



SECTION 07 21 13

CONTINUOUS INSULATION XCI CG WALL PANELS

This specification is based on the exterior continuous insulation products of Hunter Panels, located at:

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As an industry leader in Polyiso Roof insulation panels for over 20 years – Hunter is proud to present our product line for Commercial Wall Applications – Hunter Xci products are designed for use in commercial wall applications to provide “ci” continuous insulation within the building envelope.

This specification includes Xci CG; high thermal resistive rigid insulation panels composed of a closed cell polyisocyanurate foam core bonded on-line during the manufacturing process to a premium performance polymer bonded glass mat facer on both sides. It is designed for use as exterior continuous insulation in a wall assembly.

Follow the instructions listed in the **SPECIFIER INSTRUCTIONS** included throughout the specification. Edit carefully to suit project requirements. Modify as necessary and delete paragraphs that are not applicable. Note that the **SPECIFIER INSTRUCTIONS** are included as “Hidden Text” in MS-Word. Display hidden notes to specifier by using “Tools”/”Options”/”View”/”Hidden Text”.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Continuous Insulation Xci CG wall panels.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast In Place Concrete: Concrete base wall.
- B. Section 03400 - Pre-Cast Concrete: Pre-cast concrete base wall.
- C. Section 04210 - Clay Masonry: Brick facing.

- D. Section 04800 - Masonry Assemblies: Masonry base wall.
- E. Section 04850 - Stone Facing.
- F. Section 05400 - Cold Formed Metal Framing.
- G. Section 07260 - Vapor Retarders: Vapor retarder materials over insulation to adjacent insulation.
- H. Section 07270 - Air Barriers: Air seal materials over insulation to adjacent insulation.
- I. Section 09110 - Non-Structural Metal Framing.
- J. Section 09200 - Plaster and Gypsum Board.
- K. Section 09220 - Stucco.

1.3 REFERENCES

- A. ASTM C 209 – Methods of Testing Insulating Board, Structural and Decorative.
- B. ASTM C 518 – Steady State Thermal Transmission By Means Of The Heat Flow Meter Apparatus (R Value).
- C. ASTM C 1289 – Specifications for Faced Rigid Cellular Polyisocyanurate Thermal Insulating Board.
- D. ASTM D 1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
- E. ASTM D 1621 – Test Methods for Compressive Properties of Rigid Cellular Plastics.
- F. ASTM D 2126 - Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
- G. ASTM D 3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- H. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials
- I. ASTM E 96 - Test Method for Water Vapor Transmission of Materials.
- J. ASTM E 2178 – Standard Method for Air Permeance of Building Materials.
- K. NFPA 285 - Standard Fire Test Method For Evaluation Of Fire Propagation Characteristics Of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components.
- L. ICC-ES Evaluation Report - ICC-ESR-3174
- M. DRJ Technical Evaluation Report #1402-02
- N. Miami Dade Product Control – Notice of Acceptance NOA No. 14-0501.01
- O. UL 723 - UL Classified

