

EXTERIOR INSULATION & FINISH SYSTEMS

PRELIMINARY INFORMATION

Style of Structure:

Two Story.

Estimate age of Structure:

The house is 5 - 10 years old.

Foundation:

Utility Basement. Finished into living space at least 75%.

Type of construction:

Frame.

Have any additions or modifications been made to the structure:

Currently remodeled and basement level finished off four years ago.

Window Construction:

Metal framing, with raised EIFS trim. Pella brand.

Door frame construction:

Wood framing, with EIFS trim.

Number of Walls Finished With EIFS Materials:

All exterior walls have at least some portion of the walls covered.

Builder:

Slick Sam.

EIFS Installer:

Excel.

Photo Front Exposure:

Faces West.



Photo Rear Exposure:

South half.



Rear Exposure Photo 2

North half.



Photo Right Side Exposure:

Faces South.



Photo Left Side Exposure:

Faces North.



CURRENT CONDITIONS

Today's Weather Conditions:

Dry 40's.

Prior Week Weather Conditions:

3" snow.

Bushes & Shrubs:

Satisfactory.

Evidence of Leakage From Interior:

Yes. Below window W3, Rear Door Atrium 3, and currently repairs underway under window W1. Water staining of the subfloor & wood framing noted. White growth noted in both locations.



Photo1,2,3=W3, Photo 4 Atrium Door.

Basement Level View of Exterior Walls:

No areas of moisture were noted on the unfinished walls of the basement level. The view of the basement level was limited to the unfinished portions. Unable to determine if any leakage or damage is present behind finished walls.

Moisture Testing Instruments Used:

Tramex Wet Wall Detector - An electronic instrument which has the ability to read elevated moisture levels up to 3" deep behind the wall surface. The unit was recalibrated at time of the inspection and on each different wall surface. Delmhorst BD2000 which is used to penetrate the wall surface to determine the exact percent of moisture level in the contacted surfaces behind the EIFS foam. The unit was recalibrated prior to today's inspection.

EXTERIOR INSULATION & FINISH SYSTEMS - MATERIALS & INSTALLATION

Brand of EIFS materials used:

Senerflex, by Synergy, Inc.

Class of System Installed.

Polymer based type system. PB stands for polymer based system. This system's coatings contain high amounts of polymer (plastic resins) giving a high degree of flexibility.

Substrate:

Sheathed substrate consisting of: Oriented strand board.

Insulating Foam Installed:

Beige Polyisocyanurate insulation boards. Extruded Polystyrene. Blue insulation boards.

Thickness of insulation boards:

5/8" insulation panels. This is the minimum thickness of the panels installed. Most of the panels were 3/4". The areas with the deep grooves cut are at least 2" thick.

Attachment Method - Insulation Board:

Mechanical. Screws and washers.

Mesh Noted:

Standard weight mesh was noted.

Color of Mesh Noted:

White mesh is common to: Firestone, by Simplex Products Division of H.B. Fuller Company.
Senerflex, by Senergy, Inc.
Full-O-Mite, by Tec, Inc. an H.B. Fuller Company.
Pleko Therm System, by Pleko Products, Inc.

Parex System 3, Parex, Inc.

Base Coat

The thickness of the resinous base coat was noted, and it appears to be 1/8" or a little less in the observed location. At least half of the bottom termination edge is not correctly basecoated to the back edge. And very little has finish coat to the bottom back edge.



Backer Rod Verified:

No backerrod noted in any areas where expected to be found.

Vapor Barrier Noted:

None noted.

Recommended Sealants:

RECOMMENDED SEALANTS. There are several preferred manufacturers of sealants. The two most popular are Dow 790 and PreCora 890. Both are available in an assortment of colors, and color matching is available through the manufacturer. These brands are preferred due to their non-hardening and lack of deterioration qualities in regard to damage caused by ultraviolet radiation characteristics. Most manufacturers have specific recommendations or requirements for their installations.

TERMINATIONS:

Siding Lower Edges in Relation to Grade:

Satisfactory - The bottom edges of the siding are clear of soil the recommended 8" above grade.

Comments:

The EIFS materials are covered with the concrete back step to the atrium door. This condition is not acceptable.

Backwrapping Condition at Terminations & Lower Edges:

Action Necessary - After an inspection of the exposed terminations, backwrapping was not evident in some locations. This condition is not acceptable considering industry standards. All penetrations are to be backwrapped during installation with a base coat, and then a backer rod installed in the gap between the penetrating material and the installed EIFS material, including light fixtures and electrical conduit, air conditioning penetration and dryer vent. Lower termination is to be installed according to EIMA Guidelines.



