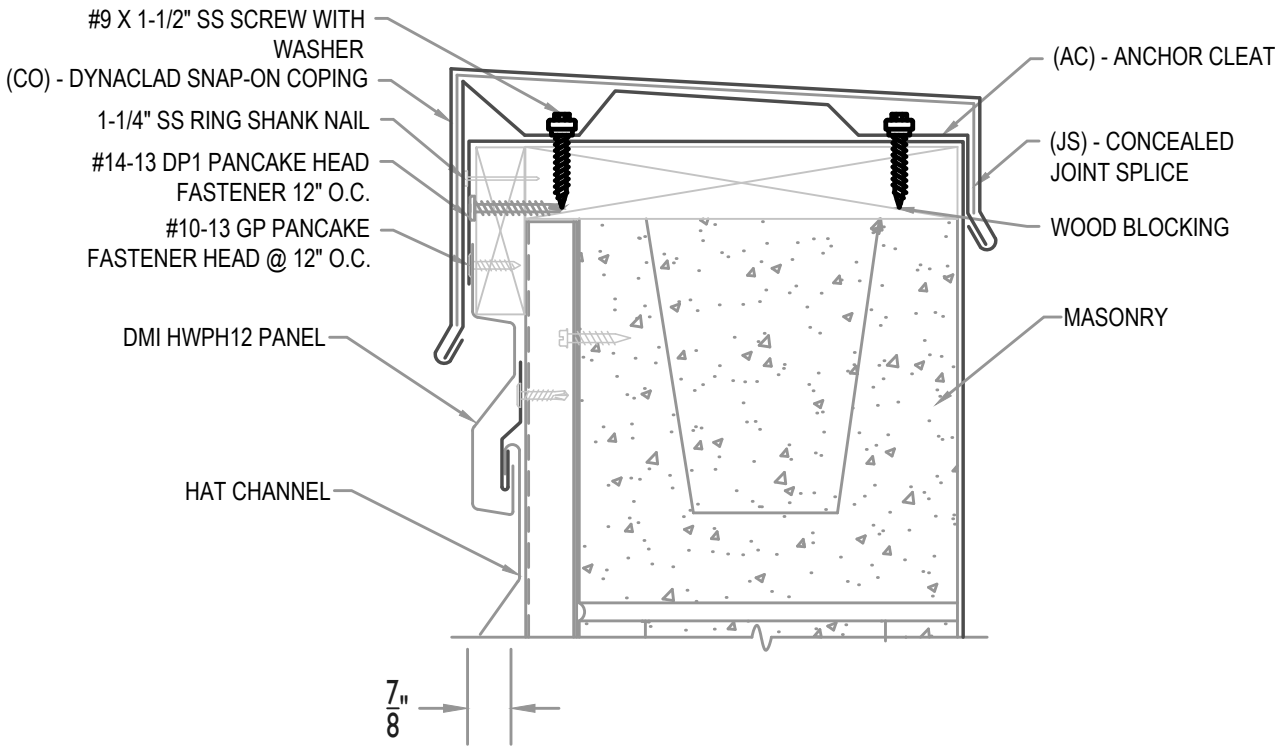
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

SEE DMI DYNACLAD EDGE INSTALLATION GUIDE FOR COMPLETE FASTENING AND INSTALLATION INFORMATION FOR ES-1 RATED SNAP-ON COPING



DMI DIMENSIONAL METALS, INC.

COPING WITH HAT CHANNEL

Detail: HWPH12-H-04-01

●PROVEN ● DEPENDABLE ● SUSTAINABLE●

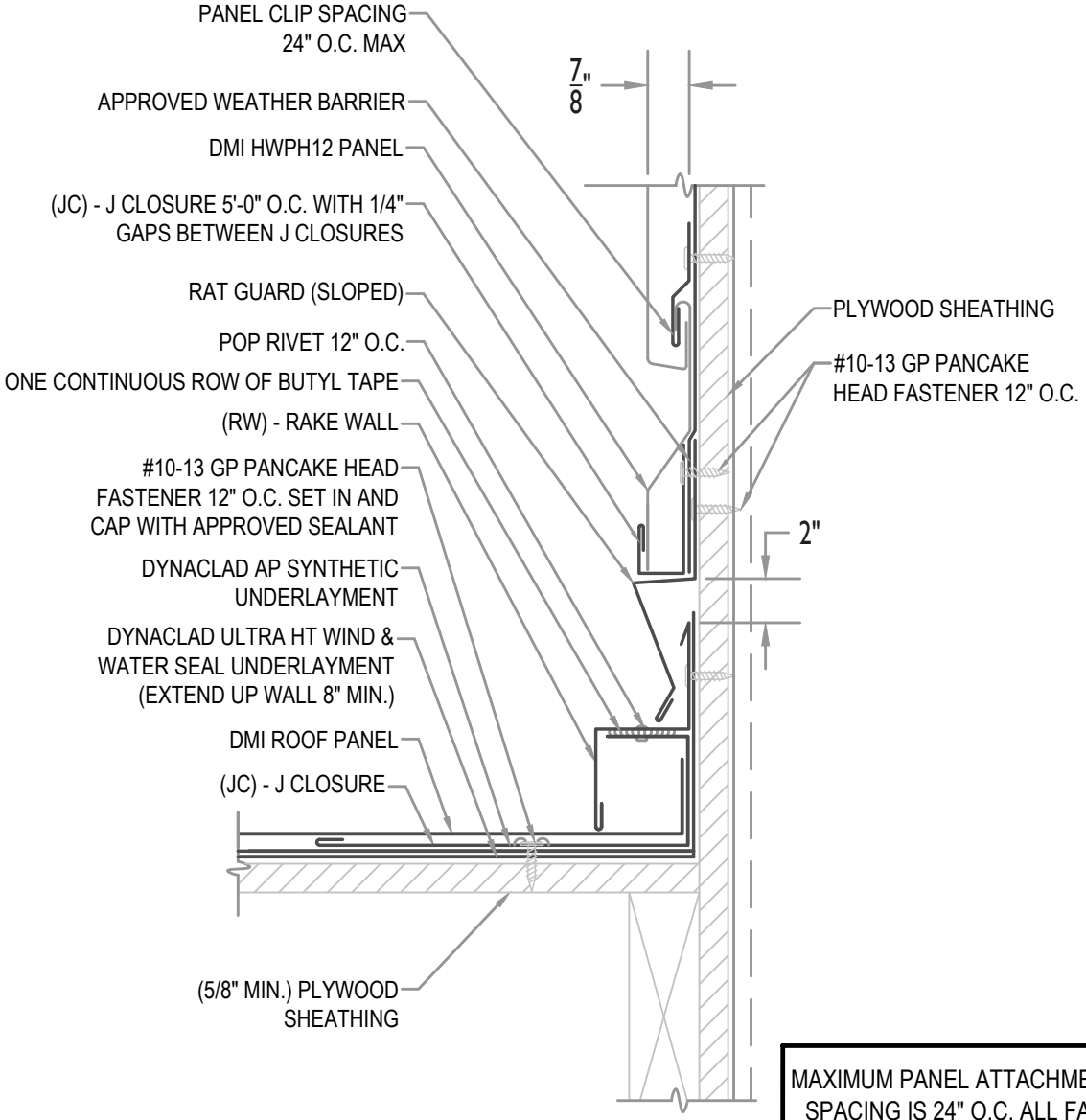
METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
04/19	3"=1'-0"

FLASHING LAP NOTE

LAP (RW) - RAKE WALL AND RAT GUARD (SLOPED) 2" MINIMUM WITH 2 ROWS OF BUTYL SEALANT.



MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.

DMI DIMENSIONAL METALS, INC.

RAKE WALL

Detail: *HWPH12-H-05-00*

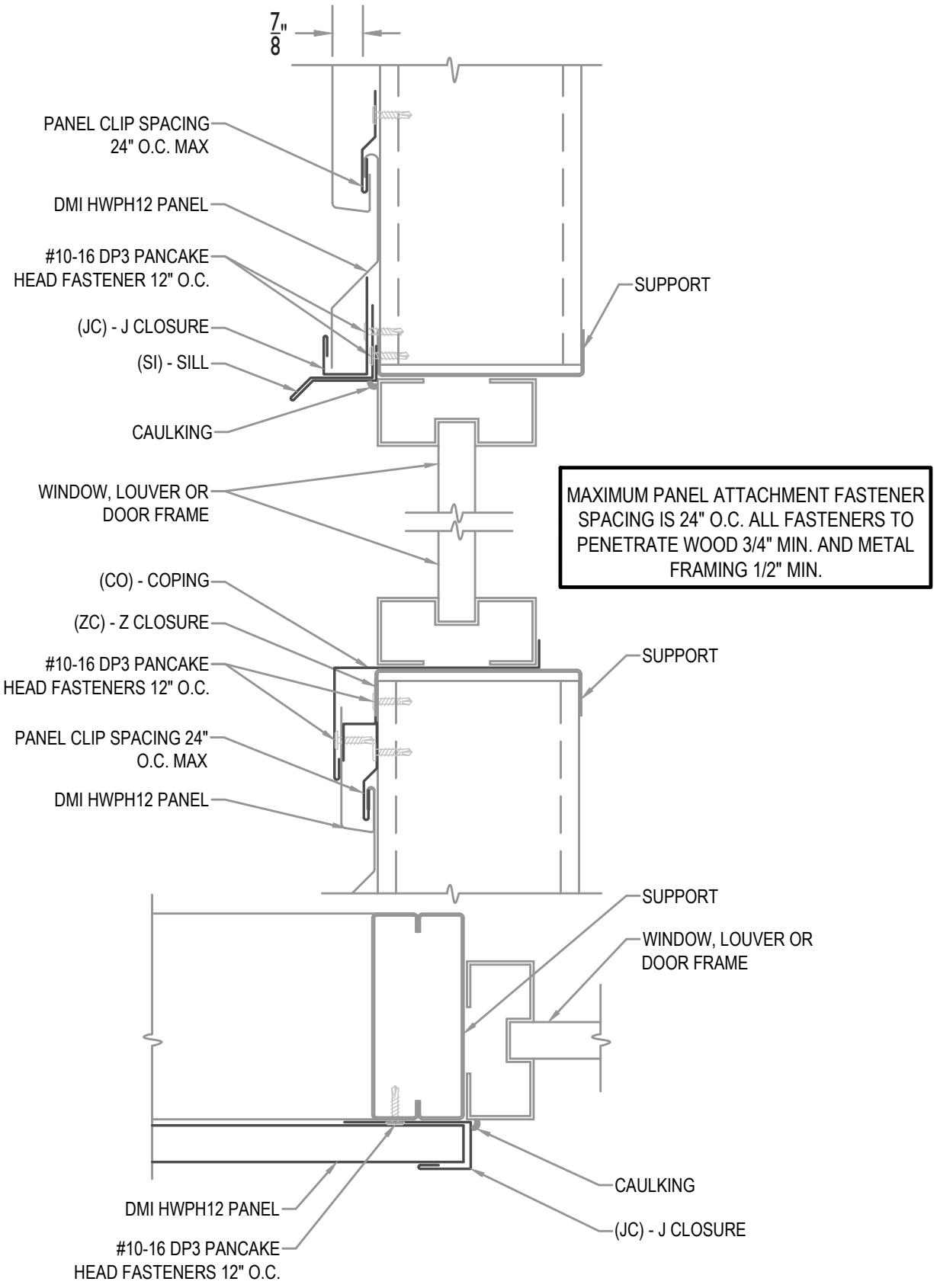
●**PROVEN** ● **DEPENDABLE** ● **SUSTAINABLE**●

METAL ENVELOPE SYSTEMS SINCE 1988

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Issue/Rev Date: 04/19

Scale: 3"=1'-0"



DMI DIMENSIONAL METALS, INC.

OPENING HEAD, SILL AND JAMB

Detail: HWPH12-H- 06-00

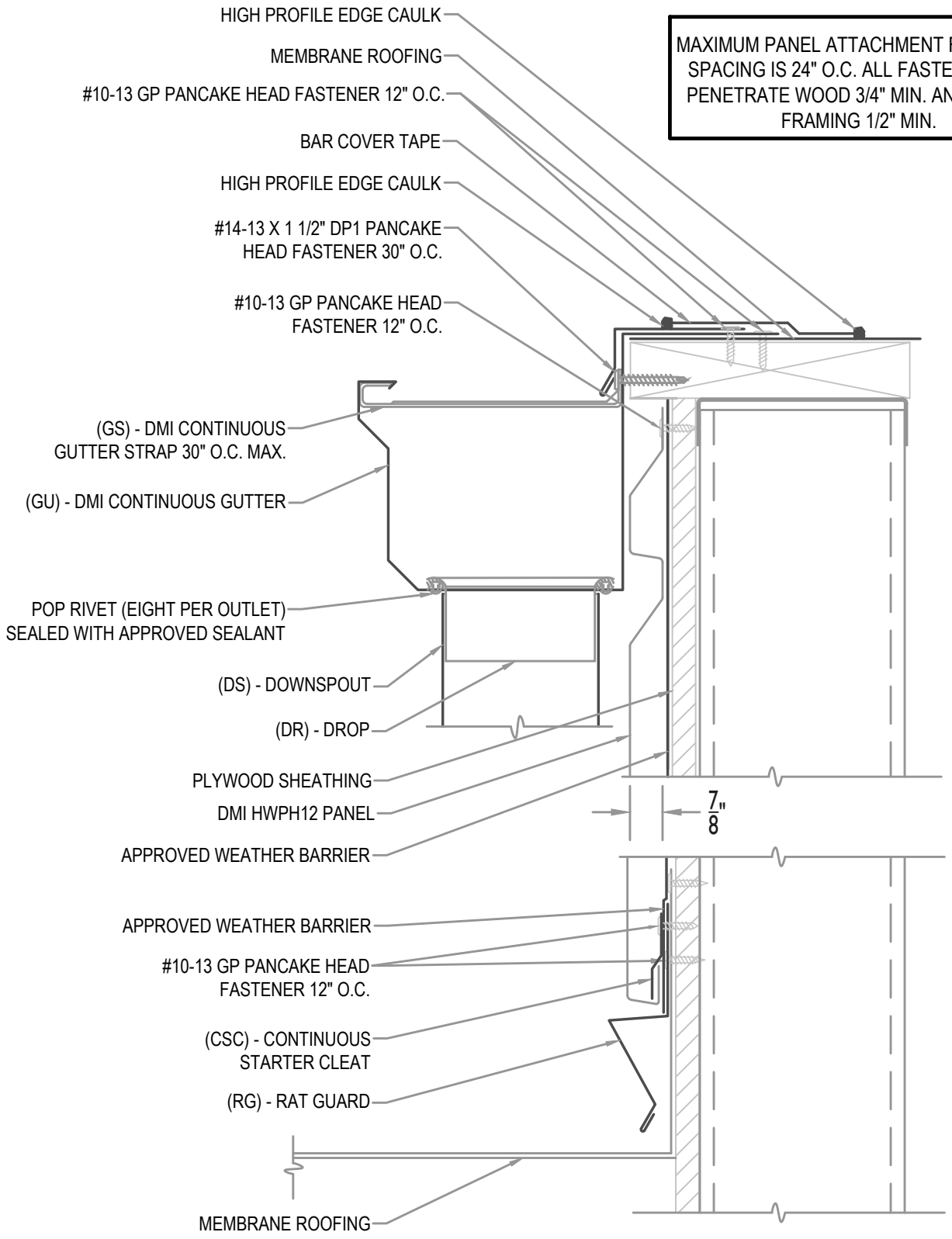
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

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Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

WALL SECTION AT MEMBRANE ROOF

Detail: HWPH12-H-07-00

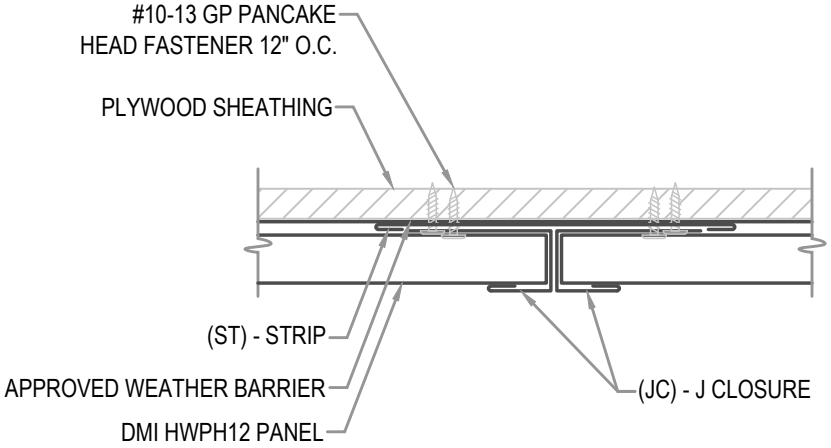
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

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Issue/Rev Date:	Scale:
04/19	3"=1'-0"

MAXIMUM PANEL ATTACHMENT FASTENER SPACING IS 24" O.C. ALL FASTENERS TO PENETRATE WOOD 3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

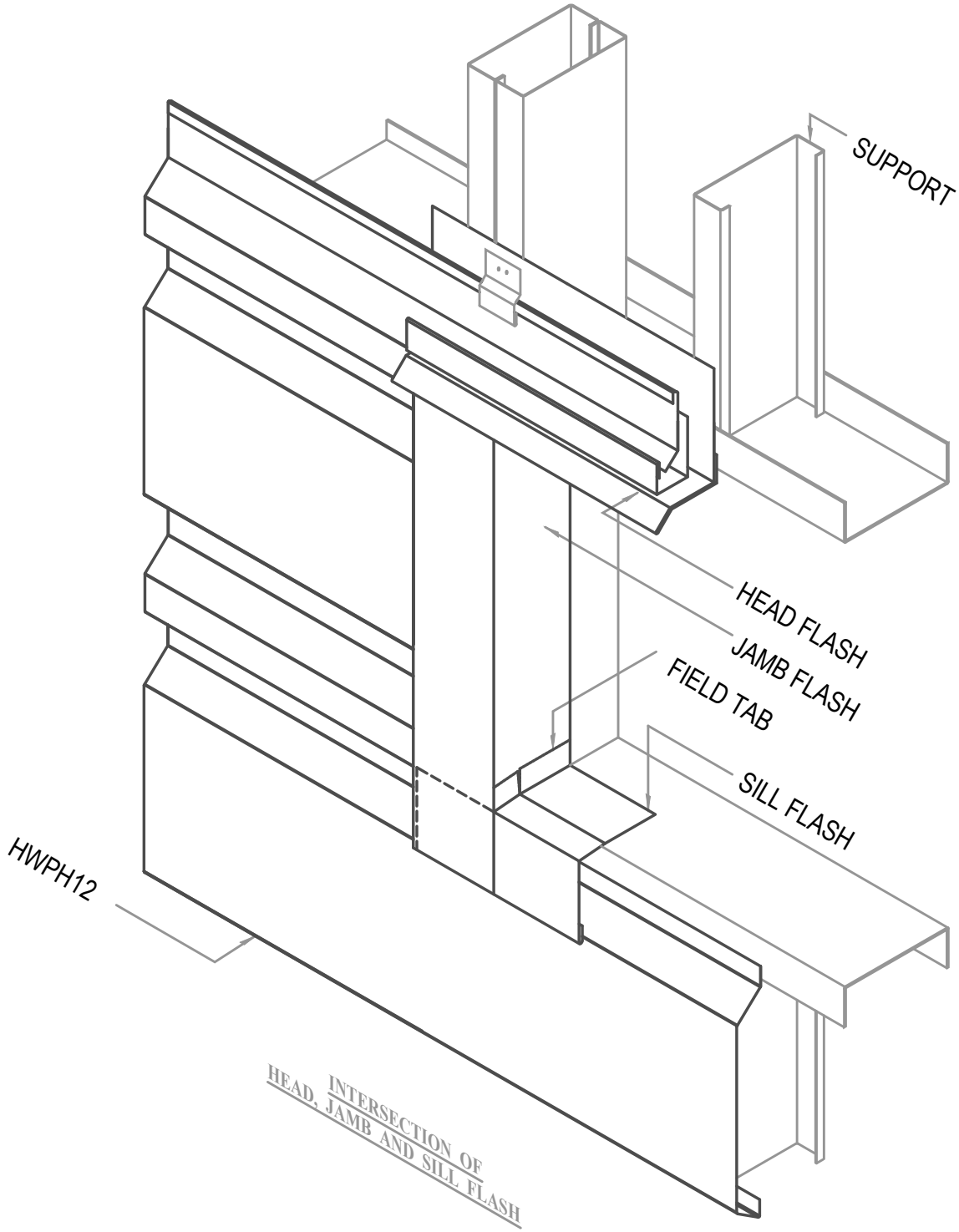
WWW.DMIMETALS.COM

PANEL LAP

Detail: HWPH12-H-08-00

Issue/Rev Date: 04/19

Scale: 3"=1'-0"



DMI DIMENSIONAL METALS, INC.

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METAL ENVELOPE SYSTEMS SINCE 1988

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ISO HEAD, SILL AND JAMB

Detail: HWPH12-H-09-00

Issue/Rev Date: 04/19

Scale: 3"=1'-0"

DynaClad®

PVDF Color Chart

DMI DIMENSIONAL METALS, INC.

WHITE
SRI = 85

COBALT BLUE
SRI = 20

PUTTY
SRI = 77

SANDSTONE
SRI = 77

DOVE GREY
SRI = 61

PATINA COPPER
SRI = 58

BRITE RED*
SRI = 44

BEIGE
SRI = 53

STONE
SRI = 49

SLATE GREY
SRI = 47

TERRA COTTA
SRI = 43

METALLIC SILVER
SRI = 53

MUSKET GREY
SRI = 35

SEAPORT
SRI = 35

COLONIAL RED
SRI = 34

SLATE BLUE
SRI = 34

CHAMPAGNE
SRI = 51

BURGUNDY
SRI = 34

HEMLOCK GREEN
SRI = 31

LEAF GREEN
SRI = 31

CHARCOAL GREY
SRI = 31

METALLIC COPPER
SRI = 49

SPARTAN BRONZE
SRI = 30

CLASSIC BRONZE
SRI = 29

MATTE BLACK
SRI = 29

EVERGREEN
SRI = 28

AGED COPPER
SRI = 43

DARK BRONZE
SRI = 27

ROYAL BLUE
SRI = 27

HARTFORD GREEN
SRI = 26

BROWN
SRI = 25

WEATHERED ZINC
SRI = 37

Premium Colors **

Metallic Colors †

† Metallic colors are directionally sensitive and therefore entire roof areas should be ordered at one time to ensure color uniformity.
*Brite Red has a clear coat. ** Premium colors carry an upcharge. SRI = Solar Reflectance Index.
Colors shown are samples and may vary slightly from actual material.

CUSTOM COLORS ARE AVAILABLE

PRODUCT - DynaClad® Prefinished Architectural Tension Leveled Coil and Flat Sheet is coated with a 70% Full Strength PVDF Paint Finish. The top side is coated with a polyester primer and a 70% full strength PVDF topcoat for a total mil thickness of 1.1 (± .1). The reverse side is a polyester primer and a polyester topcoat with a total dry film thickness of .55 (± .1).

Substrates

Galvalume®

Consists of aluminum-zinc alloy coated (55% aluminum, 43.4% zinc, 1.6% silicon, nominal percentage by weight) carbon steel of commercial weight meeting ASTM 792.

HDG-90

Consists of hot-dipped galvanized steel base sheet of commercial weight (AISI G90 designation) meeting ASTM A653.

Aluminum

Consists of 3003/3105 H14 alloy aluminum base sheet of commercial weight meeting ASTM B209.

Stocked substrates are produced from 48" wide coil. Standard sized flat sheets are 48" X 120". Custom sized flat sheets can be produced in various widths and lengths with extended lead times and additional costs.

WARRANTY - A finish warranty covering color fade, chalking, and film integrity as well as a perforation warranty (Galvalume® only) covering base sheet integrity is available at no additional cost.

DYNACLAD® STOCKING COLOR/MATERIAL

COLOR (IN ALPHABETICAL ORDER)	24 GAGE GALVALUME KYNAR 500	22 GAGE GALVALUME KYNAR 500	.032 ALUM. 3003/3105 H14 KYNAR 500	.040 ALUM. 3003/3105 H14 KYNAR 500	.050 ALUM. 3003/3105 H14 KYNAR 500	.063 ALUM. 3003/3105 H14 KYNAR 500
AGED COPPER	•		•			
BEIGE	•	•	•	•	•	
BRITE RED	•		•	•		
BROWN	•		•	•		
BURGUNDY	•		•			
CHAMPAGNE	•		•			
CHARCOAL GREY	•		•	•		
CLASSIC BRONZE	•		•	•		
COBALT BLUE	•		•			
COLONIAL RED	•		•			
DARK BRONZE	•	•	•	•	•	•
DOVE GREY	•	•	•	•		
EVERGREEN	•		•	•		
HARTFORD GREEN	•		•			
HEMLOCK GREEN	•		•			
LEAF GREEN	•		•			
MATTE BLACK	•		•	•		
METALLIC COPPER	•		•			
METALLIC SILVER	•		•			
MUSKET GREY	•		•	•		
PATINA COPPER	•		•	•		
PUTTY	•	•	•	•	•	
ROYAL BLUE	•		•	•		
SANDSTONE	•	•	•	•		
SEAPORT	•		•			
SLATE BLUE	•		•			
SLATE GREY	•	•	•	•	•	
SPARTAN BRONZE	•		•	•		
STONE	•		•	•		
TERRA COTTA	•		•			
WEATHERED ZINC	•		•			
WHITE	•	•	•	•	•	•

COLORS LISTED ABOVE ARE AVAILABLE ON ANY OF THE SUBSTRATES BUT WILL HAVE ADDITIONAL LEAD TIMES AND COST.

STOCKED NON-PAINTED MATERIAL

HDG-90	24 ga, 22 ga, 20 ga, 18 ga, and 16 ga
ACRYLUME®	24 ga and 22 ga
MILL FINISHED ALUMINUM	.032, .040, .050, and .063
CLEAR ANODIZED ALUMINUM	.032 and .040
COPPER	16 oz. and 20 oz.
RHEINZINK®	.7 mm, .8 mm, and 1.0 mm
STAINLESS STEEL TYPE 304	24 ga and 22 ga

PERFORMANCE SPECIFICATION

ABRASION RESISTANCE *(ASTM D968)*
Passed 80 Liters

ACCELERATED WEATHERING *(ASTM D4587, G154)*
5,000 hours with no chalking, blistering or loss of adhesion

CHEMICAL RESISTANCE *(ASTM E1308)*
No visible changes

ADHESION *(ASTM D3359)*
No coating removed

COLOR CHANGE *(ASTM D2244)*
After 2,000 hours color change less than 2 NBS units

FLAME TEST *(ASTM E84)*
Class A

FLORIDA EXTERIOR DURABILITY *(ASTM G7, E2244 & D4214)*
Less than 5 Δ units color change and chalk rating of less than 8

FORMABILITY / T BEND *(ASTM D522 & D4145)*
No adhesion loss on a 1/8" Mandrel and 2T bend

GLOSS *(ASTM D523)*
30% (±5%) at 60 degrees
55% (±5%) at 85 degrees

HUMIDITY *(ASTM D2247)*
2,000 hours Galvalume® and G-90
3,000 hours Aluminum

IMPACT *(ASTM D2794)*
No cracking or loss of adhesion

PENCIL HARDNESS *(ASTM D3363)*
HB Minimum

SALT SPRAY *(ASTM B117)*
No blisters or adhesion loss after 2,000 hours for Galvalume® & G-90
No blisters or adhesion loss after 3,000 hours for Aluminum

CYCLIC SALT FOG *(ASTM D5894)*
Acceptance

See dmimetals.com for test reports, thermal emittance, and SR values.

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Fluropon® is a registered trademark of Sherwin-Williams.
Galvalume® is a registered trademark of BIEC International Inc. and some of its licensed partners.
Acrylume® is a registered trademark of USX.

2020-01

HWP

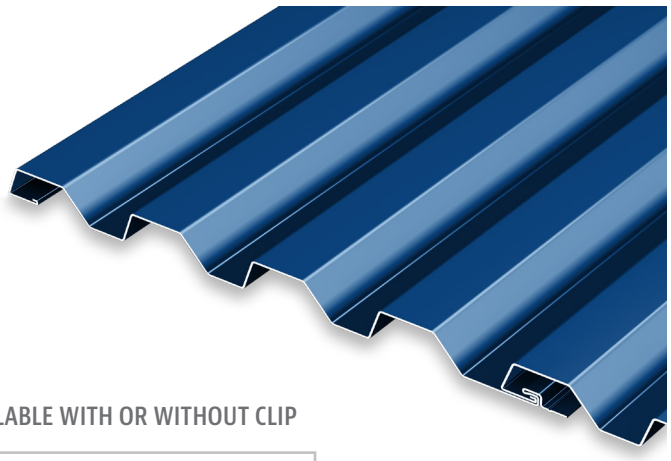
PRECISION SERIES WALL PANELS

MATERIALS

.032 aluminum
.040 aluminum
.050 aluminum
24 gauge steel
22 gauge steel

SPECS

12" or 16" Wide
7/8" High







AVAILABLE WITH OR WITHOUT CLIP



PRODUCT FEATURES

- No-clip panel, or clip installation for expansion/contraction
- Panel depth of 7/8"
- Cost-effective installation
- Horizontal or vertical installation
- Panel lengths:
  30' maximum for steel;
  22' maximum for aluminum on the thru-fastened leg; longer lengths available on clip panels

MATERIAL

- 43 stocked colors (24 gauge steel)
- 36 stocked colors (.032 aluminum)
- 16 Stocked colors (22 gauge steel)
- 22 stocked colors (.040 aluminum)
- 29 stocked colors (.050 aluminum)
- Galvalume Plus available

TESTS

- ASTM E330
- ASTM E283
- ASTM E331
- ASTM 1592

FLORIDA BUILDING PRODUCT APPROVALS

Please refer to pac-clad.com or your local factory for specific product approval numbers for Precision Series panels.

Note: Line drawings may not be to scale.