1.4 SYSTEM DESCRIPTION

- A. NFPA 285 Exterior Wall Assembly – Concrete Masonry:
1. Base Wall System: Concrete Masonry Wall.
 2. Approved Exterior Finish:
 - a. Masonry: Brick veneer anchors, standard types, installed maximum 24 inches (610 mm) o.c. vertically. Maximum 2 inch (51 mm) air gap between exterior insulation and brick. Standard nominal 4 inch (102 mm) thick or greater, clay brick.
 - b. Stucco: Minimum 1/2 inch (13 mm) thick, Exterior Cement Plaster and Lath.
 - c. Natural Stone or Cast Artificial Stone: Minimum 1-1/4 (32 mm) inch Natural Stone Veneer or minimum 1-1/2 inch (36 mm) thick Cast Artificial Stone Veneer. Any standard installation technique can be used.
 - d. Terra Cotta Cladding: Use any Terra Cotta Cladding System in which Terra Cotta is minimum 1/2 inch (13 mm). Any standard installation technique can be used.
 - e. Metal Composite Material: Use any Metal Composite Material system that has been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - f. Exterior Metal: Uninsulated Sheet Metal exterior wall coverings including Steel, Aluminum, and Copper. Any standard installation technique can be used.
 - g. Fiber Cement Board siding. Any standard installation technique can be used.
 - h. Porcelain or Ceramic Tile: Minimum 1/4 inch (6 mm) thick. Mechanical attachment required.
 - i. Stone or Porcelain or Ceramic/Aluminum Honeycomb Composite: Panels that have been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - j. Autoclaved-Aerated-Concrete: Any AAC Panel that have successfully tested by the panel manufacturer via the NFPA 285 test method.
 - k. Thin Brick: Minimum 3/4 inch thick system that has been successfully tested by the panel manufacturer via the ASTM E 119 or the NFPA 285 test method.
 - l. TABS II Panel System: Minimum 1/2 inch thick brick with TABS Wall Adhesive.
 - m. FunderMax M.Look Grey Core- minimum 1/4" thick using any standard installation technique.
 3. Panel Thickness:
 - a. 4.0 inches (102 mm) maximum with non-combustible claddings.
 - b. 3.5 inches (89 mm) maximum with combustible claddings.
 4. Stud Cavity: Not Applicable.
 5. Exterior Sheathing: Not Applicable.
 6. Floorline Firestopping: Not Applicable.
 7. Weather Resistive Membrane Applied to Base Wall: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - 5) Fire Resist 705 (Please contact Hunter Xci for assembly options)
 - b. BASF
 - 1) Enersheild HP
 - 2) Enersheild I
 - c. Cosella Dorcken:
 - 1) Delta Vent SA
 - 2) Delta Vent S
 - 3) Delta-Fassade S
 - 4) Delta Maxx
 - d. Dryvit

- 1) Backstop NT
- e. DuPont
 - 1) Tyvec CommercialWrap or Commercial Wrap D
- f. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
- g. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
- h. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
- i. Prosoco:
 - 1) R Guard CAT-5
 - 2) R Guard CAT-5 Rainscreen
 - 3) R Guard Spray Wrap MVP
 - 4) R Guard VB
- j. StoCorp:
 - 1) StoGuard Vapor Shield
- k. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- l. WR Grace:
 - 1) Perm-a-barrier VPS
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier Aluminum Wall Membrane
 - 6) Perm-a-barrier NPL 10 (Please contact Hunter Xci for cladding options)
 - 7) Perm-a-barrier VPL 50 (Please contact Hunter Xci for cladding options)
- m. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield TMP
 - 3) Air Shield LSR
- n. 3M:
 - 1) 3015 (with Hold Fast adhesive at a 6 mil thickness)
- o. Pecora
 - 1) XL Perm Ultra VP
- p. None
- 8. Weather Resistive Membrane Applied to Exterior Insulation: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - 5) Fire Resist 705 (Please contact Hunter Xci for assembly options)
 - b. Cosella Dorken:
 - 1) Delta-Vent SA
 - 2) Delta-Vent S
 - 3) Delta Fassade S
 - 4) Delta Max
 - c. Dryvit:

- 1) Backstop NT
- d. DuPont
 - 1) Tyvec Commercial Wrap
- e. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
- f. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
- g. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
- h. Prosoco:
 - 1) R-Guard Cat-5
 - 2) R-Guard Cat-5 Rainscreen
 - 3) R-Guard Spray Wrap MVP
 - 4) R-Guard VB
- i. Sto Corp:
 - 1) Gold Coat
- j. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- k. WR Grace:
 - 1) Perm-a-barrier Aluminum Wall Membrane
 - 1) Perm-a-barrier NPL
 - 2) Perm-a-barrier NP 20
 - 3) Perm-a-barrier VPL
 - 4) Perm-a-barrier VPL LT
 - 5) Perm-a-barrier VPS
- l. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield LSR
 - 3) Air Shield TMP
- m. Pecora
 - 1) XL Perm Ultra VP
- n. None.