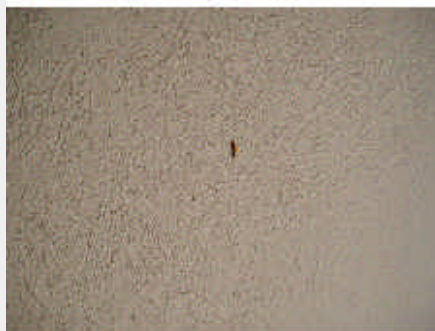
Comments:

Action Necessary - Electric outlet on rear of house is not correctly sealed and backwrapped.



Surface Defects noted:

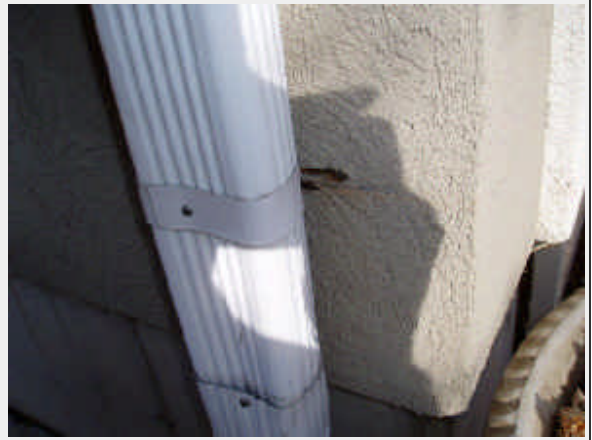
Action Necessary - There is physical damage to the siding material. Repairs are needed to prevent moisture intrusion. Damage in wall to right of side garage door. Also damage to trim right of GD#3 and freeze damage to the fireplace stack .



Fireplace, GD#3, Right of Garage Entry

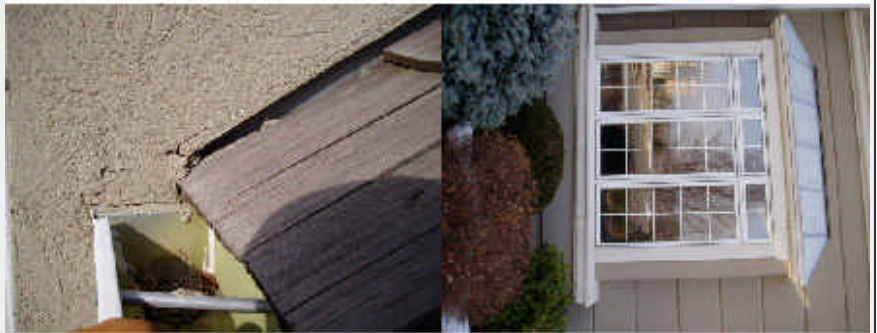
Gutter - Downspouts:

Attention Needed- The downspouts' securing straps appear to be nailed through the siding. Industry standards call for a plastic sleeve to be inserted through the siding and then a screw be installed through the sleeve. Repairs are needed. EIMA Guidelines 1996 Version, page 22.



Intersecting Roof to Wall Flashing:

Action Necessary - There is no kick-out installed at the lower edge where the lower roof edge terminates at the siding. This condition will allow water to enter the wall cavity. This condition is not acceptable. The National Association of Home Builders has determined the lack of kick-outs to be the second leading cause of moisture intrusion in walls, second only to window misinstallations. EIMA Guidelines, 1996 Version, page 27. Only kickout location #KO-6,



KO # 7 Copper roof over W#2.

on the South wall, appears to have been an attempt to make a kickout.

Also noted is the copper roof extension over windows W#1 & W#2, both of the se copper extensions are in contact with the EIFS finish material on both shoulders and do not extend outward over the front edge far enough for the water to run off and fall to the ground. As installed both of these extensions contribute to the moisture conditions noted.

Intersecting Wall Flashing Comments:

Adequate clearance between roof covering and adjacent wall covering.



Soffit & Gable Termination:

Action Necessary - The top edge termination at the soffit does not appear to be correctly installed with the required 1/2" gap with backer rod and approved sealant. Repairs are needed. No sealants at soffit nor at rake boards. EIMA Guidelines Version 1996, pages 26.