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PAC-CLAD PETERSEN
A CARLISLE COMPANY

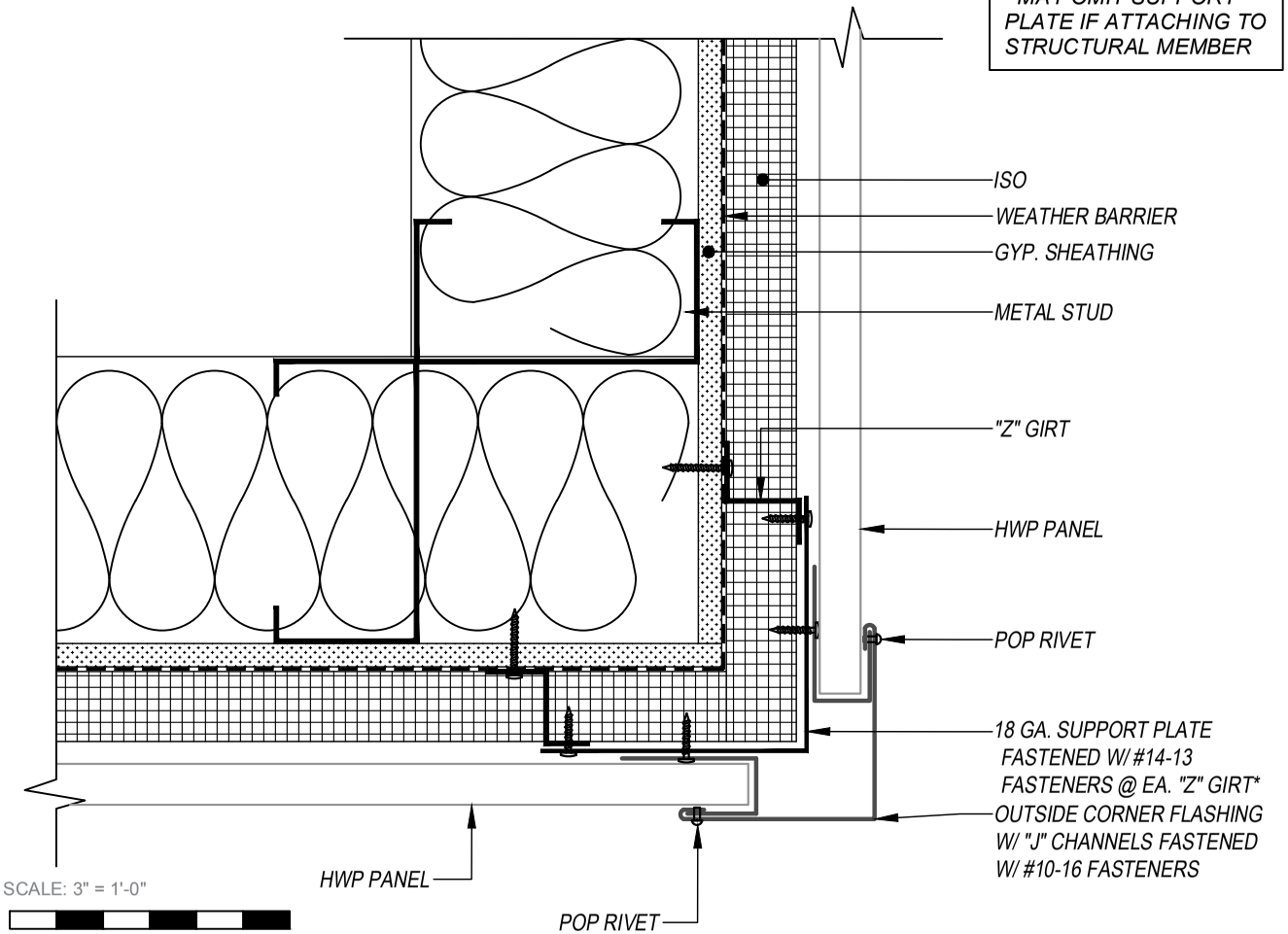
PERCISION SERIES - HWP - Z-GIRT

OUTSIDE CORNER DETAIL

HORIZONTAL APPLICATION



PRECISION SERIES - HWP

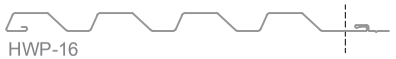


SCALE: 3" = 1'-0"

0 1 2 3 4 5 6 in

EFFECTIVE DATE: 01-03-2023
SUBJECT TO CHANGE WITHOUT NOTICE

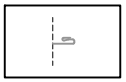
THIS DETAIL DRAWING IS APPLICABLE TO ALL HWP SERIES WALL PANEL PROFILES



HWP-16



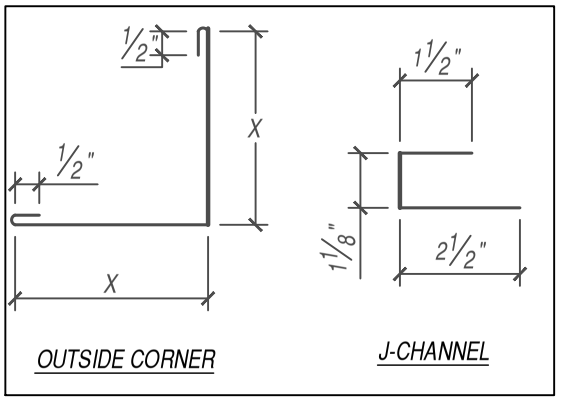
HWP-12



CONCEALED CLIP END

KEYNOTES:

- TRIM FASTENERS ARE SELF-DRILL PANCAKE HEAD AND MUST BE INSTALLED IN A STAGGERED PATTERN
- FASTENERS MUST PENETRATE STEEL SUBSTRATE BY 5/8" MINIMUM THREAD LENGTH
- FASTENER SPACING VARIES BASED ON PROJECT SPECIFIC LOADS AND/OR LOCAL BUILDING CODES



FLASHINGS

DISCLAIMER: DETAIL SHOWN FOR ILLUSTRATION PURPOSES ONLY. ACTUAL PROJECT DETAIL MAY VARY

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F: 800-722-7150

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Annapolis Junction, MD 20701
P: 800-344-1400
F: 301-953-7627

10551 PAC Road
Tyler, TX 75707
P: 800-441-8661
F: 903-581-8592

102 Northpoint Parkway
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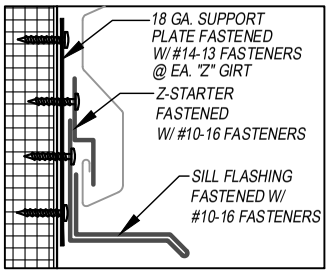
PERCISION SERIES - HWP - Z-GIRT

SILL DETAIL

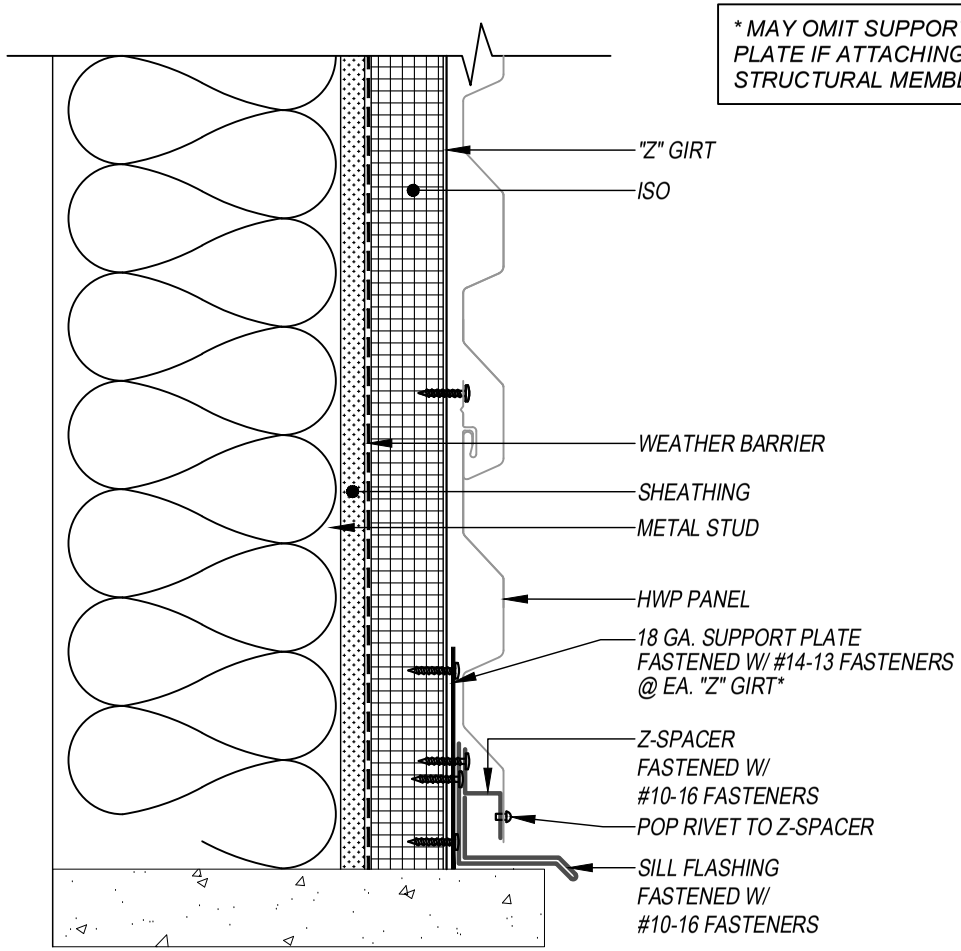
HORIZONTAL APPLICATION



PRECISION SERIES - HWP



ON MODULE CONDITION



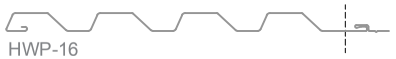
** MAY OMIT SUPPORT PLATE IF ATTACHING TO STRUCTURAL MEMBER*

SCALE: 3" = 1'-0"

0 1 2 3 4 5 6 in

EFFECTIVE DATE: 01-03-2023
SUBJECT TO CHANGE WITHOUT NOTICE

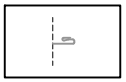
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HWP-16



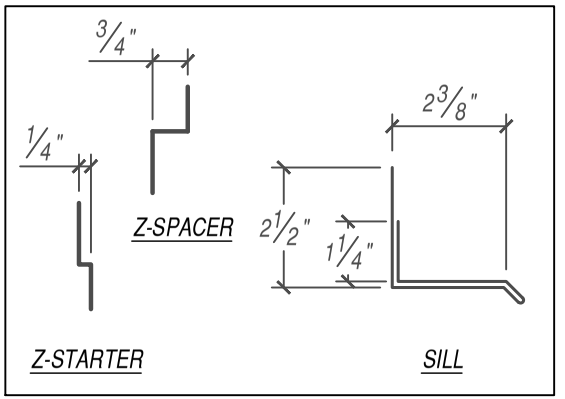
HWP-12



CONCEALED CLIP END

KEYNOTES:

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FLASHINGS

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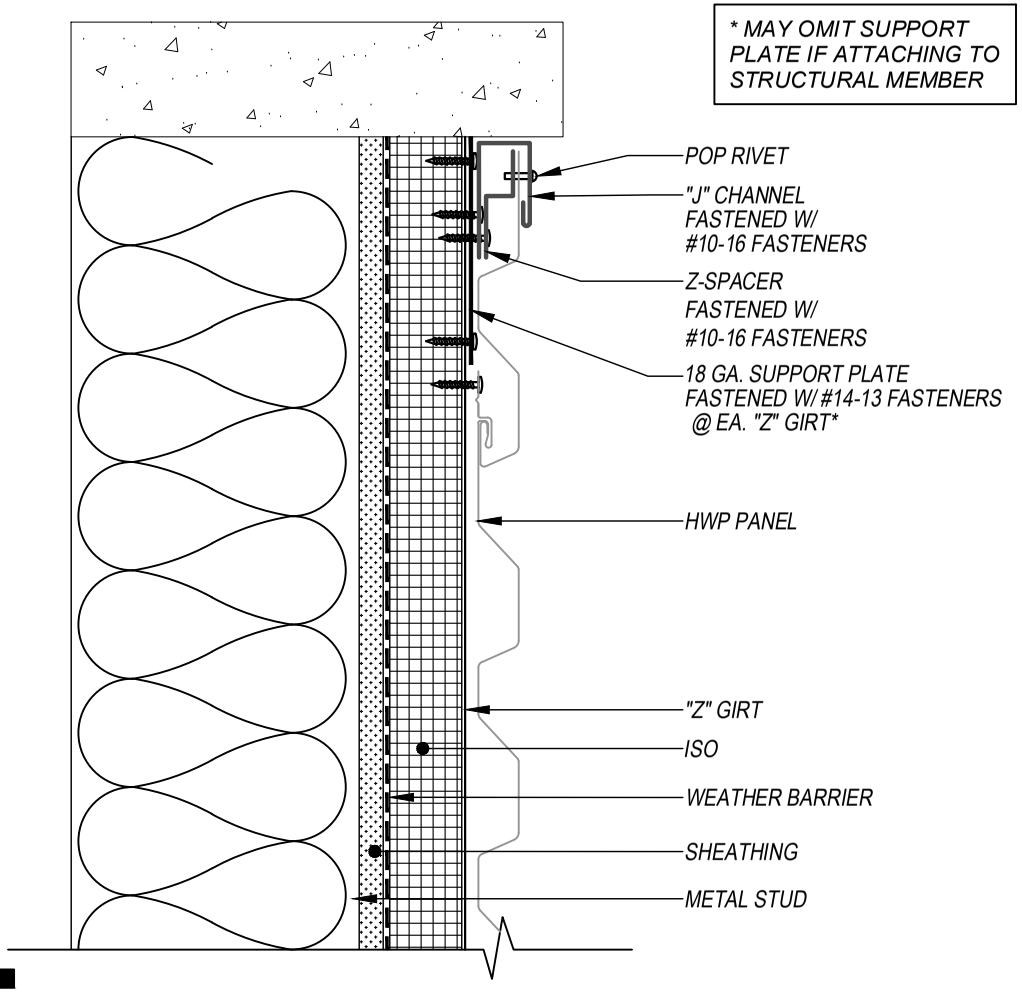
PERCISION SERIES - HWP - Z-GIRT

TOP-OF-WALL DETAIL

HORIZONTAL APPLICATION



PRECISION SERIES - HWP



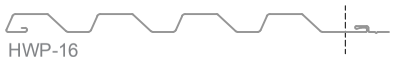
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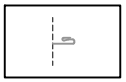
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HWP-16



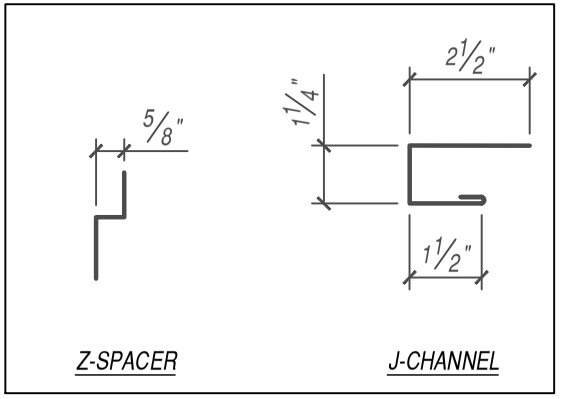
HWP-12



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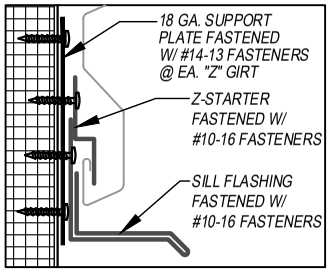
PERCISION SERIES - HWP - Z-GIRT

WINDOW HEAD DETAIL

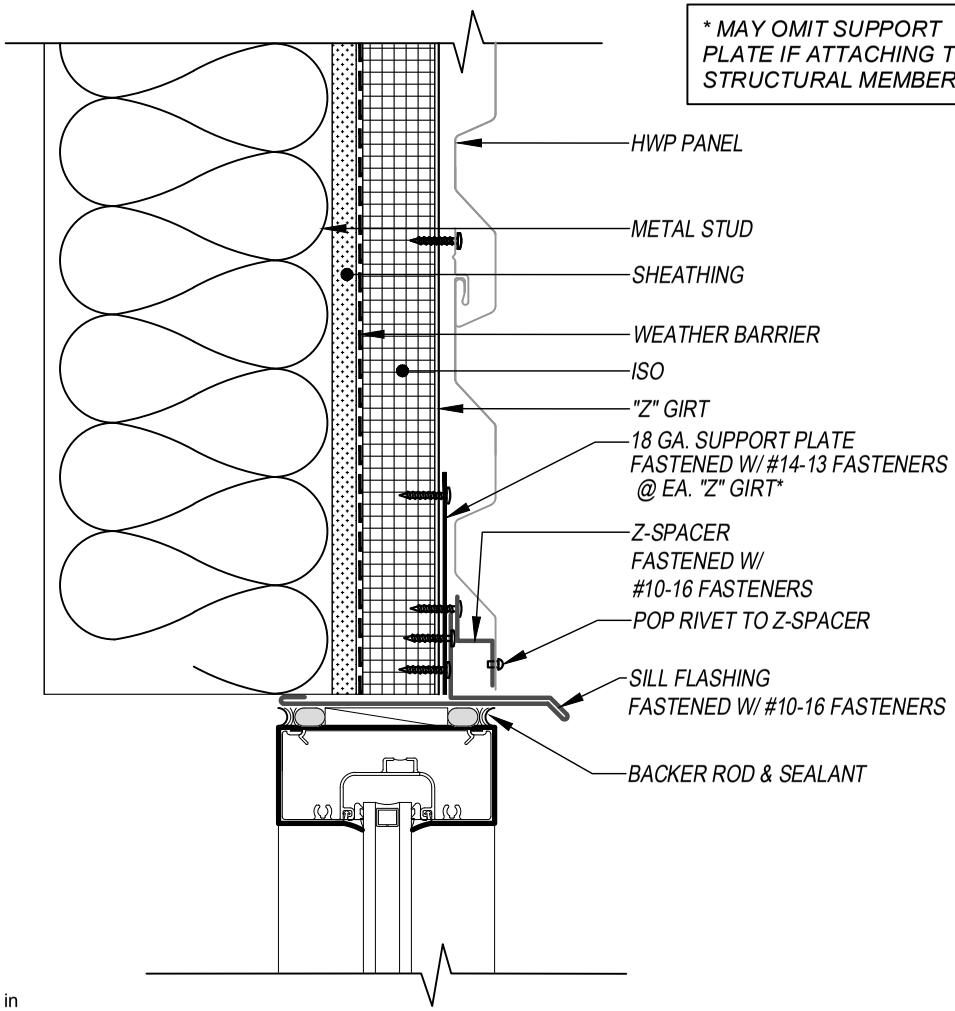
HORIZONTAL APPLICATION



PRECISION SERIES - HWP



ON MODULE CONDITION

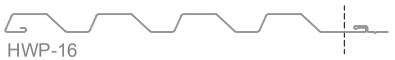


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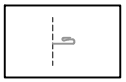
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HWP-16



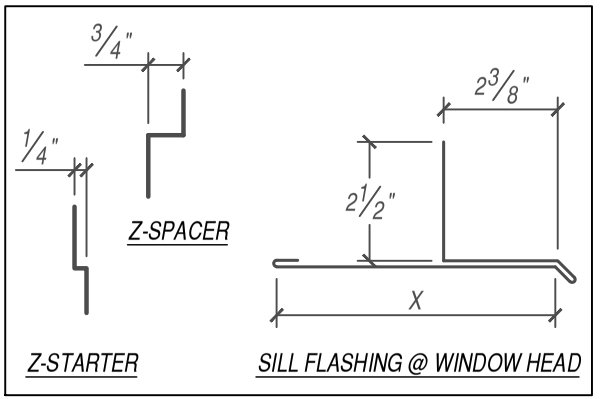
HWP-12



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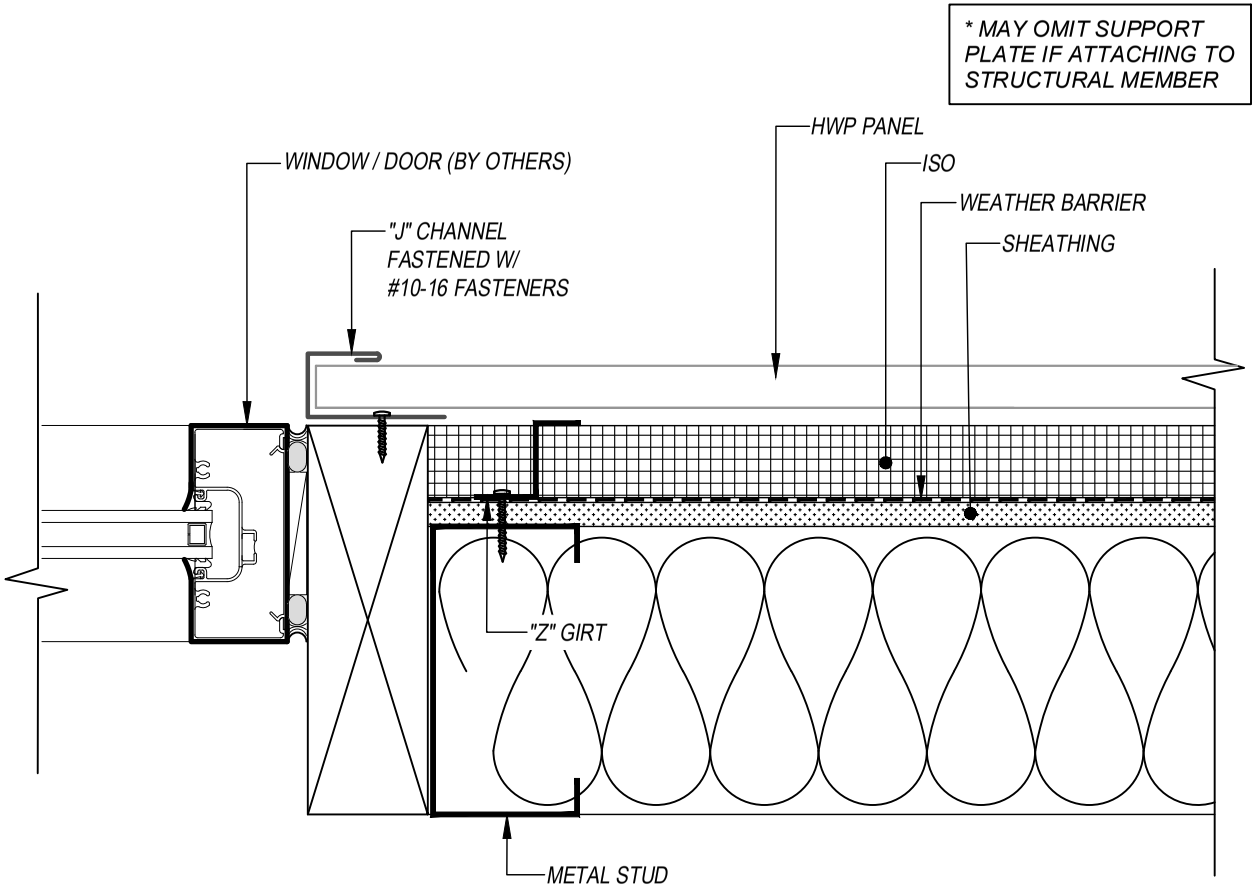
PERCISION SERIES - HWP - Z-GIRT

WINDOW JAMB DETAIL

HORIZONTAL APPLICATION



PRECISION SERIES - HWP

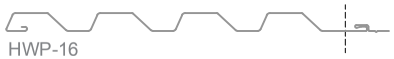


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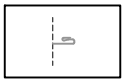
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HWP-16



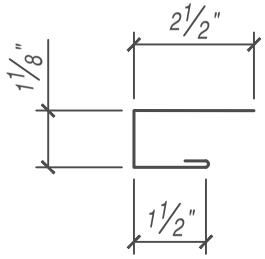
HWP-12



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J-CHANNEL

FLASHINGS

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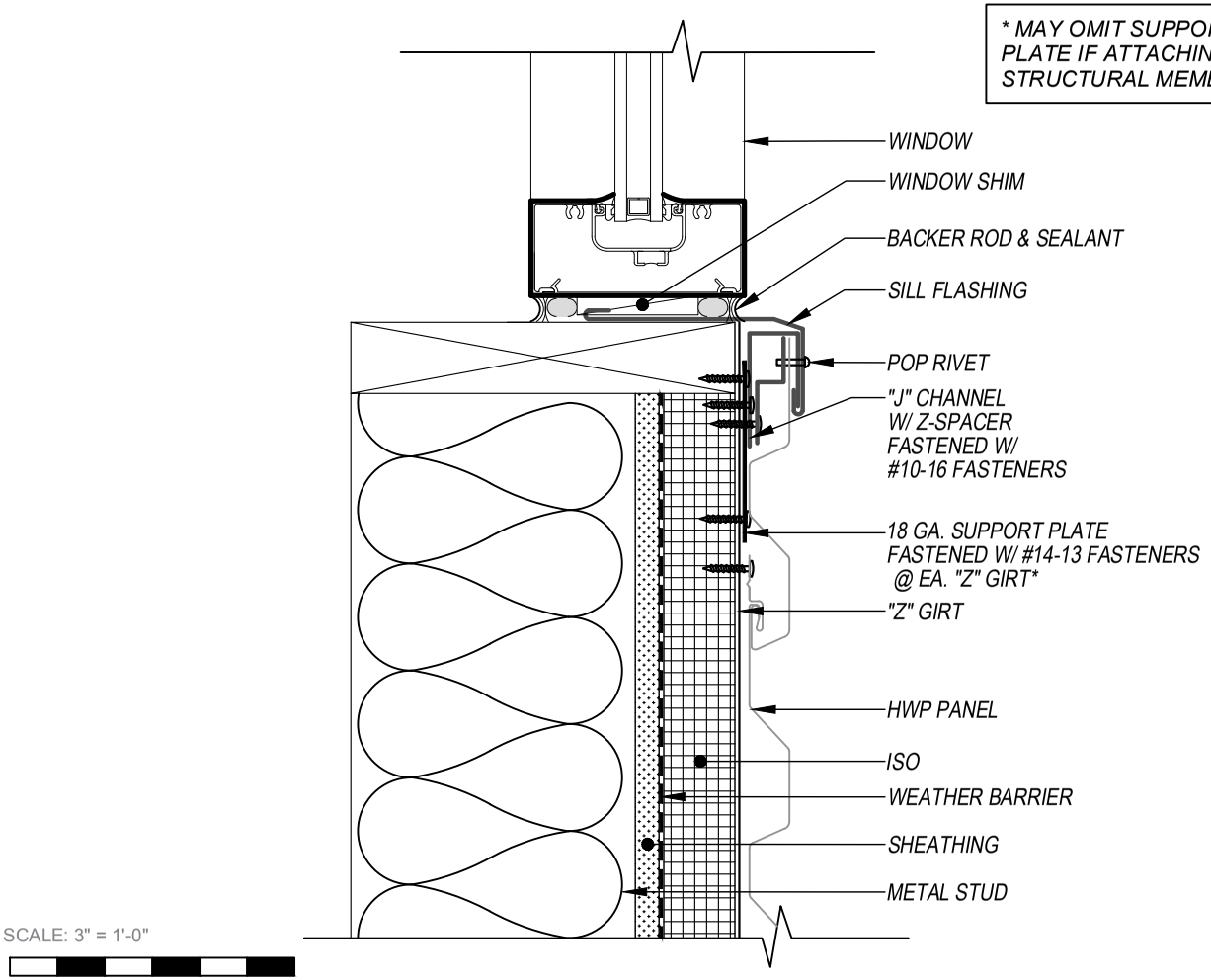
PERCISION SERIES - HWP - Z-GIRT

WINDOW SILL DETAIL

HORIZONTAL APPLICATION



PRECISION SERIES - HWP

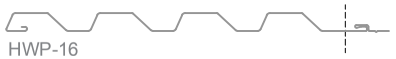


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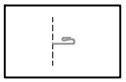
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HWP-16



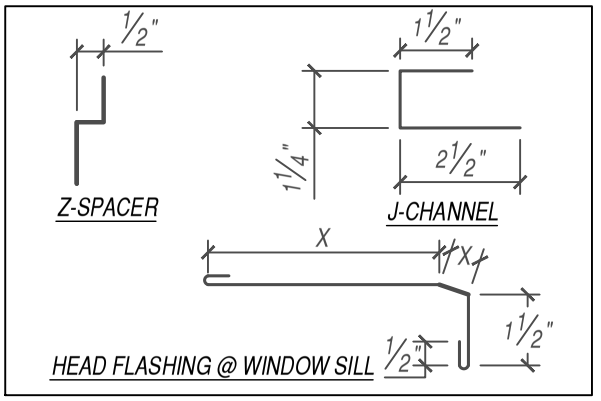
HWP-12



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Color Guide



FOREST GREEN



HARTFORD GREEN



▲ MILITARY BLUE



BERKSHIRE BLUE



▲ PACIFIC BLUE
(FKA Slate Blue)



AWARD BLUE



▲ AGED BRONZE



▲ MEDIUM BRONZE



▲ CARDINAL RED



▲ COLONIAL RED

▲ SANDSTONE

▲ ALMOND

▲ STONE WHITE

▲ BONE WHITE

PAC-CLAD.COM

Premium Colors

ALTERNATE MANUFACTURER COLOR SELECTION



● ▲ 👑 $$ ANODIC CLEAR



● ▲ 👑 $$ SILVERSMITH



● ▲ 👑 $ SILVER



● ▲ 👑 $ CHAMPAGNE



● ▲ 👑 $ ZINC



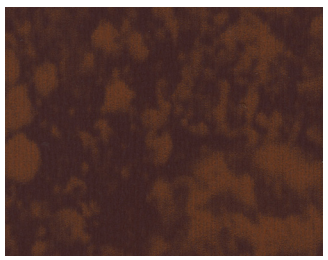
● ▲ 👑 $ WEATHERED ZINC



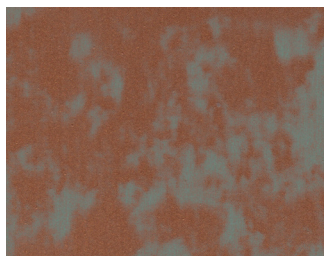
● ▲ 👑 $ COPPER PENNY



● ▲ 👑 $ AGED COPPER



👑 $$ WEATHERED STEEL



👑 $$ WEATHERED COPPER

Kynar 500® or Hylar 5000® pre-finished steel and aluminum for roofing, curtainwall and storefront applications.

● Metallic Colors $ Pricing ▲ Cool Colors 👑 Premium Colors

See back for color availability chart.

Standard Colors



▲ PATINA GREEN



▲ TEAL



▲ HEMLOCK GREEN



FOREST GREEN



HARTFORD GREEN



▲ EVERGREEN



▲ HUNTER GREEN



▲ ARCADIA GREEN



▲ MILITARY BLUE



BERKSHIRE BLUE



▲ GRAPHITE



▲ CHARCOAL



INTERSTATE BLUE



▲ PACIFIC BLUE
(fka Slate Blue)



AWARD BLUE



MATTE BLACK STEEL



BLACK ALUMINUM



▲ DARK BRONZE



▲ BURNISHED SLATE



▲ AGED BRONZE



▲ MEDIUM BRONZE



▲ MANSARD BROWN



BURGUNDY



▲ TERRA COTTA



▲ CARDINAL RED



▲ COLONIAL RED



MIDNIGHT BRONZE



▲ MUSKET GRAY



▲ SIERRA TAN

▲ SANDSTONE

▲ ALMOND



▲ SLATE GRAY



▲ CITYSCAPE



▲ GRANITE

▲ STONE WHITE

▲ BONE WHITE

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AZ: 833 750 1935 **GA:** 800 272 4482 **WA:** 253 501 2450

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PAC-CLAD® Color Availability

PAC-CLAD STANDARD COLORS	REFLECTIVITY	EMISSIVITY	3 YEAR EXPOSURE	SRI	STEEL		ALUMINUM				20-IN. COIL	
					24 GA.	22 GA.	.032	.040	.050	.063	24 GA.	.032
AGED BRONZE	0.29	0.87	0.27	29	✓							
ALMOND	0.56	0.86	0.55	65	✓	✓	✓	✓	✓		✓	
ARCADIA GREEN	0.29	0.87	0.29	29	✓		✓					
AWARD BLUE***	0.24	0.86	0.23	22	✓		✓		✓			
BERKSHIRE BLUE*	0.30	0.87	0.27	31	✓							
BLACK ALUMINUM**	0.04	0.89	0.04	-2			✓	✓	✓	✓		
BONE WHITE	0.70	0.86	0.69	85	✓	✓	✓	✓	✓	✓	✓	✓
BURGUNDY	0.14	0.85	0.13	9	✓		✓		✓			
BURNISHED SLATE	0.32	0.87	0.31	33	✓							
CARDINAL RED***	0.44	0.86	0.44	49	✓		✓		✓			
CHARCOAL	0.30	0.86	0.30	30	✓		✓	✓	✓		✓	✓
CITYSCAPE	0.49	0.86	0.50	56	✓	✓	✓	✓	✓		✓	✓
COLONIAL RED	0.31	0.86	0.31	31	✓		✓	✓	✓			
DARK BRONZE	0.29	0.86	0.29	29	✓	✓	✓	✓	✓	✓	✓	✓
EVERGREEN	0.28	0.86	0.26	27	✓		✓					
FOREST GREEN	0.10	0.86	0.10	4	✓	✓	✓	✓	✓			
GRANITE*	0.33	0.87	0.33	34	✓	✓	✓	✓	✓			
GRAPHITE	0.29	0.87	0.28	29	✓							
HARTFORD GREEN	0.08	0.88	0.08	3	✓		✓	✓	✓			
HEMLOCK GREEN	0.31	0.87	0.30	32	✓		✓		✓			
HUNTER GREEN	0.28	0.86	0.27	27	✓		✓					
INTERSTATE BLUE	0.16	0.87	0.15	12	✓		✓		✓			
MANSARD BROWN	0.31	0.86	0.31	31	✓	✓	✓	✓	✓			
MATTE BLACK STEEL**	0.26	0.86	0.25	25	✓	✓					✓	
MEDIUM BRONZE	0.30	0.87	0.29	31	✓	✓	✓	✓	✓	✓	✓	✓
MIDNIGHT BRONZE	0.06	0.87	0.06	0	✓			✓				
MILITARY BLUE	0.31	0.86	0.30	31	✓		✓					
MUSKET GRAY	0.32	0.86	0.31	33	✓	✓	✓		✓			
PACIFIC BLUE	0.28	0.86	0.27	27	✓		✓					
PATINA GREEN	0.33	0.86	0.32	34	✓		✓					
SANDSTONE	0.48	0.86	0.48	54	✓	✓	✓	✓	✓	✓	✓	✓
SIERRA TAN	0.32	0.82	0.31	31	✓	✓	✓	✓	✓		✓	
SLATE GRAY	0.38	0.86	0.37	41	✓	✓	✓	✓	✓		✓	✓
STONE WHITE	0.69	0.86	0.67	84	✓	✓	✓	✓	✓	✓	✓	✓
TEAL	0.32	0.86	0.32	33	✓		✓					
TERRA COTTA	0.34	0.87	0.33	36	✓		✓		✓		✓	✓
PAC-CLAD PREMIUM COLORS												
AGED COPPER	0.55	0.80	0.53	62	✓		✓					
ANODIC CLEAR	0.32	0.83	0.31	31				✓				
CHAMPAGNE	0.50	0.85	0.49	57	✓		✓	✓	✓			
COPPER PENNY	0.52	0.81	0.52	58	✓		✓	✓	✓		✓	
SILVER	0.47	0.87	0.46	53	✓	✓	✓	✓	✓		✓	✓
SILVERSMITH	0.32	0.88	0.32	34				✓				
WEATHERED COPPER	0.45	0.88	N/A	51	✓							
WEATHERED STEEL	0.32	0.89	N/A	34	✓							
WEATHERED ZINC	0.48	0.82	0.46	53	✓	✓	✓		✓			
ZINC	0.42	0.82	0.38	45	✓		✓	✓	✓			
CLEAR-COAT ACRYLIC FINISH (NON-KYNAR)												
GALVALUME PLUS	0.68	0.14	0.55	57	✓	✓					✓	

PAC-CLAD Premium finishes are available from stock at a moderate extra cost. PAC-CLAD Copper Penny is a Non-Weathering finish. Solar Reflectance Index calculated according to ASTM E-1980.
*Low Gloss/Low Sheen, 70% PVDF finish ** Appearance differs for Black Aluminum and Matte Black Steel *** 10-year finish warranty

TECHNICAL DATA FOR KYNAR 500/HYLAR 5000 COATING:

- South Florida Exposure: Color (ASTM D 2244) - No more than 5ΔE Hunter units at 20 years; Chalk (ASTM D 4214) – Rating no less than 8 at 20 years; Film integrity – 20 years.
- Accelerated Weathering (ASTM D 4587, ASTM G 154): 5000 Hours; Chalk, per ASTM D 4214, rating of 6 or better; Color, per ASTM D 2244, < 5ΔE (Hunter Units) color change.
- Humidity Resistance (ASTM D 2247): Galvalume or HDG, 100% RH, 2000 hours – No field blisters; Aluminum, 100% RH, 3000 hours – No field blisters
- Salt Spray Resistance (ASTM B 117): Aluminum: 3000 hours, creep from scribe no more than 1/16" (2mm), no field blisters. Galvalume or HDG:2000 hours, creep from scribe no more than 1/8" (4mm), no field blisters
- Chemical/Acid Pollution Resistance (ASTM D 1308): Pass
- T-Bend (ASTM D 4145): 1T – 3T with no loss of adhesion
- Pencil hardness (ASTM D 3363): HB – 2H
- Specular Gloss (ASTM D 523) @ 60 degrees: Typical – 20 – 35
- Abrasion Resistance (ASTM D 968): 80 Liters/Mil +/- 5 Liters
- Cross Hatch Adhesion (ASTM D 3359): No loss of adhesion
- Reverse Impact (ASTM D 2794): Galvalume or HDG, 2x metal thickness inch-pounds, no loss of adhesion; Aluminum, 1.5x metal thickness inch-pounds, no loss of adhesion
- Flame Test (ASTM E 84): Class A Coating

PAC-CLAD is a registered trademark of Petersen Aluminum Corp. Kynar 500 is a registered trademark of Arkema Inc. Hylar 5000 is a registered trademark of Solvay Solexis. 7/22

5. COMPOSITE METAL WALL PANEL

- Material: Composite aluminum wall panels
- Basis-of-Design Product: Citadel, Envelope 2000 RV System
- Composite metal wall panel is proposed as an accent to compliment and coordinate with the brick. The material also matches the palette installed at Herndon High School to create continuity and connection between the schools.
- The aluminum will be factory-finished with a fluoropolymer finish in the manufacturer's standard light gray color.

