

Monomoy Regional Middle School

Siding Replacement Feasibility Study

School Committee Meeting

October 24, 2024



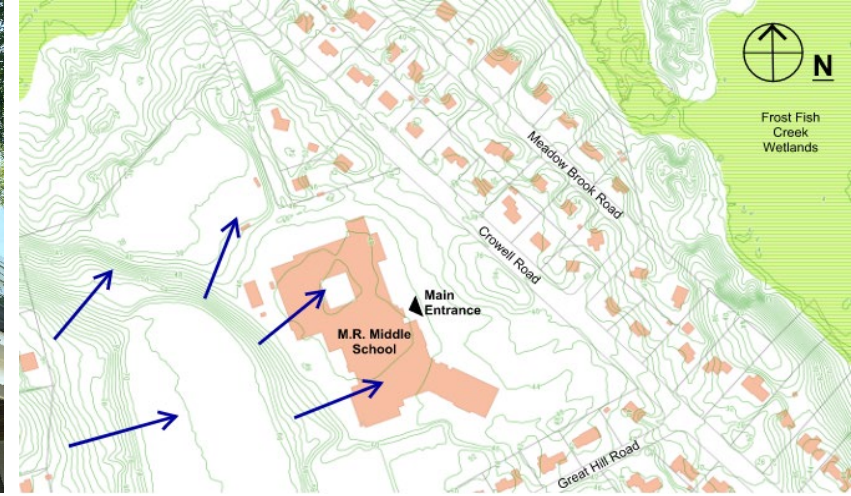


Agenda

- Scope
- Process
- Findings
- Recommendations
- Cost Estimate
- Next Steps

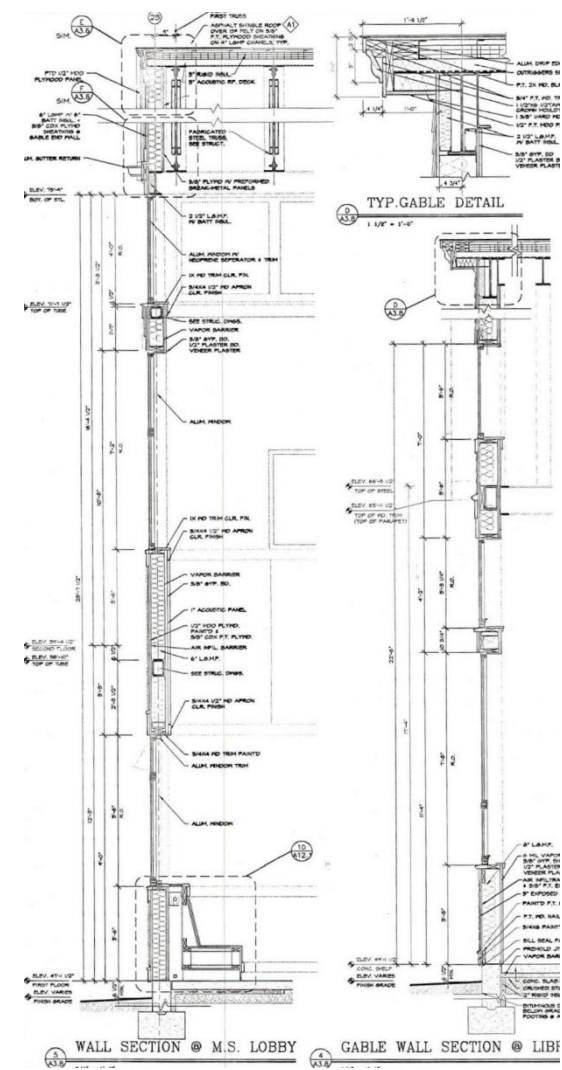
Scope of Work

- Engaged to Study Siding
- More than just Siding
- Water Management
- Interior Conditions
- Hazardous Materials Sampling
- Roofing & Flashing
- Windows
- Foundations & Slabs



Process

- Document Existing Conditions
- Study Original Construction Documents
- Perform Investigative Test Cuts
- Collect Samples for Testing
- Report Our Findings
- Recommend Renovations and Repairs
- Develop Feasibility Cost Estimate



Findings

On the Surface

- Attractive From a Distance
- Fits Local Cape Style
- Plenty of Daylighting



On the Surface

- Evident Decay upon Closer Look
- Extensive Lichen Growth
- Soft and Stained Shingles
- Substrate Exposed by Rot