Moisture Readings:

Action Necessary - Higher than acceptable moisture readings were recorded. Readings in excess of 20% were noted. Excessive moisture readings were noted in the walls: Below windows, W#13, W#14, W#17. There are 2 other windows that have readings in excess of 18%, W#20, W#16. There are three other windows that were not tested The window that is being replaced. W#1, and W#2 and W#3 has foam so thick on the underside that moisture penetration pins are not long enough to penetrate to the substrate. The basement view under Window W#2 shows staining wood rot and mold growth. The area under Atrium door #3 was not accessible due to the concrete step but the under side from the basement shows rotted subfloor and mold. Photos of the Individual moisture readings are listed in Photo Log #6 thru end.

PENETRATIONS:

Penetrations Noted:

Air Conditioning Line Set. Air Conditioning Service Disconnect. Doorbell. Rain Gutter Downspout Attachments. Clothes Dryer Vent. Electric Service Entry. Electrical Outlets. Miscellaneous Electrical Fixtures. Gas Line Pipe. Hose Bibs. Intercom orr stereo speakers, Lighting Fixtures. Telephone Service Entry.

Penetrations Incorrectly Installed:

Air Conditioning Line Set. Air Conditioning Service Disconnect. Doorbell. Rain Gutter Downspout Attachments. Clothes Dryer Vent. Electrical Outlets. Miscellaneous Electrical Fixtures. Gas Line Pipe. Hose Bibs. Intercom orr stereo speakers, Lighting Fixtures. Telephone Service Entry. EIMA Guidelines 1996 version pages 21, 23,24, 25.



Dryer, Misc Elect, Tele,Cable, A.C.

TERMINATIONS AT WINDOWS:

Window Terminations:

The installed head flashing appears to be installed correctly on half of the windows and several windows show no flashing W#18 & W#19. There may be others that will need to be addressed when making the recommended modifications. Action Necessary - The window vertical terminations and under sides of the sills do not appear to be correctly installed. The correct installation should be the insulation board with basecoated backwrapping and a 3/8" gap allowing for a backer rod to be installed with a manufacturer approved sealant covering the backer rod and edges between the siding and window header, brick mould, or window sill. All installed windows are similar. The appropriate detail is noted in EIMA Guidelines 1996 version, page 6 & 7 & 8.

Comments:

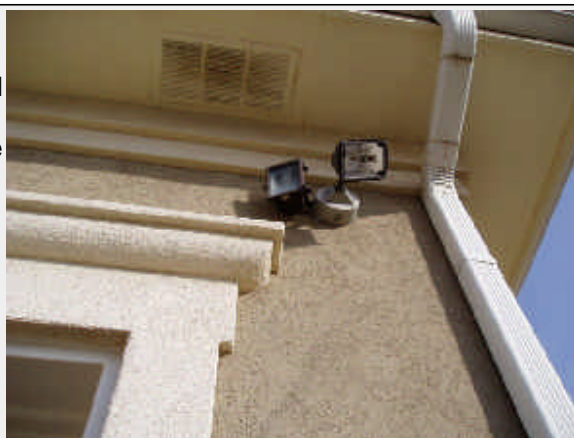
Sills on several windows have come loose which allows water entry. This condition will not be present after correct sealant and backer rods are installed.



TERMINATIONS AT DOORS:

Door Terminations:

There is a lack of flashing or incorrectly installed flashing above the door. Flashing is installed to prevent water from running down the wall and into the wall cavity around the door frame. Otherwise, moisture can enter and cause damage to the substrate or framing. The flashing must be wider than the door frame and extend to daylight. Action Necessary - The vertical terminations at the door do not appear to be correctly installed. The correct installation should be the insulation board with base coated backwrapping and a 3/8" gap allowing for a backer rod to be installed with a manufacturer approved sealant covering the backer rod and edges between the siding and door brick moulding. Doors located on: Overhead Door #1 Garage Door #2 Garage Door #3. EIMA Guidelines 1996 version, page 12 & 13.



Door Termination Comment:

There are several open gaps among vertical terminations at doors that can allow water entry. These will be eliminated when proper backerrod and sealants are installed.



RAISED TRIM & ARCHITECTURAL FEATURES

Description & Locations:

Raised banding noted around windows. Windows on first floor have banding above the windows that has a flat top surface. This is not allowed due to water sitting on the surface that is detrimental to the finish coating which will become soft. As noted in EIMA Guidelines 1996 Version, page 7.



Conditions Noted in Raised Trim & Architectural Features:

Window sills below all windows noted. Other than windows #1 thru #4, the installed sills should be tapered as noted above. Typical with or without a window pan is pictured in EIMA Guidelines, 1999 Version, page 14.