Herndon High School
Metal Panel Detail





Silver Grey



CITADEL
ARCHITECTURAL PRODUCTS

ENVELOPE 2000®

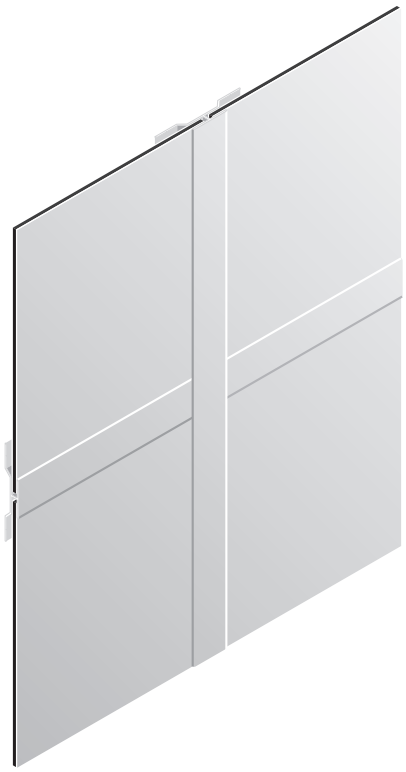
REVEAL (RV) SYSTEM



The Ultimate In Performance
In A Field-Assembled System

TECHNICAL MANUAL

- System Assembly
- Substrate Layouts
- CAD Sections/Details
- Physical Properties
- Performance Properties

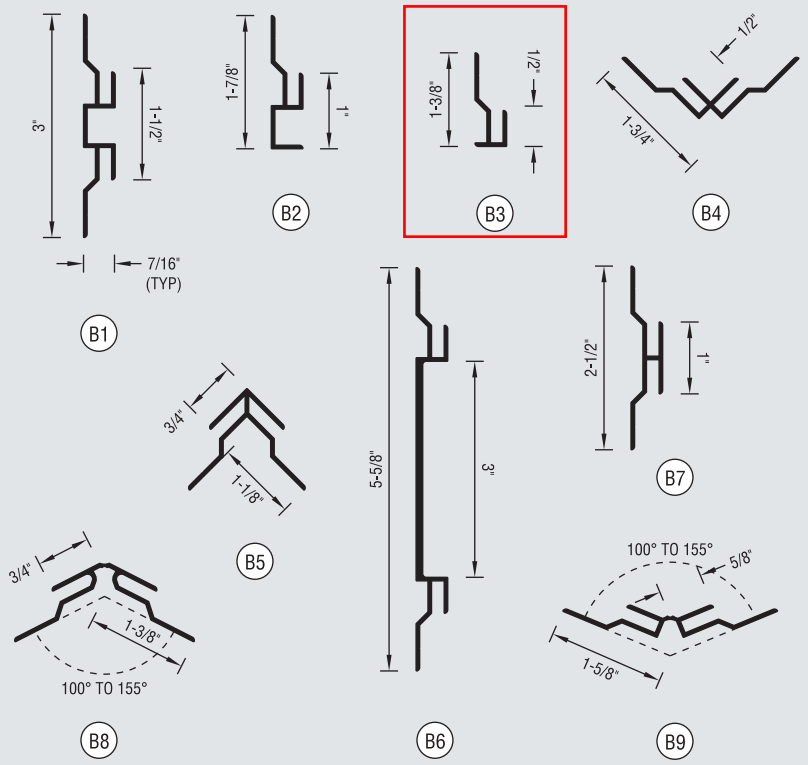


BATTEN PROFILES



REVEAL PROFILES

MOLDINGS / EXTRUSIONS



PROPERTIES

B1 CRAX-1 Horizontal/Vertical (Reveal)
12'-6", 3.56 lbs

B2 CRAX-2 Perimeter J (Reveal)
12'-6", 2.25 lbs

B3 CRAX-3 Perimeter J
12'-6", 1.69 lbs

B4 CRAX-4 Inside Corner
12'-6", 3.00 lbs

B5 CRAX-5 Outside Corner
12'-6", 3.19 lbs

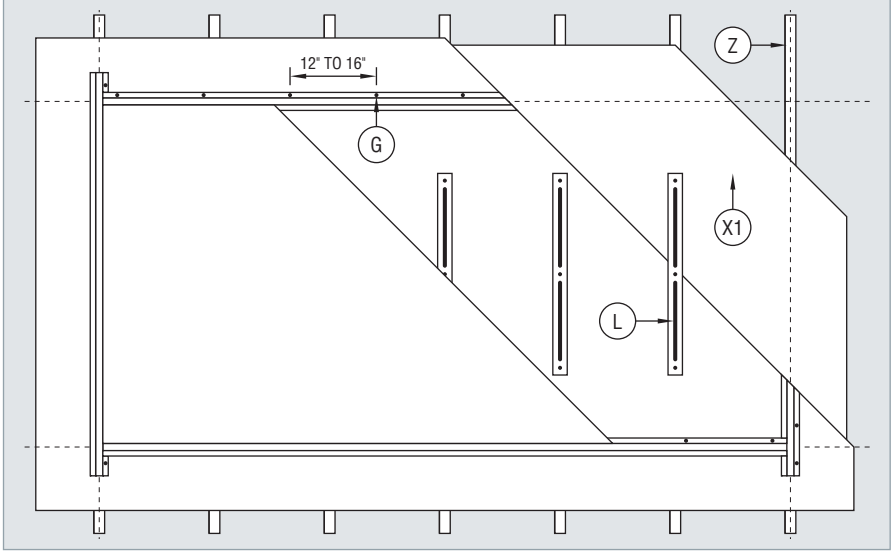
B6 CRAX-6 Horizontal/Vertical (Reveal)
12'-6", 8.06 lbs

B7 CRAX-7 Horizontal/Vertical
12'-6", 2.81 lbs

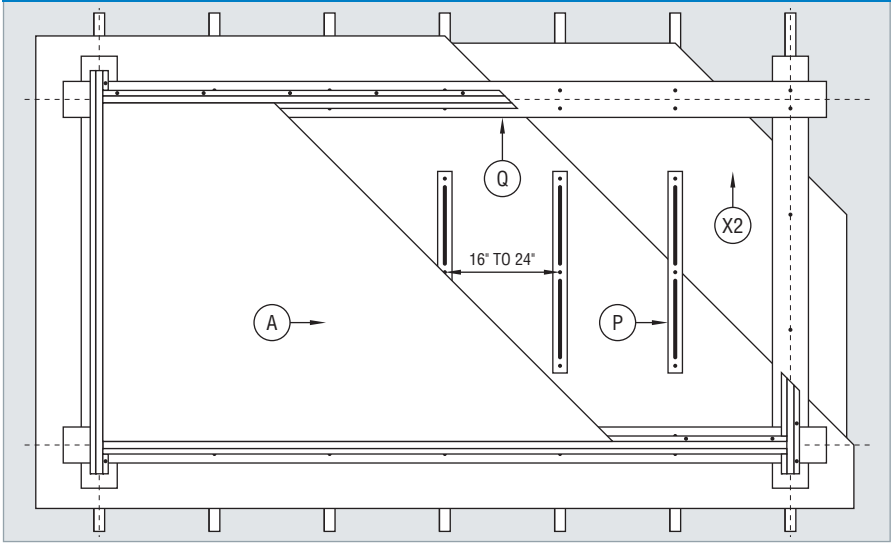
B8 CRAX-8 Outside Corner (Adjustable)
12'-6", 4.13 lbs

B9 CRAX-9 Inside Corner (Adjustable)
12'-6", 3.00 lbs

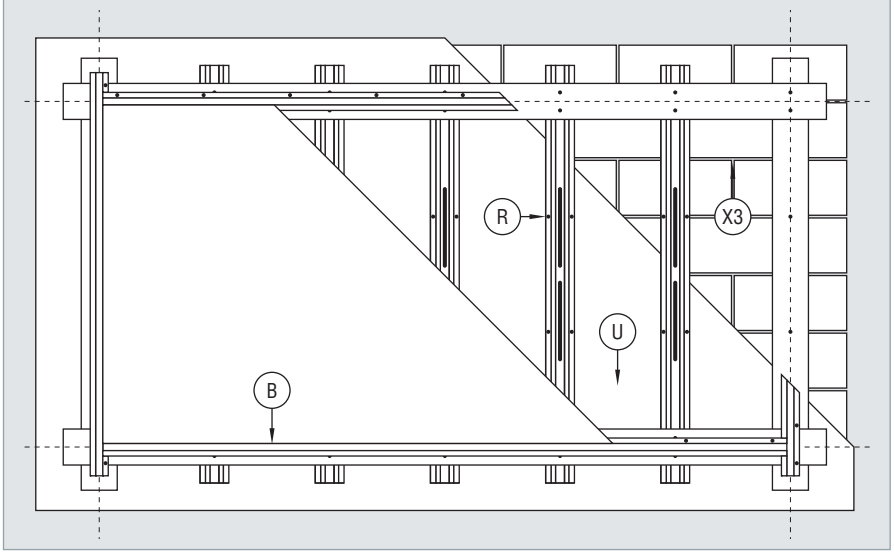
NAILABLE SUBSTRATE



NON-NAILABLE SUBSTRATE



MASONRY SUBSTRATE



COMPONENTS

A Envelope 2000®

B Molding

G Fastener
As selected by contractor to suit project requirements.
- panel - secured by sealant/adhesive
- molding - 12" to 16" along length

L Construction Adhesive
An approved adhesive must be used. Contact Citadel for current list.
- located 16" to 24" o.c.
- 3/8" bead x 2/3 panel height
- for panels 36" x 36" or larger

P Field Strapping
- located 16" to 24" o.c.
- 1-1/2" (min) x 2/3 panel height
- 22ga (min) recommended
- fastened 12" to 16" along length

Q Grid Strapping
- 16ga (min) recommended
- fastened 12" to 16" along length

R Furring
- metal (hat channels, z-girts) or wood
- located 16" to 24" o.c.
- fastened 12" to 16" along length

S Shim (not shown)
- plastic shims recommended
- flatness tolerance is 1/4" in 20'-0"

U Air/Moisture Barrier
Recommended for this system.

X1 Nailable Substrate
- plywood - 1/2" (min) recommended
- OSB - 1/2" (min) recommended

X2 Non-Nailable Substrate
- exterior gypsum board

X3 Masonry Substrate
- CMU (block)
- pre-formed concrete

Z Stud Framework
- metal or wood
- located 16" to 24" o.c.

NOTE: Combine both SECTION and SUBSTRATE drawings for a complete listing of components.

DESCRIPTION

- **Field Assembled** - all panels and moldings are shipped directly to the jobsite and are cut-to-size in the field, saving significant time and money
- **Barrier Wall** - designed to be completely sealed against moisture intrusion to protect the structural wall assembly of the building
- **Progressive** - each step of the installation process builds off the previous step in a sequential manner, moving up and across the elevation
- **Joints** - one piece aluminum moldings capture the panel edges and may be color matched or painted a complimentary color

Comparative Installed Cost

$ (compared to other Citadel systems) $$

Lead Time:	15 working days
Minimum Qty:	none
System Depth:	7/16" from the face of the substrate to the face of the molding

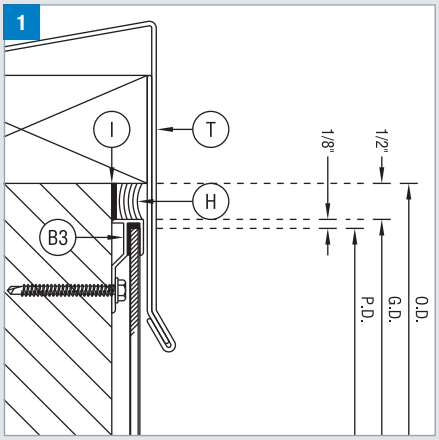
HORIZONTAL SECTIONS

1: Parapet
Metal flashing secured over blocking completes the vertical run and prevents moisture from getting behind the system.

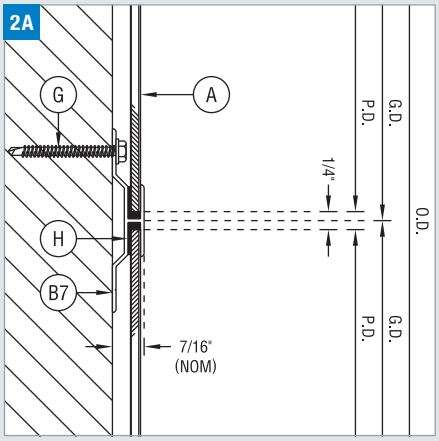
2A, 2B & 2C: Horizontal
Sealant is applied into the molding channel and slid over the top of the mounted panel. More sealant is then applied into the top channel of the molding and fasteners are then placed in the top leg of the extrusion. Batten or reveal (1/2" or 3") profile.

3A & 3B: Base/Foundation
Installation typically begins at the base of the wall and moves vertically. The cladding should be kept approximately 12" away from landscaping grade. However, if the system is installed adjacent to a concrete sidewalk, that dimension may be reduced to 1/2".

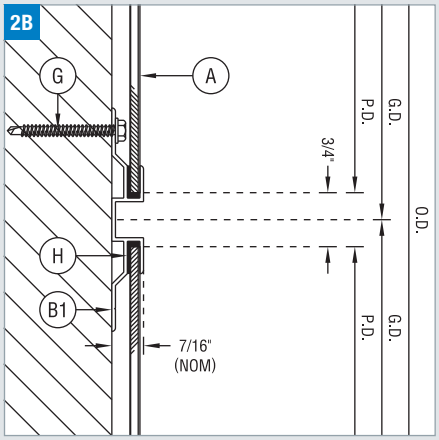
1



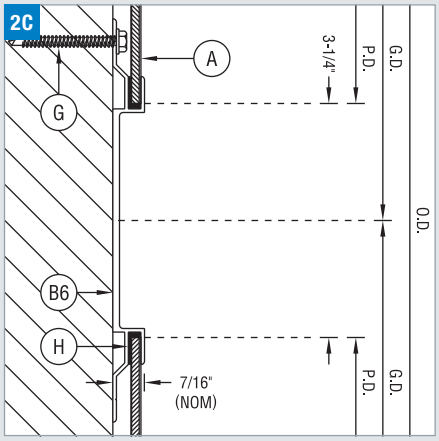
2A



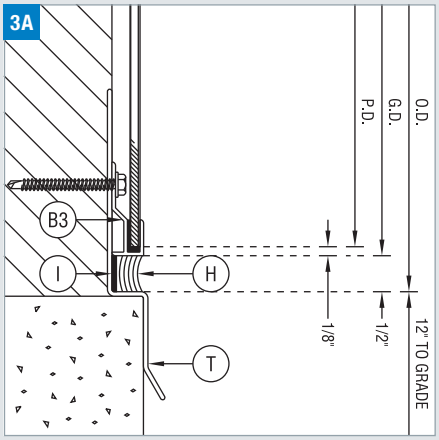
2B



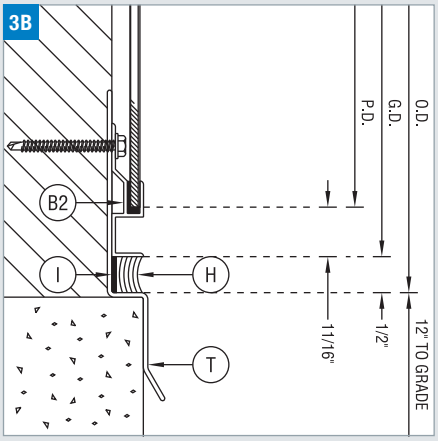
2C

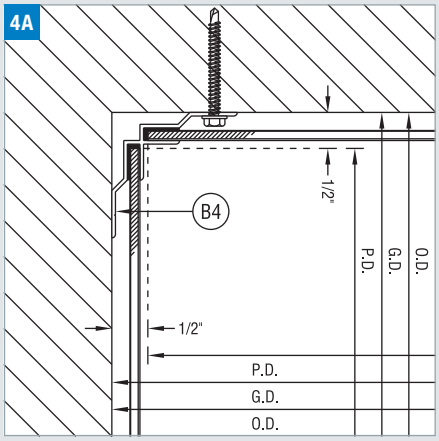


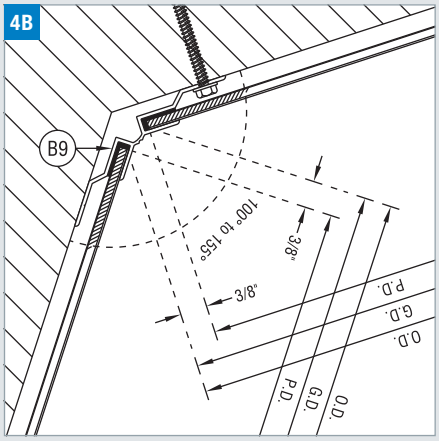
3A

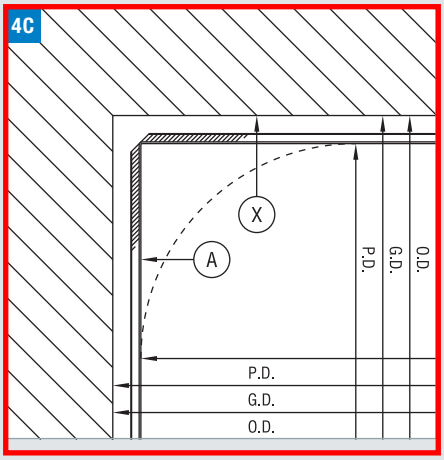


3B



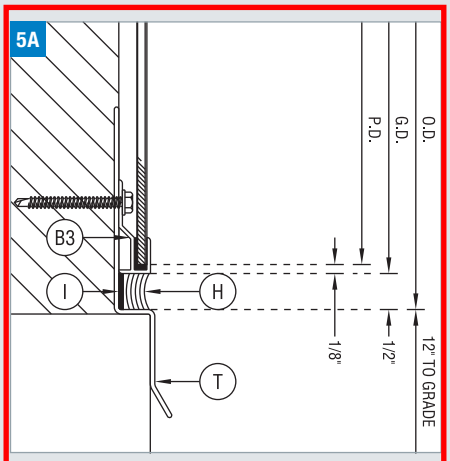


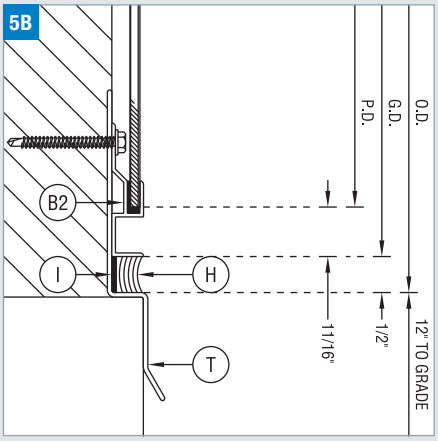


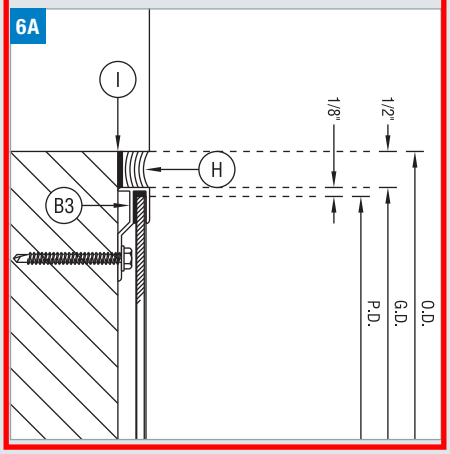


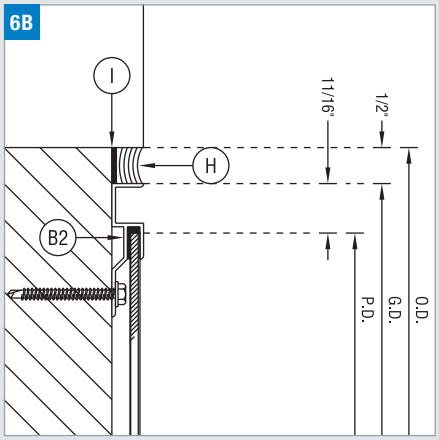
INSIDE CORNER

4A, 4B & 4C: Inside Corner
The corner molding is slid over the panel edge after sealant has been applied. Then the lead leg is mechanically fastened. The next panel in the sequence inserted into the molding after sealant is placed in the channel. As an option for non-standard corners, the adjustable molding may be used and bent to the correct angle. Or, panels may also be routed on the back side and bent to form the corner.





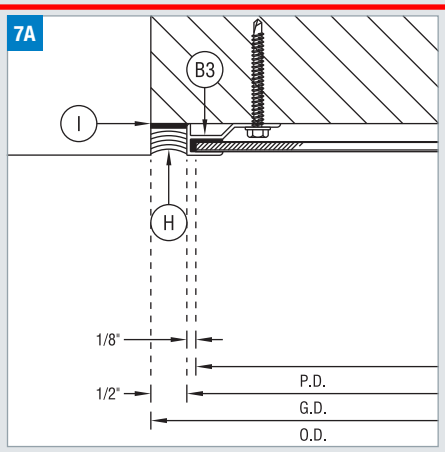


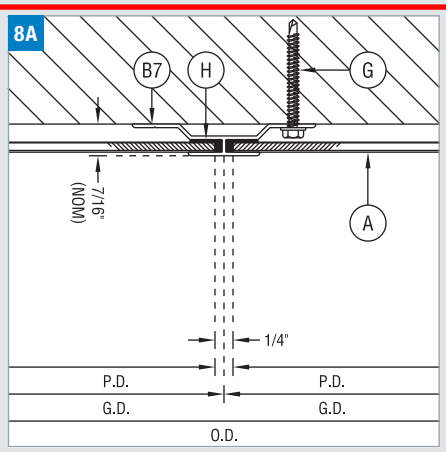


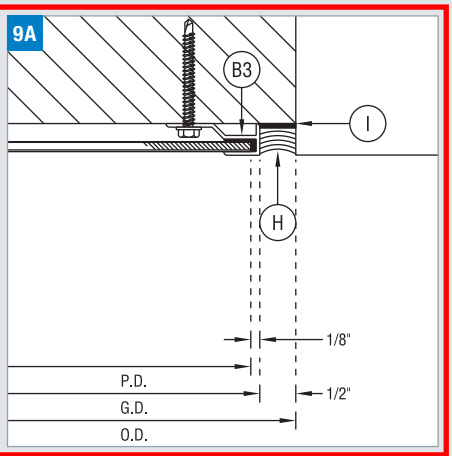
WINDOW HEAD & SILL

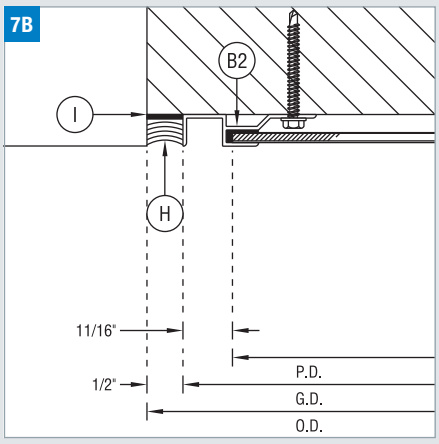
5A & 5B: Head
Similar to the base condition, flashing should be used behind the system to direct water away and prevent moisture intrusion.

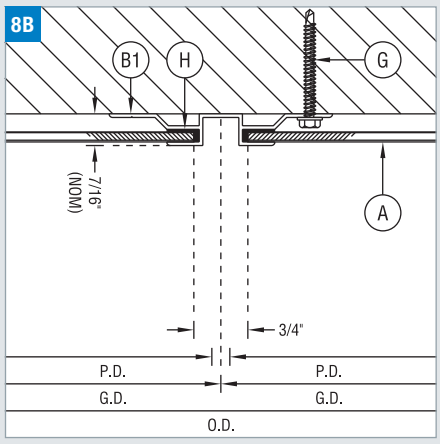
6A & 6B: Sill
Depending upon visual preference, windows will either extend past the face of the panel or be aligned so that they sit flush. If this is the last panel in the sequence, molding is held in place with sealant and adhesive.

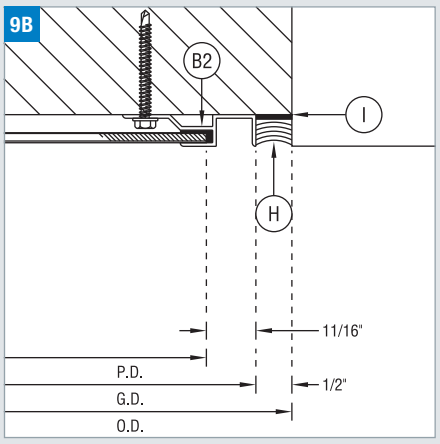










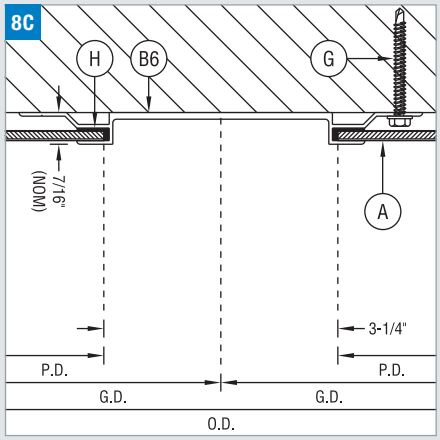


VERTICAL SECTIONS

7A & 7B: Jamb - Start
When abutting dissimilar material, a sealant joint should be used to prevent moisture intrusion behind the system.

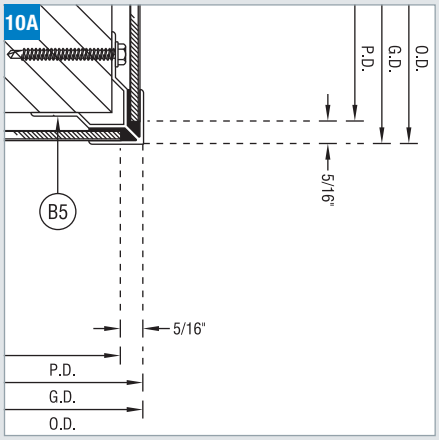
8A, 8B & 8C: Vertical
Same condition as the horizontal, the fastener is placed on the leading edge.

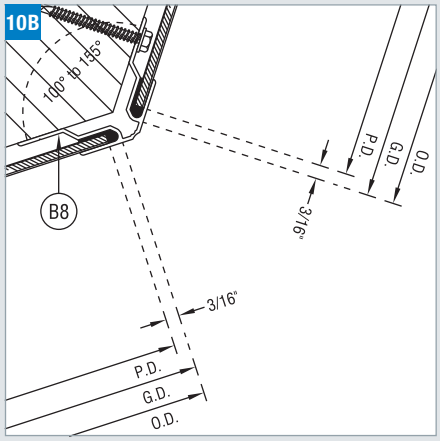
9A & 9B: Jamb - End
The last molding in the sequence will be held in place with visible fasteners or held in place with sealant and adhesive.

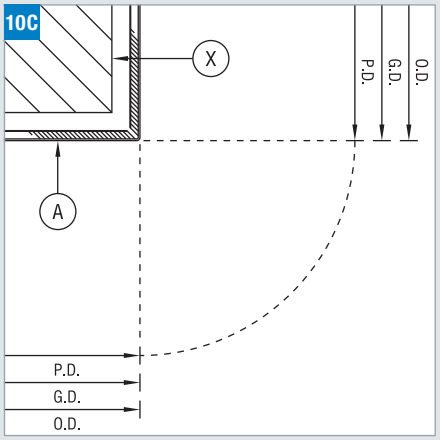


OUTSIDE CORNER

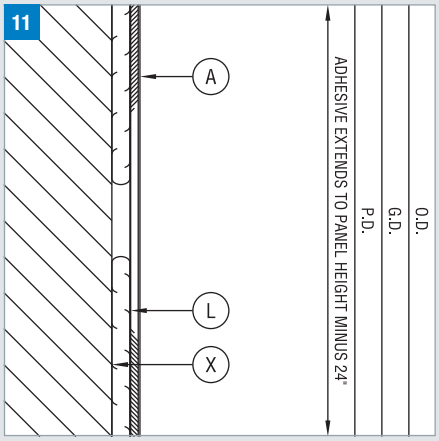
10A, 10B & 10C: Outside Corner
The corner molding is slid over the panel edge after sealant has been applied. Then the lead leg is mechanically fastened. The next panel in the sequence inserted into the molding after sealant is placed in the channel. As an option for non-standard corners (or for visual preference), the panels may be routed and bent to form the corner.



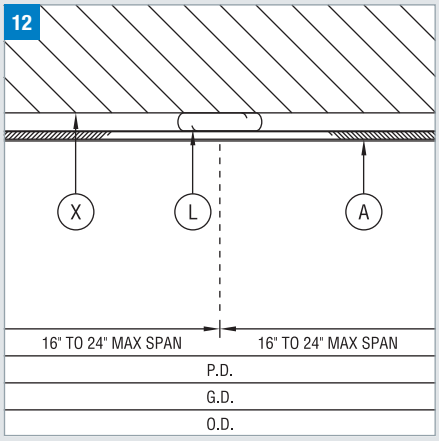




11



12

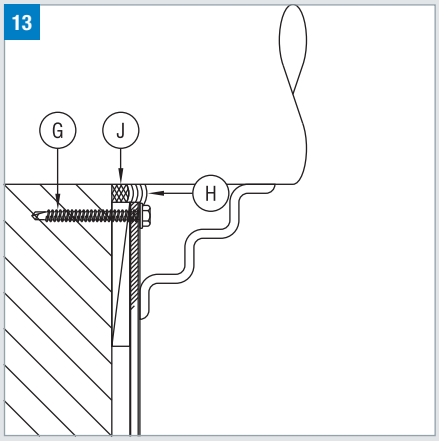


INTERMEDIATE CONNECTION

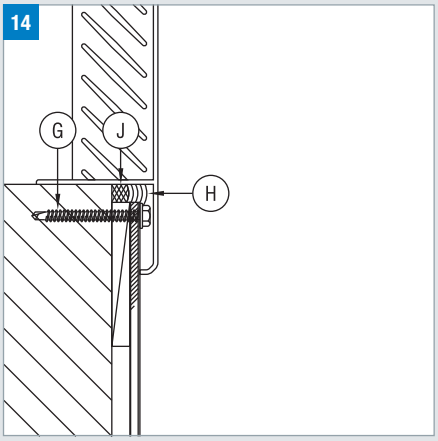
11: Intermediate Connection - Horz
Construction adhesive secures the field of the panel at intermediate locations. The length of this bead should extend to cover a majority of the panel.

12: Intermediate Connection - Vert
The spacing of the adhesive may be dependent upon the type of substrate chosen for the application.

13



14



SYSTEM PENETRATIONS

13: Round
When piping or other round penetrations must occur, the hole should be made slightly larger to accomodate a backer rod (when possible) and sealant joint around the object.

14: Linear (Square or Rectangular)
Moldings should be used to trim the panel edge for all linear penetrations. However, if that is not possible, a proper sealant joint should be utilized to maintain system integrity.

COMPONENTS

A Envelope 2000®

B1 CR-AX1 Horizontal/Vertical (Reveal)

B2 CR-AX2 Perimeter J (Reveal)

B3 CR-AX3 Perimeter J

B4 CR-AX4 Inside Corner

B5 CR-AX5 Outside Corner

B6 CR-AX6 Horizontal/Vertical (Reveal)

B7 CR-AX7 Horizontal/Vertical

B8 CR-AX8 Outside Corner (Adjustable)

B9 CR-AX9 Inside Corner (Adjustable)

G Fastener
As selected by contractor to suit project requirements.
- panel - secured by sealant/adhesive
- molding - 12" to 16" along length

H Silicone Sealant
An approved sealant must be used. Contact Citadel for current list.

I Bond Breaker Tape

J Foam Backer Rod

L Construction Adhesive
An approved adhesive must be used. Contact Citadel for current list.
- located 16" to 24" o.c.
- 3/8" bead x 2/3 panel height
- for panels 36" x 36" or larger

T Flashing

X Substrate
As selected by architect to suit project requirements.

NOTE: Combine both SECTION and SUBSTRATE drawings for a complete listing of components.

ENVELOPE 2000® REVEAL (RV) SYSTEM



MATERIAL PROPERTIES

Component		Standard (in)	Metric (mm)
A	Prefinished Smooth Aluminum[1]	.024"	0.61mm
B	Thermoset Phenolic Resin	.105"	2.68mm
C	Primed Smooth Aluminum	.010"	0.25mm

PANEL PROPERTIES

Property	Standard (in)	Metric (mm)
Panel Weight	1.25 lbs/ft^2	6.12 kg/m^2
Nominal Thickness[2]	1/8"	4mm
Thickness Tolerance	±1/32"	±0.79mm
Length & Width Tolerance	+0, -1/8"	+0, -3.18mm
Squareness	1/64" per lineal ft	
Flatness	visually flat	

FINISH PROPERTIES

Finish	Type	Coating
Smooth Kynar 500®	2-coat PVDF (solid, mica)	0.20 mil primer + 0.80 mil color
	3-coat PVDF (metallic)	0.20 mil primer + 0.80 mil color + 0.70 mil clear
Smooth Anodized	Exterior Standard No. 1[3]	0.20 mil to 0.45 mil (depending on color)

PANEL PERFORMANCE[4]

Property	Test	Value	Unit
Flame Spread	ASTM E84	Class A	---
Peel Strength	ASTM D1781	34.5	lb-in/lb
Ignition Temperature	ASTM D1929	900°	°F
Impact Resistance	ASTM D5420	on request	

SYSTEM PERFORMANCE (ENVELOPE 2000® RV SYSTEM)

Property	Test	Value
Air Infiltration	ASTM E283	pass
Water Resistance	ASTM E330	pass
Uniform Load	ASTM E331	pass

1 - Prefinished aluminum skins are furnished with a PVC film for protection during shipment and installation.
2 - 3mm, 6mm, and 8mm thicknesses are also available for use with other attachment systems.
3 - Class I or Class II anodizing is available as a premium custom finish. However, the warranty remains the same and fabrication difficulties will result (increased crazing, cracking) due to the increased film thickness.
4 - Other testing is available upon request.

