

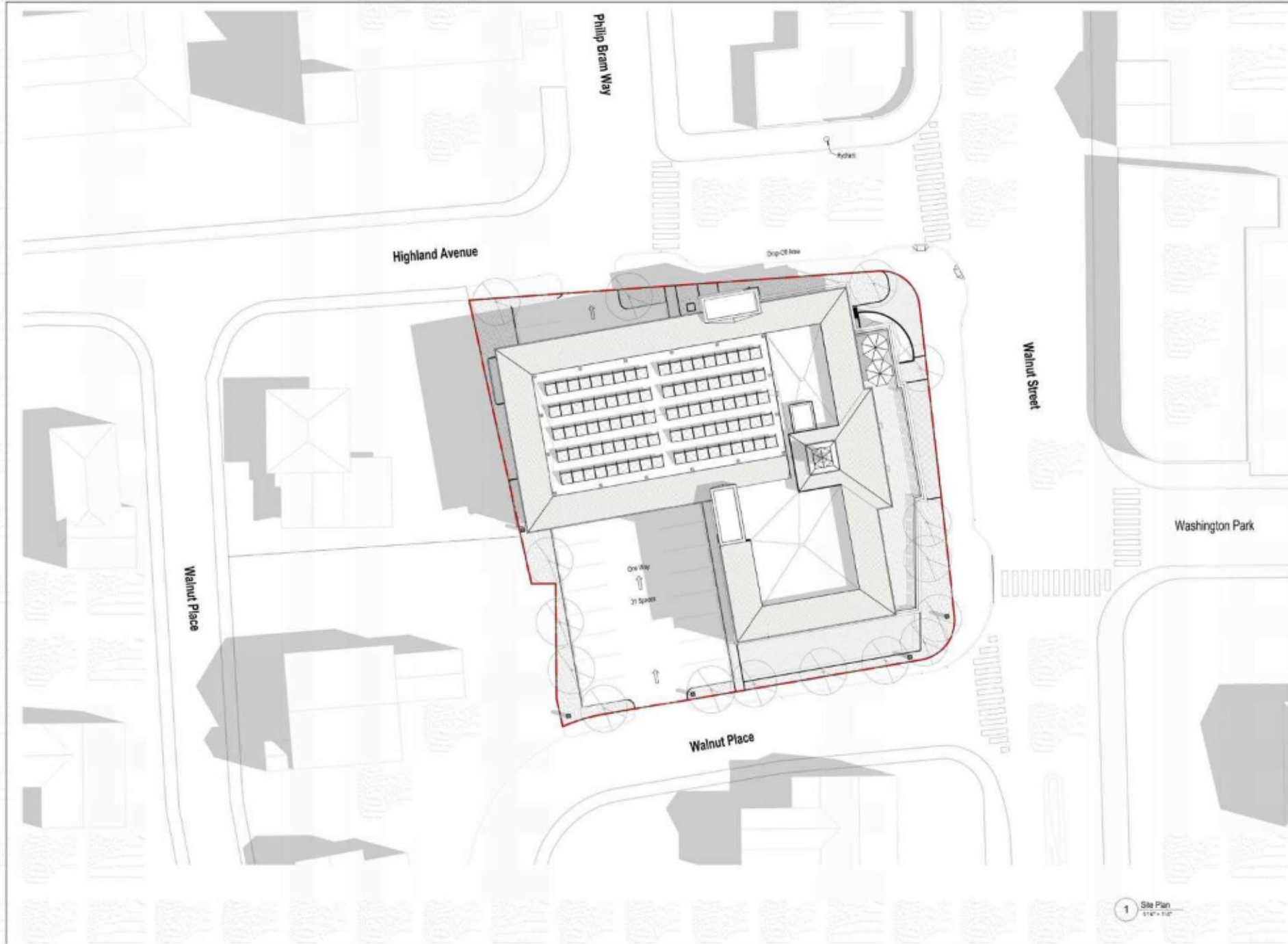
NewCAL

Design Review Committee

May 10, 2023



[illegible]



ARCHITECT
bh+a
 Bergman Nevada + Architects, Inc.
 9000 Canyon Blvd., Suite 200
 Boulder, CO 80521
 (303) 440-0450

PROJECT NAME
Newton Center for Active Living

**340 Walnut Street,
 Newton, MA 02459**
CLIENT
City of Newton

PROJECT TEAM
Civil Engineer
 Peter Caporale
 1000 Walnut St., Suite 210
 Boston, MA 02118
 Tel: 617.552.1700
Landscape Architect
 Erik J. J. Landscape Architects, Inc.
 1000 Walnut St., Suite 210
 Boston, MA 02118
 Tel: 617.552.1700
Structural Engineering
 Peter J. Roberts & Associates, Inc.
 270 Washington Street
 Boston, MA 02118
 Tel: 617.552.1700
MECHANICAL ENGINEERING
 J. J. Consulting Engineers
 200 Walnut Street, Suite 5
 Boston, MA 02118
 Tel: 617.552.1700
Food Service
 Creative Food Systems, Inc.
 100 Walnut Street
 Boston, MA 02118

Technology Engineering / IAT Security
 Building Technology Consulting LLC
 100 Walnut Street
 Boston, MA 02118

Owner
 City of Newton
 100 Walnut Street
 Boston, MA 02118

REVISIONS

NO.	DATE	DESCRIPTION
1	04/10/2021	ISSUED FOR PERMIT

DRAWING TITLE
Site Plan

DRAWING INFORMATION

April 10, 2021
 1000 Walnut Street
 Boston, MA 02118
 Scale: 1/8" = 1'-0"
 Date: 04/10/21
 Drawn: [Signature]
 Checked: [Signature]

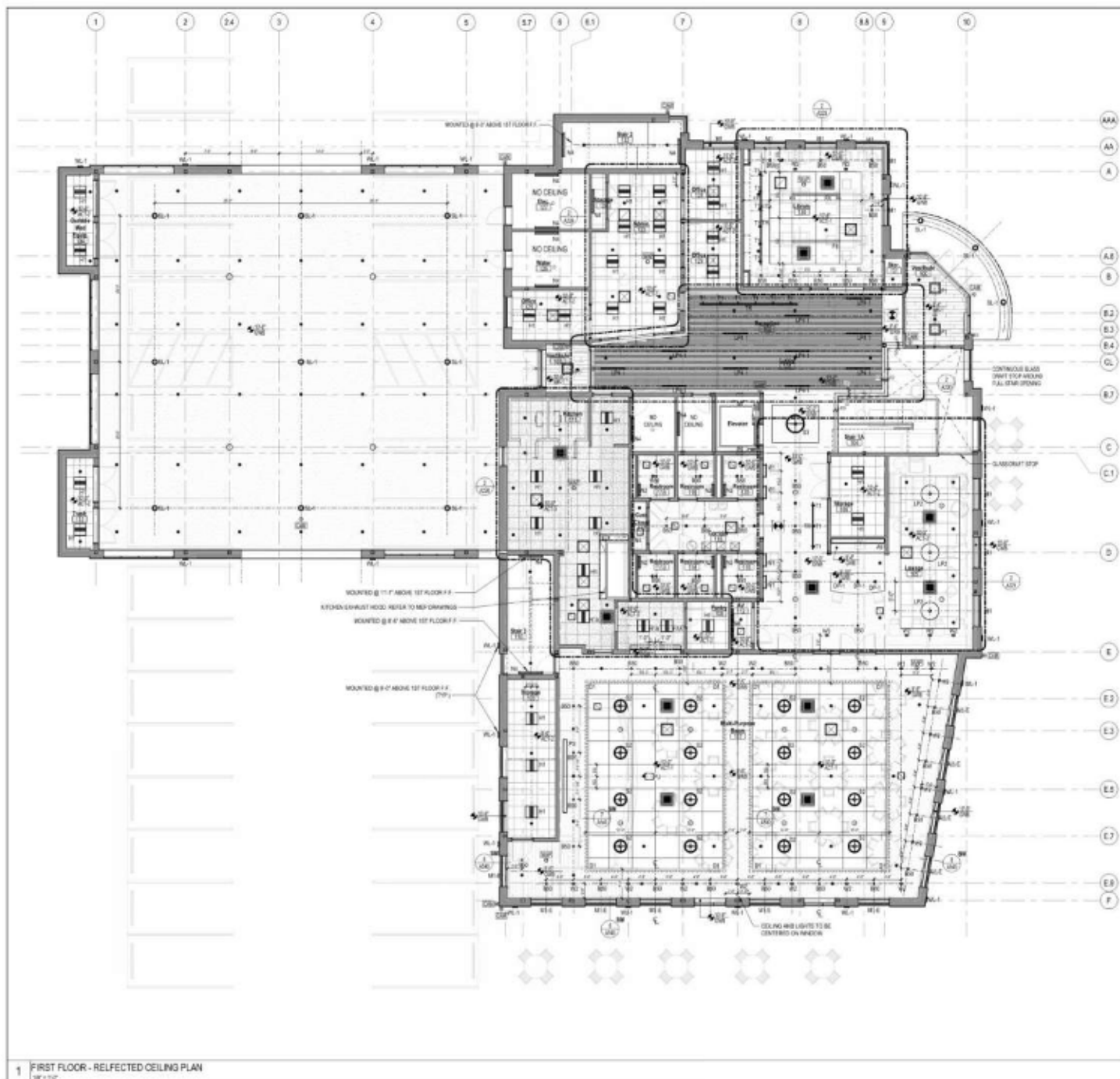
DRAWING NUMBER

A001



2. PROVIDE SPOCKING FOR ANCHORAGE OF ATTACHED GADGETS, CLOSET AND OTHER WALL MOUNTED SHELVING AND OTHER ITEMS. FURNITURE SHOULD BE DOCUMENTED.