PRIOR REPAIRS NOTED

Damage repairs noted:

Below window W#16 there is evidence of a repair due to a vertical crack. I am pointing to repair in the left side of photo.



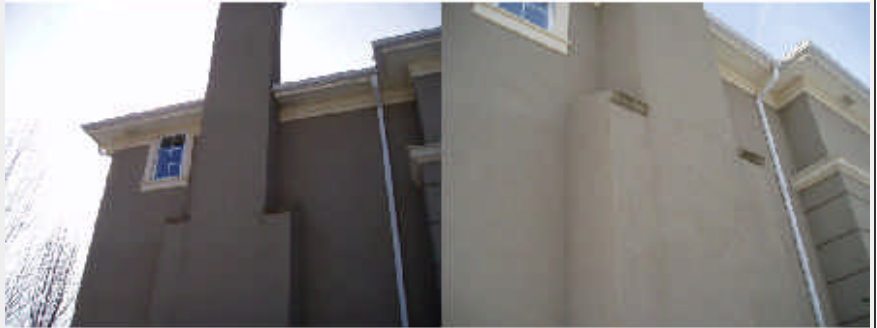
Comments:

Repairs to Window #1 are in progress. Note water staining on the remaining foam which indicates prior water entry.



FIREPLACE CONDITION.

The fireplace is not flashed correctly as is evidenced by the water that is running down the stack from the roof edge to the concrete foundation below. Water was running out indicating that the stack substrate materials have been soaked and repair not only to the EIFS materials but the substrate will be needed after appropriate flashing is installed.



Note water visible on bottom of stack.

PHOTO LOG

Photo Log:

Photo #1:

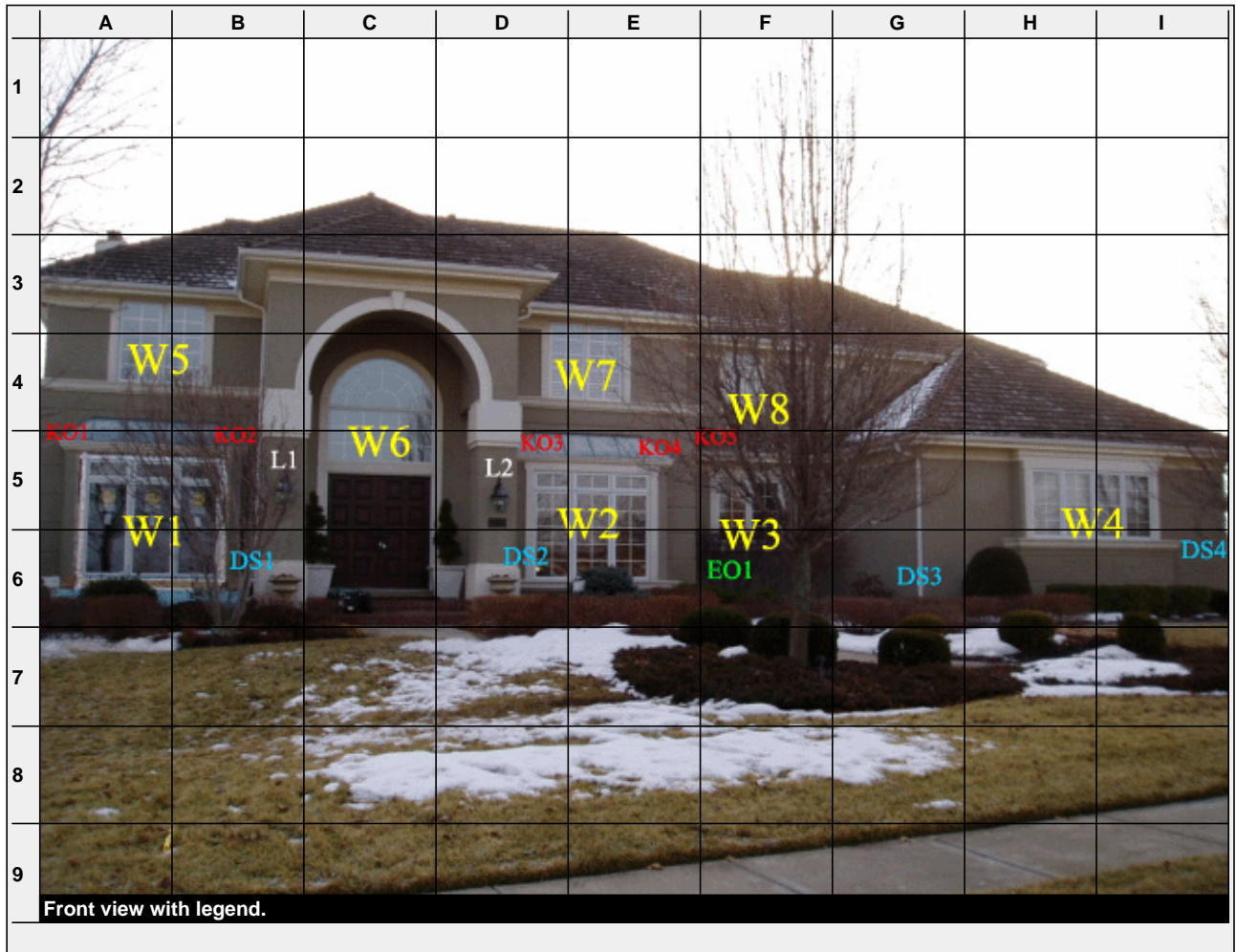


Photo #2

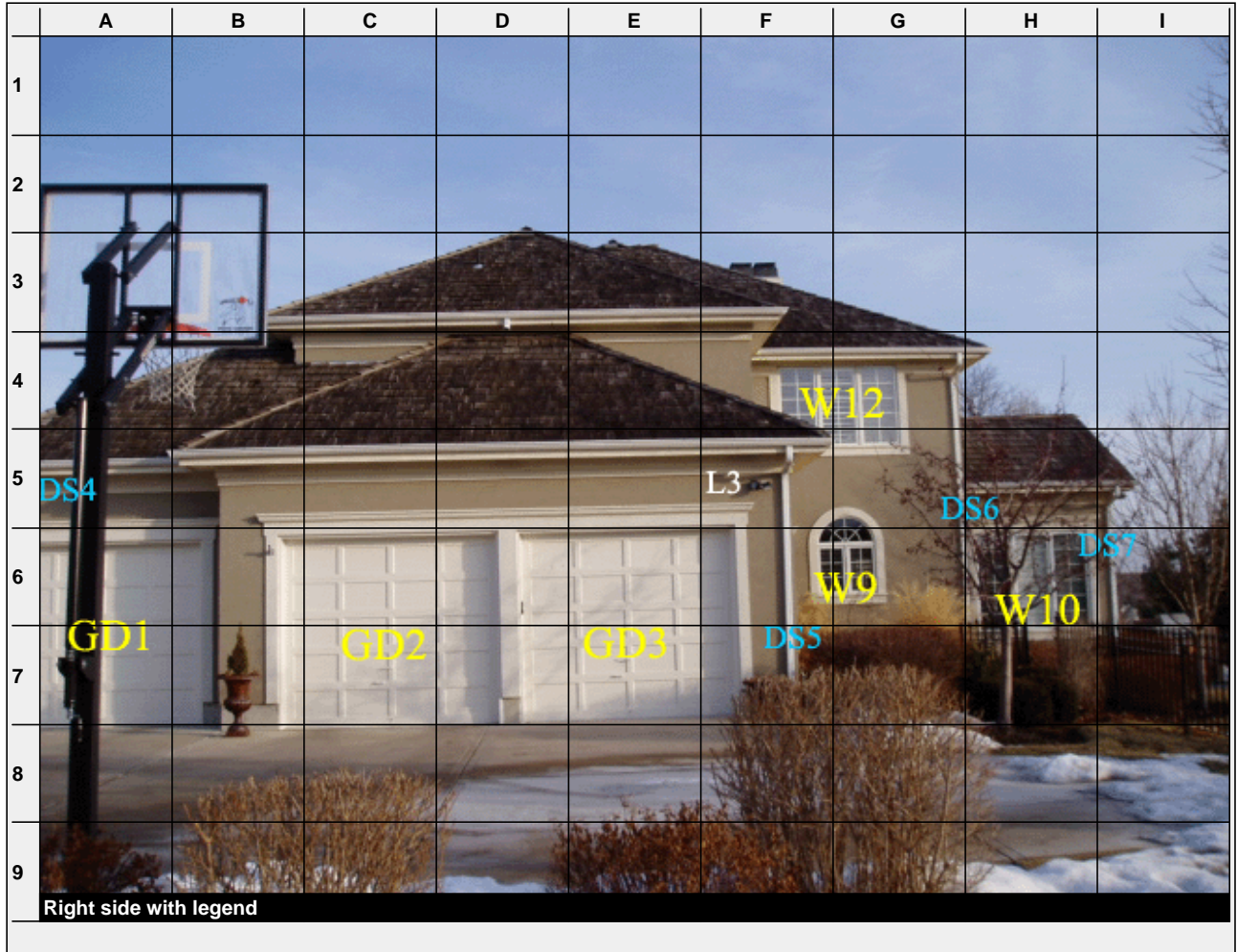


Photo #3:



Photo #4:



Photo #5:

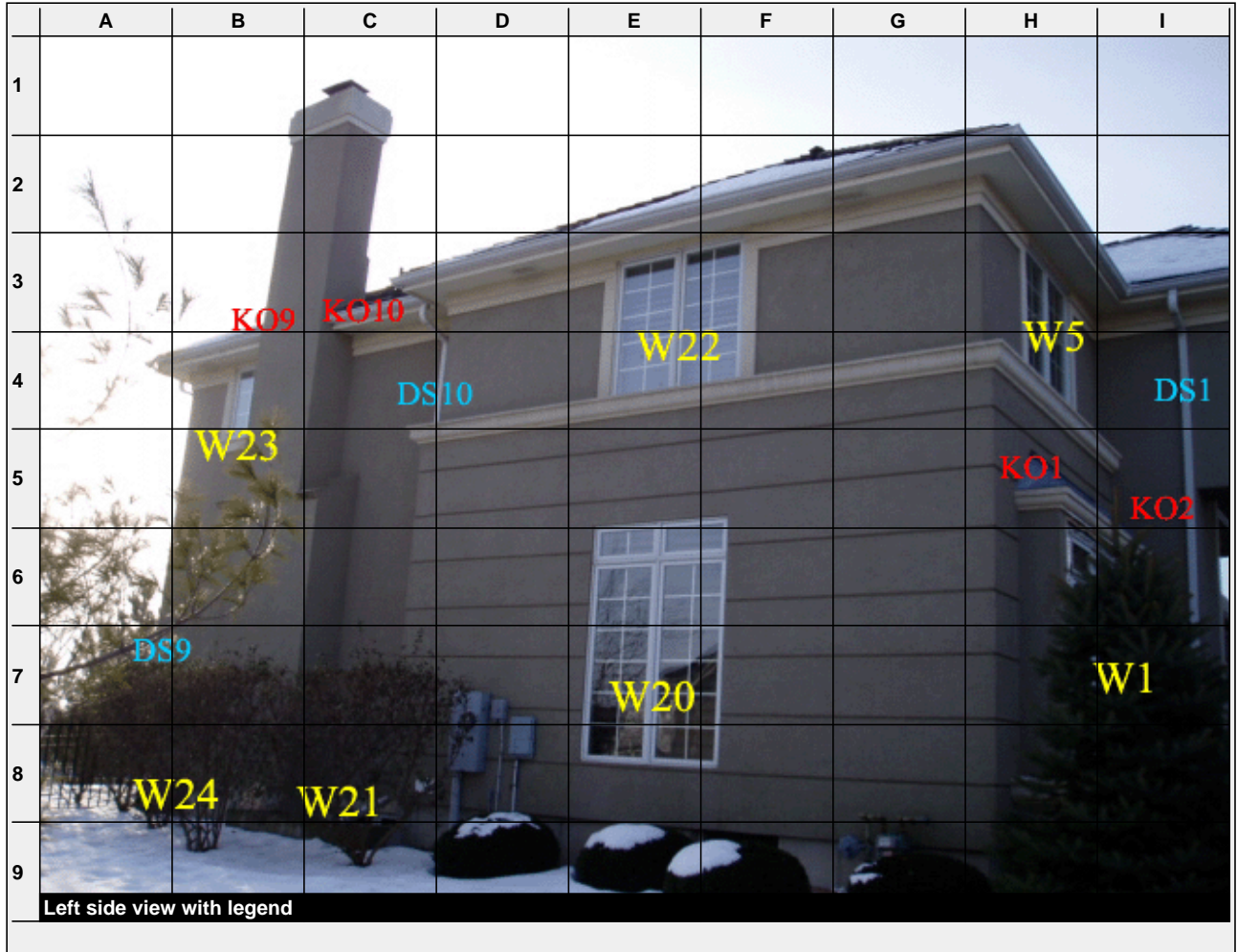


Photo #6:

Stacked window W#13.



Left, Left Center, Right Center, Right

Photo #7:

Window W#14.



Left, Center, Right.

Photo #8:

Window W#15.



Photo #9:

Window W#16.



Photo #10:

Window W#17.



Left, Center.