Summary Photo



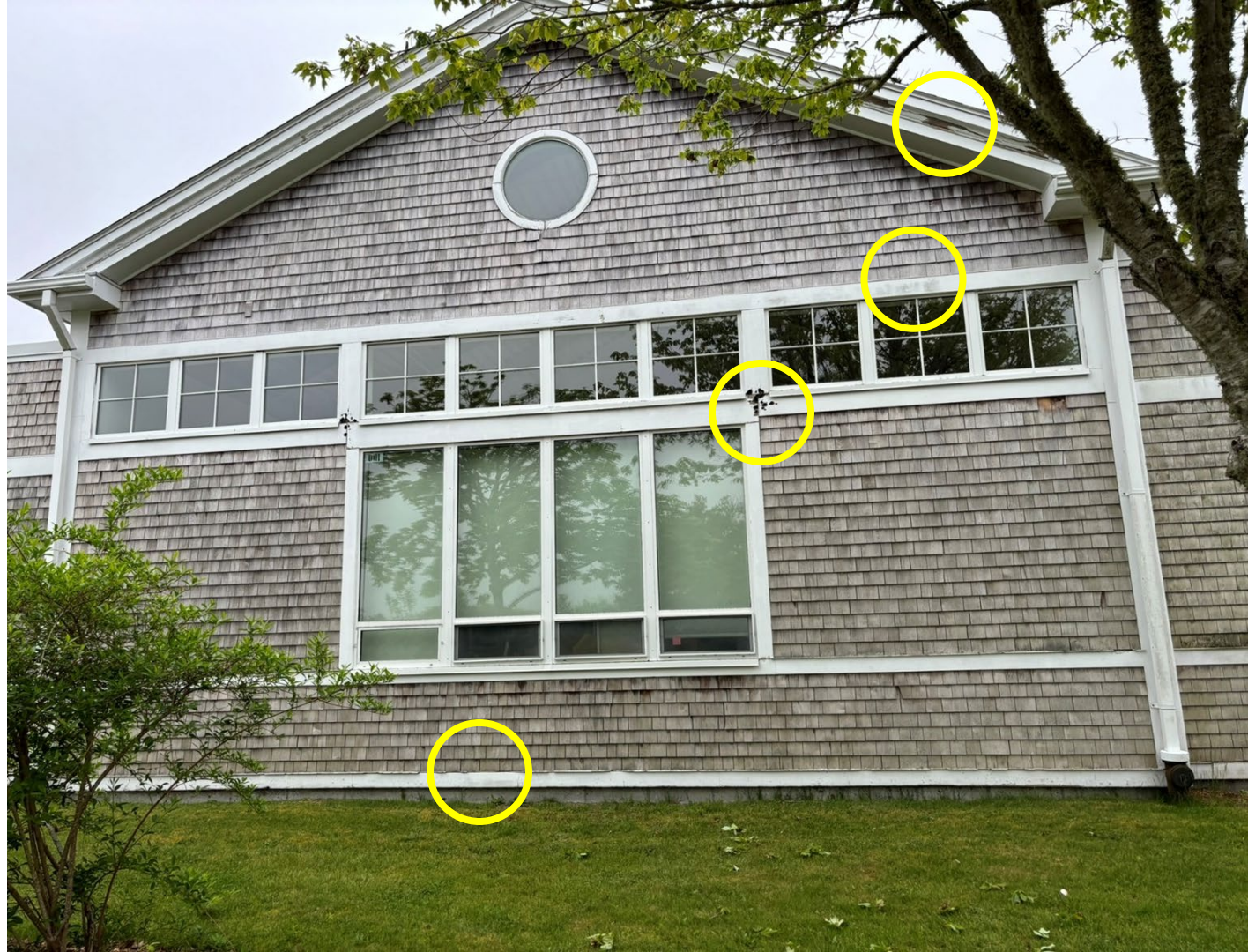
Summary Photo

- Loose Shingles
- Missing Shingles
- Lichen & Mildew Hbst



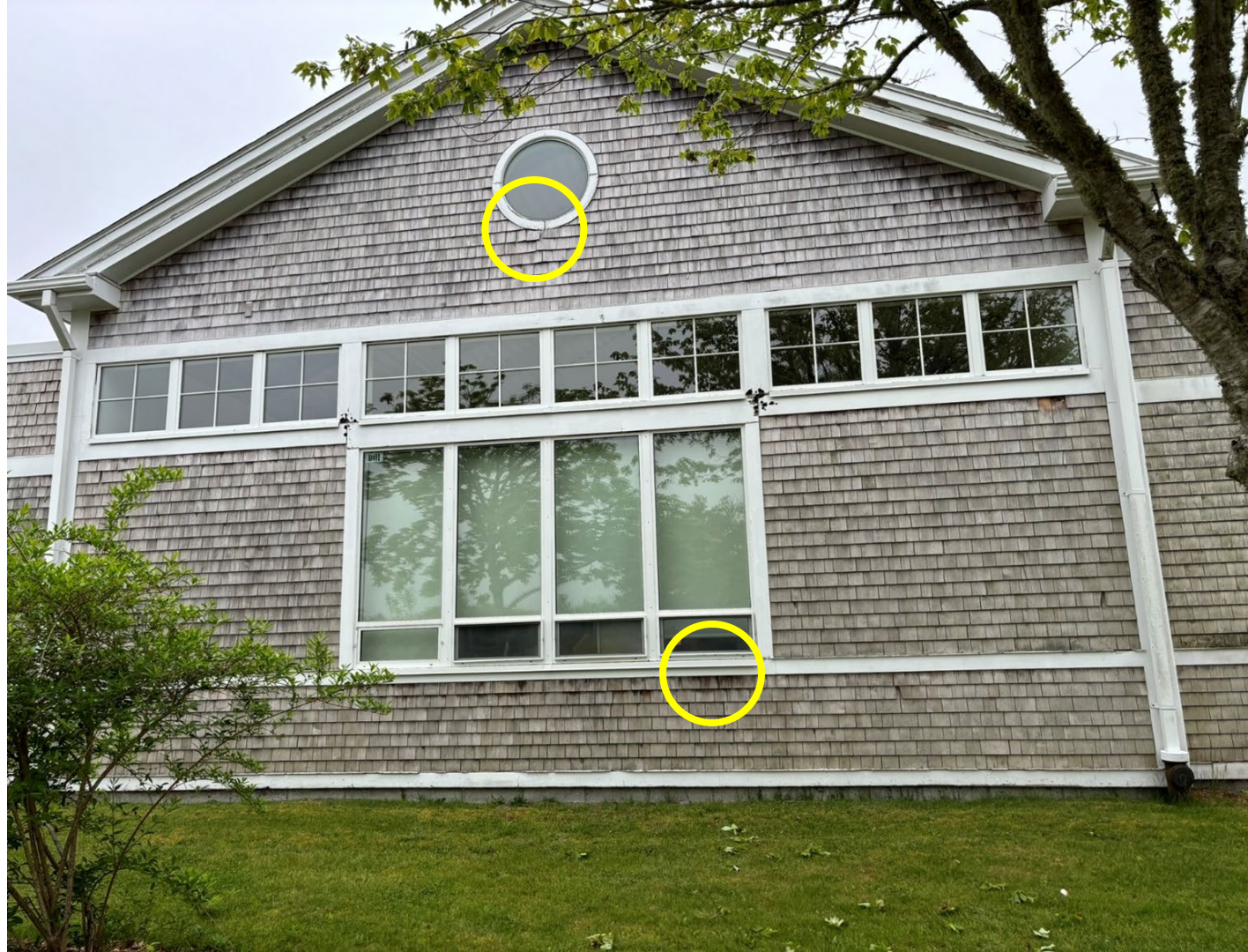
Summary Photo

- Rotted Trim
- Rotted & Missing Cap Trim
- Worn & Peeling Paint



Summary Photo

- Evidence of Water Infiltration
- Buckled Shingles
- Staining Below Sills



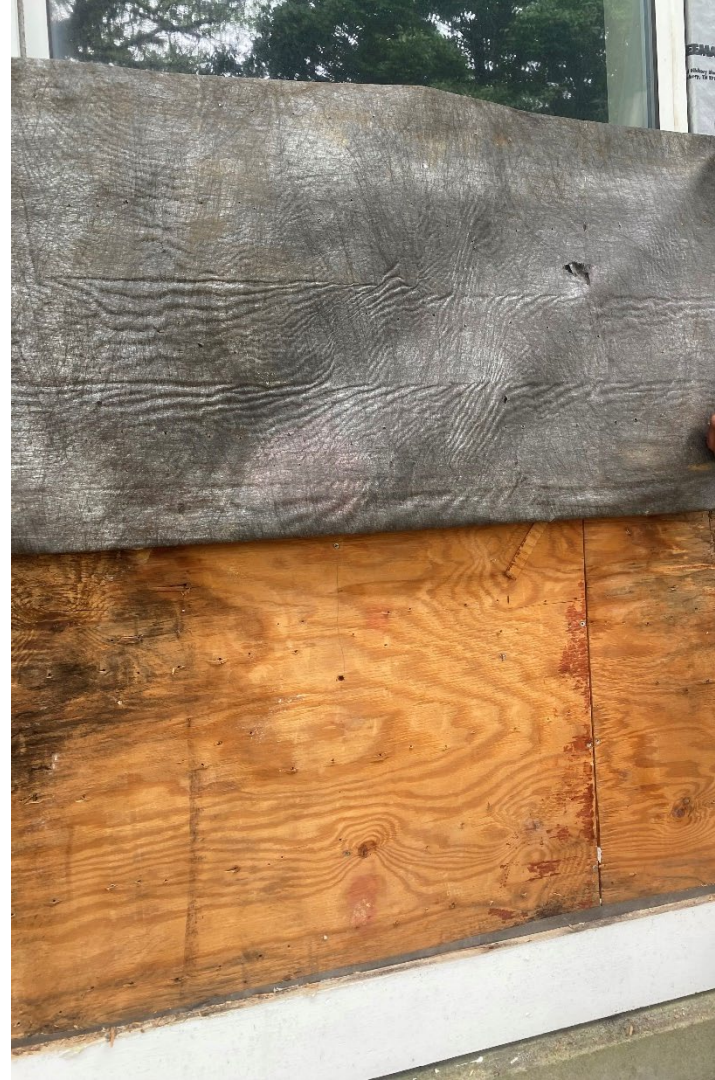
Interior Damage

- Water Damage to Finishes
- Leak Stains
- Suspect Mold Growth at Window Sills



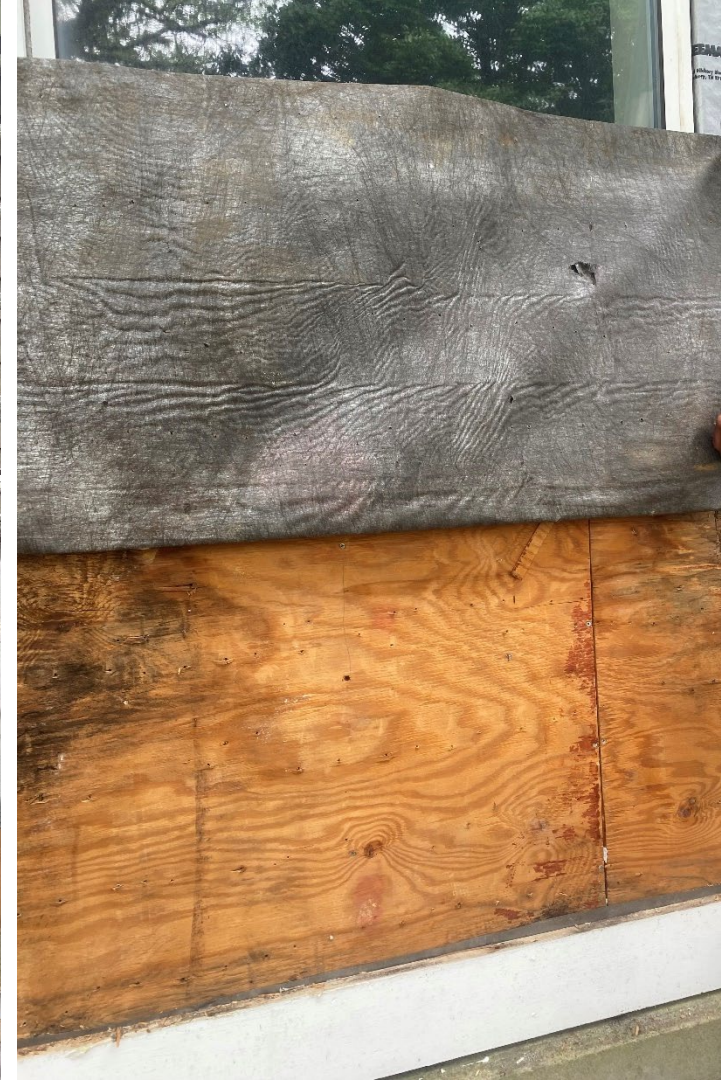
Test Cuts