1. PROVIDE BLOCKING FOR WALL AND FUTURE INSTALLATION OF DRAB BARS (SEE HYDROK ELEVATIONS)
2. PROVIDE BLOCKING FOR ANCHORAGE OF HYDROK CABINETS, CLOSET AND OTHER WALL MOUNTED SHELVING AND OTHER ITEM. BUSHING/SPACERS PER THESE DOCUMENTS



RCP LEGEND

	4'-0" x 4'-0" ACOUSTIC CEILING TILE, ACT-1		GYP-SUM WALL BOARD CEILING AND/OR SOFFIT, PAINTED
	2'-0" x 2'-0" ACOUSTIC CEILING TILE, ACT-2		EXPOSED STRUCTURE
	2'-0" x 2'-0" ACOUSTIC CEILING TILE, ACT-3		WOOD SLAT CEILING, 1" WIDE x 4" HIGH

RCP SYMBOLS

	AL LINEAR WALL SLOT GRAZER LIGHT, # INDICATES LENGTH
	B50 1'-0" LED ROUND RECESSED CEILING MOUNTED LIGHT
	D1 LED COVE LIGHT
	DP1 DECORATIVE PENDANT
	DP2 DECORATIVE PENDANT
	DP3 DECORATIVE PENDANT
	DL LINEAR LED UPLIGHTS, # INDICATES LENGTH
	FL RECESSED LINEAR LED, # INDICATES LENGTH
	G SURFACE MOUNTED LINEAR TASK LIGHT
	H1 2'-0" RECESSED LED TROFFER DOWNLIGHT
	LP1 LED HIGH BAY PENDANT FIXTURE
	LP2 DRUM PENDANT
	LS1 RECESSED ROUND LIGHT
	NL LINEAR WALL MOUNTED LED, # INDICATES LENGTH
	P1 2'-0" SQUARE RECESSED CEILING LIGHT
	PS4 LINEAR PENDANT LED, # INDICATES LENGTH
	SL1 1'-0" ROUND SURFACE MOUNTED CEILING LIGHT
	SR ROUND PENDANT RING, # INDICATES DIAMETER
	TR TRACK
	T1 TRACK HEAD, ROUND LED
	W1 1'-0" LINEAR WALL MOUNTED TUBE ADJUSTABLE
	W2 RECESSED WALL WASH LIGHT
	W3 WALL MOUNTED SQUARE EXTERIOR LIGHT
	SPRINKLER HEAD - SEE FIRE PROTECTION DRAWINGS
	SUPPLY DIFFUSER, SEE HVAC DRAWINGS
	RETURN DIFFUSER, SEE HVAC DRAWINGS
	EXHAUST FAN
	2'-0" x 4'-0" CEILING CASSETTE, SEE HVAC DRAWINGS
	EXIT SIGN
	SMOKE DETECTOR - SEE ELECTRICAL DRAWINGS, CENTER ON CEILING TILE UNLESS OTHERWISE NOTED
	OCCUPANCY SENSOR - SEE ELECTRICAL DRAWINGS, CENTER ON CEILING TILE UNLESS OTHERWISE NOTED
	WAP WIRELESS ACCESS POINT
	CL ALIGN FIXTURES, DEVICES, OUTLETS, EQUIPMENT AS SHOWN
	SP ROUND RECESSED WIRED SPEAKER
	MF SHADE, # INDICATES %, E SUFFIX INDICATES MOTORIZED SHADE
	PR CEILING SUSPENDED PROJECTOR
	PSM RECESSED PROJECTOR SCREEN, # INDICATES LENGTH IN INCHES

RCP NOTES

1. CENTER FIXTURE ON TILE UNLESS OTHERWISE NOTED
2. GYPSUM BOARD CEILING TO BE PAINTED WHITE MATTE TO MATCH ACT FINISH. SOFFITS TO BE PAINTED **BL** UNLESS OTHERWISE NOTED.
3. ALL SPRINKLER HEADS, OCCUPANCY SENSORS, SMOKE DETECTORS, DIFFUSERS, DEVICES AND CEILING MOUNTED HORN STROBES SHALL ALIGN WITH LIGHT FIXTURES AND EACH OTHER AS NOTED.
4. ALL EXIT SIGNS SHALL BE CENTERED ON THE WALL OPENING OR DOOR AS SHOWN, UNLESS OTHERWISE NOTED.
5. ALIGN ACOUSTIC CEILING GRID CENTERED AS INDICATED WITH CENTERLINES AND EDGE DIMENSION STRINGS NOTED ON THE RCP.

ARCHITECT
bh+a
 Benjamin Hendrix + Associates, Inc.
 9 Central Street, Suite 300
 Boston, MA 02111
 (617) 389-1450

PROJECT NAME
Newton Center for Active Living

345 Walnut Street,
 Newton, MA 02459

CLIENT
 City of Newton

PROJECT TEAM

Chief Engineer
 Paul C. Condon
 100 Belmont St., Suite 210
 Boston, MA 02114
 Tel: 617-552-1700

Landscape Architect
 KPA-204 Landscape Architecture, Inc.
 100 Belmont St., Suite 210
 Boston, MA 02114
 Tel: 617-552-1700

Structural Engineering
 Fels, Ball, Roberts & Associates, Inc.
 250 Washington Street
 Boston, MA 02108
 Tel: 617-552-1700

Mechanical Engineering
 Alford Consulting Engineers
 220 Columbia Road, Suite 6
 Boston, MA 02114
 Tel: 617-552-1700

Fire Service
 Custom Fire Protection, Inc.
 100 Walnut Street
 Boston, MA 02114

Technology Engineering / IAT Security
 Building Technology Consulting LLC
 100 Bedford Street
 Boston, MA 02114

Owner
 City of Newton
 345 Walnut Street
 Newton, MA 02459

REVISIONS

NO.	DATE	DESCRIPTION

DRAWING TITLE
First Floor Reflected Ceiling Plan

DRAWING INFORMATION

April 15, 2011
 10' x 10' (1:12)

Computer Generated
 10' x 10' (1:12)

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

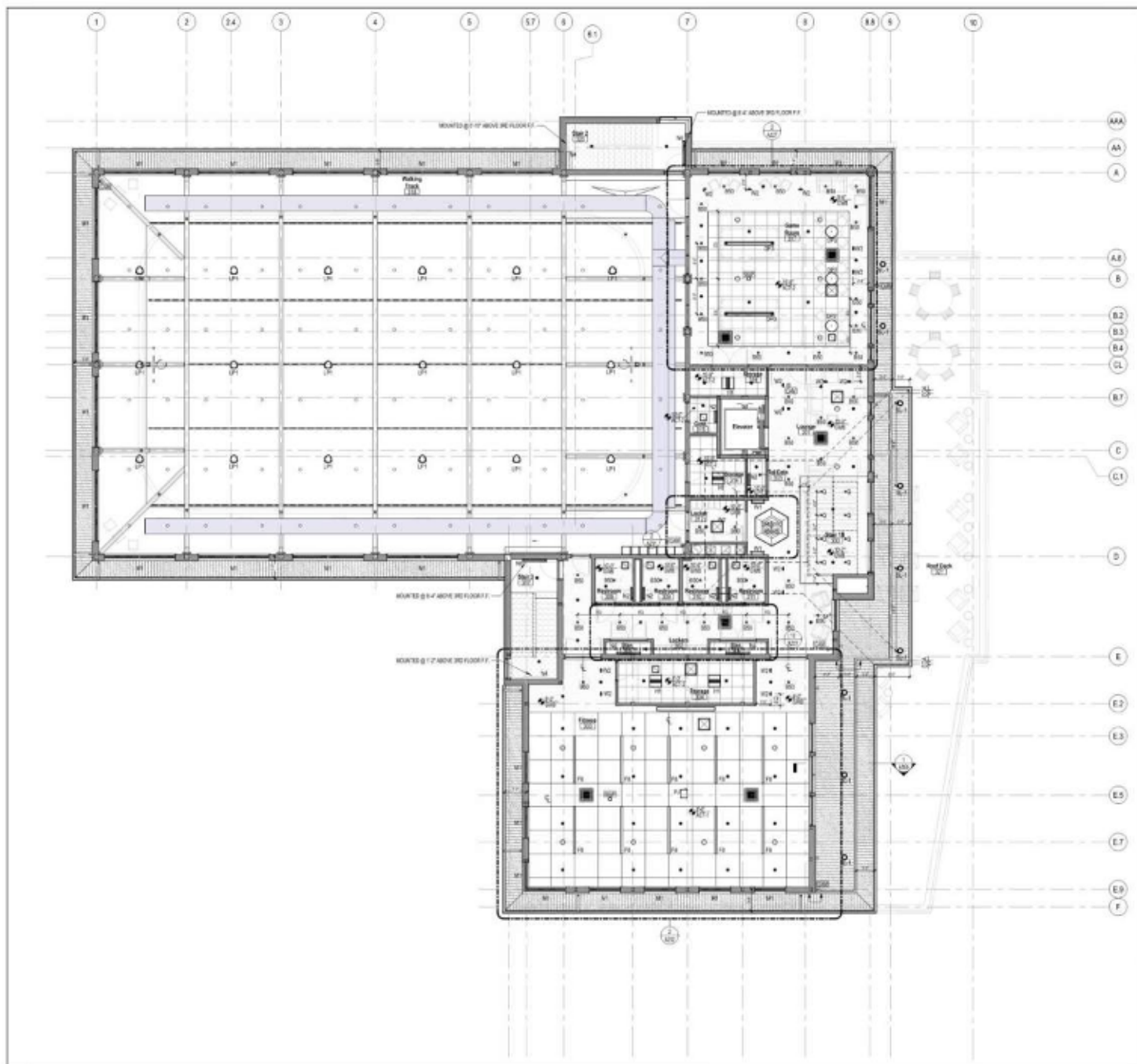
DRAWING NUMBER
A111

Copyright BH+A, Inc. V2.1



1. CENTER PICTURE ON TILE UNLESS OTHERWISE NOTED
2. GYP/SIM BOARD DELAYS TO BE PAINTED WHITE-WHITE TO MATCH ACT FINISH COFFITS TO BE PAINTED UNLESS OTHERWISE NOTED
3. ALL SPRINKLER HEADS, OCCUPANCY CENERS, SMOKE DETECTORS, DIFFUSERS, SMOGGIES AND CEILING AND HANGING-HORN STROBES SHALL ALIGN WITH LIGHT FIXTURES AND END OF OTHERS NOTED
4. ALL EXIT SIGNS SHALL BE CENTERED ON THE WALL OPENING OR DOOR AS SHOWN, UNLESS OTHERWISE NOTED
5. ALIGN ACCEUTIC CEILING GRID CENTERED AS INDICATED WITH CENTERLINES AND EGGED DIMENSION STRINGS NOTED ON THE RCP.