STANDARD SIZES

48" x 96" (121.9cm x 243.8cm)
48" x 120" (121.9cm x 304.8cm)
48" x 144" (121.9cm x 365.8cm)
60" x 96" (152.4cm x 243.8cm)
60" x 120" (152.4cm x 304.8cm)
60" x 144" (152.4cm x 365.8cm)

Cut-to-size panels are available in any increment up to 60" x 144".

WARRANTY

Panel Composition: 5 years
Kynar 500® Finishes: 30 years
Anodized Finishes: 20 years

RECYCLED CONTENT (BY WEIGHT)

Post-Consumer: 0.5%
Post-Industrial: 23.3% to 23.9%

BENDING / CURVING

Panels and moldings may be curved on-site (worked along a substrate) or in a factory setting.

Min. Radius On-Site: 25' (most applications)
Min. Radius Factory: 12"

Citadel Architectural Products, Inc.
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www.citadelap.com • *info@citadelap.com*

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CITADEL
ARCHITECTURAL PRODUCTS

COLOR GUIDE

CLADDING SYSTEMS & GLAZING PANELS






EMBRACE **THE GRID...**

The grid structure of a cladding system creates an inherent design opportunity to express a number of visual statements. From the subtilty of a monolithic approach to the attention-grabbing look of Mondrian-inspired elements, this simple combination of lines and color offers endless possibilities. **So embrace the grid, and then highlight it with color!**





















STOCK POLYESTER FINISHES

- no min quantity, no set-up charge
- 2 week standard lead time

5 YEAR WARRANTY

Durable yet budget-friendly. These finishes offer excellent durability while providing a more economical alternative. Available in a wide range of colors, the textured finishes help conceal any dings or dents and the smooth finishes provide an alternate option for glazing infill.

SERIES A: Standard Textured Polyester (.010")

HIGH GLOSS WHITE

SHASTA WHITE

BONE WHITE


PUEBLO BEIGE


STATUARY BRONZE


CLASSIC BRONZE


METALLIC SILVER

SERIES B: Premium Textured Acrylic Urethane (.010")


SILVER GREY


SLATE GREY

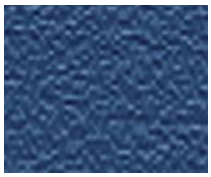

CHARCOAL GREY

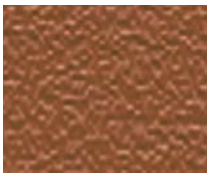
SANDSTONE

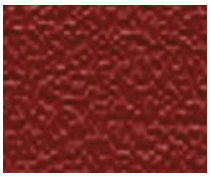

SIERRA TAN


MEDIUM BRONZE


SKY BLUE


REGAL BLUE


TERRA COTTA


REGAL RED


COLONIAL RED


BRANDYWINE

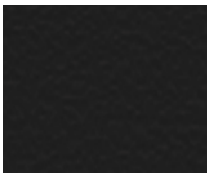

PATINA GREEN


HEMLOCK GREEN


SHERWOOD GREEN


HARTFORD GREEN


MANSARD BROWN


EBONY

SERIES D: Standard Smooth Polyester (.024")

POLAR WHITE (48" ONLY)

CLASSIC WHITE

BATTLESHIP GREY (48" ONLY)


CLASSIC BRONZE


METALLIC SILVER

NOTE: Series C and Series E have been discontinued.

STOCK PVDF FINISHES

- no min quantity, no set-up charge
- 2 week standard lead time

30 YEAR WARRANTY

Guaranteed performance just got better. As an industry benchmark, Kynar 500® coatings have long been known for quality and durability. Now, these coatings have become even better with the introduction of 'cool' technology providing enhanced performance for longer... guaranteed.

SERIES F: Standard Kynar 500® (.024")

ARCTIC WHITE ☼ 89	RESERVE WHITE ☼ 87	SHASTA WHITE ☼ 85	SILVER GREY ☼ 59	SLATE GREY ☼ 37	CHARCOAL GREY ☼ 30
BONE WHITE ☼ 80	SANDSTONE ☼ 66	PUEBLO BEIGE ☼ 64			
SIERRA TAN ☼ 37	MEDIUM BRONZE ☼ 31	STATUARY BRONZE ☼ 30			
EBONY 0					

☼ DURANAR® ULTRA-COOL® Coatings

- greater solar reflectivity
- increased energy efficiency
- exceptional color stability
- superior chalk and fade resistance

SERIES G: Premium Kynar 500® (.024")

SKY BLUE ☼ 32	REGAL BLUE ☼ 33	TERRA COTTA ☼ 37	REGAL RED ☼ 45	COLONIAL RED ☼ 30	BRANDYWINE 23
PATINA GREEN ☼ 42	HEMLOCK GREEN ☼ 29	SHERWOOD GREEN ☼ 26	HARTFORD GREEN 4	MANSARD BROWN ☼ 27	EXTRA DARK BRONZE

☼ - Indicates ULTRA-COOL® color. 32 - Indicates the Solar Reflectivity Index (SRI). Higher numbers means greater reflectivity and less heat gain.
› - Indicates a directional, lot-specific material. When specifying material for a project, panels with these finishes must be installed in all the same direction (180° not acceptable).

STOCK PVDF FINISHES *(continued)*

30 YEAR WARRANTY

The beauty of color, the shine of metal. Mixing mica or metallic flakes within the paint coating allows the base color to offer additional pop, bringing depth to the building elevation. This look is further enhanced by the way in which these flakes reflect the light from different viewpoints.

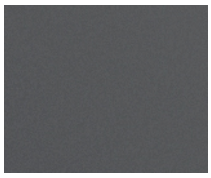
SERIES H: Standard Kynar 500® Mica/Metallic (.024")

SILVER METALLIC › ☼ 72

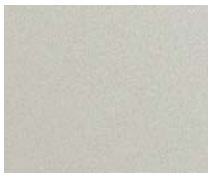
PLATINUM › ☼ 57


NORTH SEA MIST › ☼ 47


PEWTER › ☼ 26

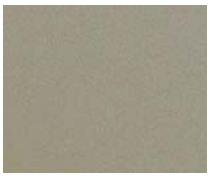

GUN METAL › ☼ 28


LIQUID COPPER › ☼ 42


ATLANTIC SUNRISE › ☼ 53

CHAMPAGNE METALLIC › ☼ 59


CHAMPAGNE BRONZE › ☼ 39


DESERT SAND › ☼ 46

STOCK ANODIZED FINISHES

- no min quantity, no set-up charge
- 2 week standard lead time

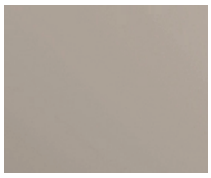
20 YEAR WARRANTY

Actual anodized aluminum. These finishes are chemically and electrically produced (not just an anodic-look paint), and offer an excellent complement to storefont and glazing system extrusions.

SERIES I: Standard Anodized (.024")

CLEAR SATIN ANODIZED ›

SERIES J: Premium Anodized (.024")


CHAMPAGNE ANODIZED ›


MEDIUM BRONZE ANODIZED ›


DARK BRONZE ANODIZED ›


BLACK ANODIZED ›

- Anodized finishes are Exterior Standard No. 1
- Class I or Class II anodizing is available as a premium custom finish. However, the warranty remains the same and fabrication difficulties will result (increased crazing, cracking) due to the film thickness.

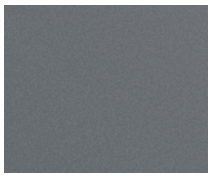
Need a custom color to match your standard? 1) submit your color sample to our sales staff, 2) approve the resulting color match, and then 3) the order will be ready to ship in 4 to 6 weeks for quantities less than 7,500 sq ft, or 8 to 10 weeks for quantities greater than 7,500 sq ft.

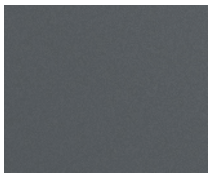
CUSTOM / NON-STOCK FINISHES

- minimum quantity varies, set-up charges may apply
- lead time varies

An additional degree of expression. From metallic paints to specialty finishes and 'natural' metals, these custom offerings provide a variety of ways to add another layer of visual dimension to any elevation. Or, take that unique approach even further with a wood grain finish to bring warmth and depth.

Custom Kynar 500® Mica/Metallic


SILVERSTORM > 17


MEDIUM GRAY > 16


DRIFTWOOD > 19


DARK BRONZE > 3


RUSSET PEARL > 22


COPPER CANYON > 29

Custom Specialty Finishes


LONG BRUSHED


RUSTED STEEL (36" WIDE ONLY)

- Moldings are not available in these finishes.

Custom Metals

STAINLESS STEEL (48" WIDE ONLY)


QUARTZ-ZINC® (39.25" WIDE ONLY)


COPPER (48" WIDE ONLY)

- Moldings are not available in these finishes.

Custom Anodized Finishes


LIGHT ZINC ANODIZED


DARK ZINC ANODIZED


COPPER PENNY ANODIZED

- Moldings are not available in these finishes.

Custom Wood Grain Finishes


BARREL OAK - LT (48" ONLY)


HERITAGE OAK - DK (48" ONLY)


MILLWORK CHERRY - LT (48" ONLY)

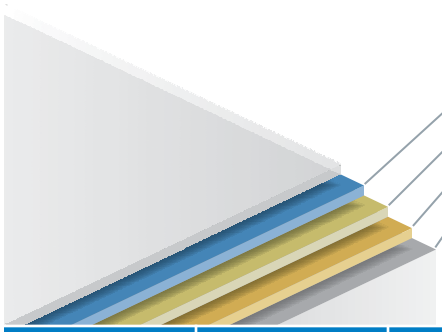

HEIRLOOM CHERRY - DK (48" ONLY)


MOUNTAIN PINE - LT (48" ONLY)


HAMPTON TEAK - DK (48" ONLY)


NORTHWEST FIR - DK (48" ONLY)

- These decorative finishes are on an .032" aluminum substrate.
- Grain patterns are available in both light (LT) and dark (DK) versions.
- Moldings are available (batten profiles only) in the same grain pattern.



D Color Coat (0.75 to 0.80 mil)
C Primer (0.20 mil)
B Pretreatment
A Aluminum Skin (0.010" to 0.040")

CATEGORY	TYPE	COMPOSITION	FEATURES & BENEFITS	DESCRIPTION	AVAILABILITY BY PRODUCT						
					Panel 15®	SinoCore®	ProCore™	Panel 20®	Envelope 2000® RV / DRV	Envelope 2000® RR / RS	GlazeGuard®
SERIES A,D	1-Coat[1] Textured/Smooth Polyester	**D** - color coat **B** - pretreatment **A** - aluminum skin	• **economical choice for coatings** • durable, hard surface • available in a wide range of colors	Thermosetting paint system applied with similar techniques to PVDF (based on volume).	●	●	●				●
SERIES B	1-Coat Textured Acrylic Urethane	**D** - color coat **C** - primer **B** - pretreatment **A** - aluminum skin	• **used for premium/custom colors** • similar in performance to polyester • good gloss retention and weatherability	Two-component cross-linked system applied with electrostatic or conventional spray equipment.		●	●	●	●	●	●
SERIES F,G	2-Coat Smooth PVDF	**D** - color coat **C** - primer **B** - pretreatment **A** - aluminum skin	• **industry benchmark for quality** • unsurpassed color retention, chemical resistance and film erosion resistance	Heat-set coating using 70% Kynar 500® or Hylar 5000® resins.		●	●	●	●	●	●
SERIES H	2-Coat Smooth PVDF	**D** - color coat **C** - primer **B** - pretreatment **A** - aluminum skin	• **metallic look with mica flake** • performance same as standard 2-coat smooth PVDF	Heat-set coating using 70% Kynar 500® or Hylar 5000® resins with mica flakes.		●	●	●	●	●	●
SERIES I,J	Integral Anodized	• nickel/hydrate seal • colorant[2] • aluminum oxide • barrier • aluminum skin	• **not an anodic look or paint,** but a true integral anodized aluminum to match storefront and window extrusions	Transparent or colored oxidized finish integral to the base aluminum induced with electricity and chemicals.							

1 - Primer is present on Polar White and Battleship Grey.
2 - Clear Satin Anodized does not use a colorant.
3 - Series C and Series E have been discontinued.

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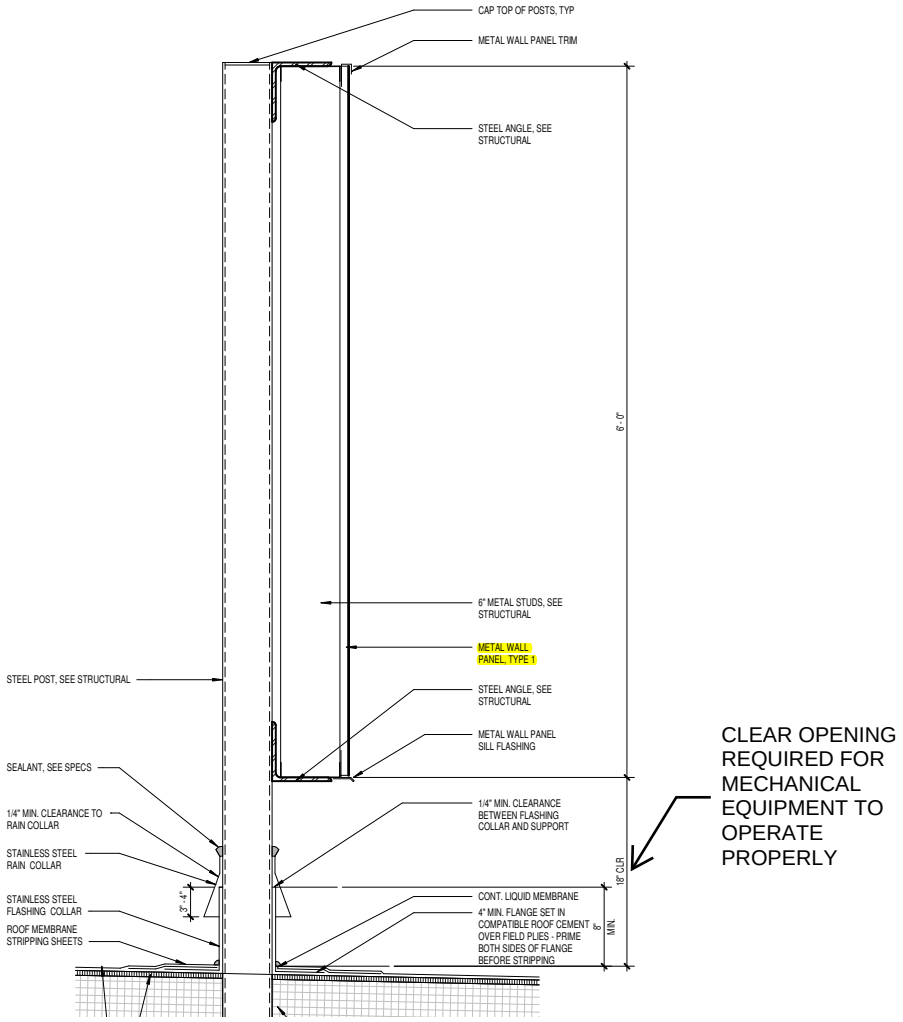
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Kynar 500® is a registered trademark of Arkema, Inc. Duranar® and ULTRA-COOL® are registered trademarks of PPG Industries, Inc.
Printed In The U.S.A. 10/17

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6. ROOF MOUNTED EQUIPMENT SCREEN

- Material: Factory-formed aluminum wall panels
- Basis-of-Design Product: Dimensional Metals Inc.
- Acceptable Manufacturers: Peterson Aluminum Corporation, PAC-Clad
- A flush horizontal formed metal wall panel is proposed to screen rooftop equipment to provide a clean appearance that wil not distract from the main building. The wall panels will be fastened to cold formed metal framing spanning to structural steel posts.
- The aluminum will be factory-finished with a fluoropolymer finish in the manufacturer's standard off-white color to blend with the sky.

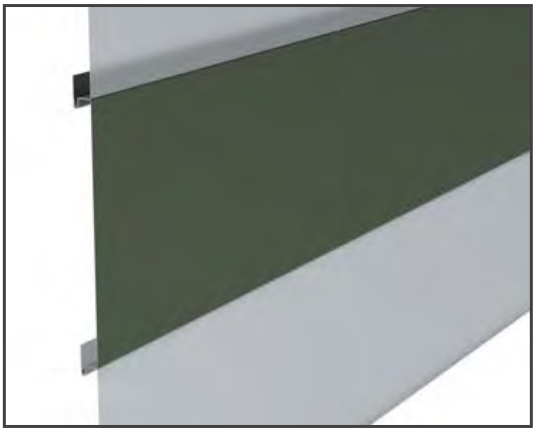
Section through Roof Screen

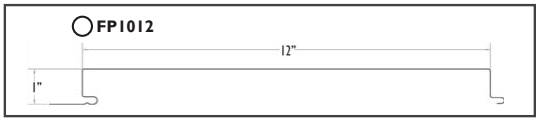


CLEAR OPENING REQUIRED FOR MECHANICAL EQUIPMENT TO OPERATE PROPERLY

Dove Grey








DMI
DIMENSIONAL METALS, INC.
PROVEN. DEPENDABLE. SUSTAINABLE.
METAL ENVELOPE SYSTEMS SINCE 1988



Harriet Tubman Underground Railroad Visitor Center
Dorchester County, MD
GWWO Architects
East Coast Exteriors

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10 ROOF SYSTEMS

18 SOFFIT SYSTEMS

20 ES-1 EDGE METALS

21 WATER CONTROL

22 RHEINZINK®

23 ACCESSORIES



DMI OHIO

We care about the success of each and every project.

Since 1988 Dimensional Metals, Inc. (DMI) has specialized in the manufacturing of architectural metal roof and wall panel systems as well as fabricated architectural sheet metal for the construction industry. We are backed by more than 30 years of sheet metal fabrication experience which helps us ensure the success of each project.

The determining factors in the success of any architectural sheet metal system are a combination of proper design, engineering, fabrication, and installation. Unique to our organization is an expert level of product and application knowledge. This provides understanding and direction to design professionals and end-users of our systems.

With our primary focus on the highest quality, customer satisfaction, value, and individual project success, our team:

- Ensures shorter lead times than industry standards
- Utilizes SMACNA-based, time-tested and industry-proven architectural details
- Designs with UL-90 classified roof deck assemblies and ASTM air, water, and structural tested systems
- Manufactures with steel coils that are made-in-the-USA and only painted with KYNAR® PVDF finishes
- Utilizes the most technologically advanced in-house CNC operated manufacturing equipment available today
- Capitalizes on our knowledgeable personnel who are qualified to solve even the most challenging design requirements
- Boasts a full-service engineering department, generating professional quality shop drawings, engineered uplift calculations, and company employed field inspection services as required
- Gives building owners and design professionals confidence that they are receiving the best quality with our Total System Warranties, which are considered the most in-depth warranties available in the industry

WALL SYSTEMS

Our selection of Concealed and Exposed Fastener Wall Panels deliver the clean lines and contemporary aesthetics that you desire while meeting your engineering and design needs.



LINK 59
Cleveland, OH
GLSD Architects, LLC
Advanced Roofing Systems

DMI TOTAL SYSTEM WARRANTIES

DMI is one of the only manufacturers to offer watertightness warranties for our wall panels and wall tiles. Our Wall Warranties are backed-up by our full-service Engineering Department, generating project specific shop drawings. Quality control is monitored by a minimum of two on-site inspections by our Field Technical Inspectors. DMI Wall Warranties give building owners and design professionals confidence that they are receiving the highest quality and most complete warranty available in the industry.



FLUSH SYSTEMS

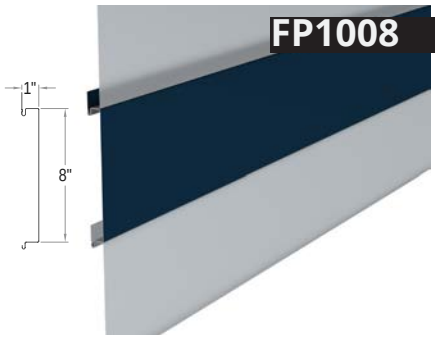
Materials: 24 ga., 22 ga., 20 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm) RHEINZINK®
16 oz., 20 oz. Copper

Panel Coverage: 8", 11" and 12"
(custom widths are available)

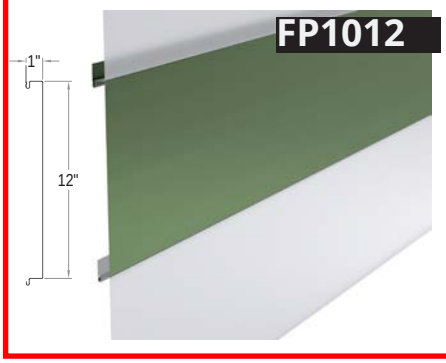
Panel Depth: 1" and 1-1/2"

Panel Lengths Offered: 4'-0" up to 20'-0"

FP1008



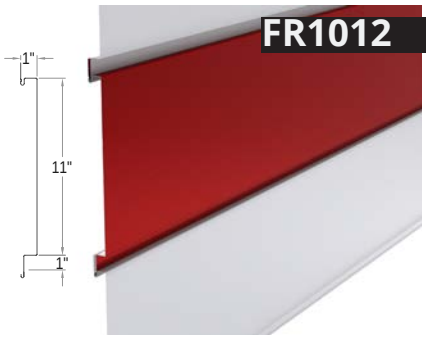
FP1012



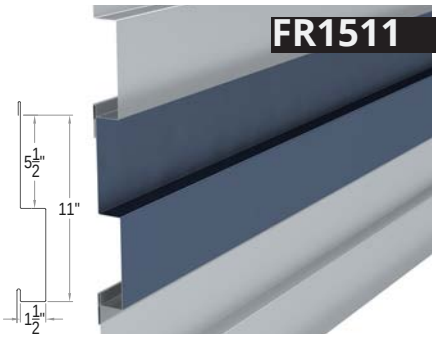
FP1511



FR1012



FR1511



Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure



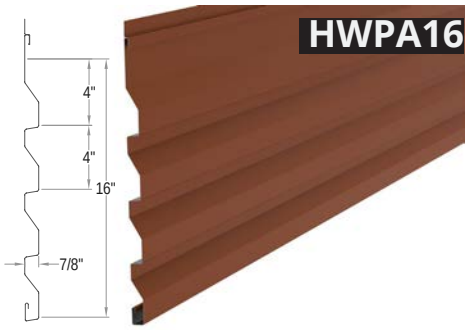
WEFALD RESIDENCE HALL AT KSU
Manhattan, KS
Treanor Architects
Missouri Builders Service

16" HORIZONTAL WALL PANEL

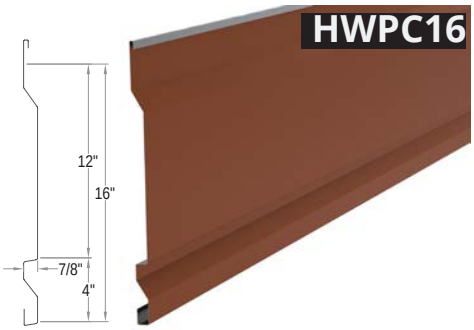


Materials: 24 ga., 22 ga., 20 ga.,18 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1.0mm) RHEINZINK®
16 oz., 20 oz. Copper
Panel Coverage: 16"
Panel Depth: 7/8"
Minimum Panel Length: 4'-0"

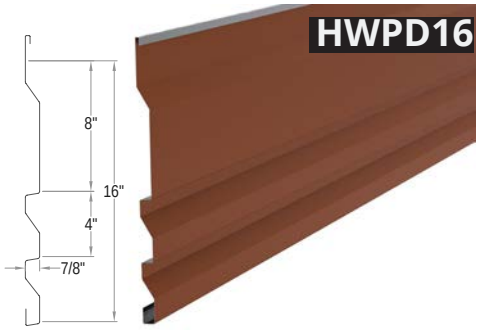
HWPA16



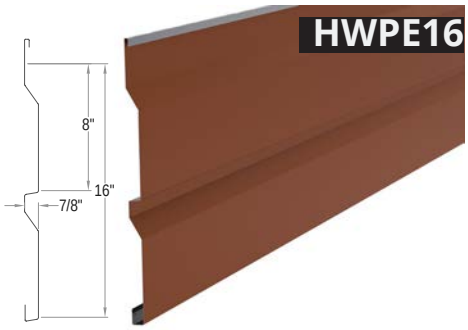
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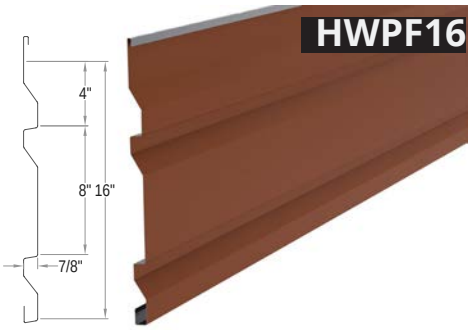
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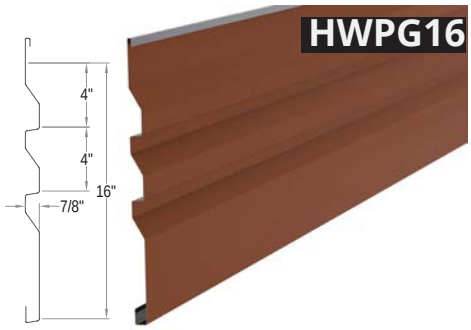
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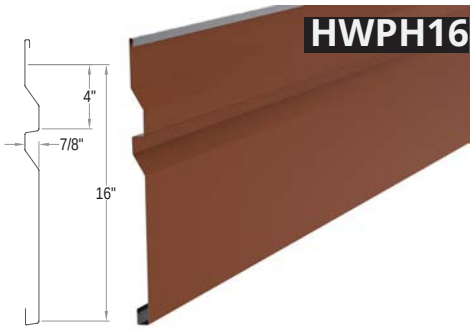
HWPF16



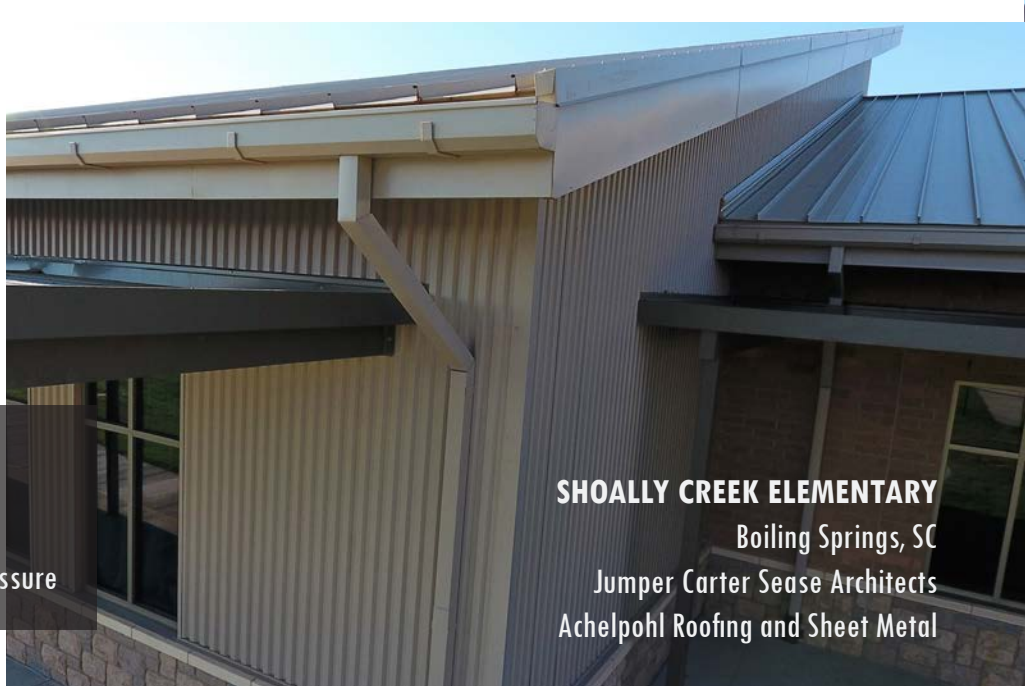
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HWPH16



Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure

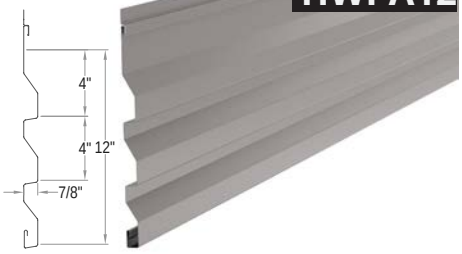


SHOALLY CREEK ELEMENTARY
Boiling Springs, SC
Jumper Carter Sease Architects
Achelpohl Roofing and Sheet Metal

12" HORIZONTAL WALL PANEL

Materials: 24 ga., 22 ga., 20 ga.,18 ga. Steel
.032, .040, .050 Aluminum
24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1.0mm) RHEINZINK®
16 oz., 20 oz. Copper
Panel Coverage: 12"
Panel Depth: 7/8"
Minimum Panel Length: 4'-0"

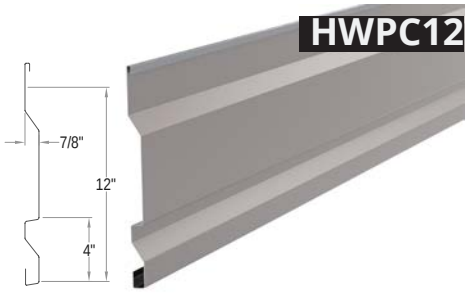
HWPA12



HWPB12



HWPC12



HWPH12





SHEET METAL WORKS LOCAL 268 UNION HALL
Caseyville, IL
Hurford Architects
BeloMan

Performance Tested
ASTM E331 Water Penetration
ASTM E283 Air Leakage
ASTM E1592 Uniform Static Air Pressure

58 Klema Drive North
Reynoldsburg, OH 43068
740.927.3633

160 Outerbelt Street
Columbus, OH 43213
614.407.EDGE

819 South Salisbury GQ Avenue
Salisbury, NC 28146
704.279.9691

GO TO

DMIMETALS.COM

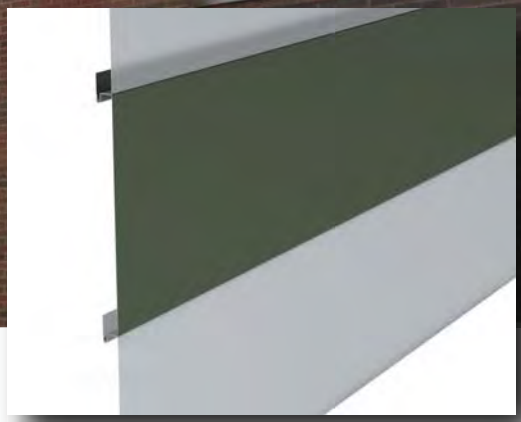
FOR MORE INFORMATION

DMI
DIMENSIONAL METALS, INC.

800.828.1510
www.dmimetals.com
sales@dmimetals.com

FLUSH PANEL SERIES FP/FR





FLUSH-PANEL SERIES (FP/FR) are single skin panels which can be used in a wide range of applications. The product is a directional system by design. The Flush-Panel series is a very flexible panel design and works well for both new construction and retro-fit applications. The wide range of profiles can be mixed and matched giving your building a distinct custom look. The continuous fastening strip does not require a clip providing economical ease of installation as well as no exposed fasteners. Panels are available in 2 configurations: Flush (FP) and up to a 5.5" Flush Reveal (FR). Optional stiffening beads and/or stucco embossing is available.

WALL ASSEMBLIES

The Flush-Panel series can be applied over open framing, hat channels (24" o.c. spacing max.) and various other solid substrates including plywood sheathing.

PRODUCT USES AND APPLICATIONS

Product uses include walls, vertical fascia, equipment screens, curtain walls and as a visual design element giving your building a unique aesthetic appearance. Stiffening beads are recommended for longer panel lengths.