B. NFPA 285 Exterior Wall Assembly – Cast-in-Place or Precast Concrete:

1. Base Wall System: Cast-in-Place or Precast Concrete.
2. Approved Exterior Finish:
 - a. Masonry: Brick veneer anchors, standard types, installed maximum 24 inches (610 mm) o.c. vertically. Maximum 2 inch (51 mm) air gap between exterior insulation and brick. Standard nominal 4 inch (102 mm) thick or greater, clay brick.
 - b. Stucco: Minimum 1/2 inch (13 mm) thick, Exterior Cement Plaster and Lath.
 - c. Natural Stone or Cast Artificial Stone: Minimum 1-1/4 (32 mm) inch Natural Stone Veneer or minimum 1-1/2 inch (36 mm) thick Cast Artificial Stone Veneer. Any standard installation technique can be used.
 - d. Terra Cotta Cladding: Use any Terra Cotta Cladding System in which Terra Cotta is minimum 1/2 inch (13 mm). Any standard installation technique can be used.

- e. Metal Composite Material: Use any Metal Composite Material system that has been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - f. Exterior Metal: Uninsulated Sheet Metal exterior wall coverings including Steel, Aluminum, and Copper. Any standard installation technique can be used.
 - g. Fiber Cement Board siding. Any standard installation technique can be used.
 - h. Porcelain or Ceramic Tile: Minimum 1/4 inch (6 mm) thick. Mechanical attachment required.
 - i. Stone or Porcelain or Ceramic/Aluminum Honeycomb Composite: Panels that have been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - j. Autoclaved-Aerated-Concrete: Any AAC Panel that have successfully tested by the panel manufacturer via the NFPA 285 test method.
 - k. Thin Brick: Minimum 3/4 inch thick system that has been successfully tested by the panel manufacturer via the ASTM E 119 or the NFPA 285 test method.
 - l. TABS II Panel System: Minimum 1/2 inch thick brick with TABS Wall Adhesive.
 - m. FunderMax M.Look Grey Core- minimum 1/4" thick using any standard installation technique.
3. Panel Thickness:
- a. 4.0 inches (102 mm) maximum with non-combustible claddings.
 - b. 3.5 inches (89 mm) maximum with combustible claddings.
4. Stud Cavity: Not Applicable.
5. Exterior Sheathing: Not Applicable.
6. Floorline Firestopping: Not Applicable.
7. Weather Resistive Membrane Applied to Base Wall: Acceptable products are:
- a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - 5) Fire Resist 705 (Please contact Hunter Xci for assembly options)
 - b. BASF
 - 1) Enersheild HP
 - 2) Enersheild I
 - c. Cosella Dorken:
 - 1) Delta Vent SA
 - 2) Delta Vent S
 - 3) Delta-Fassade S
 - 4) Delta Maxx
 - d. Dryvit
 - 1) Backstop NT
 - e. DuPont
 - 1) Tyvec CommercialWrap or Commercial Wrap D
 - f. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - g. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - h. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)

- i. Prosoco:
 - 1) R Guard CAT-5
 - 2) R Guard CAT-5 Rainscreen
 - 3) R Guard Spray Wrap MVP
 - 4) R Guard VB
 - j. StoCorp:
 - 1) StoGuard Vapor Shield
 - k. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
 - l. WR Grace:
 - 1) Perm-a-barrier VPS
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier Aluminum Wall Membrane
 - 6) Perm-a-barrier NPL 10 (Please contact Hunter Xci for cladding options)
 - 7) Perm-a-barrier VPL 50 (Please contact Hunter Xci for cladding options)
 - m. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield TMP
 - 3) Air Shield LSR
 - n. 3M:
 - 1) 3015 (with Hold Fast adhesive at a 6 mil thickness)
 - o. Pecora
 - 1) XL Perm Ultra VP
 - p. None
8. Weather Resistive Membrane Applied to Exterior Insulation: Acceptable products are:
- a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - b. Cosella Dorken:
 - 1) Delta-Vent SA
 - 2) Delta-Vent S
 - 3) Delta Fassade S
 - 4) Delta Max
 - c. Dryvit:
 - 1) Backstop NT
 - d. DuPont
 - 1) Tyvec Commercial Wrap
 - e. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - f. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - g. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
 - h. Prosoco:

- 1) R-Guard Cat-5
- 2) R-Guard Cat-5 Rainscreen
- 3) R-Guard Spray Wrap MVP
- 4) R-Guard VB
- i. Sto Corp:
 - 1) Gold Coat
- j. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- k. WR Grace:
 - 1) Perm-a-barrier Aluminum Wall Membrane
 - 1) Perm-a-barrier NPL
 - 2) Perm-a-barrier NP 20
 - 3) Perm-a-barrier VPL
 - 4) Perm-a-barrier VPL LT
 - 5) Perm-a-barrier VPS
- l. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield LSR
 - 3) Air Shield TMP
- m. Pecora
 - 1) XL Perm Ultra VP
- n. None.

C. NFPA 285 Exterior Wall Assembly – Steel Stud:

1. Base Wall System: Steel Stud, 1 layer 5/8 inch thick Type X Gypsum wallboard on interior, installed over steel studs: minimum 3-5/8 inches depth, minimum 22 gauge at a maximum of 24 inches (610 mm) o.c. with lateral bracing every 4 feet (1220 mm) vertically.
2. Approved Exterior Finish:
 - a. Masonry: Brick veneer anchors, standard types, installed maximum 24 inches (610 mm) o.c. vertically. Maximum 2 inch (51 mm) air gap between exterior insulation and brick. Standard nominal 4 inch (102 mm) thick or greater, clay brick.
 - b. Stucco: Minimum 1/2 inch (13 mm) thick, Exterior Cement Plaster and Lath.
 - c. Natural Stone or Cast Artificial Stone: Minimum 1-1/4 (32 mm) inch Natural Stone Veneer or minimum 1-1/2 inch (36 mm) thick Cast Artificial Stone Veneer. Any standard installation technique can be used.
 - d. Terra Cotta Cladding: Use any Terra Cotta Cladding System in which Terra Cotta is minimum 1/2 inch (13 mm). Any standard installation technique can be used.
 - e. Metal Composite Material: Use any Metal Composite Material system that has been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - f. Exterior Metal: Uninsulated Sheet Metal exterior wall coverings including Steel, Aluminum, and Copper. Any standard installation technique can be used.
 - g. Fiber Cement Board siding. Any standard installation technique can be used.
 - h. Porcelain or Ceramic Tile: Minimum 1/4 inch (6 mm) thick. Mechanical attachment required.
 - i. Stone or Porcelain or Ceramic/Aluminum Honeycomb Composite: Panels that have been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - j. Autoclaved-Aerated-Concrete: Any AAC Panel that have successfully tested by the panel manufacturer via the NFPA 285 test method.
 - k. Thin Brick: Minimum 3/4 inch thick system that has been successfully tested by the panel manufacturer via the ASTM E 119 or the NFPA 285 test method.

- l. TABS II Panel System: Minimum 1/2 inch thick brick with TABS Wall Adhesive.
 - m. FunderMax M.Look Grey Core- minimum 1/4" thick using any standard installation technique.
3. Panel Thickness:
 - a. 4.0 inches (102 mm) maximum with non-combustible claddings.
 - b. 3.5 inches (89 mm) maximum with combustible claddings.
 4. Stud Cavity Insulation:
 - a. Any non-combustible insulation
 - b. Minimum 1-1/2 inch Covestro EcoBay CC SPF
 - c. Minimum 1-1/2 inch BASF Walltite SPF
 - d. NCFI InsulBloc (Requires the use of min. 1/2 inch exterior gypsum)
 - e. Icynene Proseal (Requires the use of min. 1/2 inch exterior gypsum)
 - f. SWD Urethane Quic-Sheild 112 (Please contact Hunter Xci for details)
 - g. Any Fiberglass or Mineral Fiber (Must rate as class A per ASTM E 84)
 - h. None.
 5. Exterior Sheathing:
 - a. None (Please contact Hunter Xci for assembly options)
 - b. Minimum 1/2 inch (12.5 mm) thick exterior type gypsum sheathing.
 6. Floorline Firestopping:
 - a. 4 lb/cu ft mineral fiber based safing insulation in each stud cavity and at each floor line, attached with Z Clips or equivalent.
 7. Weather Resistive Membrane Applied to Base Wall: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - 5) Fire Resist 705 (Please contact Hunter Xci for assembly options)
 - b. BASF
 - 1) Enersheild HP
 - 2) Enersheild I
 - c. Cosella Dorken:
 - 1) Delta Vent SA
 - 2) Delta Vent S
 - 3) Delta-Fassade S
 - 4) Delta Maxx
 - d. Dryvit
 - 1) Backstop NT
 - e. DuPont
 - 1) Tyvec CommercialWrap or Commercial Wrap D
 - f. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - g. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - h. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
 - i. Prosoco:
 - 1) R Guard CAT-5
 - 2) R Guard CAT-5 Rainscreen