Copyright 1994, Inc.



RCP LEGEND

	4' x 4' acoustic ceiling tile, ACT-1		GYPDUM WALL BOARD CEILING AND/OR SOFFIT, PAINTED
	2' x 2' acoustic ceiling tile, ACT-2		EXPOSED STRUCTURE
	2' x 2' acoustic ceiling tile, ACT-3		WOOD SLAT CEILING, 1" WIDE x 4" HIGH

RCP SYMBOLS

	AW LINEAR WALL SLOT GRAZER LIGHT, # INDICATES LENGTH
	BS0 4' LED ROUND RECESSED CEILING MOUNTED LIGHT
	D1 LED CONE LIGHT
	DP1 DECORATIVE PENDANT
	DP2 DECORATIVE PENDANT
	DP3 DECORATIVE PENDANT
	SR LINEAR LED UPLIGHTS, # INDICATES LENGTH
	RL RECESSED LINEAR LED, # INDICATES LENGTH
	GS SURFACE MOUNTED LINEAR TASK LIGHT
	H1 2' x 2' RECESSED LED TROFFER DOWNLIGHT
	LP1 LED HIGH BAY PENDANT FIXTURE
	LP2 DRUM PENDANT
	LR1 RECESSED ROUND LIGHT
	WR LINEAR WALL MOUNTED LED, # INDICATES LENGTH
	PL 2' SQUARE RECESSED CEILING LIGHT
	PL-4 LINEAR PENDANT LED, # INDICATES LENGTH
	SL1 1' ROUND SURFACE MOUNTED CEILING LIGHT
	SR ROUND PENDANT RING, # INDICATES DIAMETER
	TR TRACK
	T1 TRACK HEAD, ROUND, LED
	WI 3' LINEAR WALL MOUNTED TUBE ADJUSTABLE
	WQ2 RECESSED WALL WASH LIGHT
	WE1 WALL MOUNTED SQUARE EXTERIOR LIGHT
	SPRINKLER HEAD - SEE FIRE PROTECTION DRAWINGS
	SUPPLY DIFFUSER, SEE HVAC DRAWINGS
	RETURN DIFFUSER, SEE HVAC DRAWINGS
	EXHAUST FAN
	24" x 24" CEILING CASSETTE - SEE HVAC DRAWINGS
	EXIT SIGN
	SMOKE DETECTOR - SEE ELECTRICAL DRAWINGS - CENTER ON CEILING TILE UNLESS OTHERWISE NOTED
	OCCUPANCY SENSOR - SEE ELECTRICAL DRAWINGS - CENTER ON CEILING TILE UNLESS OTHERWISE NOTED
	WAP WIRELESS ACCESS POINT
	AL ALIGN FIXTURES, DEVICES, DIFFUSERS, EQUIPMENT AS SHOWN
	SP ROUND RECESSED WIRED SPEAKER
	SH SHADE, # INDICATES %, 2 SUPPLY INDICATES MOTORIZED SHADE
	PR CEILING SUSPENDED PROJECTOR
	PSR RECESSED PROJECTOR SCREEN, # INDICATES LENGTH IN INCHES

RCP NOTES

1. CENTER FIXTURE ON TILE UNLESS OTHERWISE NOTED
2. GYPSUM BOARD CEILINGS TO BE PAINTED WHITE/MATTE TO MATCH ACT FINISH. SOFFITS TO BE PAINTED 2.1 UNLESS OTHERWISE NOTED.
3. ALL SPRINKLER HEADS, OCCUPANCY SENSORS, SMOKE DETECTORS, DIFFUSERS, DEVICES AND CEILING MOUNTED HORN STROBES SHALL ALIGN WITH LIGHT FIXTURES AND EACH OTHER AS NOTED.
4. ALL EXIT SIGNS SHALL BE CENTERED ON THE WALL OPENING OR DOOR AS SHOWN, UNLESS OTHERWISE NOTED.
5. ALIGN ACOUSTIC CEILING GRID CENTERED AS INDICATED WITH CENTERLINES AND EGOED DIMENSION STRINGS NOTED ON THE RCP.

ARCHITECT
bh+a
 Benjamin Hendrix + Architects, Inc.
 9 Chandler Center Street, Suite 200
 Boston, MA 02215
 (617) 269-1459

PROJECT NAME
Newton Center for Active Living

 345 Walnut Street,
 Newton, MA, 02459

CLIENT
 City of Newton

PROJECT TEAM
Civil Engineer
 Park Associates
 100 Summer St., Suite 210
 Falmouth, MA 02540
 Tel: 508-543-1700

Landscape Architect
 K&B-204 Landscape Architecture, Inc.
 100 Belmont St., Suite 202
 Boston, MA 02128
 Tel: 617-451-1010

Structural Engineering
 F&B-S&B Engineers & Associates, Inc.
 250 Washington Street
 Newton, MA 02459
 Tel: 617-557-8800

Mechanical Engineering
 Alford Consulting Engineers
 220 Walker Road, Suite 6
 Needham, MA 02462
 Tel: 617-843-1988

Food Service
 Custom M-Graft Associates, Inc.
 97 West Main Street
 Georgetown, MA 01853

Technology Engineering / RF Security
 Building Technology Consulting LLC
 80 Bedford Street
 Brookline, MA 02146

Electrical
 B-Squared Engineering
 100 Middlesex Road
 Stamford, CT 06902

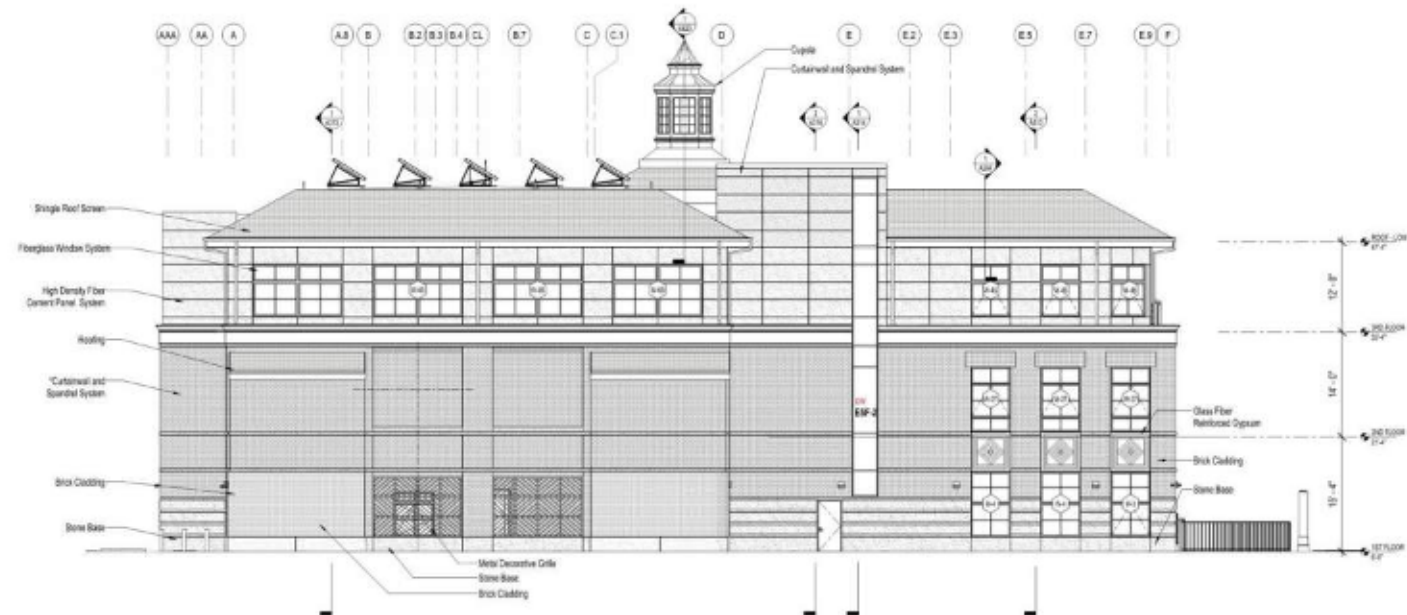
REVISIONS

DRAWING TITLE
Third Floor Reflected Ceiling Plan

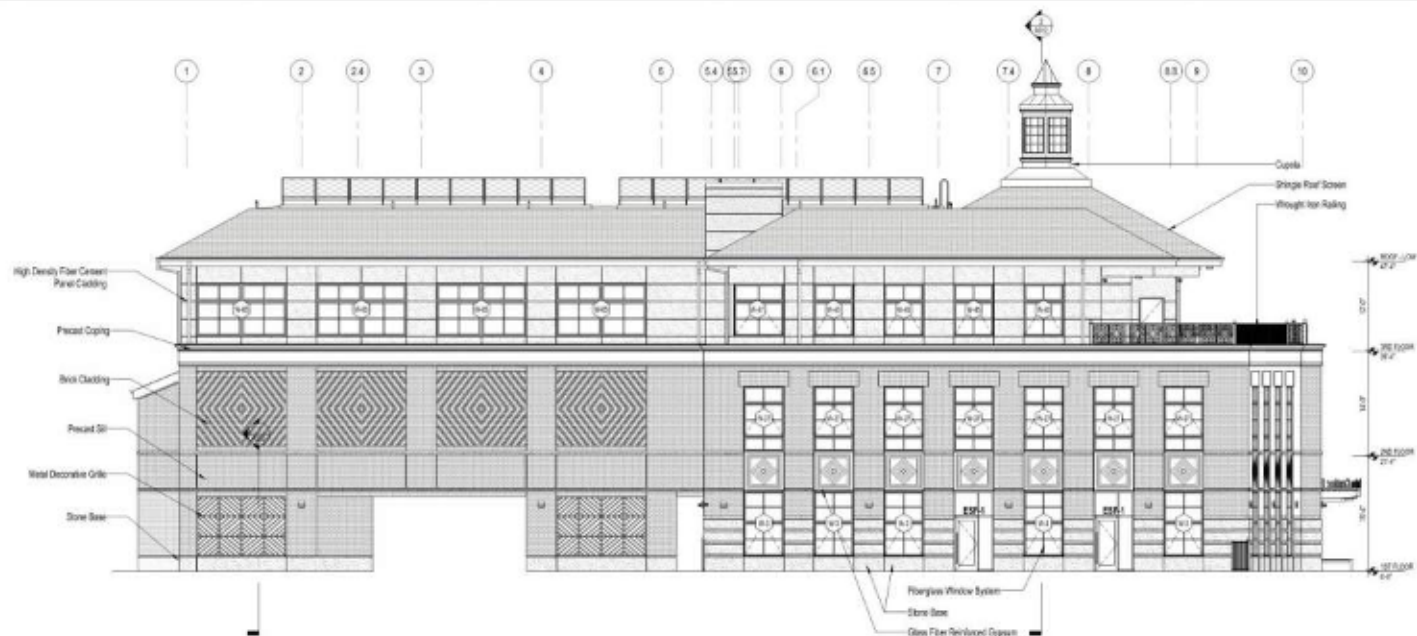
DRAWING INFORMATION

DRAWING NUMBER
A113

Copyright BH+A, Inc.