- Identify the Infiltration paths and the makeup and condition of the substrates
- Insufficient Window Flashing
- Plywood Sheathing Stained and Rotted
- Evidence of Water Infiltration Behind Air/Water Barrier
- Water Testing Showed No Leaks Through Window Unit
- Insufficient Window Flashing of Rough Opening is a Likely Primary Source



Test Cuts

- **Where is the Water Infiltrating?**
- **Peel Back Siding Layers**
- **Insufficient Window Flashing**
- **Flywood Sheathing Stained and Rotted**
- **Evidence of Water Infiltration Behind Air/Water Barrier**
- **Water Testing Showed No Leaks Through Window Unit**
- **Insufficient Window Flashing of Rough Openings**



Test Cuts

- Damaged Insulation
- Rodent Infilt ration
- Oxidized (Rust ed) Framing
- Gap in Vapor Barrier – Interior Side of Wall



Test Cuts

- “Backwards” Base Flashing
- Severely Rotted Sheathing
- Dissimilar Air/Water Barrier
- Absent Vapor Barrier
- Missing Air/Water Barrier



Test Cuts

- Discontinuous Vapor Barrier
- Unsealed Air/Water Barrier Termination
- Oxidized Framing and Decking



Test Cuts

- Roof Cuts did Not Show Signs of Water Infiltration