PRODUCT OFFERINGS

24 ga., 22 ga., 20 ga., .032, .040 Aluminum, 24 ga. (.7mm), 22 ga. (.8mm), 20 ga. (1mm) RHEINZINK®, and 16 oz., 20 oz. Copper,
Embossing and various stiffener configurations available

- FP10/FR10 - 1" Panel Thickness
- FP15/FR15 - 1.5" Panel Thickness

PERFORMANCE TESTED

- ASTM E283 Air Leakage
- ASTM E331 Water Penetration
- ASTM E1592 Static Air Pressure

ADDITIONAL NOTES

- Minimum panel length is 4'-0" and Maximum panel length is 20'-0"
- 22 ga., 20 ga. Steel and .040 Aluminum not stocked in all colors.
  - Minimum order quantities and extended lead times may accompany panel orders using these substrates.
- Perforations are available utilizing .032 & .040 Aluminum Only (Venting only in .032)

FLUSH-PANEL ADVANTAGES

- Continuous fastening strip requires no clips providing for quick and economical installation
- Contributes to enhanced visual impact
- Can be installed horizontally, vertically and diagonally
- Gives your existing building a clean, contemporary look
- Common interlocking engagement leg allows for mixing and matching of various Flush-Panel series profiles
- Warranties Available: For total confidence



FP1012



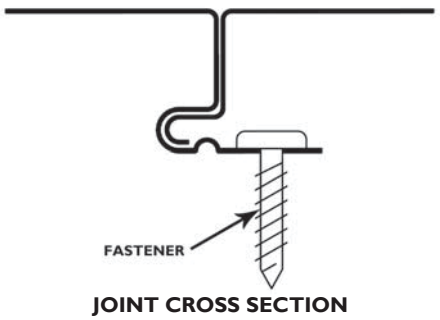
FP1511



FR1012

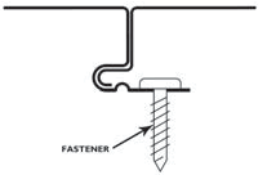


FR1511



JOINT CROSS SECTION

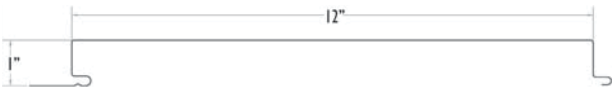
FP/FR SUBMITTAL



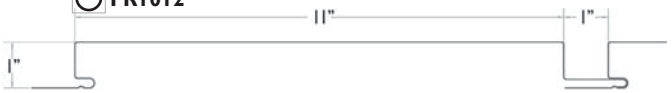
PROJECT NAME: _____
ARCHITECT: _____
INSTALLING CONTRACTOR: _____
GENERAL CONTRACTOR: _____
SPECIFICATION SECTION: _____

PROFILE

○ FP1012



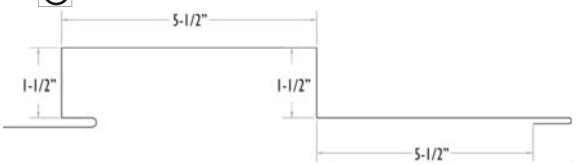
○ FR1012



○ FP1511



○ FR1511



DynaClad® Standard Colors (IN ALPHABETICAL ORDER)	STOCKED AT DMI					
	24 GAGE GALVALUME	22 GAGE GALVALUME	.032 ALUM. 3105 H14	.040 ALUM. 3105 H14	.050 ALUM. 3105 H14	.063 ALUM. 3105 H14
AGED COPPER*	●		●			
BEIGE	●		●	●	●	
BRITE RED*	●		●	●		
BROWN	●		●	●		
BURGUNDY	●		●			
CHAMPAGNE*	●		●			
CHARCOAL GREY	●		●	●		
CLASSIC BRONZE	●		●	●		
COBALT BLUE	●		●			
COLONIAL RED	●		●	●		
DARK BRONZE	●	●	●	●	●	●
DOVE GREY	●		●	●		
EVERGREEN	●		●	●		
HARTFORD GREEN	●		●			
HEMLOCK GREEN	●		●			
LEAF GREEN	●		●			
MATTE BLACK	●		●	●		
METALLIC COPPER*	●		●			
METALLIC SILVER*	●		●			
MUSKET GREY	●		●	●		
PATINA COPPER	●		●	●		
PUTTY	●	●	●	●	●	
ROYAL BLUE	●		●	●		
SANDSTONE	●	●	●	●	●	
SEAPORT	●		●	●		
SLATE BLUE	●		●			
SLATE GREY	●		●	●	●	
SPARTAN BRONZE	●		●	●		
STONE	●		●	●		
TERRA COTTA	●		●			
WEATHERED ZINC*	●		●			
WHITE	●	●	●	●	●	●
MILL FINISHED ALUM.			●	●	●	●
ACRYLUME®	●	●				
CLEAR ANODIZED			●	●		

SUBSTRATE

- ○ 24 GA. GALVALUME
- ○ 22 GA. GALVALUME
- ○ 20 GA. G-90
- ○ .032 ALUMINUM
- ○ .040 ALUMINUM
- ○ 16 OZ. COPPER
- ○ 20 OZ. COPPER
- ○ 24 GA. (.7MM) RHEINZINK®
- ○ 22 GA. (.8MM) RHEINZINK®
- ○ 20 GA. (1MM) RHEINZINK®

EMBOSSED

- ○ YES
- ○ NO

Consult DMI for minimum quantities, upcharges, set up fees and extended lead times

STANDARD FINISHES (NA ON COPPER)

- ○ DYNACLAD® PVDF: _____
- ○ ACRYLIC COATED GALVALUME (ACRYLUME)
- ○ MILL FINISH ALUMINUM
- ○ CLEAR ANODIZED ALUMINUM
- ○ PREPATINA BLUE-GREY (RHEINZINK® ONLY)
- ○ PREPATINA GRAPHITE-GREY (RHEINZINK® ONLY)

PREMIUM FINISHES*

- ○ DYNACLAD® METALLIC PVDF: _____
- ○ DYNACLAD® BRITE RED PVDF
- ○ DYNACLAD® STANDARD COLOR PVDF W/CLEARCOAT (3-COAT): _____
- ○ DYNACLAD® METALLIC COLOR PVDF W/CLEARCOAT (3-COAT): _____
- ○ CUSTOM COLOR: _____

**Premium Colors subject to minimum quantities, extended lead times and upcharges. Consult DMI for details.*

WARRANTY

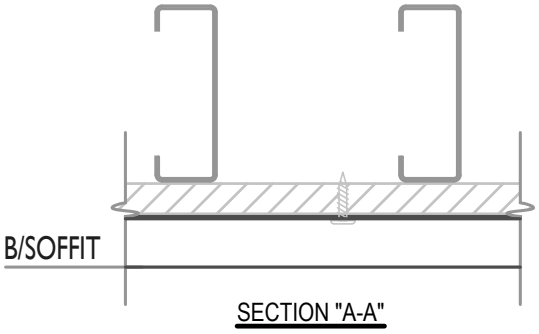
- ☐ DYNACLAD® PAINT FINISH
- ☐ GALVALUME 20 YEAR - 6 MONTH (SUBSTRATE)

**Warranties not available for Rhenzink®*

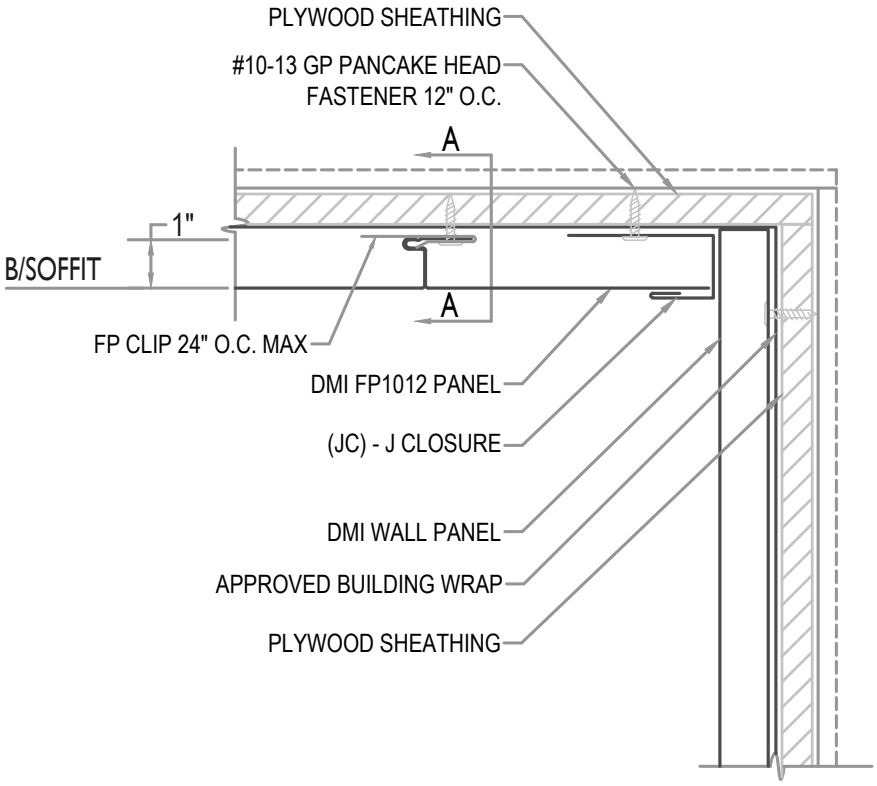
Non-Stock colors available subject to minimum quantities, additional lead times and upcharges.
** Denotes Premium Color - subject to additional costs.*

Dimensional Metals, Inc. has specialized in the manufacturing of Architectural Metal Panel Systems and Fabricated Architectural Sheet Metal for the construction industry since 1988. We use the most technologically advanced Fixed Base Roll-Forming Equipment to deliver complete in-house quality control over the manufacture of our products.

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



SECTION "A-A"



DIMENSIONAL METALS, INC.

SOFFIT TO WALL PANEL

Detail: FP10-H-01-00

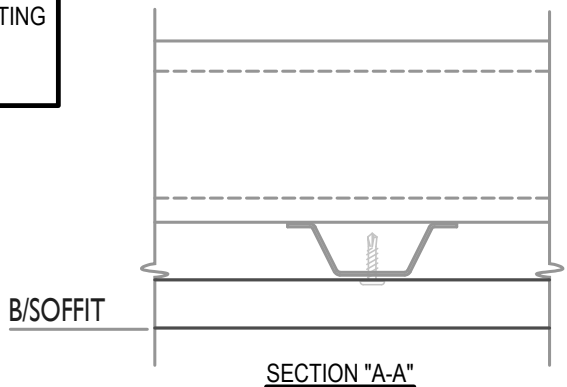
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

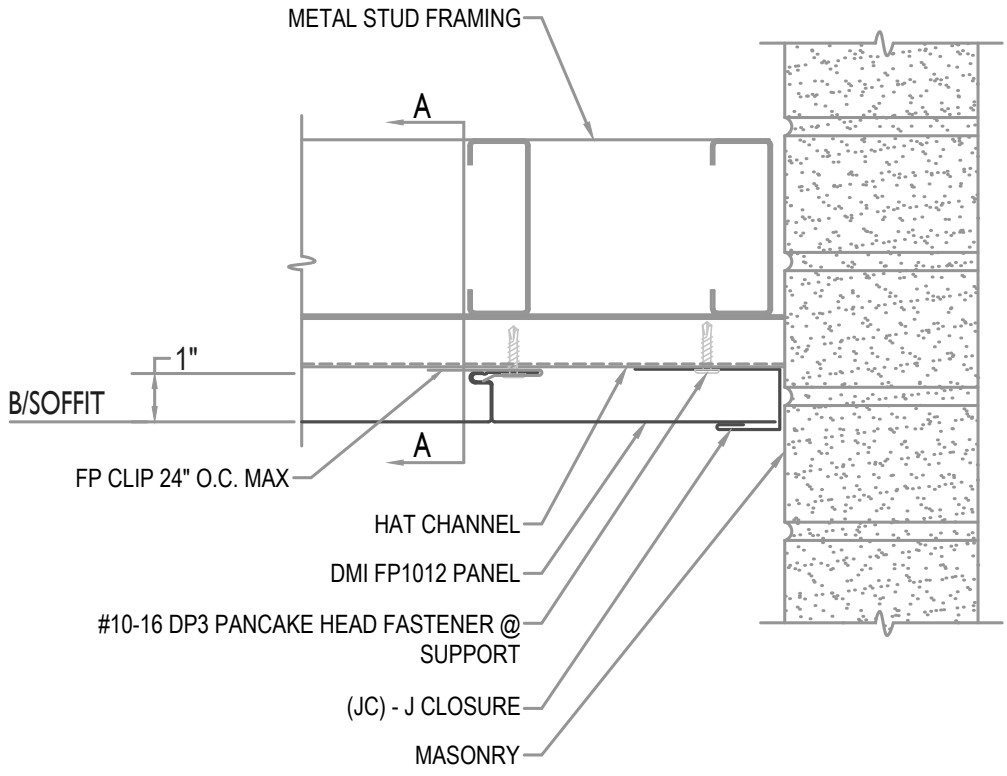
WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING 3/4" MIN. AND METAL FRAMING 1/2" MIN.

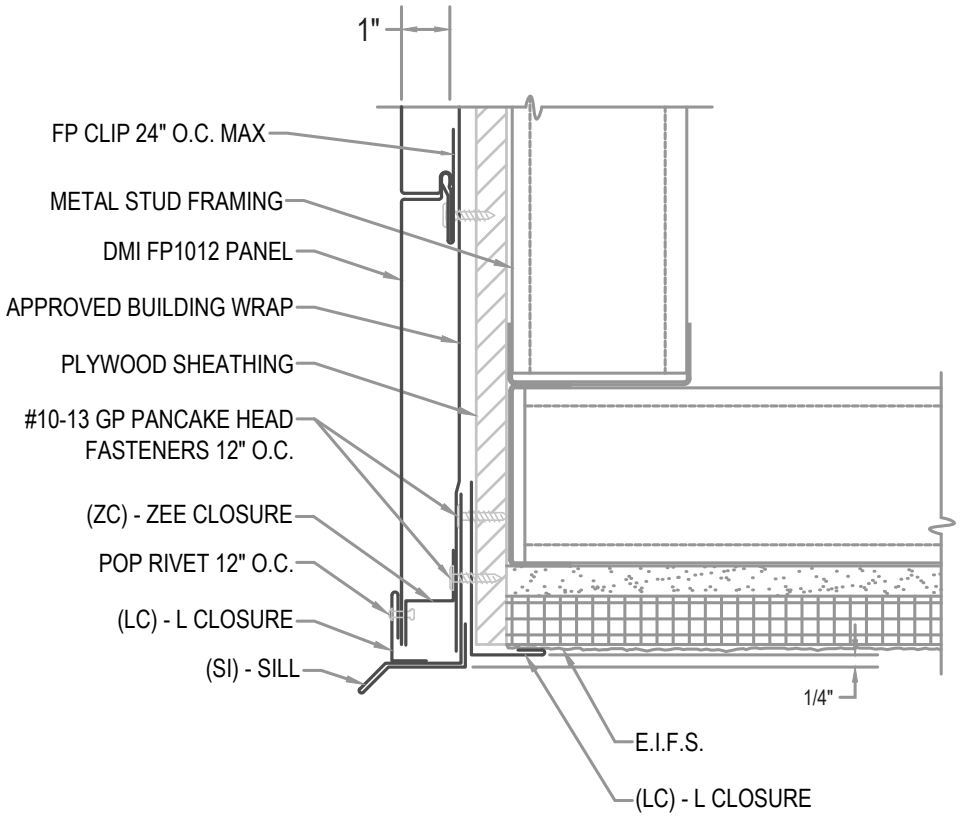


SECTION "A-A"



DMI DIMENSIONAL METALS, INC.	SOFFIT ENDWALL	Detail: FP10-H-01-01	
	●PROVEN ● DEPENDABLE ● SUSTAINABLE● METAL ENVELOPE SYSTEMS SINCE 1988 WWW.DMIMETALS.COM	Issue/Rev Date: 03/17	Scale: 3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

WALL PANEL W/ SILL (EIFS SOFFIT)

Detail: FP10-H-02-00

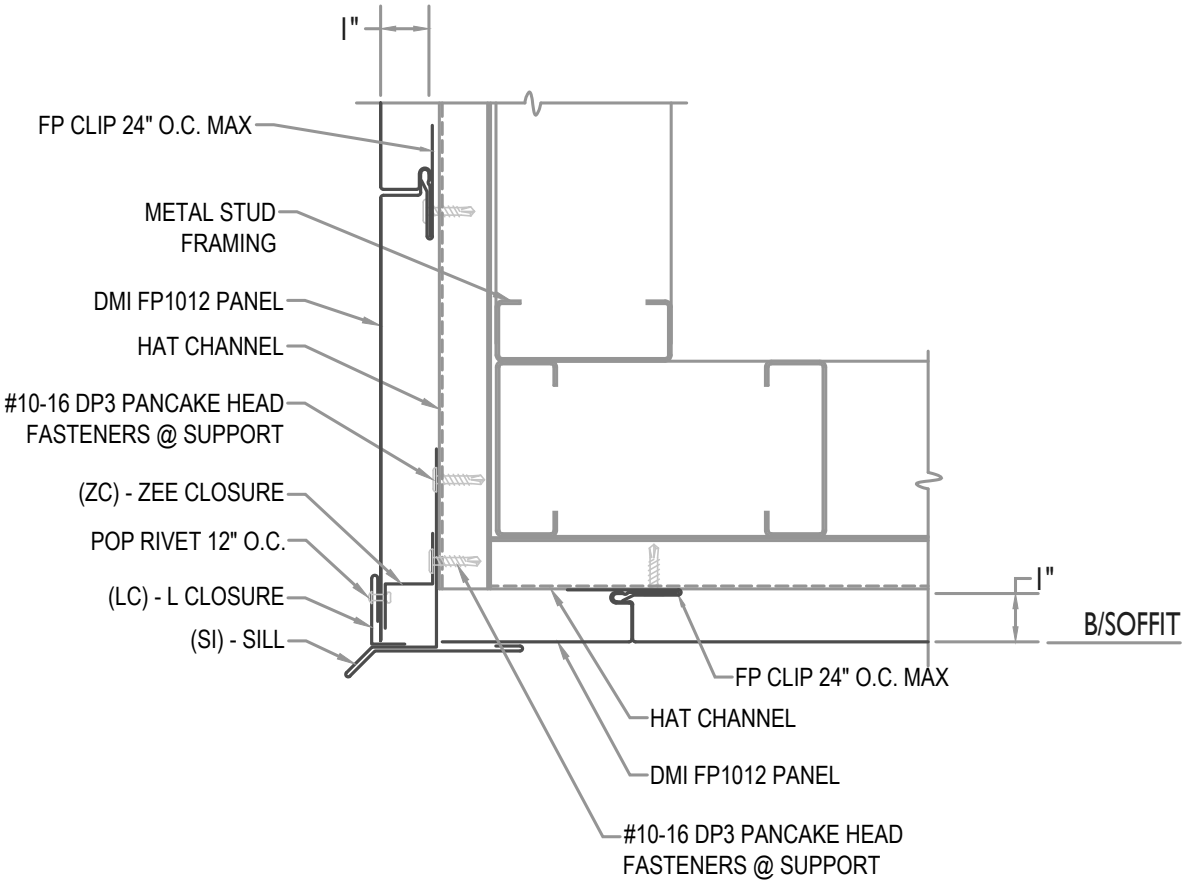
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

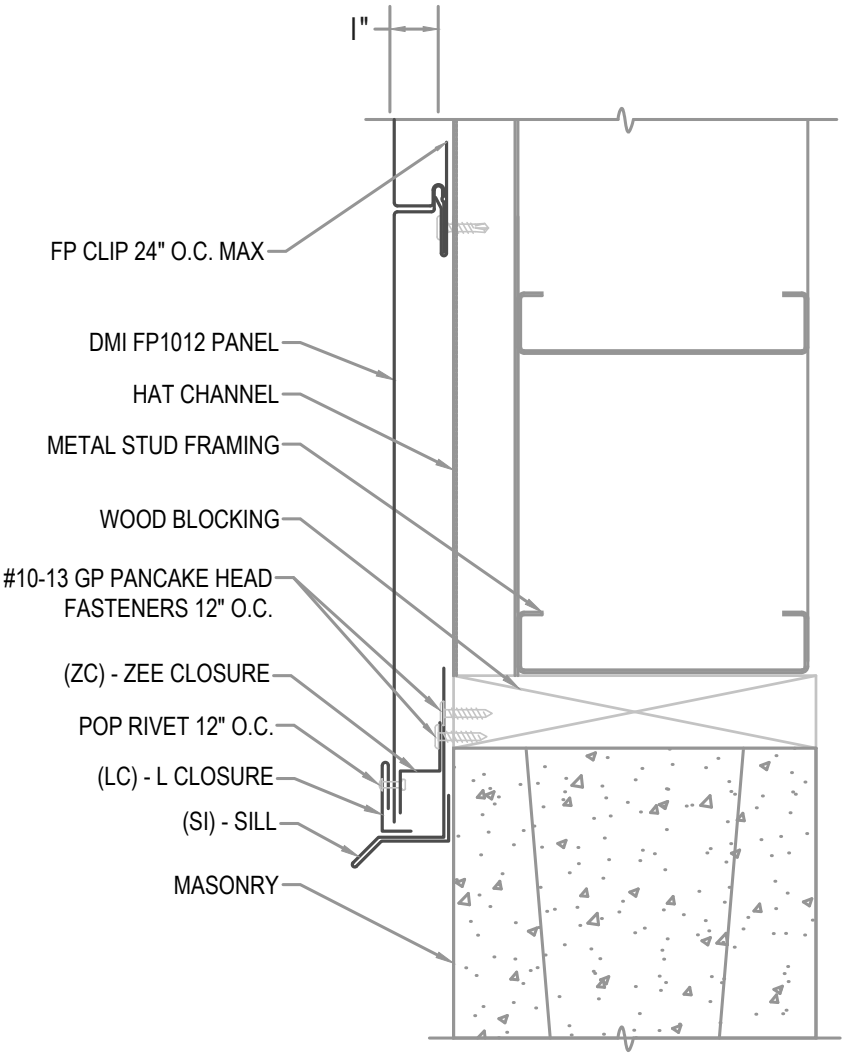
Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.	WALL PANEL W/ SILL (PANEL SOFFIT)	Detail: FP10-H-02-01	
	●PROVEN ● DEPENDABLE ● SUSTAINABLE● METAL ENVELOPE SYSTEMS SINCE 1988 WWW.DMIMETALS.COM	Issue/Rev Date: 03/17	Scale: 3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

WALL PANEL W/ SILL (AT BLOCK)

Detail: FP10-H-02-02

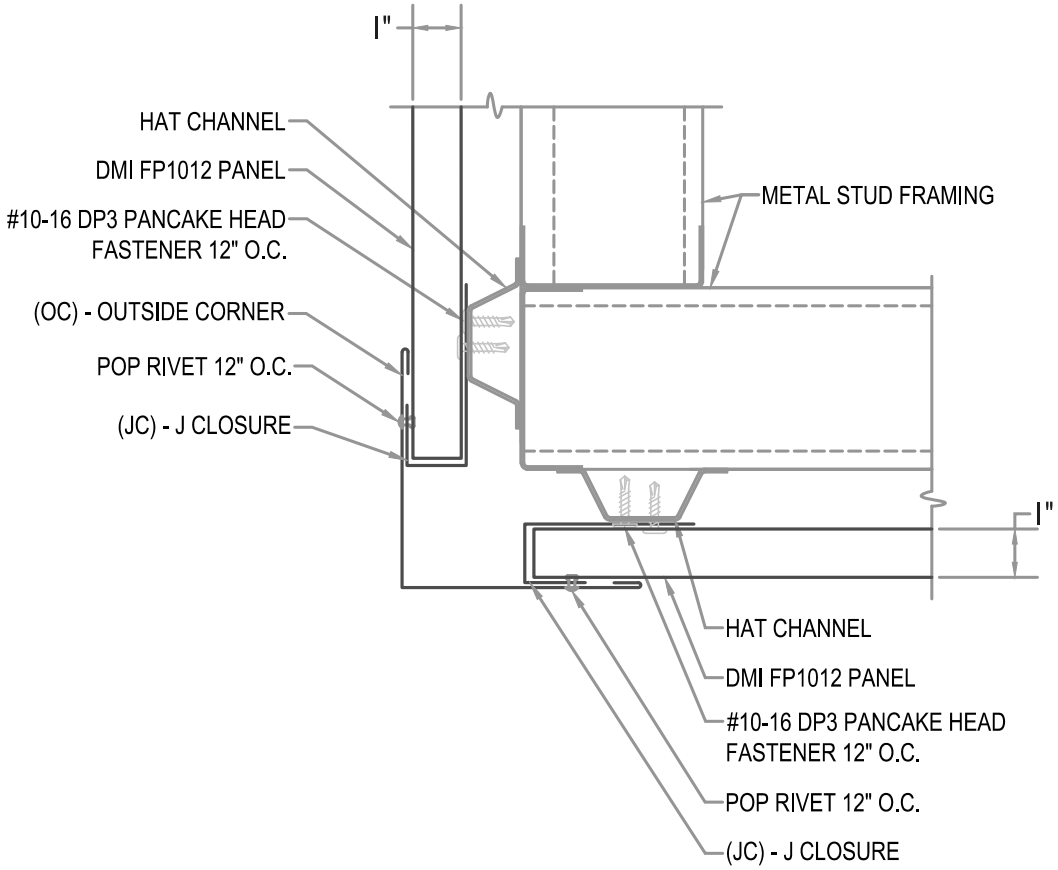
●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

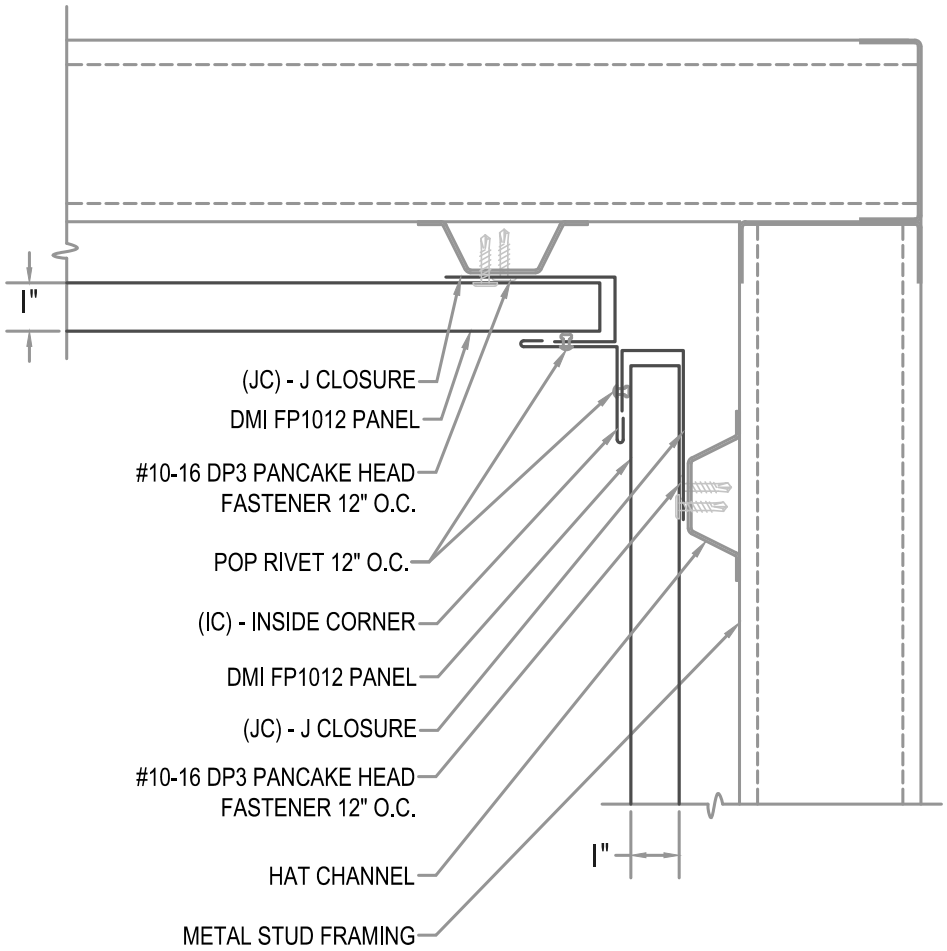
Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.	OUTSIDE CORNER	Detail: FP10-H-03-00	
	●PROVEN ● DEPENDABLE ● SUSTAINABLE● METAL ENVELOPE SYSTEMS SINCE 1988 WWW.DMIMETALS.COM	Issue/Rev Date: 03/17	Scale: 3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

INSIDE CORNER

Detail: FP10-H-03-01

●PROVEN ● DEPENDABLE ● SUSTAINABLE●

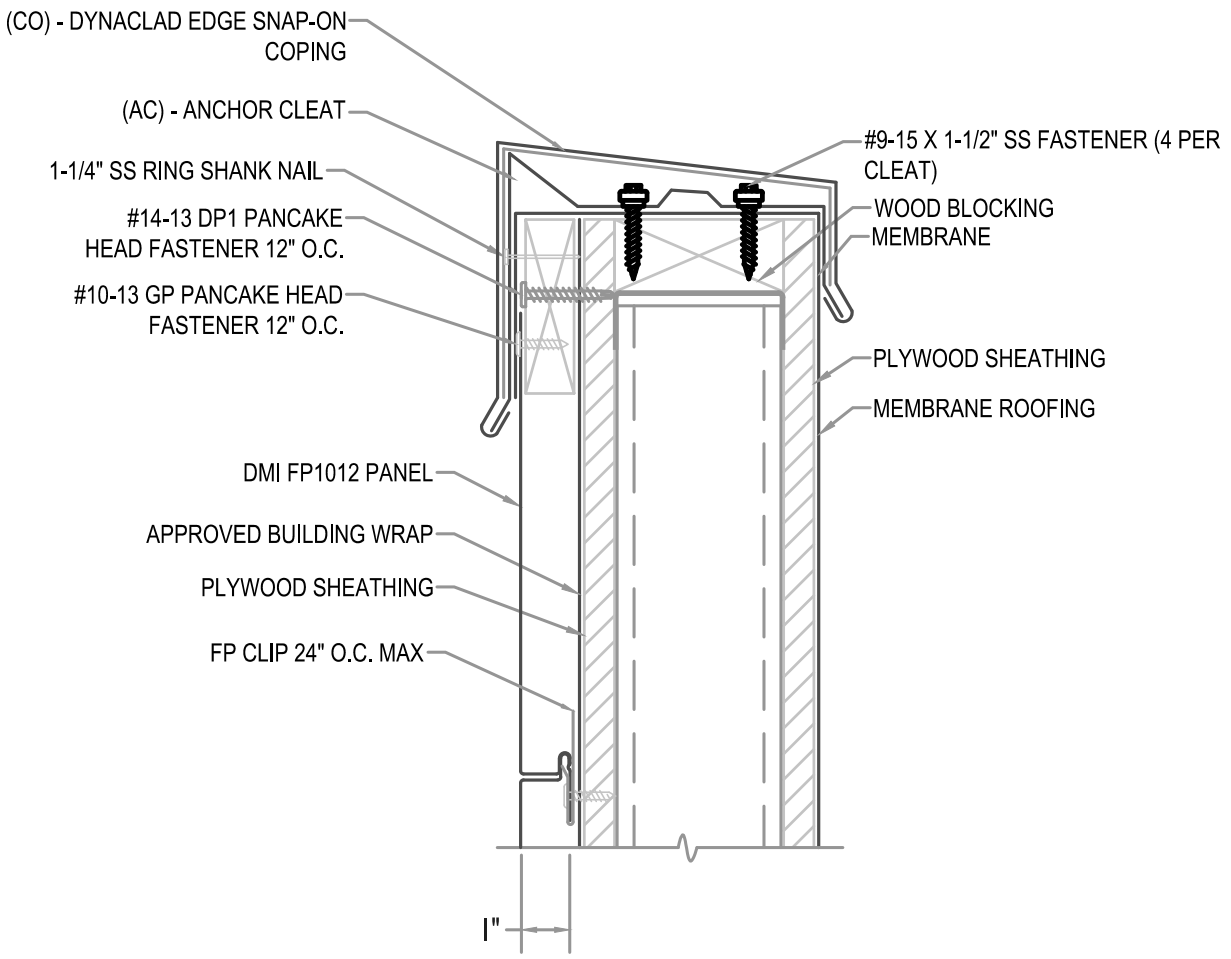
METAL ENVELOPE SYSTEMS SINCE 1988

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Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING 3/4" MIN. AND METAL FRAMING 1/2" MIN.

SEE DMI DYNACLAD EDGE INSTALLATION GUIDE FOR COMPLETE FASTENING AND INSTALLATION INFORMATION FOR ES-1 RATED SNAP-ON COPING



DIMENSIONAL METALS, INC.

COPING WITH WOOD SUBSTRATE

Detail: FP10-H-04-00

●PROVEN ●DEPENDABLE ●SUSTAINABLE●

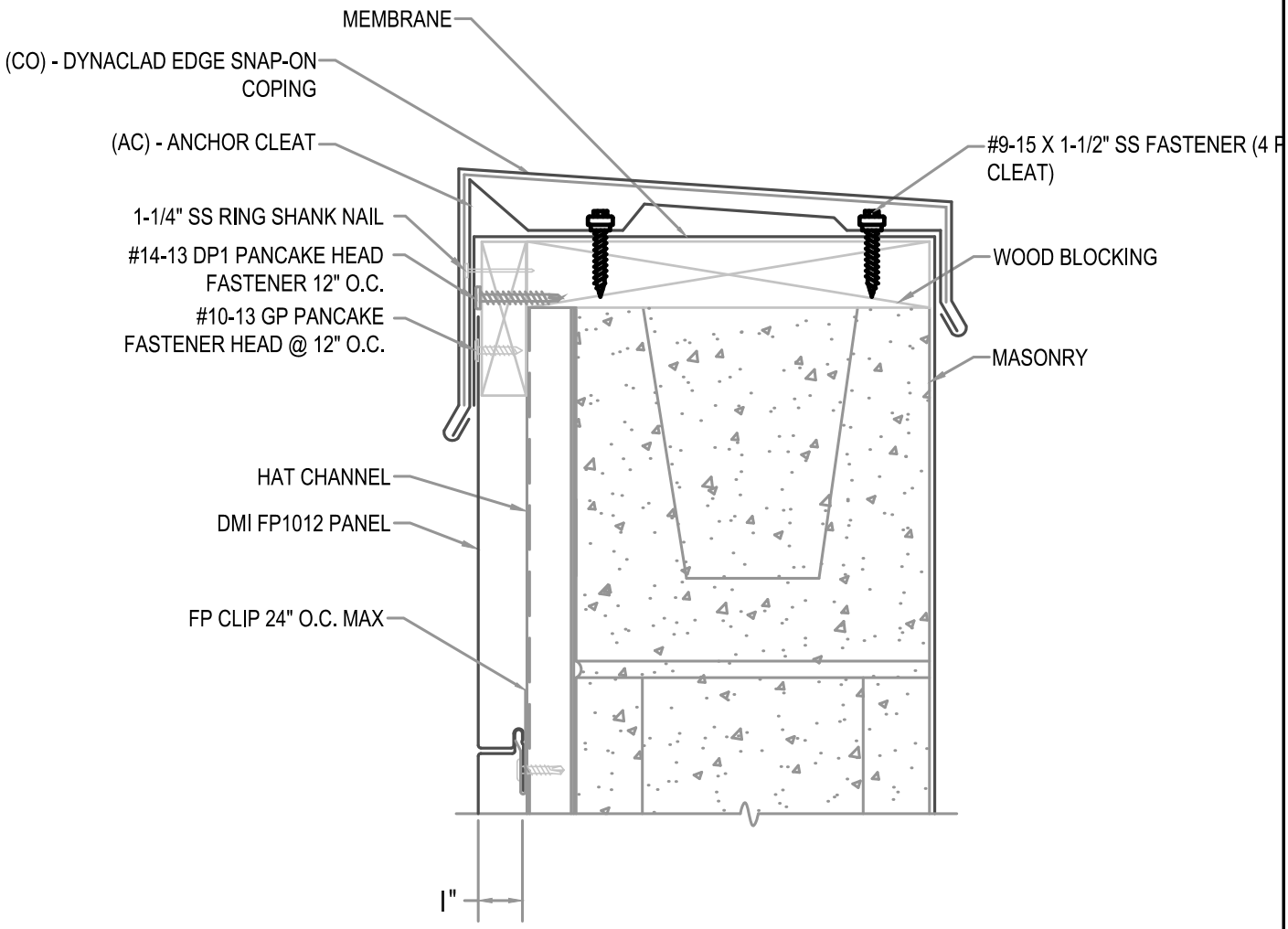
METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING 3/4" MIN. AND METAL FRAMING 1/2" MIN.