1 BUILDING ELEVATION - WEST
1/8" = 1'-0"



2 BUILDING ELEVATION - SOUTH
1/8" = 1'-0"

ARCHITECT

bh+a

Bergman-Nelson + Architects, Inc.
300 Central Street, Suite 200
Boston, MA 02111
(617) 267-1450

PROJECT NAME

Newton Center for
Active Living

340 Walnut Street,
Newton, MA 02459

CLIENT

City of Newton

PROJECT TEAM

Civil Engineer

Paul G. Roberts & Associates, Inc.

100 Cambridge Street, Suite 210

Framingham, MA 01701

Tel: 508.881.1700

Landscape Architect

Rob. D. Landscapes Architecture, Inc.

100 Belmont St., Suite 210

Boston, MA 02111

Tel: 617.451.1010

Structural Engineering

Paul G. Roberts & Associates, Inc.

100 Cambridge Street, Suite 210

Framingham, MA 01701

Tel: 508.881.1700

Mechanical Engineering

Robert Consulting Engineers

200 Columbia Road, Suite 5

Boston, MA 02111

Tel: 617.451.1010

Food Service

Custom M-Graft Associates, Inc.

100 West Main Street

Georgetown, MA 01853

Technology Engineering / RF Security

Bentley Technology Consulting LLC

100 Bedford Street

Brighton, MA 02269

Electric

B. Squared Engineering

100 Millis Road

Dorchester, MA 01919

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

REVISIONS

A201

Copyright 2014, Inc.

V2.1

DRC Responses

reviewer	received	#	Doc	Question	Response
Carol S	04/26/23	01		Confirm NewCAL will have private landscape contractor providing maintenance. Landscapes with perennials not a good fit for the City's PRC landscape contractors.	NewCAL will work with PR&C and Executive Office to see that the proposed landscaping can be properly maintained including additional support from private landscape contractor as required.
Carol S	04/26/23	02		The Director of Urban Forestry is to be called to assess and sign off on tree protection once it's completed.	Tree protection specifications and submittals will require on site review and sign off by Marc Welch.
Carol S	04/26/23	03		Fenced patio has no access for landscape maintenance. How to keep area clean and mulched?	A gate has been added
Carol S	04/26/23	04		Detail 2 Steel Pipe Fence on Granite Curb is not up against lawn and sidewalk as shown. Correct to show fence on curb with shrub and tree bed inside and sidewalk outside. Conflict between trees and table umbrellas?	Detail has been revised
Carol S	04/26/23	05		L200 key should also have fence symbols.	Legend has been updated
Carol S	04/26/23	06		Assuming pending landscape furnishings sections will be submitted for review.	Confirmed
Carol S	04/26/23	07		Good diversified plant list.	
Carol S	04/26/23	08		Most of the unfenced perennial beds will need curbing/edging. If not, sidewalk plow, de-icer, bike and foot traffic will harm unprotected plants.	Edging has been added
Carol S	04/26/23	09		Bike rack location?	Bike racks have been shown
Carol S	04/26/23	10		Tree transplant note – is that the new location? Where's former location? Root pruning being done now?	The location shown is both the current and future location. The timing to transplant may not work with the NewCAL construction schedule. The tree can't realistically remain in its current location during construction. Should the schedule not allow relocation, the tree would be replaced in kind.

reviewer	received	#	Doc	Question	Response
Peter B	05/04/23	11	Spec	Provide Commissioning specifications, including list of all construction components that will be commissioned. Ensure that specifications for each component reference the commissioning requirements. Specifically I did not see references for commissioning in the air sealing section or the electrical section for emergency generator and transfer switch	ALLIED to provide in 100% CD document
Peter B	05/04/23	12	Spec	Missing spec for emergency generator and transfer switch	ALLIED to provide in 100% CD document
Peter B	05/04/23	13	A104 P104 P105	Coordinate roof slope and location of RDs underneath "ERV Gym", and under solar panel walkways	BH+A and ALLIED (Background coordination)
Peter B	05/04/23	14		Show elevation of sprinkler piping on gym sections / interior elevations.	BH+A NOTED
Peter B	05/04/23	15	H101 H102 H103	Ductwork sizes are mostly not shown.	ALLIED to provide in 100% CD document
Peter B	05/04/23	16	HP	HP drawings do not show sizes of condensate piping.	ALLIED to provide in 100% CD document
Peter B	05/04/23	17	H104	Complete designations of rooftop equipment - these need to match numbers on schedules.	ALLIED to provide in 100% CD document
Peter B	05/04/23	18	H200	Complete schedules for fans and electric heaters.	ALLIED to provide in 100% CD document
Peter B	05/04/23	19	H201	Schedule for ERV 100 and ERV 200 does not have heat pump heating coil performance data "data provided by VRF mfr". Min performance needed.	ALLIED to provide in 100% CD document
Peter B	05/04/23	20		ERV 200 heat wheel winter leaving temp is 51 db but entering temp for heat pump heating and also for resistance coil is 63 db.	ALLIED to provide in 100% CD document
Peter B	05/04/23	21		Assure that the final energy model reflects actual design for hot water heating, electric space heating, and electric coil use in energy recovery units.	Coordination with Green Engineer and Allied

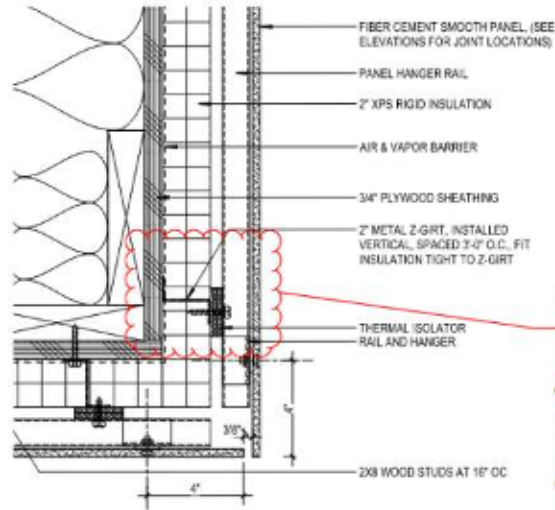
reviewer	received	#	Doc	Question	Response
Tom G	05/05/23	22	Spec	Comment #1: Section 033000 Cast-In-Place Concrete – Clause 2.2: Add requirement to report embodied carbon of concrete mixes used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Concrete v2.2 https://d2evkimvhatqav.cloudfront.net/documents/PCR-Concrete-2022-deviation.pdf?v=1674581547	BH+A: NOTED
Tom G	05/05/23	23	Spec	Comment #2: Section 034500 Architectural Precast Concrete (part of 040001 FSB) – Clause 1.5 SUBMITTALS, Item H – Material Certificates Add requirement to report embodied carbon of precast concrete used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Precast Concrete v3.0 https://d2evkimvhatqav.cloudfront.net/documents/astm_precast_concrete_v3.0.pdf?v=1631303354	BH+A: NOTED
Tom G	05/05/23	24	Spec	Comment #3: Section 034900 Glass Fiber Reinforced Concrete – Clause 1.5: SUBMITTALS, Item A.: Product Data: Add requirement to report embodied carbon of GFRC used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Concrete v2.2 https://d2evkimvhatqav.cloudfront.net/documents/PCR-Concrete-2022-deviation.pdf?v=1674581547	BH+A: NOTED
Tom G	05/05/23	25	Spec	Comment #4: Section 035412 Gypsum Cement Underlayment Clause 1.3: SUBMITTALS, Item A.: Product Data: Add requirement to report embodied carbon of concrete mixes used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Concrete v2.2 https://d2evkimvhatqav.cloudfront.net/documents/PCR-Concrete-2022-deviation.pdf?v=1674581547	BH+A: NOTED
Tom G	05/05/23	26	Spec	Comment #5: Section 051200 Structural Steel Framing – Clause 1.5 SUBMITTALS Add requirement to report embodied carbon of structural steel materials used via verified Environmental Product Declarations conformant to UL Environment PCR Part B: Building-Related Products and Services: Steel Construction Product EPD Requirements UL 10010-34 v.2.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED

reviewer	received	#	Doc	Question	Response
Tom G	05/05/23	27	Spec	Comment #6: Section 053100 Steel Decking – Clause 1.5 SUBMITTALS Add requirement to report embodied carbon of steel decking materials used via verified Environmental Product Declarations conformant to UL Environment PCR Part B: Building-Related Products and Services: Steel Construction Product EPD Requirements UL 10010-34 v.2.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	28	Spec	Comment #7 - Section 054000 Cold-Formed Steel Framing - Clause 1.5: SUBMITTALS, Item A.: Product Data: Add requirement to report embodied carbon of cold-formed steel framing materials used via verified Environmental Product Declarations conformant to UL Environment PCR Part B: Building-Related Products and Services: Steel Construction Product EPD Requirements UL 10010-34 v.2.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	29	Spec	Comment #8: Section 061400 Glue Laminated Wood Construction Add requirement to report embodied carbon of Glue Laminated Wood Construction materials used via verified Environmental Product Declarations conformant to UL Environment PCR, Part B: Structural and Architectural Wood Products EPD Requirements UL 10010-9 v.1.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	30	Spec	Comment #9: Section 061400 Sheathing - Clause 1.3: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of sheathing materials used via verified Environmental Product Declarations conformant to UL Environment PCR, Part B: Structural and Architectural Wood Products EPD Requirements UL 10010-9 v.1.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	31	Spec	Comment #10: Section 064020 Interior Architectural Woodwork - Clause 1.3: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of architectural woodwork materials used via verified Environmental Product Declarations conformant to UL Environment PCR, Part B: Structural and Architectural Wood Products EPD Requirements UL 10010-9 v.1.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	32	Spec	Comment #11: Section 064200 Paneling - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of architectural woodwork materials used via verified Environmental Product Declarations conformant to UL Environment PCR, Part B: Structural and Architectural Wood Products EPD Requirements UL 10010-9 v.1.0 https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED

reviewer	received	#	Doc	Question	Response
Tom G	05/05/23	38	Spec	Comment #17: Section 077700 Wall Cladding - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of Wall Cladding materials used via verified Environmental Product Declarations conformant to ISO 21930:2017.	BH+A: NOTED
Tom G	05/05/23	39	Spec	Comment #18: Section 081110 Hollow Metal Doors and Frames - Clause 1.3: SUBMITTALS, Item A.: Add OPTIONAL requirement to report embodied carbon of Hollow Metal Doors and Frames materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building Related Products and Services Part B: Commercial Steel Doors and Steel Frames EPD Requirements UL 10010-27 v.1; https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	40	Spec	Comment #19: Section 081400 Wood Doors - Clause 1.3: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of wood doors used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Interior Architectural Wood Door Leaves https://d2evkimvhatqav.cloudfront.net/documents/PCR-Int-Arch-Wood-Doors-2022-DRAFT.pdf?v=1674581549	BH+A: NOTED
Tom G	05/05/23	41	Spec	Comment #20: Section 081110 Door Hardware - SUBMITTALS, Item I: Product Data: Add OPTIONAL requirement to report embodied carbon of Door Hardware materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Builders Hardware EPD Requirements. 10010-13 Version 1. UL Environment. November 2019. https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	42	Spec	Comment #21: Section 075400 Thermoplastic Membrane Roofing: - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of Gypsum Board Assemblies used via verified Environmental Product Declaration (EPD) conformant to NSF PCR for Gypsum Panel Products https://d2evkimvhatqav.cloudfront.net/documents/pcr_gypsum_panel_products_2019_1.1.pdf?v=1594929936	BH+A: NOTED

reviewer	received	#	Doc	Question	Response
Tom G	05/05/23	43	Spec	Comment #22: Section 096400 Wood Flooring - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of wood flooring materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements UL E 10010-7 v.2.0, https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	44	Spec	Comment #23: Section 096460 Wood Athletic Flooring - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of wood athletic flooring materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements UL E 10010-7 v.2.0, https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	45	Spec	Comment #24: Section 096510 Resilient Flooring and Accessories - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of Resilient Flooring and Accessories materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements UL E 10010-7 v.2.0, https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	46	Spec	Comment #25: Section 096560 Resilient Athletic Flooring - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of Resilient Athletic Flooring materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements UL E 10010-7 v.2.0, https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED
Tom G	05/05/23	47	Spec	Comment #26: Section 096800 Carpeting - Clause 1.4: SUBMITTALS, Item A.: Product Data: Add OPTIONAL requirement to report embodied carbon of carpeting materials used via verified Environmental Product Declarations conformant to UL Environment PCR Guidance for Building-Related Products and Services Part B: Flooring EPD Requirements UL E 10010-7 v.2.0, https://www.ul.com/services/product-category-rules-pcrs	BH+A: NOTED

reviewer	received	#	Doc	Question	Response
Ellen L	05/05/23	48		Library lighting?	BH+A Library Lighting is provided with downlights, wall washers, linear fixtures and are LED, 3500K temperature lighting, 10 % dimming capability and controlled through a lighting control system
Ellen L	05/05/23	49		Will there be a spec section for Alternates?	BH+A: Currently no Alternate planned
Ellen L	05/05/23	50		Windows: Aluminum Clad Wood (Eagle, Kolbe & Kolbe, Marvin) v. uPVC windows – as alternate to fiberglass windows & doors (Intus) Fiberglass (Fibertec, Inline Fiberglass, Pella... Marvin as Basis of Design? Which window?)	BH+A: Window basis of design is Marvin Modern line series with 0.29 U assembly;
Ellen L	05/05/23	51		Locations of above noted window materials?	BH+A: Window Material is based on Fiberglass
Ellen L	05/05/23	52		Clarify fiberglass & aluminum clad window system at gymnasium- either/or?	BH+A : Gym Window is Fiberglass; Project window system is Fiberglass; Storefront are Aluminum
Ellen L	05/05/23	53		Critical submittals (Summary of Work): switchgear & generator? (notes only RTU)	ALLIED to provide in 100% CD document
Ellen L	05/05/23	54		Finish on wood fascia & trim? Paint per 500 series drawings? Type of wood for maintenance and durability?	BH+A: Generally wood species are maple; Finishes are clear stained at exposed locations and paintable pine at non exposed locations
Ellen L	05/05/23	55		Gutter and downspout material?	BH+A: Gutter and Downspout are Aluminum
Ellen L	05/05/23	56		Nice RCPs and ceiling details	

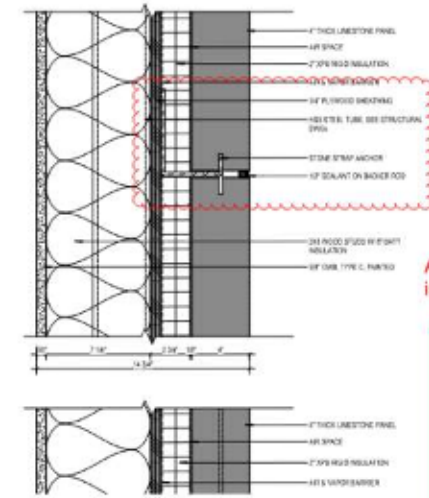


Wood Studs

A0006/EW3-1: Would it be better to have thermal isolator located at the sheathing?

BH+A:
Will adjust to face of Sheathing

5/10/2023



A007/EW4-1: Don't see thermal isolator behind "stone strap anchors"

BH+A:
Will include thermal isolator at face of sheathing if applicable

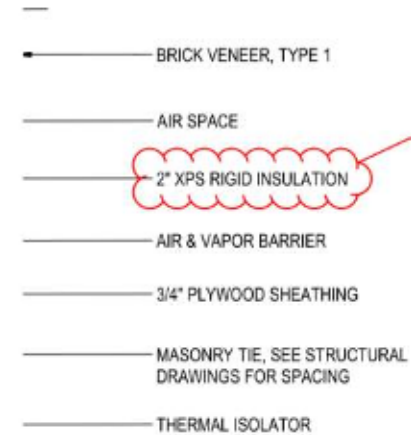
5/10/2023



A006/EW2-1 (TYP): what material is this? how are joints, penetrations, terminations handled? Is it continuous around all six (6) sides?

BH+A:
Air Vapor Barrier to be Carisle CC-705 series, non permeable, rubberized sheet product or similar.

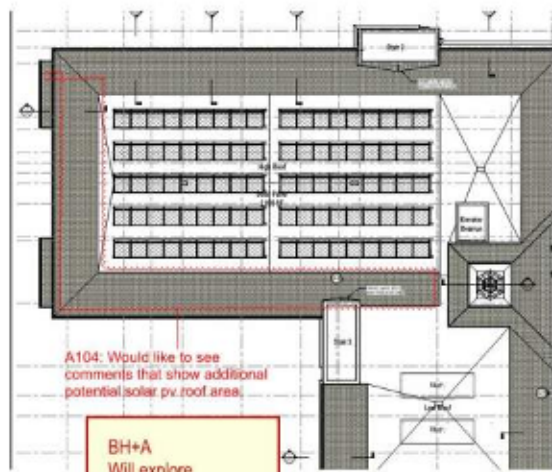
5/10/2023



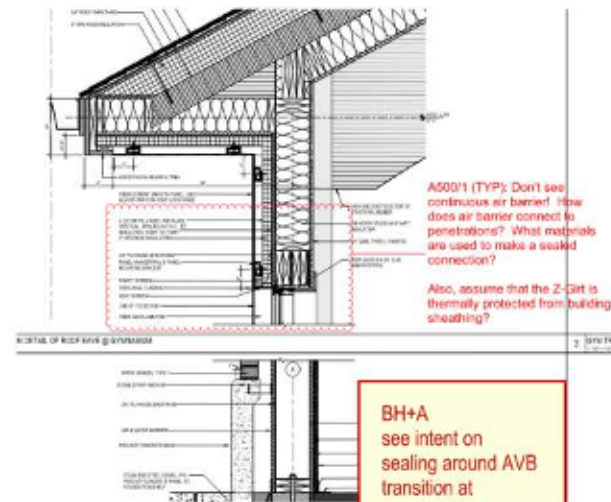
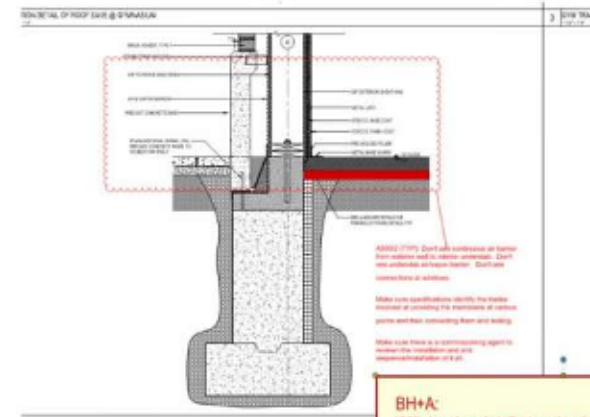
A006/EW2-1 (TYP): using low GWP XPS?