- 3) R Guard Spray Wrap MVP
- 4) R Guard VB
- j. StoCorp:
 - 1) StoGuard Vapor Shield
- k. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- l. WR Grace:
 - 1) Perm-a-barrier VPS
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier Aluminum Wall Membrane
 - 6) Perm-a-barrier NPL 10 (Please contact Hunter Xci for cladding options)
 - 7) Perm-a-barrier VPL 50 (Please contact Hunter Xci for cladding options)
- m. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield TMP
 - 3) Air Shield LSR
- n. 3M:
 - 1) 3015 (with Hold Fast adhesive at a 6 mil thickness)
- o. Pecora
 - 1) XL Perm Ultra VP
- p. None
- 8. Weather Resistive Membrane Applied to Exterior Insulation: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - b. Cosella Dorken:
 - 1) Delta-Vent SA
 - 2) Delta-Vent S
 - 3) Delta Fassade S
 - 4) Delta Max
 - c. Dryvit:
 - 1) Backstop NT
 - d. DuPont
 - 1) Tyvec Commercial Wrap
 - e. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - f. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - g. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
 - h. Prosoco:
 - 1) R-Guard Cat-5
 - 2) R-Guard Cat-5 Rainscreen
 - 3) R-Guard Spray Wrap MVP

- 4) R-Guard VB
- i. Sto Corp:
 - 1) Gold Coat
- j. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- k. WR Grace:
 - 1) Perm-a-barrier Aluminum Wall Membrane
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier VPL LT
 - 6) Perm-a-barrier VPS
- l. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield LSR
 - 3) Air Shield TMP
- m. Pecora
 - 1) XL Perm Ultra VP
- n. None.

D. NFPA 285 Exterior Wall Assembly – Fire Retardant Treated Wood Stud:

1. Base Wall System: FRT Wood Stud, 1 layer 5/8 inch thick Type X Gypsum wallboard on interior, installed over wood studs: nominal 2x4 at a maximum of 24 inches (610 mm) o.c. with lateral bracing as required by code.
2. Approved Exterior Finish:
 - a. Masonry: Brick veneer anchors, standard types, installed maximum 24 inches (610 mm) o.c. vertically. Maximum 2 inch (51 mm) air gap between exterior insulation and brick. Standard nominal 4 inch (102 mm) thick or greater, clay brick.
 - b. Stucco: Minimum 1/2 inch (13 mm) thick, Exterior Cement Plaster and Lath.
 - c. Natural Stone or Cast Artificial Stone: Minimum 1-1/4 (32 mm) inch Natural Stone Veneer or minimum 1-1/2 inch (36 mm) thick Cast Artificial Stone Veneer. Any standard installation technique can be used.
 - d. Terra Cotta Cladding: Use any Terra Cotta Cladding System in which Terra Cotta is minimum 1/2 inch (13 mm). Any standard installation technique can be used.
 - e. Metal Composite Material: Use any Metal Composite Material system that has been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - f. Exterior Metal: Uninsulated Sheet Metal exterior wall coverings including Steel, Aluminum, and Copper. Any standard installation technique can be used.
 - g. Fiber Cement Board siding. Any standard installation technique can be used.
 - h. Porcelain or Ceramic Tile: Minimum 1/4 inch (6 mm) thick. Mechanical attachment required.
 - i. Stone or Porcelain or Ceramic/Aluminum Honeycomb Composite: Panels that have been successfully tested by the panel manufacturer via the NFPA 285 test method. Any standard installation technique can be used.
 - j. Autoclaved-Aerated-Concrete: Any AAC Panel that have successfully tested by the panel manufacturer via the NFPA 285 test method.
 - k. Thin Brick: Minimum 3/4 inch thick system that has been successfully tested by the panel manufacturer via the ASTM E 119 or the NFPA 285 test method.
 - l. TABS II Panel System: Minimum 1/2 inch thick brick with TABS Wall Adhesive.
 - m. FunderMax M.Look Grey Core- minimum 1/4" thick using any standard installation technique.
3. Panel Thickness:

- a. 4.0 inches (102 mm) maximum with non-combustible claddings.
- b. 3.5 inches (89 mm) maximum with combustible claddings.
- 4. Stud Cavity Insulation:
 - a. Any non-combustible insulation
 - b. Minimum 1-1/2 inch Covestro EcoBay CC SPF
 - c. Minimum 1-1/2 inch BASF Walltite SPF
 - d. NCFI InsulBloc (Requires the use of min. 1/2 inch exterior gypsum)
 - e. Icynene Proseal (Requires the use of min. 1/2 inch exterior gypsum)
 - f. SWD Urethane Quic-Sheild 112 (Please contact Hunter Xci for details)
 - g. Any Fiberglass or Mineral Fiber (Must rate as class A per ASTM E 84)
 - h. None.
- 5. Exterior Sheathing:
 - a. None (Please contact Hunter Xci for assembly options)
 - b. Minimum 1/2 inch (12.5 mm) thick exterior type gypsum sheathing.
 - c. Minimum 1/2 inch (12.5 mm) thick fire retardant treated wood structural panels. (Approved for Type III construction only)
- 6. Floorline Firestopping:
 - a. 4 lb/cu ft mineral fiber based safing insulation in each stud cavity and at each floor line, attached with Z Clips or equivalent.
 - b. Solid fire retardant treated wood fire blocking at floor line. (Approved for Type III construction only)
- 7. Weather Resistive Membrane Applied to Base Wall: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - 5) Fire Resist 705 (Please contact Hunter Xci for assembly options)
 - b. BASF
 - 1) Enersheild HP
 - 2) Enersheild I
 - c. Cosella Dorken:
 - 1) Delta Vent SA
 - 2) Delta Vent S
 - 3) Delta-Fassade S
 - 4) Delta Maxx
 - d. Dryvit
 - 1) Backstop NT
 - e. DuPont
 - 1) Tyvec CommercialWrap or Commercial Wrap D
 - f. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - g. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - h. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
 - i. Prosoco:
 - 1) R Guard CAT-5
 - 2) R Guard CAT-5 Rainscreen

- 3) R Guard Spray Wrap MVP
- 4) R Guard VB
- j. StoCorp:
 - 1) StoGuard Vapor Shield
- k. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- l. WR Grace:
 - 1) Perm-a-barrier VPS
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier Aluminum Wall Membrane
 - 6) Perm-a-barrier NPL 10 (Please contact Hunter Xci for cladding options)
 - 7) Perm-a-barrier VPL 50 (Please contact Hunter Xci for cladding options)
- m. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield TMP
 - 3) Air Shield LSR
- n. 3M:
 - 1) 3015 (with Hold Fast adhesive at a 6 mil thickness)
- o. Pecora
 - 1) XL Perm Ultra VP
- p. None
- 8. Weather Resistive Membrane Applied to Exterior Insulation: Acceptable products are:
 - a. Carlisle:
 - 1) Fire Resist Barritech VP or VP LT
 - 2) Fire Resist Barritech NP
 - 3) Fire Resist 705 FR-A
 - 4) Fire Resist 705 VP
 - b. Cosella Dorken:
 - 1) Delta-Vent SA
 - 2) Delta-Vent S
 - 3) Delta Fassade S
 - 4) Delta Max
 - c. Dryvit:
 - 1) Backstop NT
 - d. DuPont
 - 1) Tyvec Commercial Wrap
 - e. GE:
 - 1) Momentive SEC 2500 SilShield
 - 2) Momentive Elemax 2600
 - f. Henry:
 - 1) Air Bloc 16MR
 - 2) Air Bloc 17MR
 - 3) Air Bloc 21S
 - 4) Air Bloc 31MR
 - 5) Air Bloc 33MR
 - g. PolyGuard
 - 1) Air Lok Flex VP
 - 2) Flexguard
 - 3) Air Lok Flex (Please contact Hunter Xci for cladding options)
 - h. Prosoco:
 - 1) R-Guard Cat-5
 - 2) R-Guard Cat-5 Rainscreen
 - 3) R-Guard Spray Wrap MVP