SEE DMI DYNACLAD EDGE INSTALLATION GUIDE FOR COMPLETE FASTENING AND INSTALLATION INFORMATION FOR ES-1 RATED SNAP-ON COPING



DMI DIMENSIONAL METALS, INC.

COPING WITH HAT CHANNEL

Detail: FP10-H-04-01

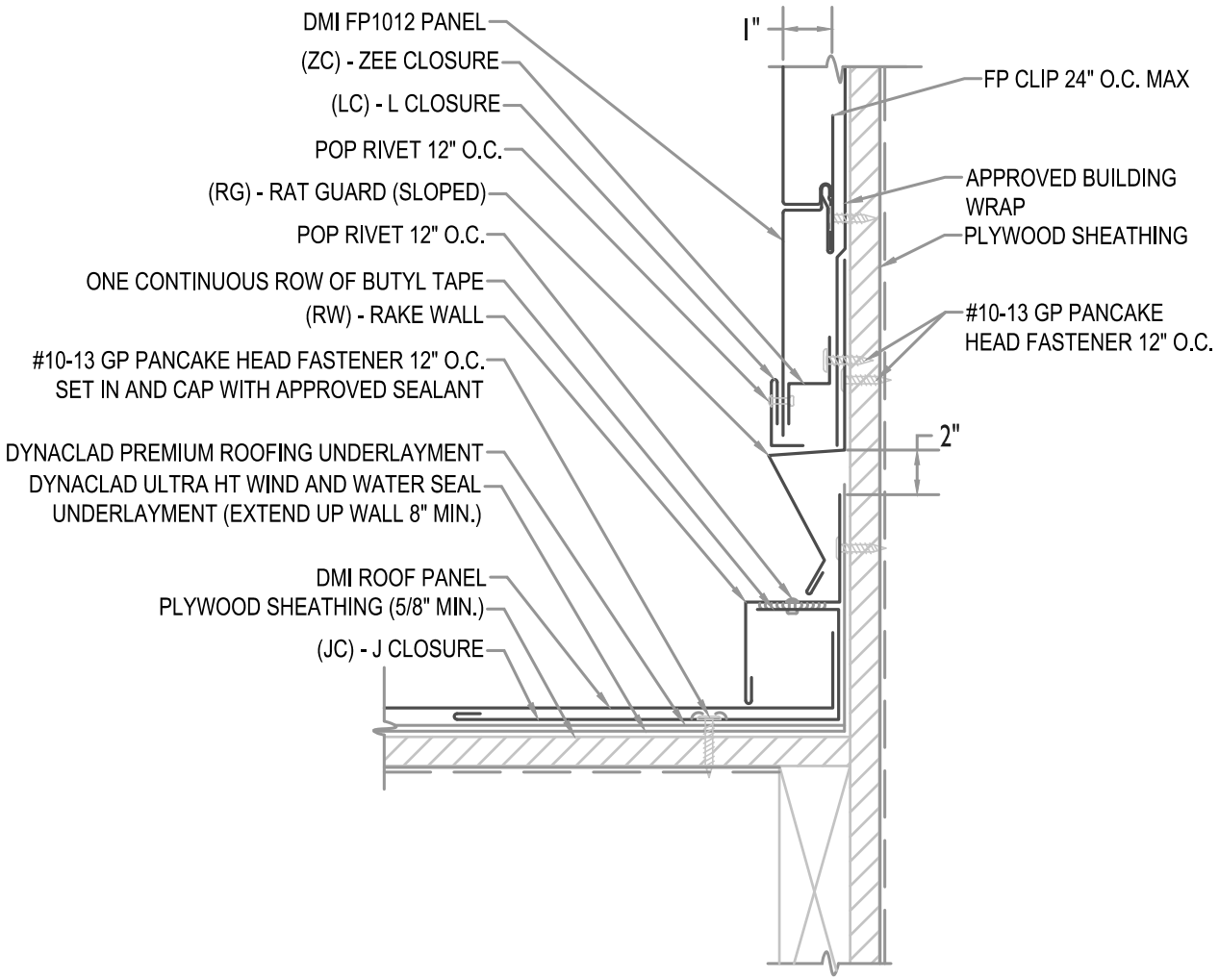
●PROVEN ●DEPENDABLE ●SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DIMENSIONAL METALS, INC.

●PROVEN ● DEPENDABLE ● SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

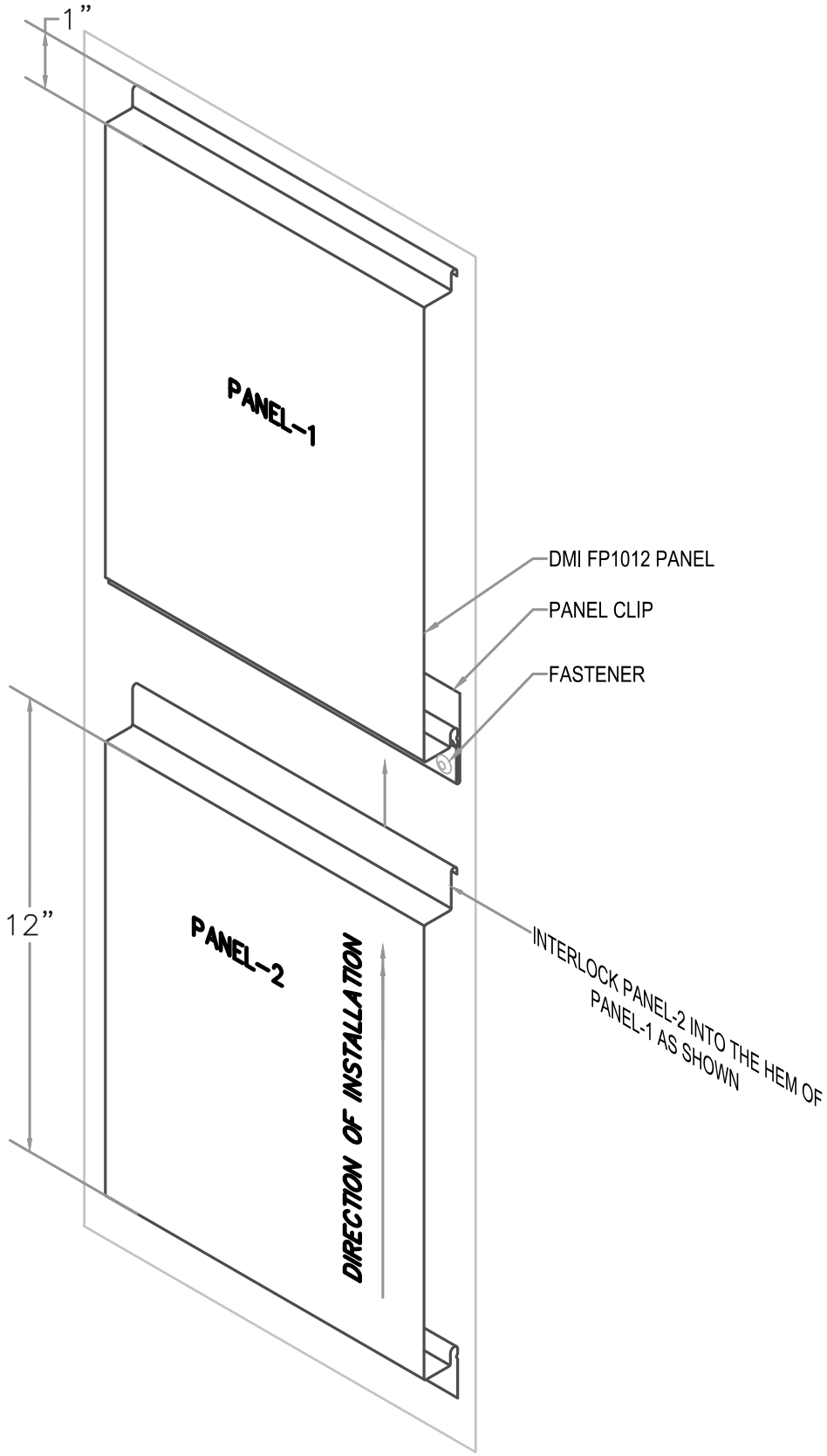
WWW.DMIMETALS.COM

RAKE WALL

Detail: FP10 05-00

Issue/Rev Date: 03/17

Scale: 3"=1'-0"



DMI DIMENSIONAL METALS, INC.

PANEL INSTALLATION

Detail: FP10 08-00

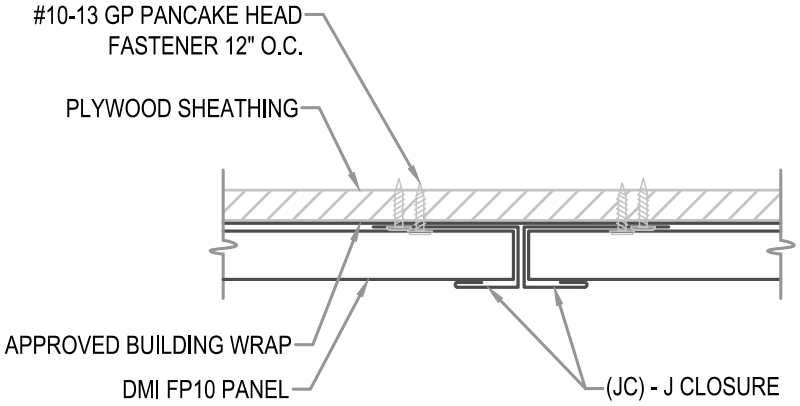
●PROVEN ●DEPENDABLE ●SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date:	Scale:
03/17	3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

PANEL LAP

Detail: FP10 10-00

●PROVEN ●DEPENDABLE ●SUSTAINABLE●

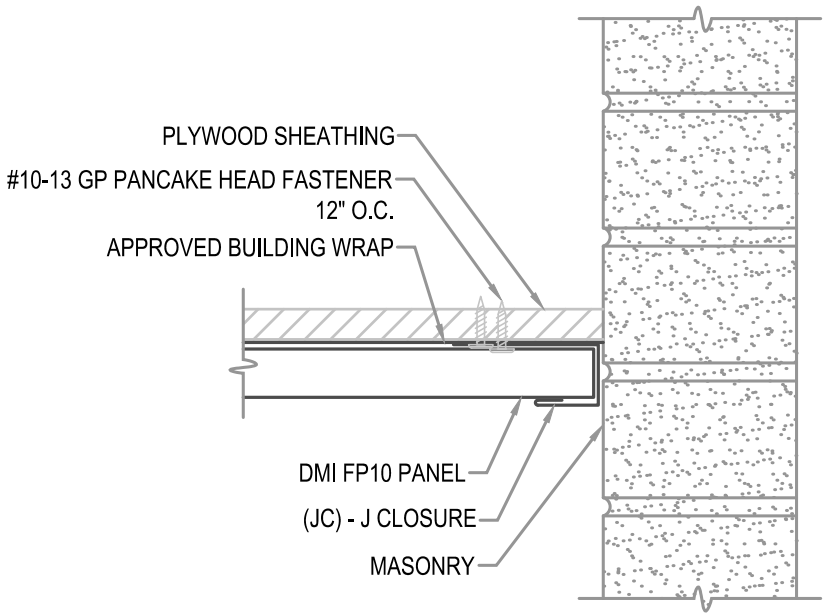
METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date: 03/17

Scale: 3"=1'-0"

FASTENERS TO PENETRATE WOOD SHEETING
3/4" MIN. AND METAL FRAMING 1/2" MIN.



DMI DIMENSIONAL METALS, INC.

WALL PANEL END

Detail: FP10 11-00

●PROVEN ●DEPENDABLE ●SUSTAINABLE●

METAL ENVELOPE SYSTEMS SINCE 1988

WWW.DMIMETALS.COM

Issue/Rev Date: 03/17

Scale: 3"=1'-0"

DynaClad®

PVDF Color Chart

DIMENSIONAL METALS, INC.

WHITE
SRI = 85

COBALT BLUE
SRI = 20

PUTTY
SRI = 77

SANDSTONE
SRI = 77

DOVE GREY
SRI = 61

PATINA COPPER
SRI = 58

BRITE RED*
SRI = 44

BEIGE
SRI = 53

STONE
SRI = 49

SLATE GREY
SRI = 47

TERRA COTTA
SRI = 43

METALLIC SILVER
SRI = 53

MUSKET GREY
SRI = 35

SEAPORT
SRI = 35

COLONIAL RED
SRI = 34

SLATE BLUE
SRI = 34

CHAMPAGNE
SRI = 51

BURGUNDY
SRI = 34

HEMLOCK GREEN
SRI = 31

LEAF GREEN
SRI = 31

CHARCOAL GREY
SRI = 31

METALLIC COPPER
SRI = 49

SPARTAN BRONZE
SRI = 30

CLASSIC BRONZE
SRI = 29

MATTE BLACK
SRI = 29

EVERGREEN
SRI = 28

AGED COPPER
SRI = 43

DARK BRONZE
SRI = 27

ROYAL BLUE
SRI = 27

HARTFORD GREEN
SRI = 26

BROWN
SRI = 25

WEATHERED ZINC
SRI = 37

Premium Colors **

Metallic Colors †

† Metallic colors are directionally sensitive and therefore entire roof areas should be ordered at one time to ensure color uniformity.
*Brite Red has a clear coat. ** Premium colors carry an upcharge. SRI = Solar Reflectance Index.
Colors shown are samples and may vary slightly from actual material.

CUSTOM COLORS ARE AVAILABLE

PRODUCT - DynaClad® Prefinished Architectural Tension Leveled Coil and Flat Sheet is coated with a 70% Full Strength PVDF Paint Finish. The top side is coated with a polyester primer and a 70% full strength PVDF topcoat for a total mil thickness of 1.1 (± .1). The reverse side is a polyester primer and a polyester topcoat with a total dry film thickness of .55 (± .1).

Substrates

Galvalume®

Consists of aluminum-zinc alloy coated (55% aluminum, 43.4% zinc, 1.6% silicon, nominal percentage by weight) carbon steel of commercial weight meeting ASTM 792.

HDG-90

Consists of hot-dipped galvanized steel base sheet of commercial weight (AISI G90 designation) meeting ASTM A653.

Aluminum

Consists of 3003/3105 H14 alloy aluminum base sheet of commercial weight meeting ASTM B209.

Stocked substrates are produced from 48" wide coil. Standard sized flat sheets are 48" X 120". Custom sized flat sheets can be produced in various widths and lengths with extended lead times and additional costs.

WARRANTY - A finish warranty covering color fade, chalking, and film integrity as well as a perforation warranty (Galvalume® only) covering base sheet integrity is available at no additional cost.

DYNACLAD® STOCKING COLOR/MATERIAL

COLOR (IN ALPHABETICAL ORDER)	24 GAGE GALVALUME KYNAR 500	22 GAGE GALVALUME KYNAR 500	.032 ALUM. 3003/3105 H14 KYNAR 500	.040 ALUM. 3003/3105 H14 KYNAR 500	.050 ALUM. 3003/3105 H14 KYNAR 500	.063 ALUM. 3003/3105 H14 KYNAR 500
AGED COPPER	•		•			
BEIGE	•	•	•	•	•	
BRITE RED	•		•	•		
BROWN	•		•	•		
BURGUNDY	•		•			
CHAMPAGNE	•		•			
CHARCOAL GREY	•		•	•		
CLASSIC BRONZE	•		•	•		
COBALT BLUE	•		•			
COLONIAL RED	•		•			
DARK BRONZE	•	•	•	•	•	•
DOVE GREY	•	•	•	•		
EVERGREEN	•		•	•		
HARTFORD GREEN	•		•			
HEMLOCK GREEN	•		•			
LEAF GREEN	•		•			
MATTE BLACK	•		•	•		
METALLIC COPPER	•		•			
METALLIC SILVER	•		•			
MUSKET GREY	•		•	•		
PATINA COPPER	•		•	•		
PUTTY	•	•	•	•	•	
ROYAL BLUE	•		•	•		
SANDSTONE	•	•	•	•		
SEAPORT	•		•			
SLATE BLUE	•		•			
SLATE GREY	•	•	•	•	•	
SPARTAN BRONZE	•		•	•		
STONE	•		•	•		
TERRA COTTA	•		•			
WEATHERED ZINC	•		•			
WHITE	•	•	•	•	•	•

COLORS LISTED ABOVE ARE AVAILABLE ON ANY OF THE SUBSTRATES BUT WILL HAVE ADDITIONAL LEAD TIMES AND COST.

STOCKED NON-PAINTED MATERIAL

HDG-90	24 ga, 22 ga, 20 ga, 18 ga, and 16 ga
ACRYLUME®	24 ga and 22 ga
MILL FINISHED ALUMINUM	.032, .040, .050, and .063
CLEAR ANODIZED ALUMINUM	.032 and .040
COPPER	16 oz. and 20 oz.
RHEINZINK®	.7 mm, .8 mm, and 1.0 mm
STAINLESS STEEL TYPE 304	24 ga and 22 ga

PERFORMANCE SPECIFICATION

ABRASION RESISTANCE *(ASTM D968)*
Passed 80 Liters

ACCELERATED WEATHERING *(ASTM D4587, G154)*
5,000 hours with no chalking, blistering or loss of adhesion

CHEMICAL RESISTANCE *(ASTM E1308)*
No visible changes

ADHESION *(ASTM D3359)*
No coating removed

COLOR CHANGE *(ASTM D2244)*
After 2,000 hours color change less than 2 NBS units

FLAME TEST *(ASTM E84)*
Class A

FLORIDA EXTERIOR DURABILITY *(ASTM G7, E2244 & D4214)*
Less than 5 Δ units color change and chalk rating of less than 8

FORMABILITY / T BEND *(ASTM D522 & D4145)*
No adhesion loss on a 1/8" Mandrel and 2T bend

GLOSS *(ASTM D523)*
30% (±5%) at 60 degrees
55% (±5%) at 85 degrees

HUMIDITY *(ASTM D2247)*
2,000 hours Galvalume® and G-90
3,000 hours Aluminum

IMPACT *(ASTM D2794)*
No cracking or loss of adhesion

PENCIL HARDNESS *(ASTM D3363)*
HB Minimum

SALT SPRAY *(ASTM B117)*
No blisters or adhesion loss after 2,000 hours for Galvalume® & G-90
No blisters or adhesion loss after 3,000 hours for Aluminum

CYCLIC SALT FOG *(ASTM D5894)*
Acceptance

See dmimetals.com for test reports, thermal emittance, and SR values.

DynaClad® is a registered trademark of Dimensional Metals, Inc.
Fluropon® is a registered trademark of Sherwin-Williams.
Galvalume® is a registered trademark of BIEC International Inc. and some of its licensed partners.
Acrylume® is a registered trademark of USX.

2020-01

FLUSH WALL PANELS

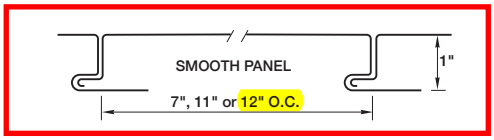
MATERIALS

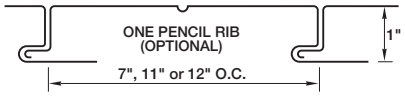
.032 aluminum
.040 aluminum*
24 gauge steel
22 gauge steel*

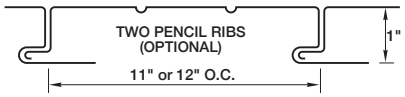
SPECS

7", 11" or 12" O.C.
1" High

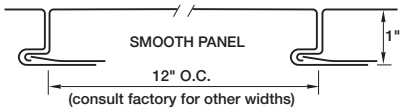
FLUSH PANEL

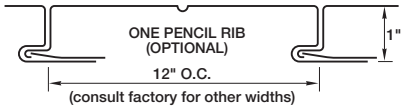


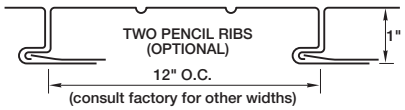




FLUSH PANEL W/ CLIP (OPTIONAL)

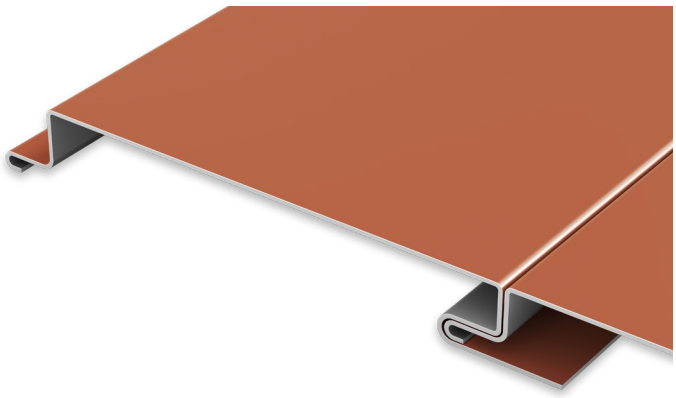




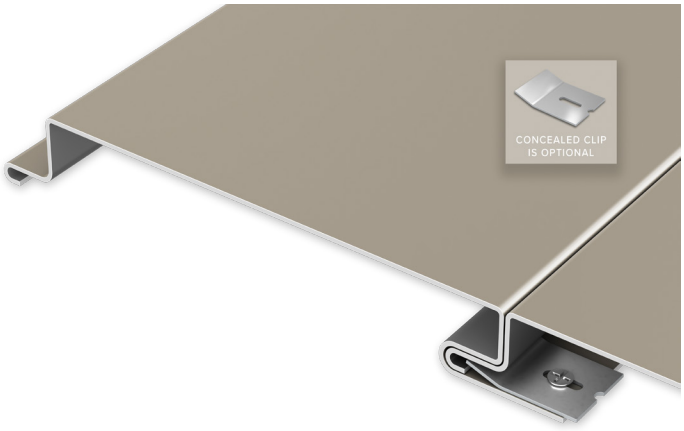


*Limited color availability. 12" O.C. has reduced fastening flange. A complete specification is available online at pac-clad.com.

**Clip is available only on 12" panels.



FLUSH PANEL



FLUSH PANEL W / CLIP (OPTIONAL)**

PRODUCT FEATURES

- Leveled for flatness
- Available with up to two pencil ribs
- Rounded interlock leg provides improved flush fit
- 30-year non-prorated finish warranty
- Panel lengths from 4' to 25'

MATERIAL

- 43 stocked colors (24 gauge steel)
- 16 Stocked colors (22 gauge steel)
- 36 stocked colors (.032 aluminum)
- 22 stocked colors (.040 aluminum)
- Galvalume Plus available

ASTM TESTS - FLUSH

- ASTM E330 tested - 12" only
- ASTM 1592
- ASTM E283
- ASTM E331
- AAMA 501.1-05

FLORIDA BUILDING PRODUCT APPROVALS

Please refer to pac-clad.com or your local factory for specific product approval numbers for Flush panels.

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FLUSH & REVEAL - Z-GIRT SUBSTRATE DETAILS

SILL DETAIL

HORIZONTAL APPLICATION

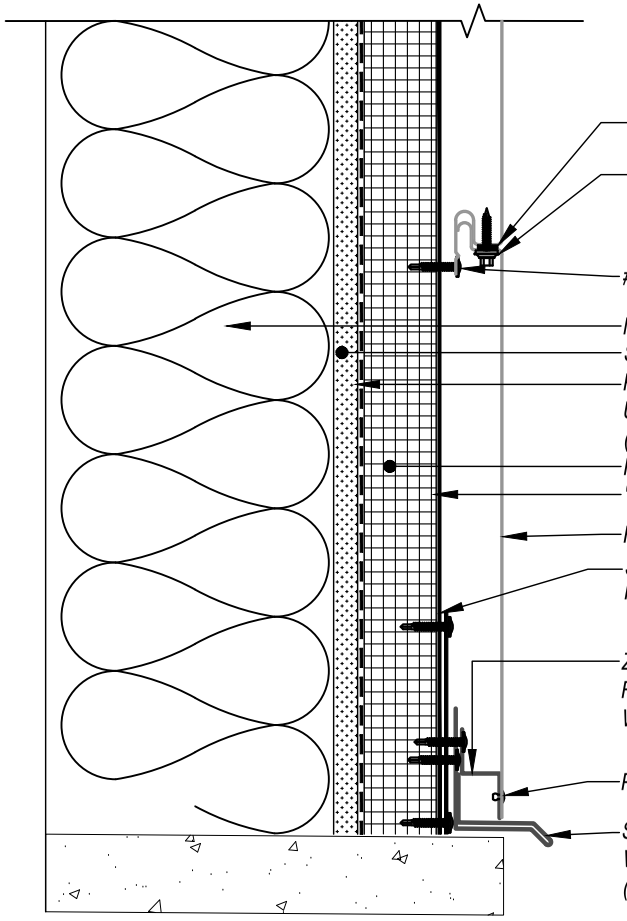
FLUSH PANEL

THIS DETAIL DRAWING IS APPLICABLE TO ALL FLUSH & REVEAL SERIES WALL PANEL PROFILES

FLUSH

REVEAL

** MAY OMIT SUPPORT PLATE IF ATTACHING TO STRUCTURAL MEMBER*



- BUTYL TAPE SEALANT
- FASTENED W/ #14 x 7/8" STITCH FASTENER
- #10-16 x 1" GP FASTENERS
- METAL STUD
- SHEATHING
- PAC-CLAD HT UNDERLAYMENT (HIGH TEMP)
- ISO
- "Z" GIRT
- FLUSH PANEL
- SUPPORT PLATE FASTENED W/ #14-13 FASTENERS @ EA. "Z" GIRT*
- Z-SPACER FASTENED W/ #10-16 x 1" FASTENERS
- POP RIVET TO Z-SPACER
- SILL FLASHING FASTENED W/ #10-16 x 1" FASTENERS (MIN. SLOPE 1/4":12')

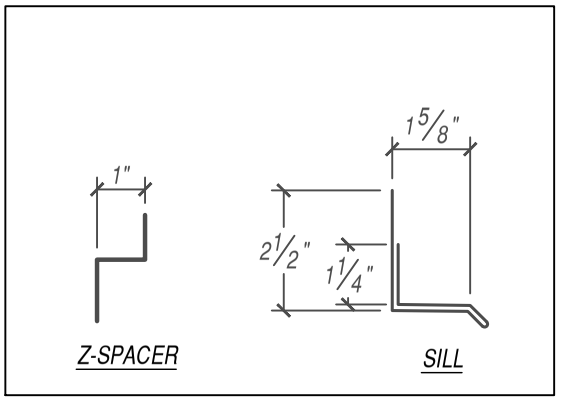
SCALE: 3" = 1'-0"

0 1 2 3 4 5 6 in

EFFECTIVE DATE: 01-03-2023
SUBJECT TO CHANGE WITHOUT NOTICE

KEYNOTES:

- TRIM FASTENERS ARE SELF-DRILL PANCAKE HEAD AND MUST BE INSTALLED IN A STAGGERED PATTERN
- FASTENERS MUST PENETRATE STEEL SUBSTRATE BY 5/8" MINIMUM THREAD LENGTH
- FASTENER SPACING VARIES BASED ON PROJECT SPECIFIC LOADS AND/OR LOCAL BUILDING CODES



FLASHINGS

DISCLAIMER: DETAIL SHOWN FOR ILLUSTRATION PURPOSES ONLY. ACTUAL PROJECT DETAIL MAY VARY

PETERSEN ALUMINUM CORPORATION - PAC-CLAD.COM

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P: 800-344-1400
F: 301-953-7627

10551 PAC Road
Tyler, TX 75707
P: 800-441-8661
F: 903-581-8592

102 Northpoint Parkway
Acworth, GA 30102
P: 800-272-4482
F: 770-420-2533

1800 S. 7th Ave., Suite 130
Phoenix, AZ 85007
P: 833-750-1935
F: 602-254-6504

9817 233rd Ave. E, Suite A
Bonney Lake, WA 98391
P: 253-501-2450
F: N/A

PAC-CLAD
PETERSEN
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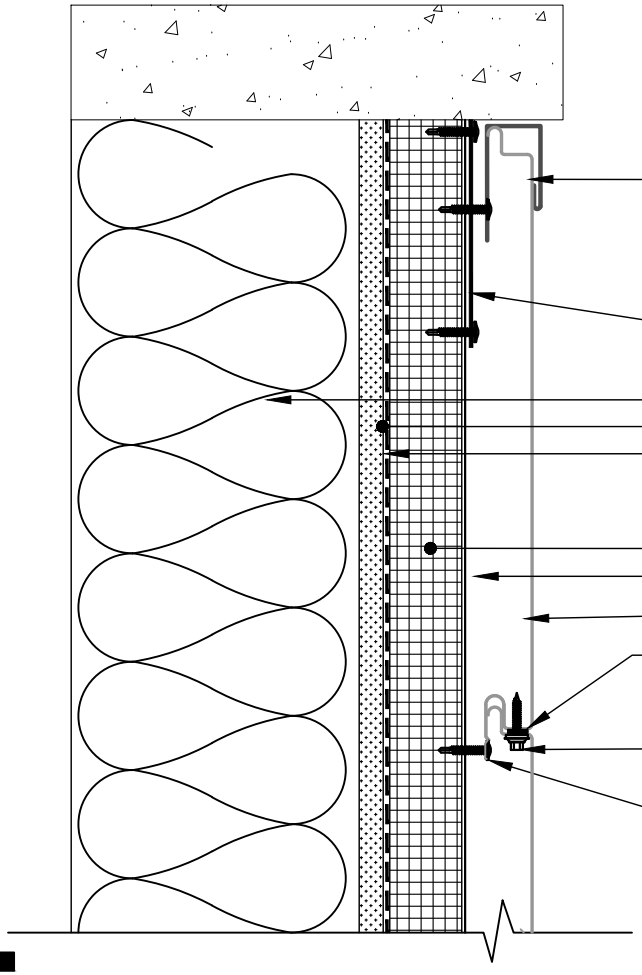
FLUSH & REVEAL - Z-GIRT SUBSTRATE DETAILS

TOP-OF-WALL DETAIL

HORIZONTAL APPLICATION



FLUSH PANEL



** MAY OMIT SUPPORT PLATE IF ATTACHING TO STRUCTURAL MEMBER*

THIS DETAIL DRAWING IS APPLICABLE TO ALL FLUSH & REVEAL SERIES WALL PANEL PROFILES



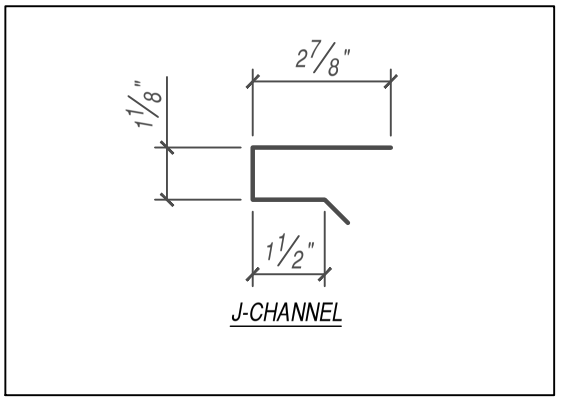
FLUSH



REVEAL

KEYNOTES:

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- *FASTENER SPACING VARIES BASED ON PROJECT SPECIFIC LOADS AND/OR LOCAL BUILDING CODES*



J-CHANNEL

FLASHINGS

SCALE: 3" = 1'-0"

0 1 2 3 4 5 6 in

EFFECTIVE DATE: 01-03-2023
SUBJECT TO CHANGE WITHOUT NOTICE

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PETERSEN ALUMINUM CORPORATION - PAC-CLAD.COM

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9817 233rd Ave. E, Suite A
Bonney Lake, WA 98391
P: 253-501-2450
F: N/A

PAC-CLAD®

PETERSEN

A CARLISLE COMPANY

Color Guide



FOREST GREEN



HARTFORD GREEN



▲ MILITARY BLUE



BERKSHIRE BLUE



▲ PACIFIC BLUE
(FKA Slate Blue)



AWARD BLUE



▲ AGED BRONZE



▲ MEDIUM BRONZE



▲ CARDINAL RED



▲ COLONIAL RED

▲ SANDSTONE

▲ ALMOND

▲ STONE WHITE

▲ BONE WHITE

PAC-CLAD.COM

Premium Colors

ALTERNATE MANUFACTURER COLOR SELECTION



●▲♛$$ ANODIC CLEAR



●▲♛$$ SILVERSMITH



●▲♛$ SILVER



●▲♛$ CHAMPAGNE



●▲♛$ ZINC



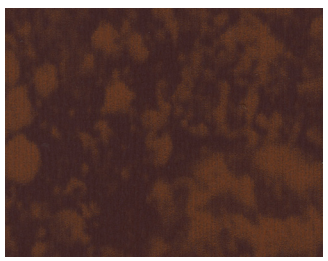
●▲♛$ WEATHERED ZINC



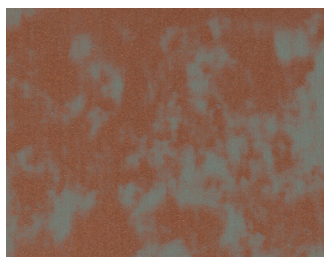
●▲♛$ COPPER PENNY



●▲♛$ AGED COPPER



♛$$ WEATHERED STEEL



♛$$ WEATHERED COPPER

Kynar 500® or Hylar 5000® pre-finished steel and aluminum for roofing, curtainwall and storefront applications.