BH+A:
Will explore Low Global Warming Potential XPS product such as Green Guard LG series (Blow agent blend target of 50)

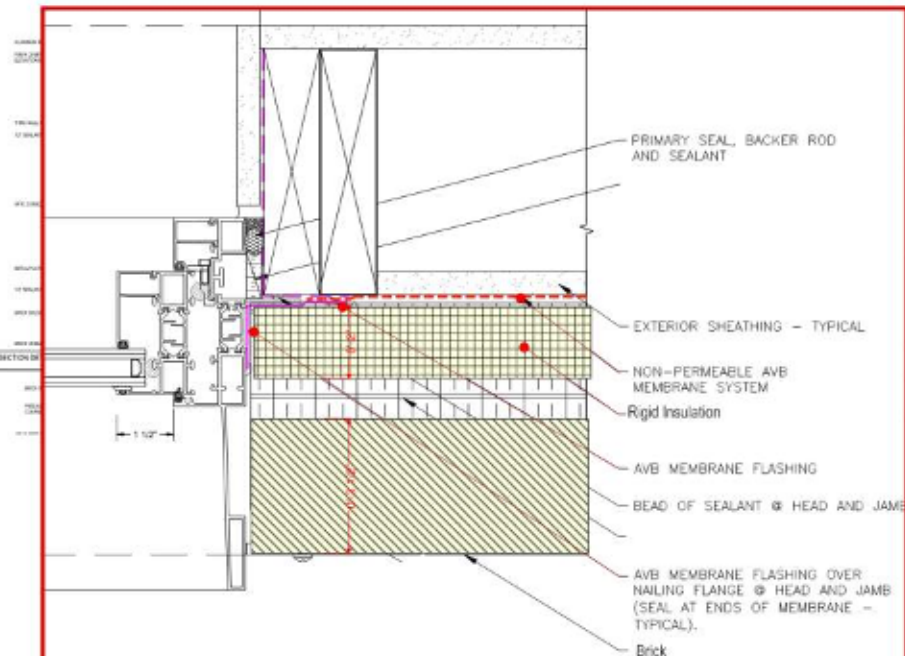
5/10/2023

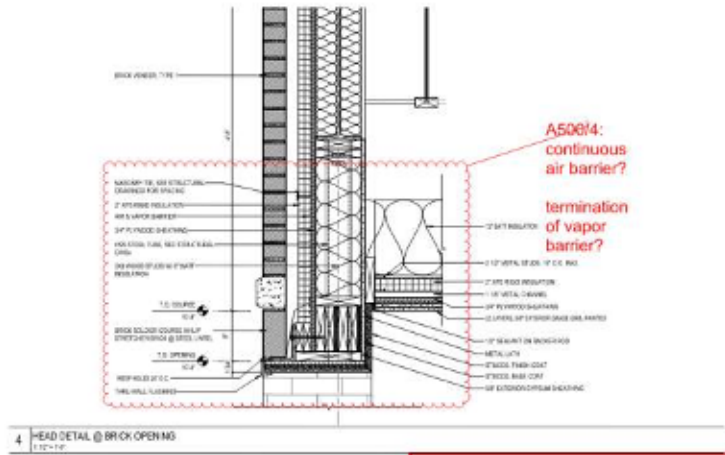


BH+A
Will explore
including PV panel
on Gym sloped roof
5/10/2023

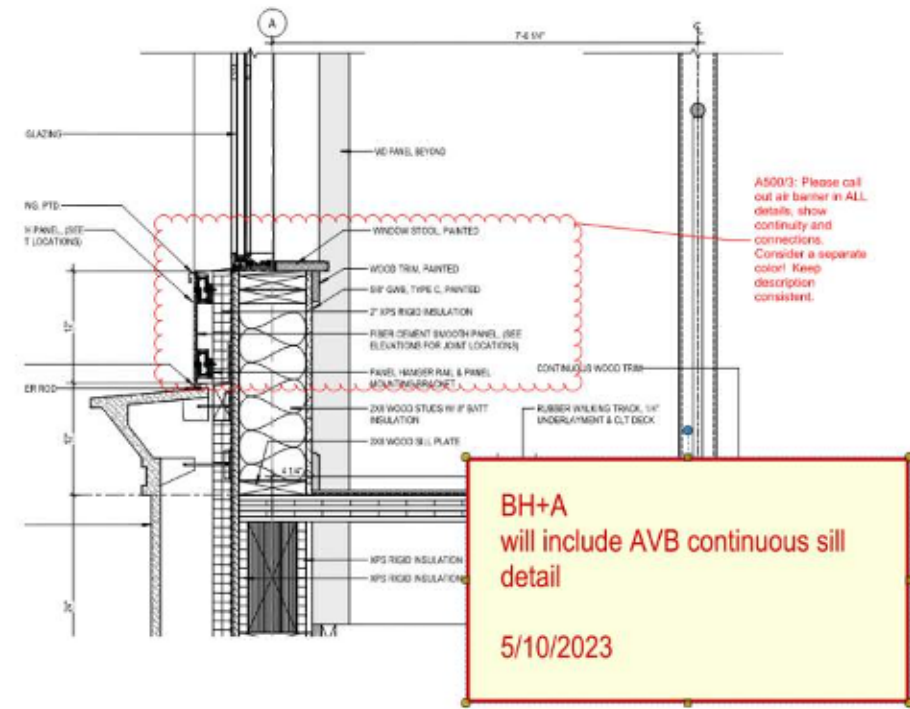


BH+A
see intent on
sealing around AVB
transition at
openings/windows
5/10/2023

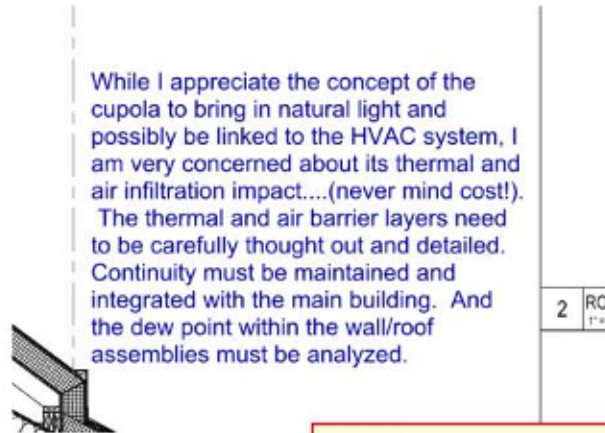




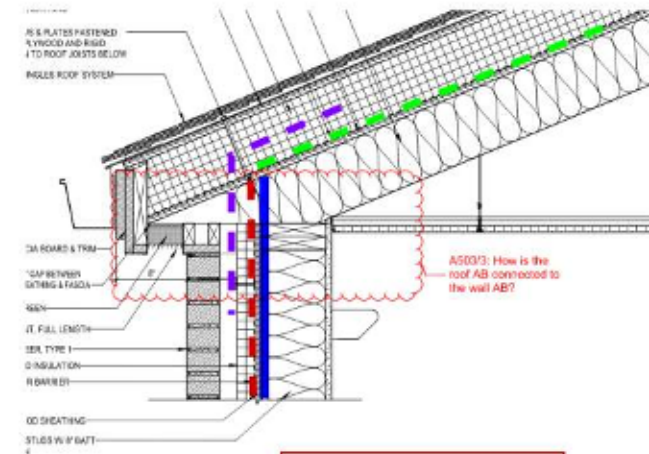
BH+A
Will include AVB continuous detail
at vertical to horizontal transitions
5/10/2023



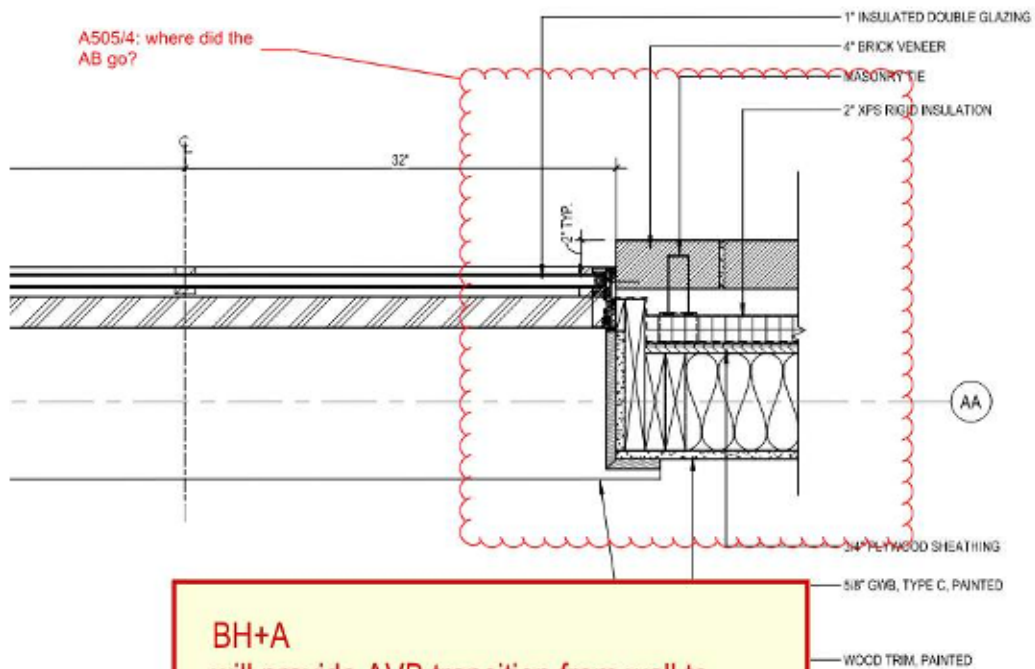
BH+A
will include AVB continuous sill
detail
5/10/2023