- 4) R-Guard VB
- i. Sto Corp:
 - 1) Gold Coat
- j. VaproShield:
 - 1) Wrap Shield SA
 - 2) Reveal Shield SA
- k. WR Grace:
 - 1) Perm-a-barrier Aluminum Wall Membrane
 - 2) Perm-a-barrier NPL
 - 3) Perm-a-barrier NP 20
 - 4) Perm-a-barrier VPL
 - 5) Perm-a-barrier VPL LT
 - 6) Perm-a-barrier VPS
- l. WR Meadows:
 - 1) Air Shield LMP (Black or Gray)
 - 2) Air Shield LSR
 - 3) Air Shield TMP
- m. Pecora
 - 1) XL Perm Ultra VP
- n. None.

1.5 DESIGN REQUIREMENTS

- A. Perform work in accordance with all federal, state and local codes.
- B. Physical properties (Foam Core):
 - 1. Water Absorption: ASTM C 209, less than 0.1 percent by volume.
 - 2. Janka Ball Test: ASTM D 1037-12, 15.
 - 3. Compressive Strength: ASTM D 1621; Type I; Grade 1, 16 psi (111 kPa), Grade 2, 20 psi (138 kPa) minimum and Grade 3, 25 psi (172 kPa).
 - 4. Dimensional Stability: ASTM D 2126, 2 percent linear change (7 days).
 - 5. Moisture Vapor Permeance: ASTM E 96, less than 1 perm (57.5ng/(Pa•s•m2)).
 - 6. Air Permeance of Building Material: ASTM E 2178, less than 0.001 L(s.m2) at 75 Pa
 - 7. Resistance to Mold: ASTM D 3273 Passed (10).
 - 8. Service Temperature: Minus 100 degrees to 250 degrees F (Minus 73 degrees C to 122 degrees C)
- C. Continuous Insulation Xci CG wall panels shall meet the continuous insulation standards of ASHRAE 90.1-2010, IECC 2015 and IBC Chapter 26.
- D. Hunter Panels Xci CG evaluated and listed under DRJ TER #1402-02. Tests include:
 - 1. Foam core flame spread index of 75 or less and smoke developed of 450 or less when tested in accordance with ASTM E 84 or UL 723.
 - 2. Classified as Type II, Class 2 in accordance with ASTM C 1289.
- E. Hunter Panels Xci CG evaluated and listed under Miami Dade Product Control – Notice of Acceptance NOA No. 14-0501.01

1.6 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on wall panels and fasteners to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