- Upturned & Adhered Membrane Terminations
- Dry Sheathing



Roofing

- Roofing Shows Age but Few Signs it has Failed



Roofing

- Repairable Deficiencies, Dings, and Dents



Roofing

- Surface Granule Deterioration



Windows

- Most Glass is Clear and Intact
- Nearing End of Expected Life Span but few signs of failure
- Bay Windows are Exception
- Deteriorated Sealants



Foundations

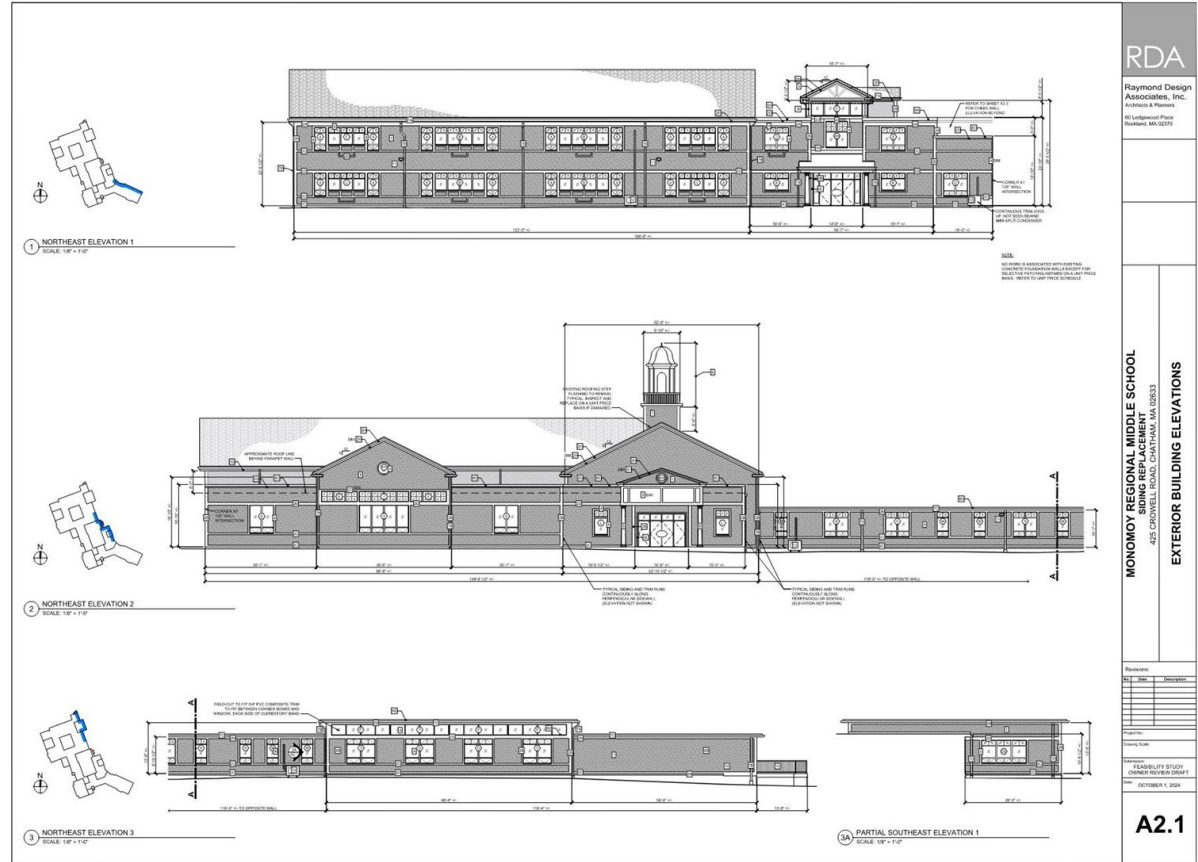
- Slab Test Cores Extracted, Good Condition
- Surface Stains from Condensate Run-Off
- Disconnect ed Downspout s, Insuff icient Leaders