BH+A
Design team to provide final AVB detail at
cupola for review.
5/10/2023

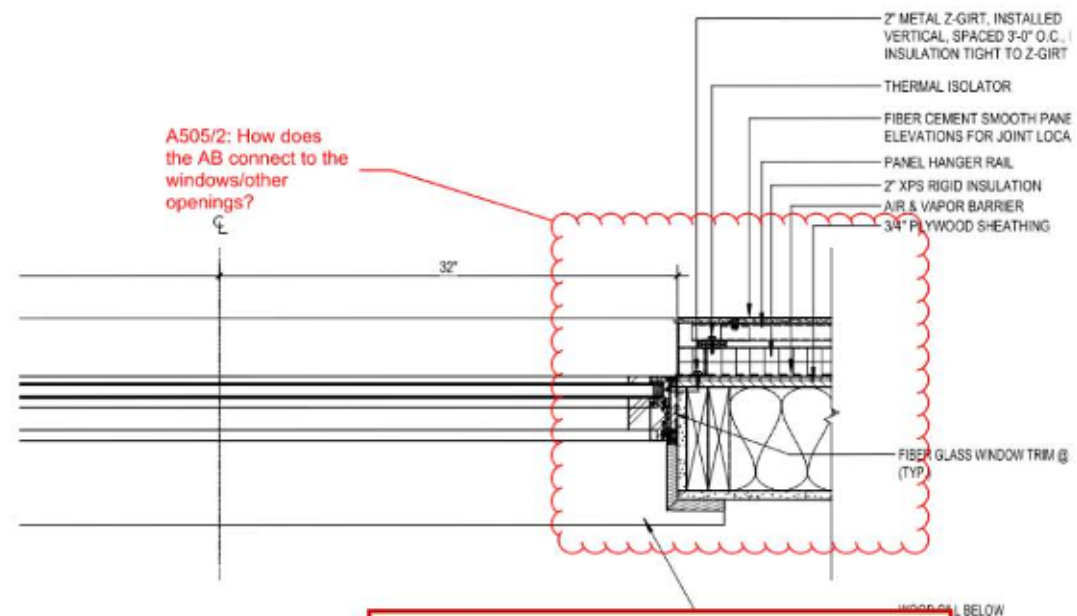


BH+A
will revise roof eave detail at
occupied spaces to provide AVB
flashing at roof AB to wall AVB
transition
5/10/2023



BH+A
will provide AVB transition from wall to
window (AVB flashing) to be included
under waterproofing contractor scope

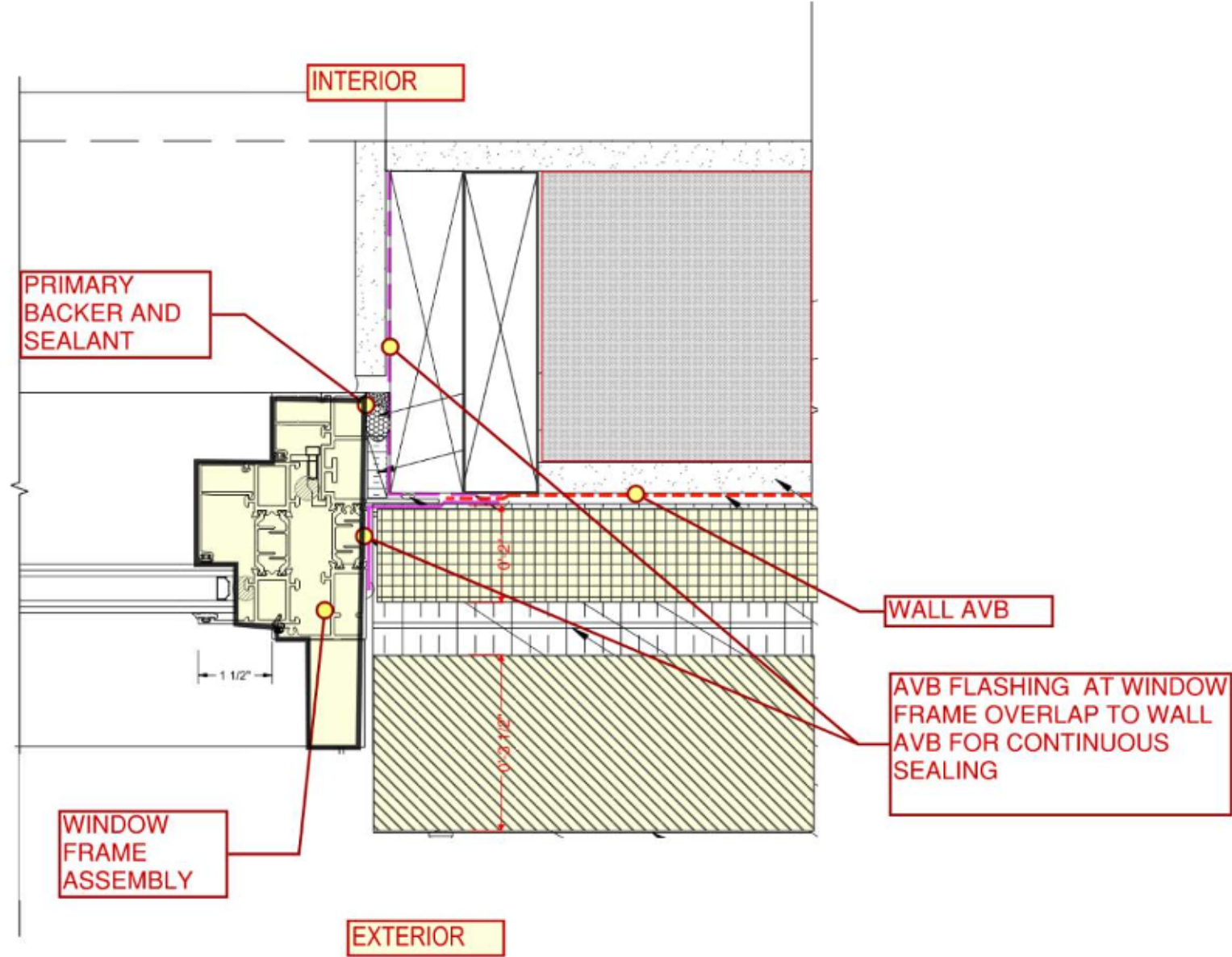
5/10/2023



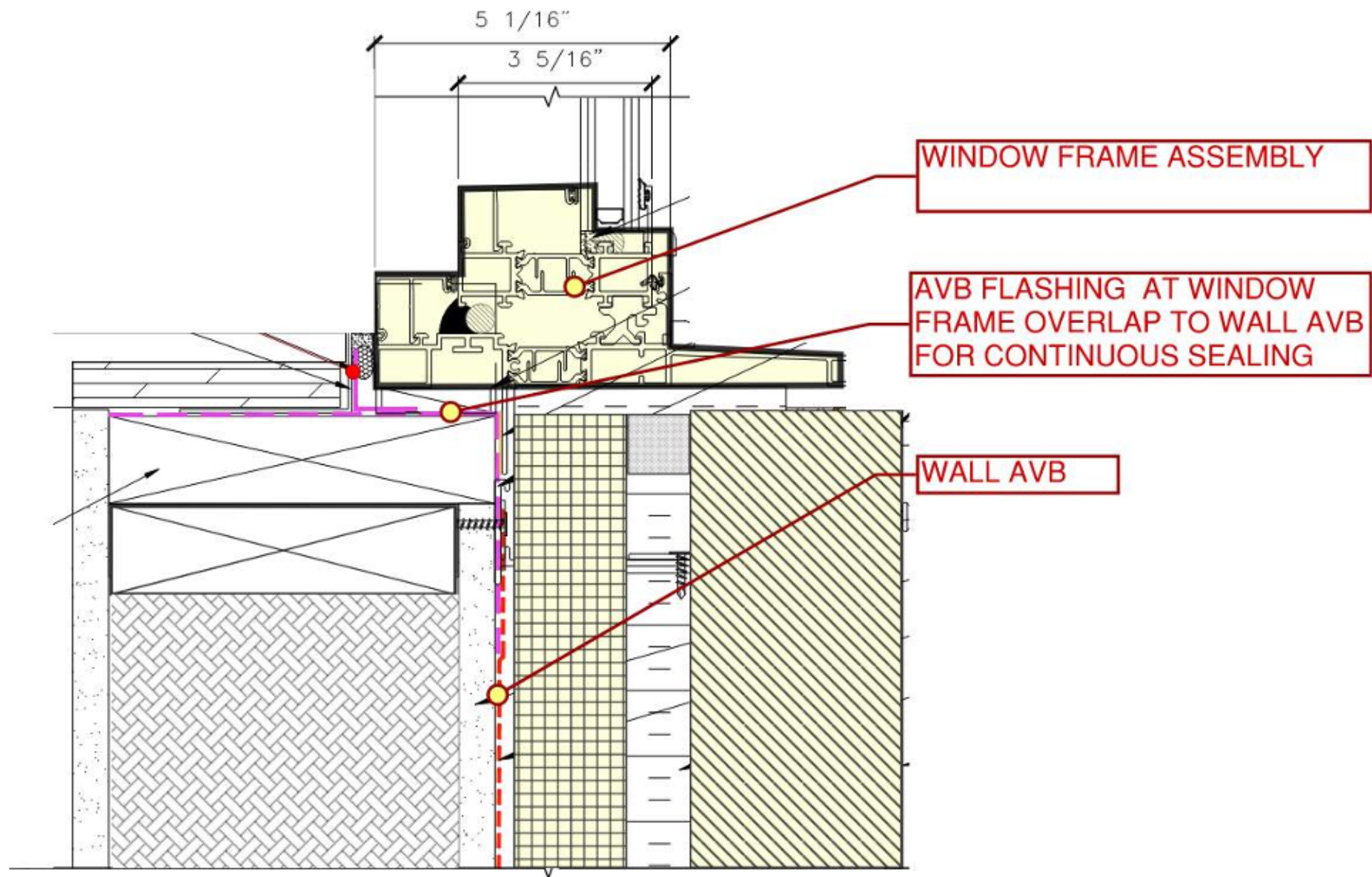
BH+A
will provide AVB transition from Fiber
cement wall to window (AVB flashing) to
be included under waterproofing
contractor scope

5/10/2023

AVB Wall to Window Sealing Example @ Jamb



AVB Wall to Window Sealing Example @ Sill



Dew Point Moisture Analysis

Dew Point “WUFI” Analysis Result



April 24, Revised April 28, 2023

Dan Chen, Principal
BARGMANN HENDRIE + ARCHETYPE, INC.
9 Channel Center Street,
Suite 300,
Boston, MA 02210

RE: Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
File No. 32742

Dear Dan:

Thank you for retaining Building Enclosure Associates, LLC (BEA) for services on the above referenced project.