- C. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 - 1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
 - 2. Environmental Product Declaration which conforms to ISO 14025.
- D. Manufacturer's Certificate: Certify panels will conform to specified performance requirements.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer shall be a company that regularly manufactures and assembles specified insulation in house with no outside fabrication operations.
- B. Pre-Installation Meeting: Convene minimum one week prior to commencing Work of this section. Review installation procedures and coordination required with Related Work and include the following:
 - 1. Participants: Authorized representatives of the Contractor, Architect, Installer, and Manufacturer.
 - 2. Review wall assemblies for potential interference and conflicts and coordinate layout and support provisions for interfacing work.
 - 3. Review continuous insulation wall panels installation methods and procedures related to application, including manufacturer's installation guidelines.
 - 4. Review firestopping requirements and weather resistive membrane requirements and placement locations.
 - 5. Review field quality control procedures.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Good construction practice dictates that all insulations should be protected from moisture and direct sunlight during job-site storage. Pallets of Hunter Panels Xci CG are double packaged in a UV resistant polyethylene bag. This moisture resistant package is designed for protection from the elements during flatbed shipment from our factories to the job-site. Outdoor storage for extended periods of time requires waterproof tarpaulins and elevated storage above ground level a minimum of 2". Additionally, we recommend slitting the bundle packaging vertically down the center of the two short sides to prevent moisture accumulation within the package.

1.9 SEQUENCING

- A. Coordinate with the installation of vapor retarders and air seal materials specified in Section 07260 and Section 07270.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.10 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Insulating panels shall be Xci products produced by Hunter Panels, 15 Franklin Street, Portland, Maine 04101. Phone: (207) 761-5678 or (888) 746-1114. Fax: (877) 775-1769. E-mail: info@hpanels.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 BOARD INSULATION

- A. Board Insulation: Hunter Panels XCI CG are a high thermal resistive rigid insulation panel composed of a closed cell polyisocyanurate foam core bonded on one side to a premium performance polymer bonded glass mat facer on both sides.
 - 1. Type: ASTM C 1289, Type II, Class 2:
 - a. Grade 2 (20 psi).
 - b. Grade 3 (25 psi).
 - 2. Panel Size:
 - a. 4 feet by 8 feet (1220 mm by 2440 mm).
 - b. Custom panel size.
 - 3. Thickness / R Value: ASTM C 518 at 75 degrees F (23.9 degrees C).
 - a. 1.0 inches (25 mm) / R Value 6.0
 - b. 1.5 inches (38 mm) / R Value 9.0
 - c. 2.0 inches (51 mm) / R Value 12.1
 - d. 2.5 inches (64 mm) / R Value 15.3
 - e. 3.0 inches (76 mm) / R Value 18.5
 - f. 3.3 inches (84 mm) / R Value 20.4
 - g. 3.5 inches (89 mm) / R Value 21.7
 - h. 4.0 inches (102 mm) / R Value 25.0
 - i. Provide to the thickness indicated on the Drawings.

2.3 PANEL FASTENERS

- A. Panel fasteners shall be corrosion resistant type as approved Hunter Panel fasteners. Length of fasteners shall be as recommended by the panel manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until exterior walls have been properly prepared.
- B. Verify that all exterior wall assembly construction has been completed to the point where the insulation may correctly be installed.
- C. Verify that mechanical and electrical services in walls have been installed and tested and, if appropriate, verify that adjacent materials and finishes are dry and ready to receive insulation.
- D. If wall assembly preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.

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

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in exterior spaces without gaps or voids. Do not compress insulation.
- C. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.
- D. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within plane of insulation.
- E. Fasten insulation as recommended by the Hunter Panel Installation Guide. Provide base support for the insulation panels as required for the exterior cladding to be installed over the panels.
- F. Exposed insulation must be protected from open flame and kept dry at all times.
- G. Install vapor retarders over insulation panels as specified in Section 07260.
- H. Install air barriers over insulation panels as specified in Section 07270.
- I. Exterior wall insulation is not intended to be left exposed for extended periods of time in excess of 60 days without adequate protection. If extended exposure is anticipated all exposed foam surfaces including corners, window and door openings, should be taped with a compatible waterproof tape.
- J. Install exterior cladding as recommended by the cladding manufacturer and as specified in other sections of this specification.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Cover the top and edges of unfinished roof panel work to protect it from the weather and to prevent accumulation of water in the cores of the panels.
- C. Do not leave panels exposed to moisture. Wet panels shall be removed or allowed to completely dry prior to application of vapor barrier and/or roof covering.
- D. Repair or replace damaged products before Substantial Completion.

END OF SECTION