●Metallic Colors $Pricing ▲Cool Colors ♛Premium Colors

See back for color availability chart.

Standard Colors



▲ PATINA GREEN



▲ TEAL



▲ HEMLOCK GREEN



FOREST GREEN



HARTFORD GREEN



▲ EVERGREEN



▲ HUNTER GREEN



▲ ARCADIA GREEN



▲ MILITARY BLUE



BERKSHIRE BLUE



▲ GRAPHITE



▲ CHARCOAL



INTERSTATE BLUE



▲ PACIFIC BLUE
(fka Slate Blue)



AWARD BLUE



MATTE BLACK STEEL



BLACK ALUMINUM



▲ DARK BRONZE



▲ BURNISHED SLATE



▲ AGED BRONZE



▲ MEDIUM BRONZE



▲ MANSARD BROWN



BURGUNDY



▲ TERRA COTTA



▲ CARDINAL RED



▲ COLONIAL RED



MIDNIGHT BRONZE



▲ MUSKET GRAY



▲ SIERRA TAN

▲ SANDSTONE

▲ ALMOND



▲ SLATE GRAY



▲ CITYSCAPE



▲ GRANITE

▲ STONE WHITE

▲ BONE WHITE

PAC-CLAD PETERSEN
A CARLISLE COMPANY

IL: 800 PAC CLAD **TX:** 800 441 8661 **MD:** 800 344 1400
AZ: 833 750 1935 **GA:** 800 272 4482 **WA:** 253 501 2450

PAC-CLAD.COM

PAC-CLAD® Color Availability

PAC-CLAD STANDARD COLORS	REFLECTIVITY	EMISSIVITY	3 YEAR EXPOSURE	SRI	STEEL		ALUMINUM				20-IN. COIL	
					24 GA.	22 GA.	.032	.040	.050	.063	24 GA.	.032
AGED BRONZE	0.29	0.87	0.27	29	✓							
ALMOND	0.56	0.86	0.55	65	✓	✓	✓	✓	✓		✓	
ARCADIA GREEN	0.29	0.87	0.29	29	✓		✓					
AWARD BLUE***	0.24	0.86	0.23	22	✓		✓		✓			
BERKSHIRE BLUE*	0.30	0.87	0.27	31	✓							
BLACK ALUMINUM**	0.04	0.89	0.04	-2			✓	✓	✓	✓		
BONE WHITE	0.70	0.86	0.69	85	✓	✓	✓	✓	✓	✓	✓	✓
BURGUNDY	0.14	0.85	0.13	9	✓		✓		✓			
BURNISHED SLATE	0.32	0.87	0.31	33	✓							
CARDINAL RED***	0.44	0.86	0.44	49	✓		✓		✓			
CHARCOAL	0.30	0.86	0.30	30	✓		✓	✓	✓		✓	✓
CITYSCAPE	0.49	0.86	0.50	56	✓	✓	✓	✓	✓		✓	✓
COLONIAL RED	0.31	0.86	0.31	31	✓		✓	✓	✓			
DARK BRONZE	0.29	0.86	0.29	29	✓	✓	✓	✓	✓	✓	✓	✓
EVERGREEN	0.28	0.86	0.26	27	✓		✓					
FOREST GREEN	0.10	0.86	0.10	4	✓	✓	✓	✓	✓			
GRANITE*	0.33	0.87	0.33	34	✓	✓	✓	✓	✓			
GRAPHITE	0.29	0.87	0.28	29	✓							
HARTFORD GREEN	0.08	0.88	0.08	3	✓		✓	✓	✓			
HEMLOCK GREEN	0.31	0.87	0.30	32	✓		✓		✓			
HUNTER GREEN	0.28	0.86	0.27	27	✓		✓					
INTERSTATE BLUE	0.16	0.87	0.15	12	✓		✓		✓			
MANSARD BROWN	0.31	0.86	0.31	31	✓	✓	✓	✓	✓			
MATTE BLACK STEEL**	0.26	0.86	0.25	25	✓	✓					✓	
MEDIUM BRONZE	0.30	0.87	0.29	31	✓	✓	✓	✓	✓	✓	✓	✓
MIDNIGHT BRONZE	0.06	0.87	0.06	0	✓			✓				
MILITARY BLUE	0.31	0.86	0.30	31	✓		✓					
MUSKET GRAY	0.32	0.86	0.31	33	✓	✓	✓		✓			
PACIFIC BLUE	0.28	0.86	0.27	27	✓		✓					
PATINA GREEN	0.33	0.86	0.32	34	✓		✓					
SANDSTONE	0.48	0.86	0.48	54	✓	✓	✓	✓	✓	✓	✓	✓
SIERRA TAN	0.32	0.82	0.31	31	✓	✓	✓	✓	✓		✓	
SLATE GRAY	0.38	0.86	0.37	41	✓	✓	✓	✓	✓		✓	✓
STONE WHITE	0.69	0.86	0.67	84	✓	✓	✓	✓	✓	✓	✓	✓
TEAL	0.32	0.86	0.32	33	✓		✓					
TERRA COTTA	0.34	0.87	0.33	36	✓		✓		✓		✓	✓
PAC-CLAD PREMIUM COLORS												
AGED COPPER	0.55	0.80	0.53	62	✓		✓					
ANODIC CLEAR	0.32	0.83	0.31	31				✓				
CHAMPAGNE	0.50	0.85	0.49	57	✓		✓	✓	✓			
COPPER PENNY	0.52	0.81	0.52	58	✓		✓	✓	✓		✓	
SILVER	0.47	0.87	0.46	53	✓	✓	✓	✓	✓		✓	✓
SILVERSMITH	0.32	0.88	0.32	34				✓				
WEATHERED COPPER	0.45	0.88	N/A	51	✓							
WEATHERED STEEL	0.32	0.89	N/A	34	✓							
WEATHERED ZINC	0.48	0.82	0.46	53	✓	✓	✓		✓			
ZINC	0.42	0.82	0.38	45	✓		✓	✓	✓			
CLEAR-COAT ACRYLIC FINISH (NON-KYNAR)												
GALVALUME PLUS	0.68	0.14	0.55	57	✓	✓					✓	

PAC-CLAD Premium finishes are available from stock at a moderate extra cost. PAC-CLAD Copper Penny is a Non-Weathering finish. Solar Reflectance Index calculated according to ASTM E-1980.
*Low Gloss/Low Sheen, 70% PVDF finish ** Appearance differs for Black Aluminum and Matte Black Steel *** 10-year finish warranty

TECHNICAL DATA FOR KYNAR 500/HYLAR 5000 COATING:

- South Florida Exposure: Color (ASTM D 2244) - No more than 5ΔE Hunter units at 20 years; Chalk (ASTM D 4214) – Rating no less than 8 at 20 years; Film integrity – 20 years.
- Accelerated Weathering (ASTM D 4587, ASTM G 154): 5000 Hours; Chalk, per ASTM D 4214, rating of 6 or better; Color, per ASTM D 2244, < 5ΔE (Hunter Units) color change.
- Humidity Resistance (ASTM D 2247): Galvalume or HDG, 100% RH, 2000 hours – No field blisters; Aluminum, 100% RH, 3000 hours – No field blisters
- Salt Spray Resistance (ASTM B 117): Aluminum: 3000 hours, creep from scribe no more than 1/16" (2mm), no field blisters. Galvalume or HDG:2000 hours, creep from scribe no more than 1/8" (4mm), no field blisters
- Chemical/Acid Pollution Resistance (ASTM D 1308): Pass
- T-Bend (ASTM D 4145): 1T – 3T with no loss of adhesion
- Pencil hardness (ASTM D 3363): HB – 2H
- Specular Gloss (ASTM D 523) @ 60 degrees: Typical – 20 – 35
- Abrasion Resistance (ASTM D 968): 80 Liters/Mil +/- 5 Liters
- Cross Hatch Adhesion (ASTM D 3359): No loss of adhesion
- Reverse Impact (ASTM D 2794): Galvalume or HDG, 2x metal thickness inch-pounds, no loss of adhesion; Aluminum, 1.5x metal thickness inch-pounds, no loss of adhesion
- Flame Test (ASTM E 84): Class A Coating

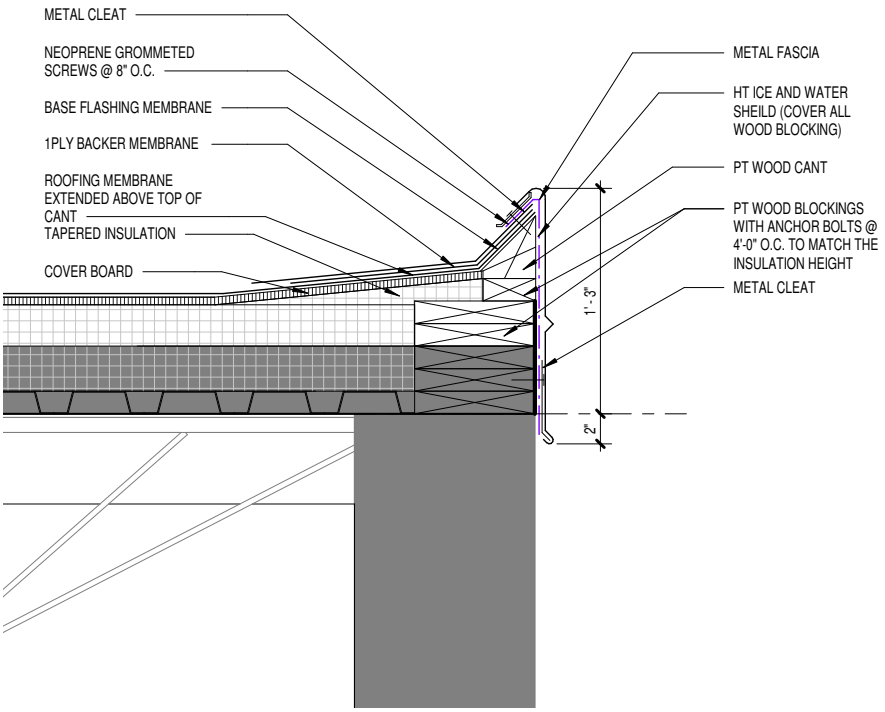
PAC-CLAD is a registered trademark of Petersen Aluminum Corp. Kynar 500 is a registered trademark of Arkema Inc. Hylar 5000 is a registered trademark of Solvay Solexis. 7/22

7. ROOF FASCIA

- Material: Shop-formed, factory-finished aluminum fascia
- The aluminum will be factory-finished with a fluoropolymer finish in a dark gray color to match the color of the window framing.

Match storefront





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8. PAINTED COLUMNS

- Material: High Performance Semi-Gloss Coating on Exposed Structural Steel Columns
- Acceptable high performance paint manufacturers:

  Glidden

  PPG

  Tnemec

  International
- Paint includes 1 finish coat over 2 intermediate coats and a primer
- The proposed paint color is intended to brighten the main entrance and create a fun, happy appearance in support of school pride.

PPG Burnt Red

Alternate Color:
PPG Yukon Gold

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9. BENCH

- Material: Custom bench integrated with the architecture and landscape. Ipe wood top and semi-gloss painted steel plate base.
- Acceptable high performance paint manufacturers:

  Glidden

  PPG

  Tnemec

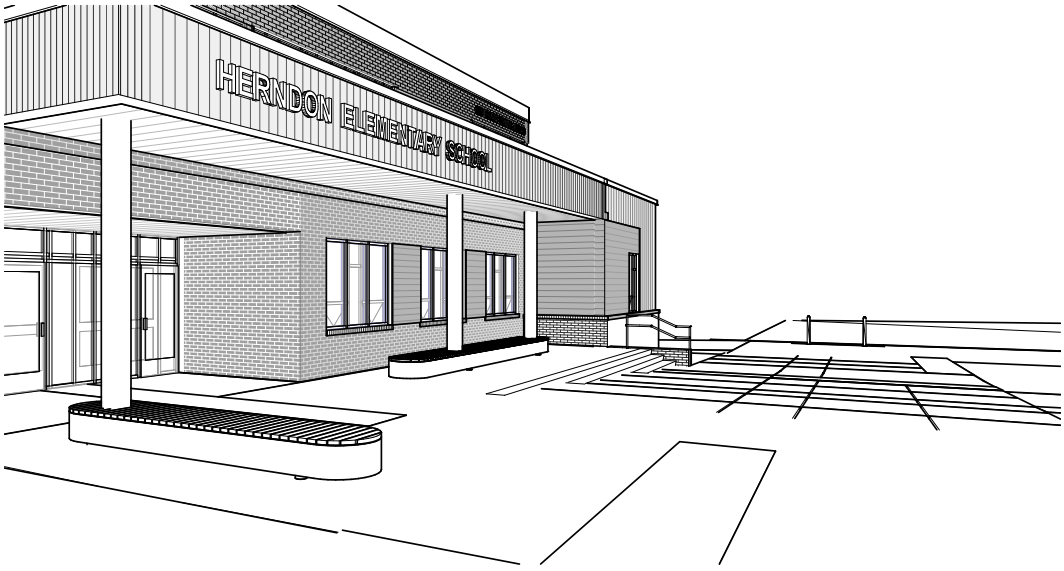
  International
- Paint includes 1 finish coat over 2 intermediate coats and a primer
- The proposed paint color is intended to brighten the main entrance and create a fun, happy appearance.

PPG Nocturne Shade
(Steel plate)

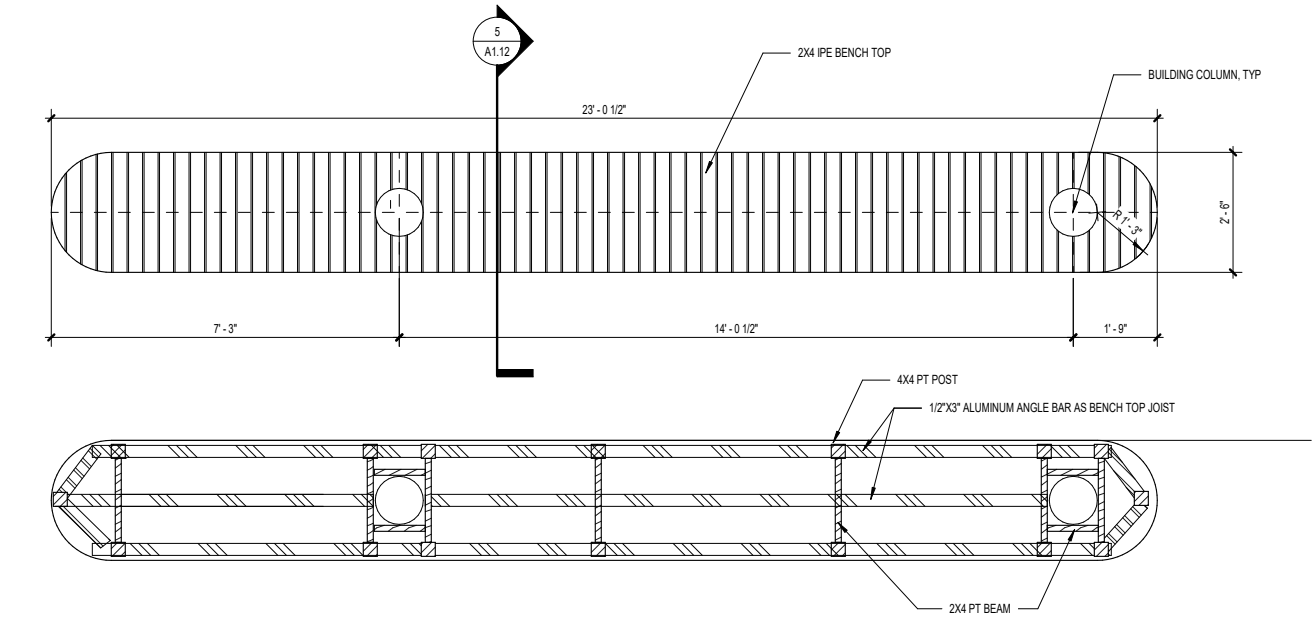


Ipe Wood
(Bench Top)





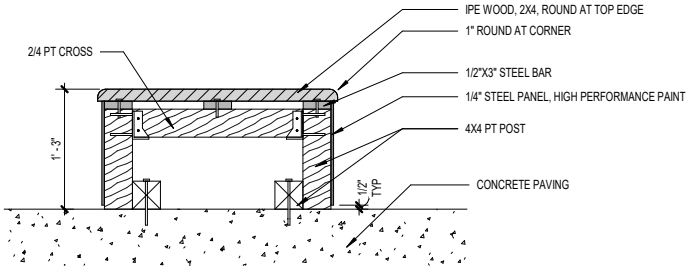
2 A1.12 FRONT ENTRY 3D VIEW 1
SCALE:



4 A1.12 ENTRY WOOD BENCH B
SCALE: 1/2" = 1'-0"



3 A1.12 FRONT ENTRY 3D VIEW 2
SCALE:



5 A1.12 BENCH SECTION
SCALE: 1" = 1'-0"



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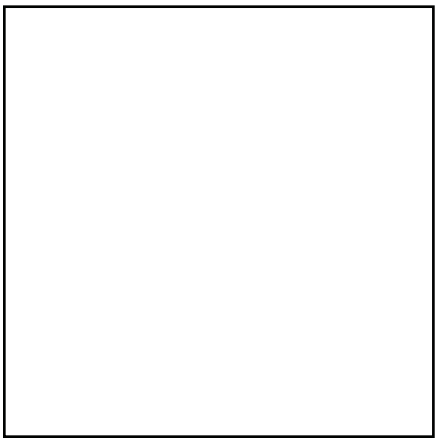
10. SIGNAGE

- Material: Cast Aluminum
- Letter to be 1” deep; 12” high (School Name); 8” high (Street Address)
- School name sign to be pin mounted through formed metal wall panel to structural cold formed metal framing.
- Street address sign to be pin mounted through existing brick and grouted withing existing cmu.
- The aluminum will be factory-finished with a fluoropolymer finish in a white color for the street address and a dark gray color for the school name to match the color of the window framing.
- Neither sign is illuminated.
- Sign font to be Helvetica.

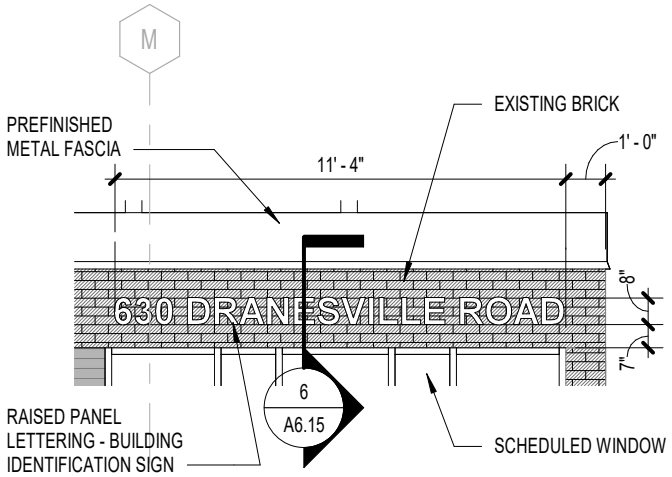
Match storefront
(School Name)



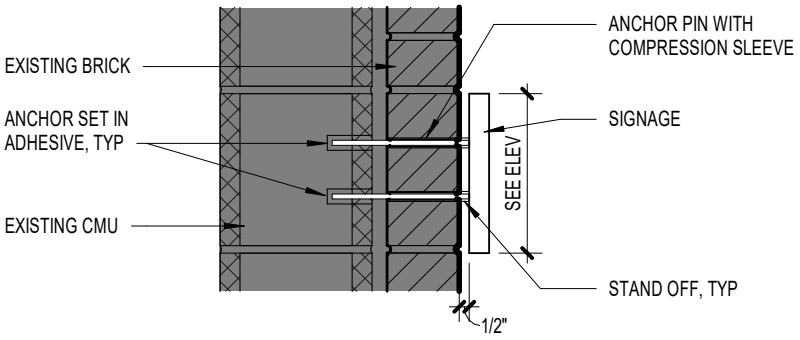
White
(Street Address)



STREET ADDRESS SIGNAGE



6 / A4.11 ENLARGED SIGN - STREET ADDRESS



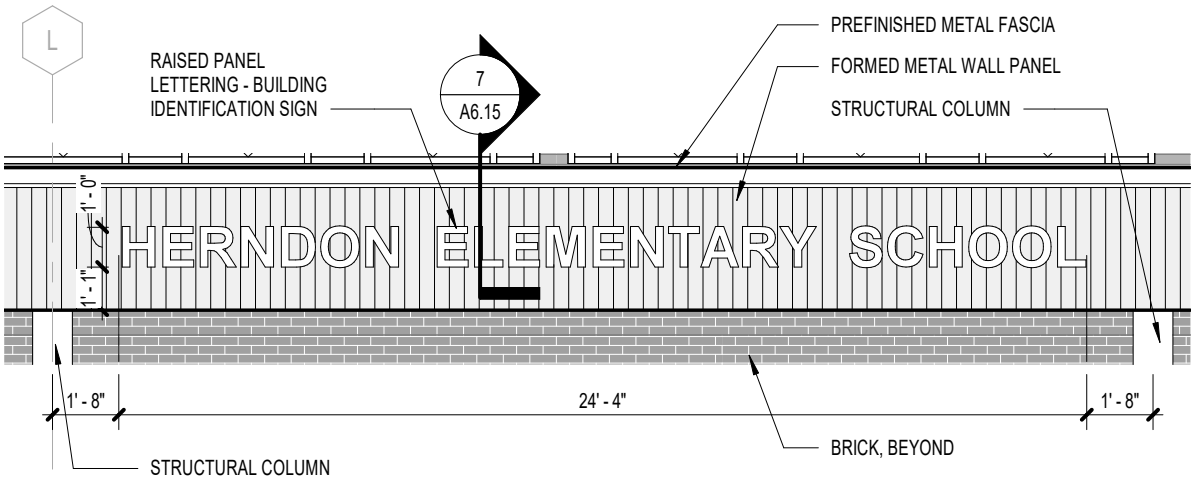
6 / A6.15 SIGN DETAIL - EX. BRICK
SCALE: 1 1/2" = 1'-0"

SEE
ENLARGED
ELEVATION



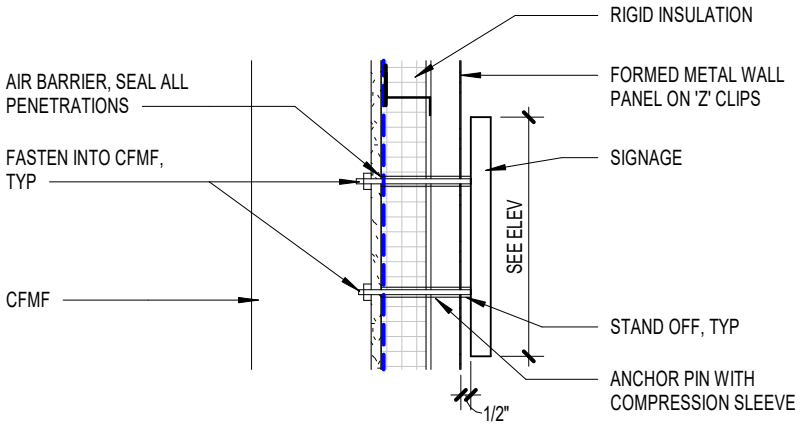
WEST ELEVATION

SCHOOL NAME SIGNAGE



7 / A4.11 ENLARGED SIGN - SCHOOL NAME

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



7 / A6.15 SIGN DETAIL - MTL WALL PANEL

SCALE: 1 1/2" = 1'-0"



WEST ELEVATION

HERNDON ELEMENTARY SCHOOL

ARCHITECTURAL REVIEW BOARD
WORK SESSION

Herndon, VA

June 12, 2024

Fairfax County PUBLIC SCHOOLS
ENGAGE • INSPIRE • THRIVE

TOWN OF Herndon VIRGINIA

COOPER CARRY



AGENDA

1. INTRODUCTION
2. CONTEXT
3. PROPOSED NEW CONSTRUCTION
4. DISCUSSION



1. INTRODUCTION

PROJECT SUMMARY

- Existing 2-story FCPS Elementary School
- Original construction: 1961
- Project Scope:

Renovation of existing building

New additions

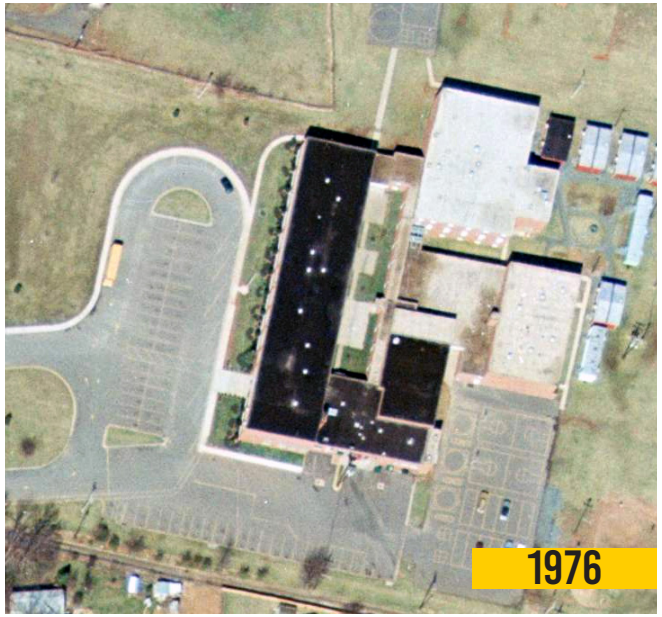
Site improvements

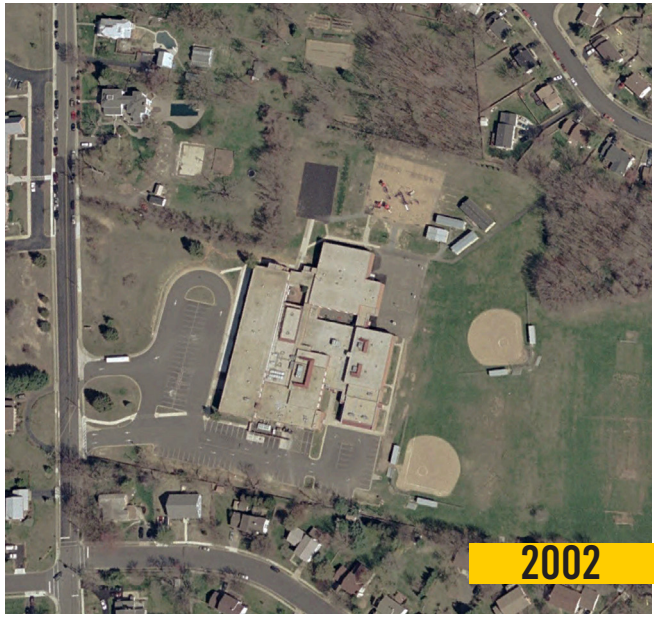


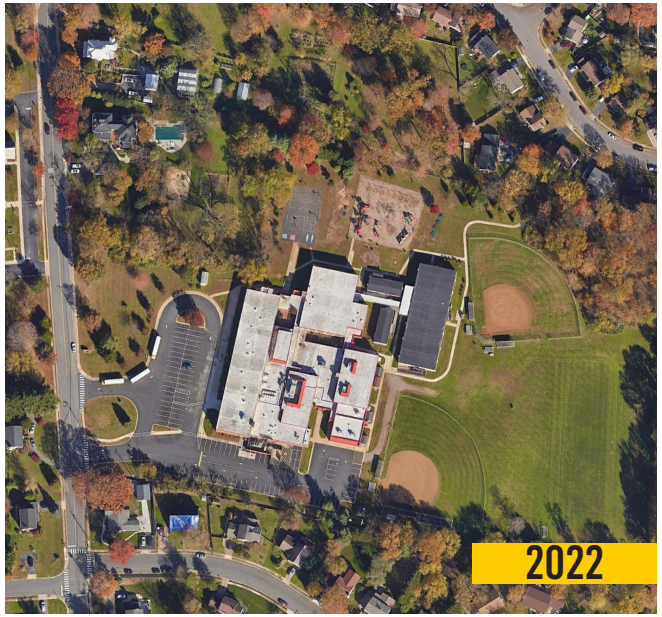
GROWTH

- Herndon Elementary School built in 1961
- Additions built between 1960-1990's









EXISTING SITE PLAN

LEGEND

- EXISTING BUILDING
- EXISTING TRAILERS
- PAVED PLAY AREA
- PLAYGROUND/ SOFTBALL FIELD
- MAIN ENTRY
- PROPERTY LINE

SITE AMENITIES

PLAYGROUND
PAVED PLAY AREA
2 - SOFTBALL FIELDS
SOCCER FIELD

PARKING

97 EXISTING PARKING SPACES

12 CURRENT BUSES FOR ARRIVAL AND DISMISSAL

CIRCULATION

- KISS & RIDE
- BUS



PROPOSED SITE PLAN

LEGEND

- EXISTING BUILDING
- ADDITION
- PLAYGROUND/ SOFTBALL FIELD
- PAVED PLAY AREA
- SOCCER FIELD
- MAIN ENTRY
- PROPERTY LINE

SITE AMENITIES

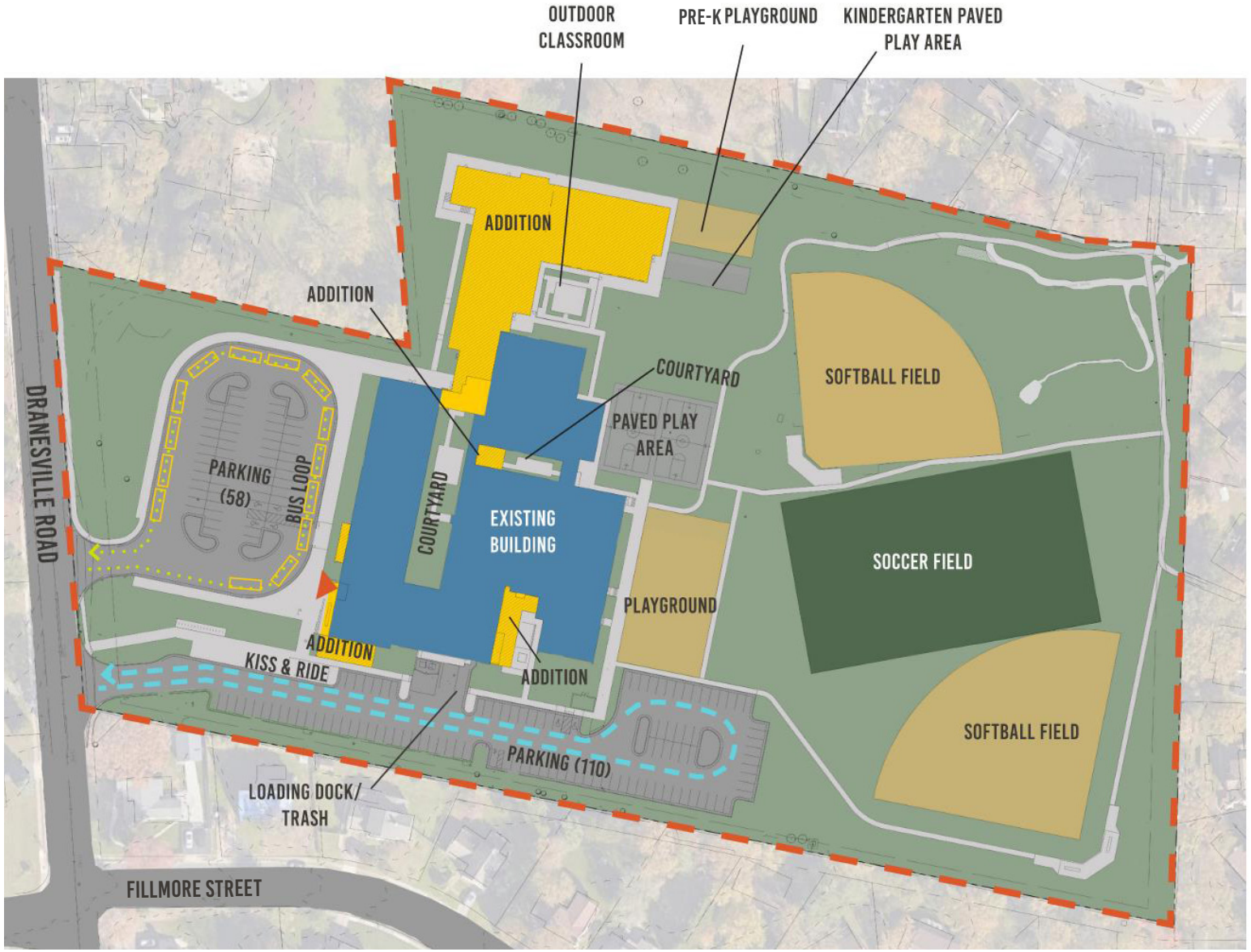
PLAYGROUND
PRE-K PLAYGROUND
KINDERGARTEN PAVED PLAY AREA
OUTDOOR CLASSROOM
PAVED PLAY AREA
2 - SOFTBALL FIELDS
SOCCER FIELD
COURTYARDS

PARKING
168 PROPOSED PARKING SPACES
(97 EXISTING)