Recommendations

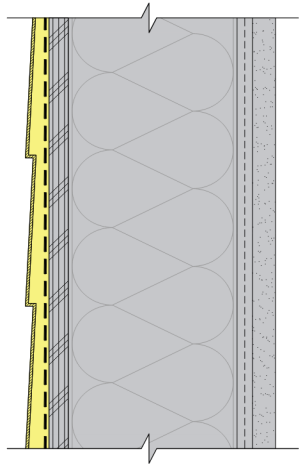
Siding Replacement

- Demolish All Existing Siding and Wood Trim Down to Plywood Sheathing
- Replace Rotted Sheathing on a Unit Price Basis
- Replace Batt Insulation on a Unit Price Basis
- New Finish Siding
- New Composite Trim to Match
- Flash Window and Door Openings.
- Existing Windows and Doors to Remain*
Replace Bay Windows
- Remove and Replace Downspouts, Light Fixtures, and Miscellaneous Items
- Selective Repairs to Roof Edges, Gutters, and Foundations



Siding Options

- Feasibility Estimate Based on Natural Cedar Shingles
- Other Options Include:
 - Polymer Shingle Panel
 - Polymer Clapboard
 - Higher Cost Options



Estimated Cost

Feasibility Cost Estimate

- **Construction Costs** for Proposed Scope is **\$4,841,415**
- Anticipate additional 30%+/- Soft Costs (Designer Fees, OPM Fees, Construction Contingency, Advertising, Etc.)
- With Soft Costs, Estimated **Total Project Cost** is Approximately **\$6,300,000**
- Feasibility Cost Estimate Includes Design Contingency
- Estimated Costs May Escalate as Time Passes
- **PHASING IS NOT RECOMMENDED**

TOTAL ESTIMATED CONSTRUCTION COST			\$ 4,841,415
Alternates (Markedup) :			
ALT1	Prepare, prime and repaint existing exterior metal doors and frames to remain.	ADD	\$ 30,895
ALT2	Replace alu. Windows - hurricane resistant w/ new incl. insulation board at all exterior cladding	ADD	\$ 3,820,042
ALT3A	Everlast composite interlocking clapboards (or equal) in lieu of cedar shingles.	ADD	\$ 186,542
ALT3B	CertainTeed Cedar Impressions.	DEDUCT	\$ (248,723)
ALT3C	CertainTeed CERTAplank Boards.	DEDUCT	\$ (373,085)
ALT3D	Beach House Shake by Derby Building Products.	DEDUCT	\$ (124,362)
ALT4	Fire rated cedar shingle siding premium	ADD	\$ 186,542

Next Steps

Next Steps

- Upon Approval of Feasibility Study / Phase Deliverables, Begin Design Development
- Infrared Moisture Testing of Exterior Walls
- Material Mock-Ups on MRSD
- Anticipate Spring 2025 Bidding



Questions & Comments