We understood that the proposed development will be a three story, 32,000 sf Senior Center building located in Newtonville, MA. The building will be all wood frame construction and clad with masonry, fiber cement panels and cast stone panels.

BHA was interested in a WUFI Analysis to confirm that the proposed assemblies as designed will function without undesirable accumulations of moisture in the wall assemblies.

The Wall sections modeled were the 3 wall types described on Exterior Wall Types sheet A006 in the 4/15/23 drawing set.

The following 3 options were analyzed relative to the presence/absence of an interior vapor barrier and type:

1. No interior vapor barrier and 2 coats of interior latex paint (Perm Rating of 10)
2. Polyethylene Vapor Barrier
3. Smart Vapor Barrier

The following is a summary of results:

ASSUMPTIONS:

Exterior climate: Boston, MA
Interior climate: 70 degrees and 35% relative humidity (RH) in winter transitioning to 75 degrees and 55% RH in summer.
Airtightness: 0.15 ACH at 50 Pascals
Air/Water barrier: Henry Blueskin SA, .03 perms – Assumed
Vapor Retarder – As noted Above

Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
April 24, Rev. April 28, 2023
Page 2 of 6

Critical wall orientation for greatest moisture damage risk: northeast
Critical location and material for moisture damage: plywood sheathing

The air space behind the exterior cladding was assumed to be unvented for all three wall types:

RESULTS

The following is a summary of results of the WUFI Analysis for the 3 options reviewed.

The results were about the same for all three wall types with differences in the amount of time required to dry the plywood and reach equilibrium depending upon the type of vapor barrier used.

1. NO VAPOR BARRIER

In the WUFI simulations, the plywood sheathing for all three wall types had low moisture damage and low mold risk. The maximum annual moisture content of the sheathing was about 14%, well below the damage threshold value of 18%.

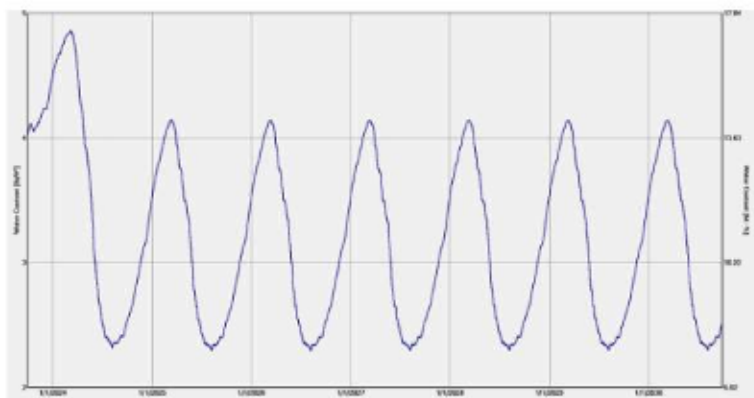
The peak annual relative humidity at the inside face of the plywood was about 83%. The Viitanen mold index at this location for all three wall types was less than 0.3 which is well below the damage threshold value of 3.0.

The WUFI simulations indicate that the wall assemblies have low risk of moisture damage as designed.

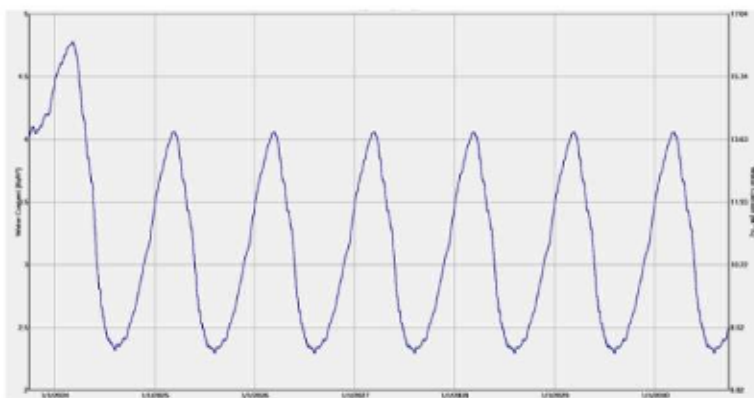
The graphs below show the plywood moisture content over a seven (7) year simulation period. The initial spike in moisture content in year 1 is from the assumed construction moisture which dries out quickly by the following year.

Dew Point “WUFI” Analysis Result

Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
April 24, Rev. April 28, 2023
Page 3 of 6

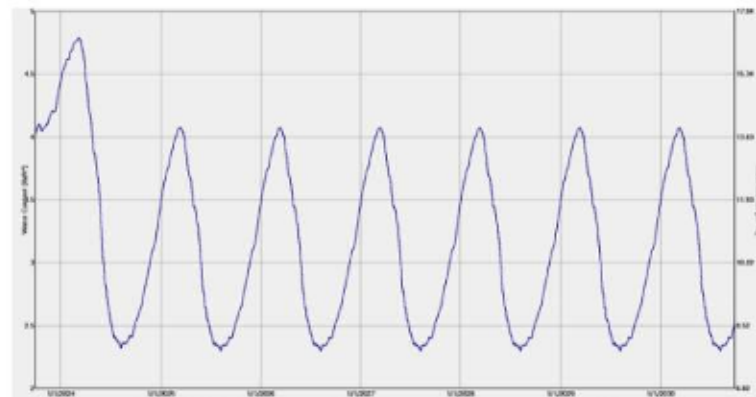


Graph 1: Wall assembly with fiber cement cladding:



Graph 2: Wall assembly with brick cladding:

Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
April 24, Rev. April 28, 2023
Page 4 of 6



Graph 3: Wall assembly with precast concrete cladding:

2. POLY VAPOR BARRIER

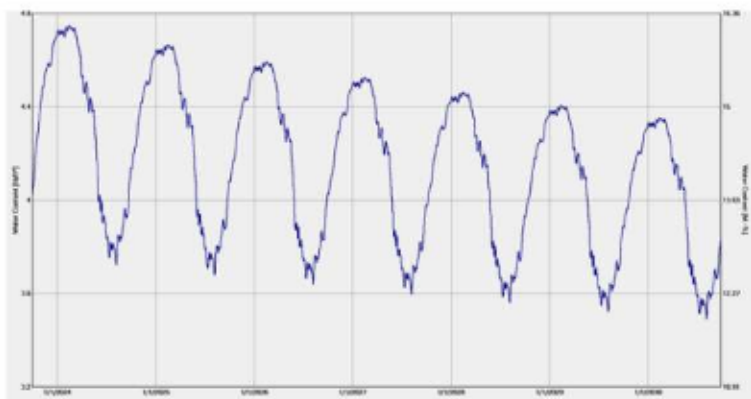
The wall assembly uses an impermeable air/water barrier and therefore adding the polyethylene vapor barrier creates a space in the wall assembly between two impermeable membranes.

In general, if moisture enters this type of space, drying happens very slowly and the elevated moisture content of the materials in this space can lead to mold and deterioration of moisture sensitive materials. In this assembly, the plywood is trapped in this space.

The graph below (for the wall with fiber cement cladding) shows that drying of construction moisture in the plywood occurs very slowly.

Dew Point “WUFI” Analysis Result

Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
April 24, Rev. April 28, 2023
Page 5 of 6



Graph 4: Fiber Cement Wall assembly with Polyethylene Vapor Barrier

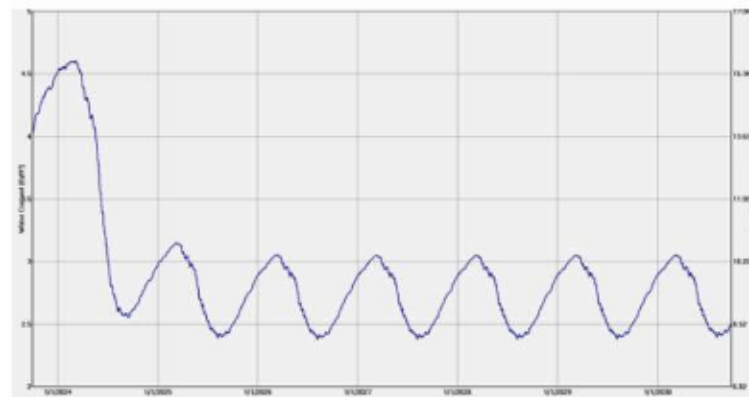
We are assuming a blower door tested assembly with low air infiltration from the interior and therefore the moisture content of the plywood remains below the damage threshold of 18% and mold risk is also low.

However, if there were unexpected air or water leakage, that moisture would be trapped and could lead to undesirable moisture related issues. Compare this to the assembly originally simulated without an explicit vapor retarder – Graph 1.

The construction moisture in the plywood dries in one year without the polyethylene, whereas with the polyethylene vapor barrier, the plywood does not reach equilibrium and is still drying after 7 years.

If a sheet vapor barrier is desired, a smart vapor retarder should be considered which would create a more resilient assembly than one with a polyethylene vapor barrier. The results for the same wall with a smart vapor retarder are presented below:

Report on WUFI Analysis
Newton Senior Center for Active Living (NewCAL)
345 Walnut Street, Newtonville, MA
April 24, Rev. April 28, 2023
Page 6 of 6



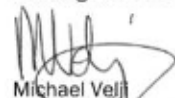
Graph 5: Fiber Cement Wall assembly with Smart Vapor Barrier

This wall assembly dries quickly similar to the wall without a sheet vapor retarder. It equilibrates at a lower moisture content than the wall with no vapor barrier because the smart vapor retarder effectively prevents water vapor diffusion from indoor air into the wall during winter compared to the original wall assembly which relies on latex paint alone for diffusion control.

At this juncture it is noted that this report is based upon a limited analysis/simulation of the proposed wall assemblies on the date of this study. Although care has been taken in the performance of the study, no representation regarding latent or concealed defects which may exist and no warranty or guarantee is expressed or implied. The report is made only in the best exercise of our ability and judgment and not intended to be contracting document.

We trust that this report meets your requirements. Please do not hesitate to contact this office if there are any questions.

Yours truly,
Building Enclosure Associates, LLC


Michael Velj
Principal-In-Charge

Thank you