14 PROPOSED BUSES FOR ARRIVAL AND DISMISSAL

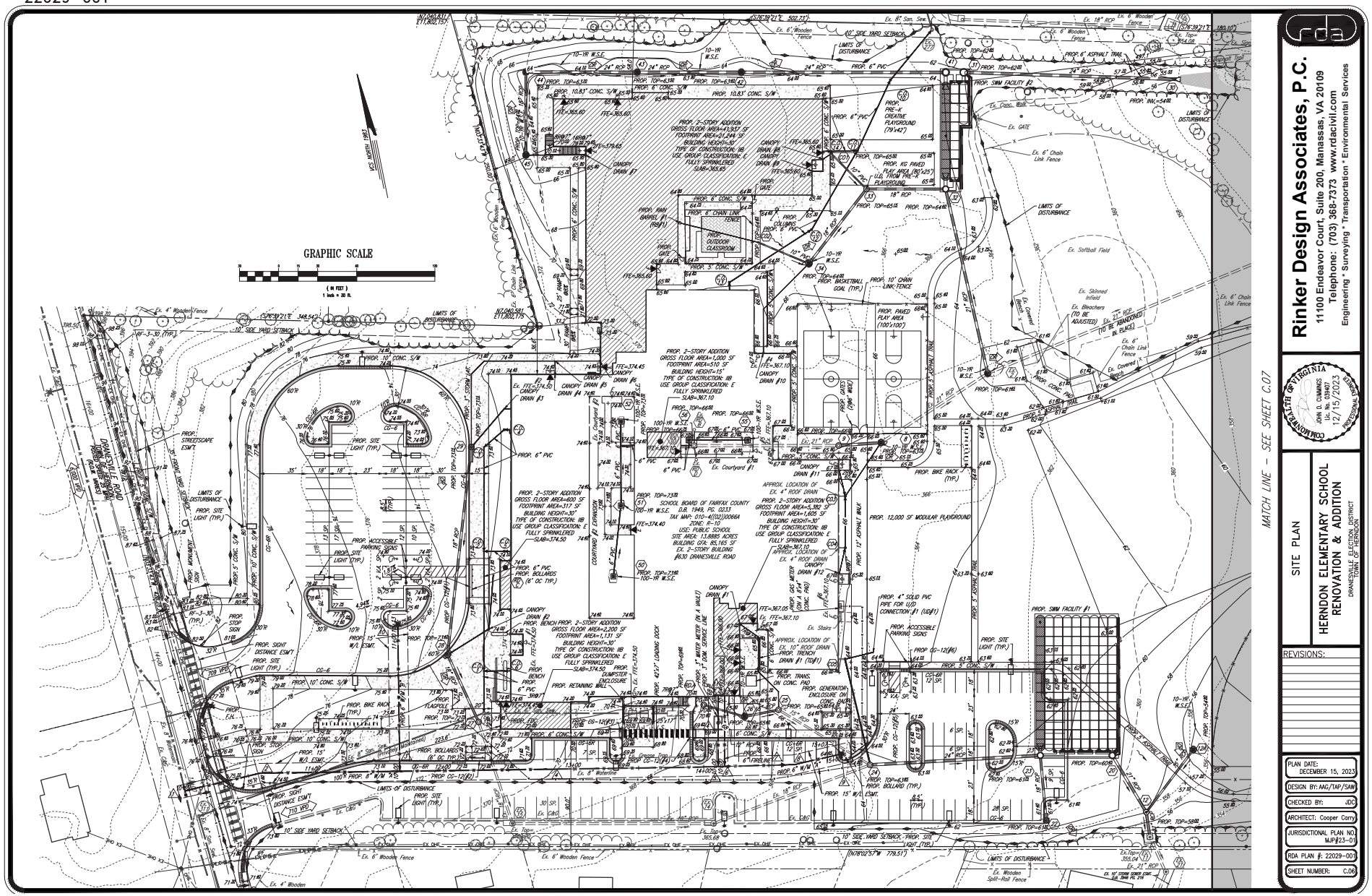
CIRCULATION

- KISS & RIDE
- BUS



SITE PLAN

22029–001

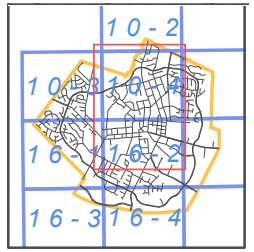


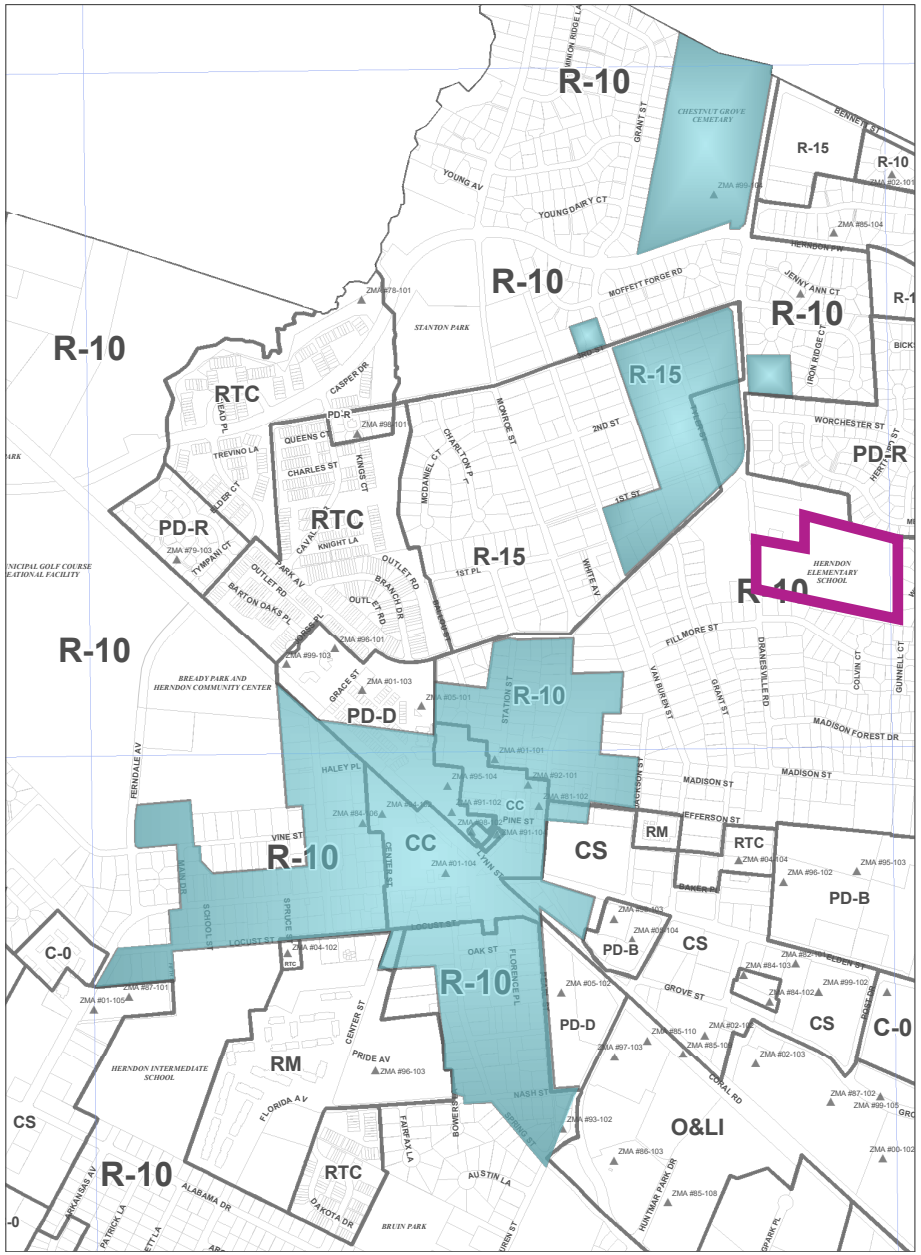


2. CONTEXT

TOWN OF HERNDON

- Zoned Residential R-10
- Site is outside of Historic District
- Site is adjacent to Trinity Presbyterian Church and single family residential dwellings
- Site is on Dranesville Road



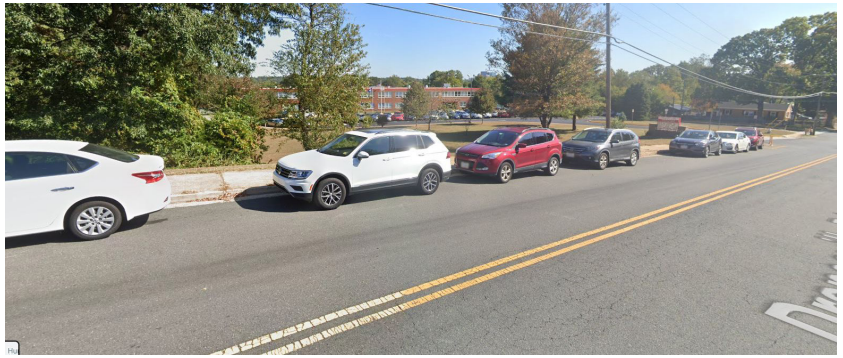


Heritage Preservation Districts

Herndon Elementary School Site

CONTEXT PHOTOS





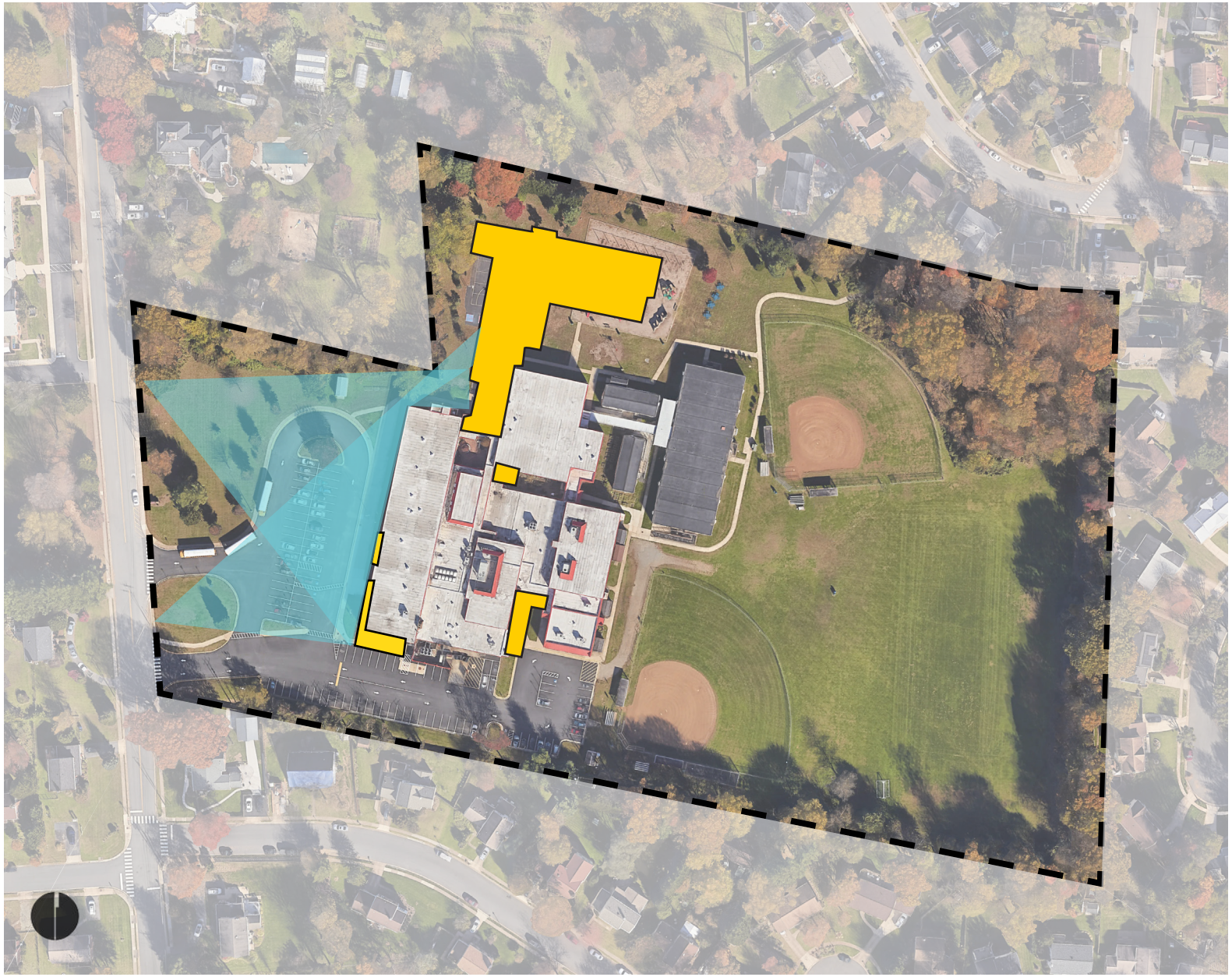








VIEWSHED



PROPOSED ADDITION

PHOTOS









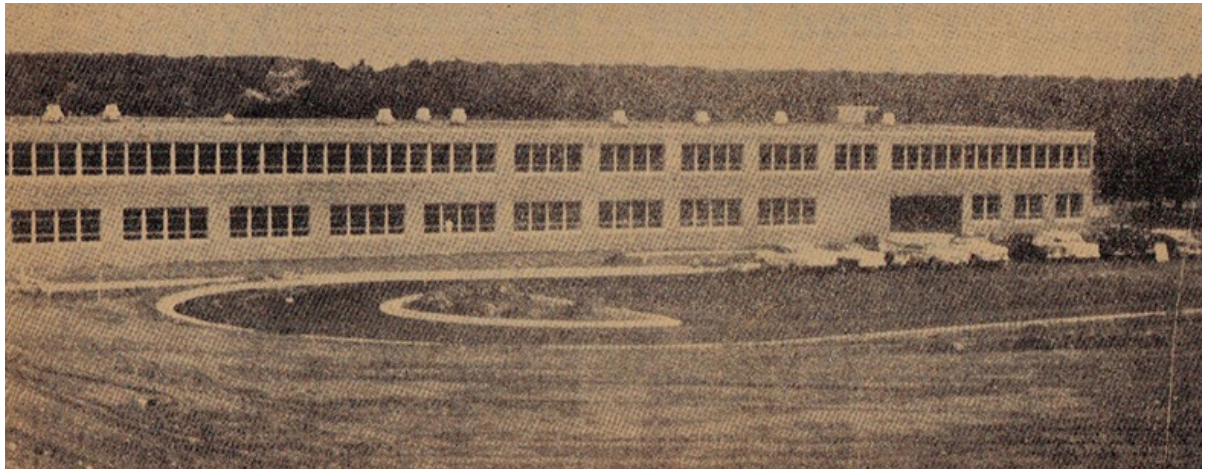




3. PROPOSED NEW CONSTRUCTION







EXISTING
FRONT FACADE



EXISTING
FRONT FACADE



PROPOSED
FRONT FACADE



EXISTING
FRONT FACADE

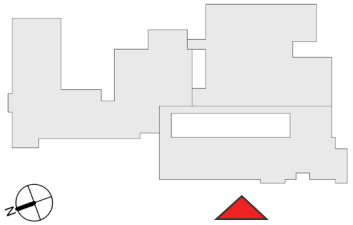


PROPOSED
FRONT FACADE



PROPOSED-ALTERNATE
FRONT FACADE

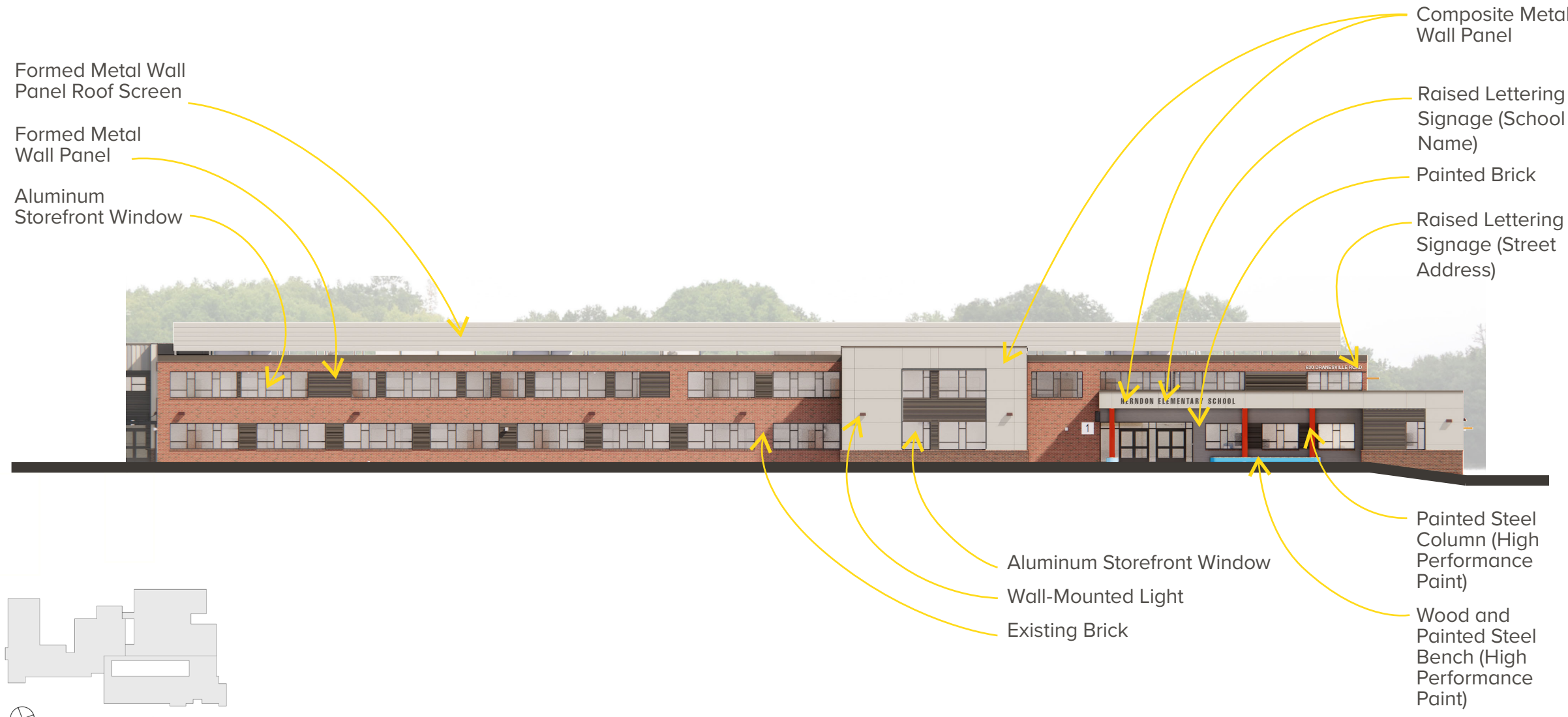


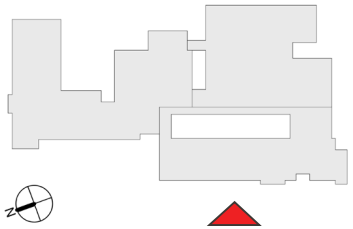


Addition / New Construction

PROPOSED

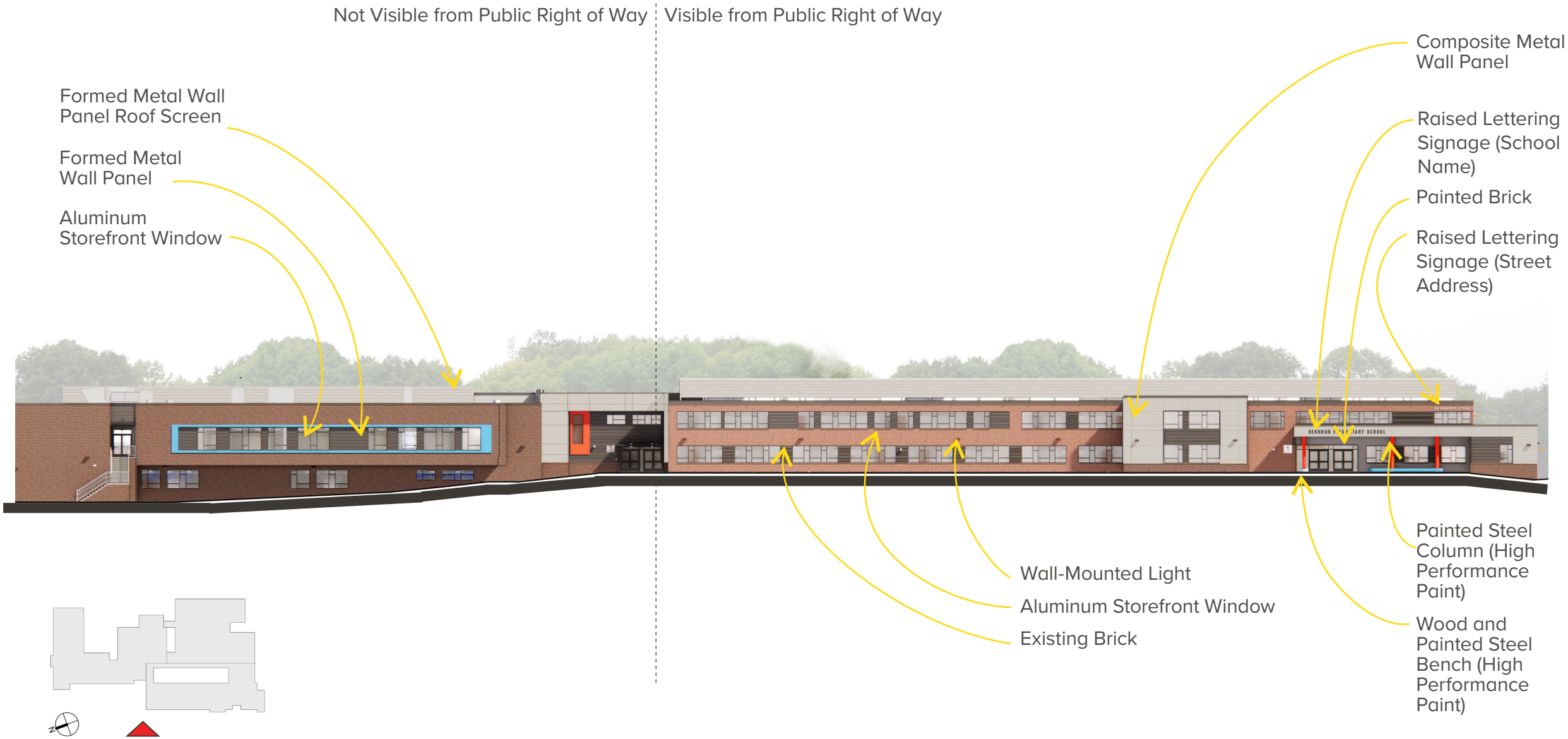
FRONT FACADE (WEST ELEVATION FACING DRANESVILLE ROAD + VISIBLE FROM PUBLIC RIGHT OF WAY)





PROPOSED

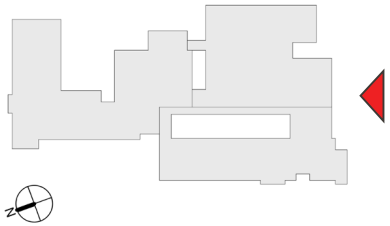
FRONT FACADE (WEST ELEVATION FACING DRANESVILLE ROAD; VISIBLE FROM PUBLIC RIGHT OF WAY)



PROPOSED

FRONT FACADE (WEST ELEVATION FACING DRANESVILLE ROAD; PARTIALLY VISIBLE FROM PUBLIC RIGHT OF WAY)

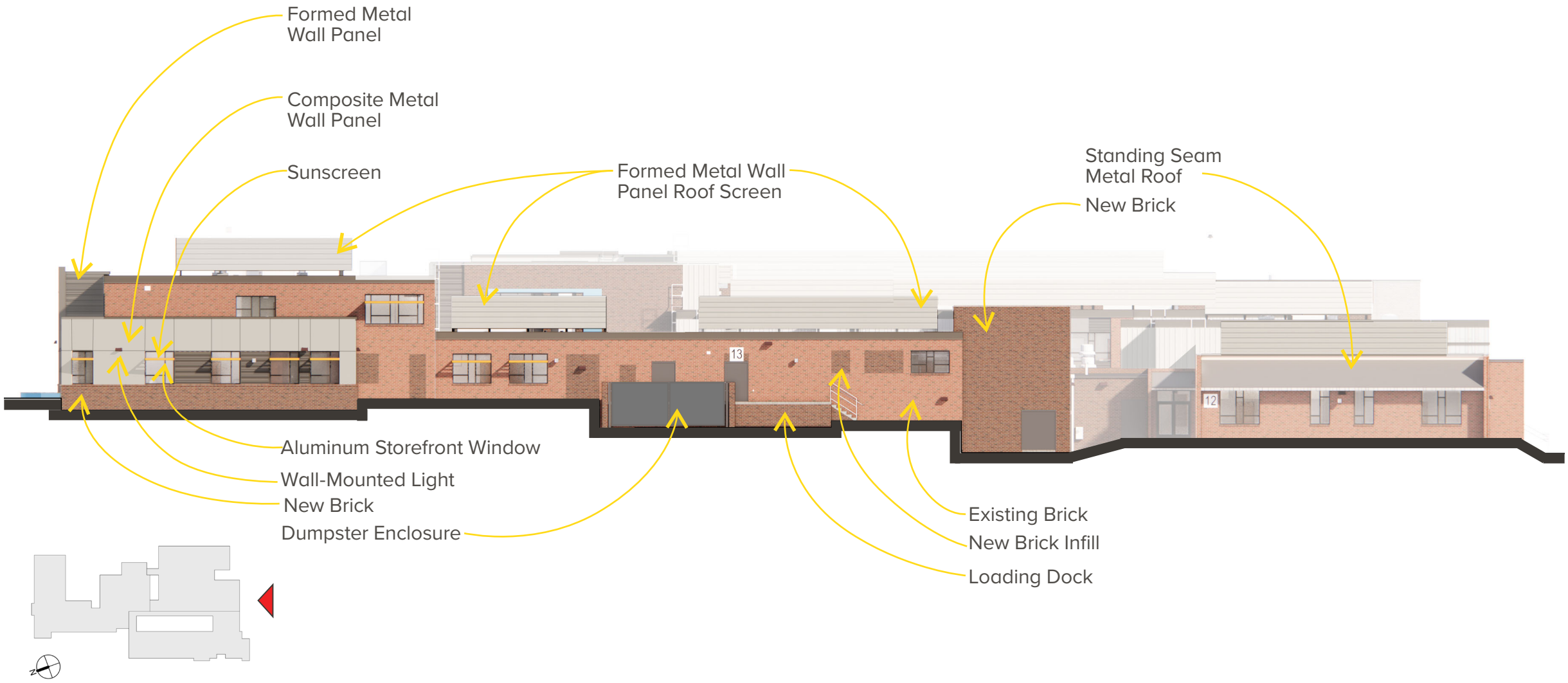




Addition / New Construction

PROPOSED

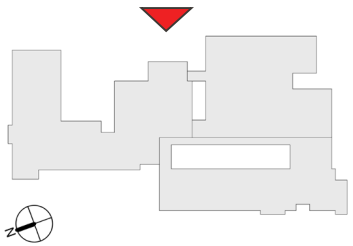
SIDE FACADE (SOUTH ELEVATION; **NOT** VISIBLE FROM PUBLIC RIGHT OF WAY)



PROPOSED

SIDE FACADE (SOUTH ELEVATION; **NOT** VISIBLE FROM PUBLIC RIGHT OF WAY)

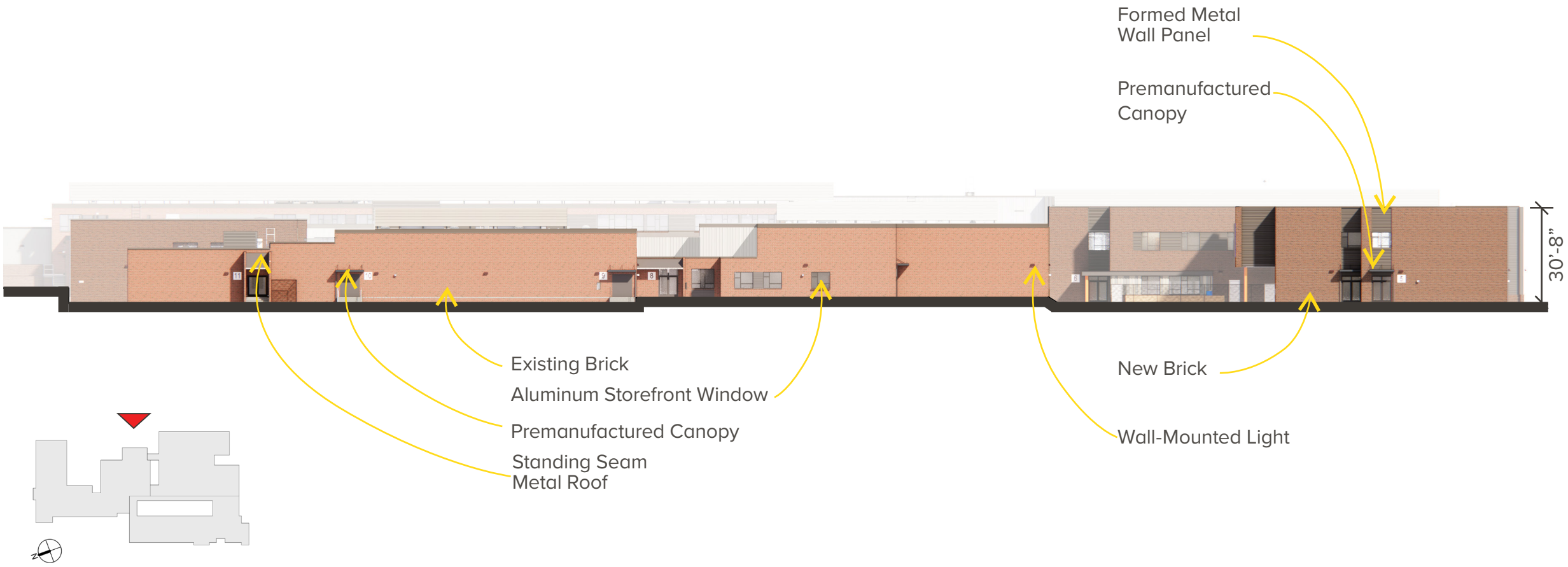




Addition / New Construction

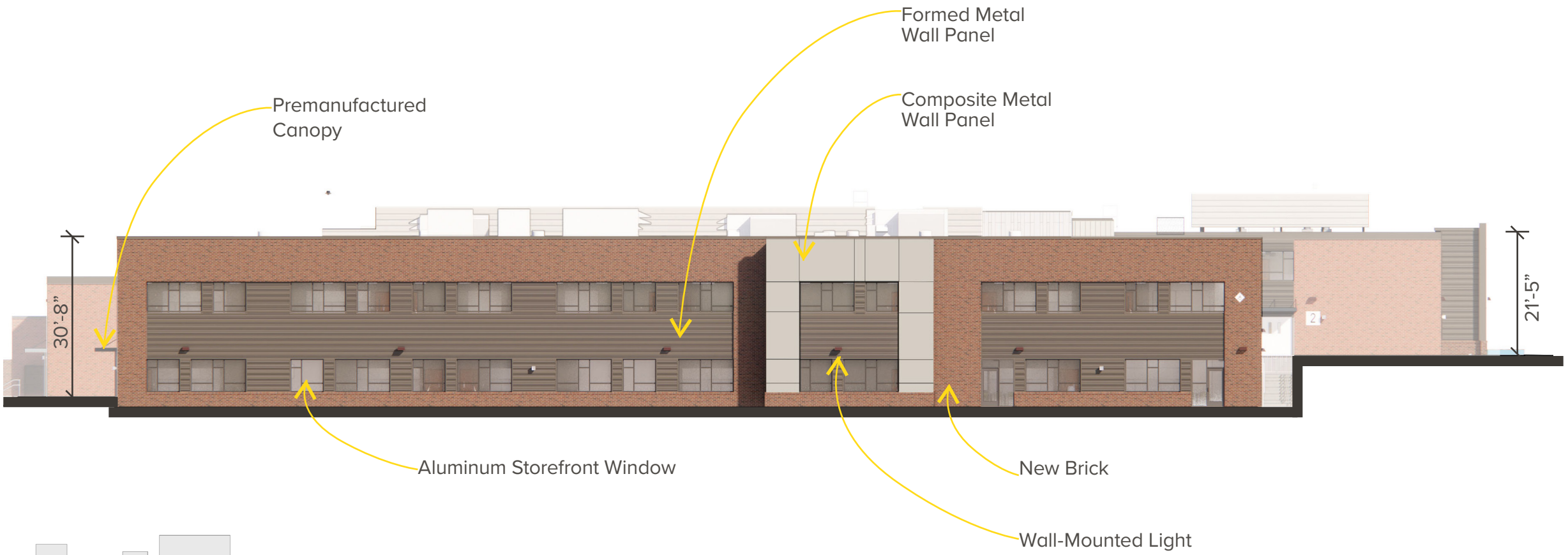
PROPOSED

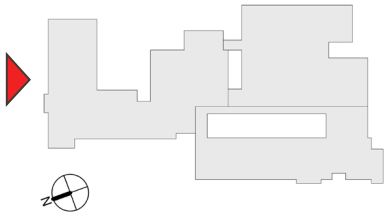
BACK FACADE (EAST ELEVATION; **NOT** VISIBLE FROM PUBLIC RIGHT OF WAY)



PROPOSED

BACK FACADE (EAST ELEVATION; **NOT** VISIBLE FROM PUBLIC RIGHT OF WAY)





PROPOSED

SIDE FACADE (NORTH ELEVATION; **NOT** VISIBLE FROM PUBLIC RIGHT OF WAY)



4. DISCUSSION


630 DRANESVILLE ROAD
ELEMENTARY SCHOOL

THANK YOU

Architectural Review Board Work Session
Agenda Item 3.a.

Agenda Item: **Discussion Item - Architectural Language Presentation**

Meeting Date: June 12, 2024

Category: New Business

Prepared by: Tamsin Himes, Lead Planner/Design-Development

Description:
As the Board Member who fills the required position of an Architect, Board Member Oleinick has offered to present the ARB with a series of training presentations about architectural review. The purpose is to help the Board better understand how to articulate feedback and critically discuss projects before the Board.

Background:
As an introduction to her presentation, Board Member Oleinick has included a statement: "As architectural review board members we are asked to provide productive feedback on design projects. Design, especially critical analysis of art or architecture can be subjective and difficult to express, especially for those who don't use that "muscle" on a regular basis. Familiarity with design vocabulary, for example: rhythm, texture, and hierarchy, and a few others, will hopefully provide board members with some basic descriptive tools in which to better communicate with applicants and their agents."

Budget Impact:
n/a/

Recommendation:
n/a

Attachments:
None