



SS Consultation Services
6121 49th Ct. E
Ellenton FL, 34222
shawn@ssconsultation.com
941-592-9210

1

Mr. O'Brien,

As requested, SS Consultation Services has completed a Cement-Based Plaster Stucco Evaluation of the home located at 11828 Carolwood Lane, Jacksonville, FL 32258. The scope of SS Consultation Services in regards to this residence consisted of inspecting the exterior stucco system, particularly stucco over frame and document and report the observations.

1) General Description

a) The Garikipati & Kota residence is a one-level, detached, single family residential structure. The wall system is constructed of stucco over frame. The home was constructed in 2011. According to the Jacksonville Property Appraiser the home consists of 3468 sq. ft. under roof. The home was constructed by KB Home. The front of the home faces Northeast.

2) Observed Condition of Evaluated Areas

a) The scope of SS Consultation Services in regards to this residence consisted of inspecting the exterior stucco system, particularly stucco over frame and document and report the observations. Our evaluation was focused on the stucco applied to the exterior walls of the home. Within these areas, cracking was observed within the cement-based plaster with an increased presence near openings within the wall systems.

3) Applicable Building Code and Specifications

a) The residence was constructed in 2011 and according to the Jacksonville Inspections Division the Permit was issued in 2011. Based on that permit date the effective dates of the Florida Building Code (FBC), the construction of the home should fall under the 2007 FBC.

i) **R101.1 Title.** These provisions shall be known as the *Florida Building Code, Residential* and shall be cited as such and will be referred to herein as "this code."

ii) **R101.2 Scope.** The provisions of the *Florida Building Code, Residential* shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress and their accessory structures. Construction standards or practices

iii) which are not covered by this code shall be in accordance with the provisions of *Florida Building Code, Building*.

(1) **Exception:** Existing buildings undergoing repair, alteration or additions, and change of occupancy shall comply with the *Florida Existing Building Code*.





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- iv) **R101.2.1** The provisions of Chapter 1, *Florida Building Code, Building* shall govern the administration and enforcement of the *Florida Building Code, Residential*.
- v) **FBC (B) 101.2 Scope.** The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.
 - (1) **Exceptions:**
 - 1. Detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the *Florida Building Code, Residential*.
- vi) **101.3 Intent.** The purpose of this code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations.
- vii) **101.4 Referenced codes.** The other codes listed in Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.
- viii) **102.1 General.** Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.
- ix) **102.4 Referenced codes and standards.** The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.
- x) **105.4.1 Permit intent.** A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code.





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3

- xi) **R703.1 General.** Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4.
- xii) **R703.6 Exterior plaster.**
- (1) **R703.6.1** Exterior use of Portland cement plaster shall comply with the application requirements of
 - (2) ASTM C 926.
 - (3) **R703.6.2** Installation of exterior lathing and framing shall comply with the application requirements of ASTM C 1063.
- xiii) **R703.8 Flashing.** Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:
1. Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.
 2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
 3. Under and at the ends of masonry, wood or metal copings and sills.
 4. Continuously above all projecting wood trim.
 5. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction.
 6. At wall and roof intersections.
 7. At built-in gutters.
- xiv) **7.11.5 Foundation Weep Screed**—Foundation weep screed shall be installed at the bottom of all steel or wood framed exterior walls to receive lath and plaster. Place the bottom edge of the foundation weep screed not less than 1 in. (25 mm) below the joint formed by the foundation and framing. The nose of the screed shall be placed not less than 4 in. (102 mm) above raw earth or 2 in. (51 mm) above paved surfaces. The weather resistive barrier and lath shall entirely cover the vertical attachment flange and terminate at the top edge of the nose or ground flange.
- xv) **ASTM C1063 Table 3** Where plywood is used for sheathing, a minimum of 1/8 in. (3.2 mm) separation shall be provided between adjoining sheets to allow for expansion

xvi) **FBC 1403.8** In order to provide for inspection for termite infestation, clearance between exterior wall coverings and final earth grade on the exterior of a building shall not be less than 6 inches (152 mm).

xvii) **ASTM C 926 Table 4 - Nominal Plaster Thickness** - per Table 4, the minimum thickness of stucco installed with metal base over solid base is a 7/8" 3 coat system.

TABLE 4: Nominal Plaster Thickness^A for Three- and Two-Coat Work, In. (mm)

BASE	Vertical			Total	Horizontal			Total
	1st Coat	2nd Coat	3rd Coat ^B		1st Coat	2nd Coat	3rd Coat ^B	
Interior/Exterior								
Three-coat work ^C								
Metal plaster base	3/8 (9.5)	3/8 (9.5)	1/8 (3)	3/4 (22)	1/4 (6)	1/4 (6)	1/4 (3)	3/4 (16)
Solid plaster base:					Use two-coat work			
Unit masonry	1/4 (6)	1/4 (6)	1/8 (3)	3/8 (16)				
Cast-in-place or precast concrete	1/4 (6)	1/4 (6)	1/8 (3)	3/8 (16)				3/8 (9.5), max
Metal plaster base over solid base	1/2 (12.5)	1/4 (6)	1/8 (3)	3/4 (22)	1/2 (12.5)	1/4 (6)	1/8 (3)	3/4 (22)
Two-coat work:								
Solid plaster base:								
Unit masonry	3/8 (9.5)	1/8 (3)		1/2 (12.5)				3/8 (9.5)
Cast-in-place or pre-cast concrete	1/4 (6)	1/8 (3)		3/8 (9.5)				3/8 (9.5)

^A Exclusive of texture.

^B For solid plaster partitions, additional coats shall be applied to meet the finished thickness specified.

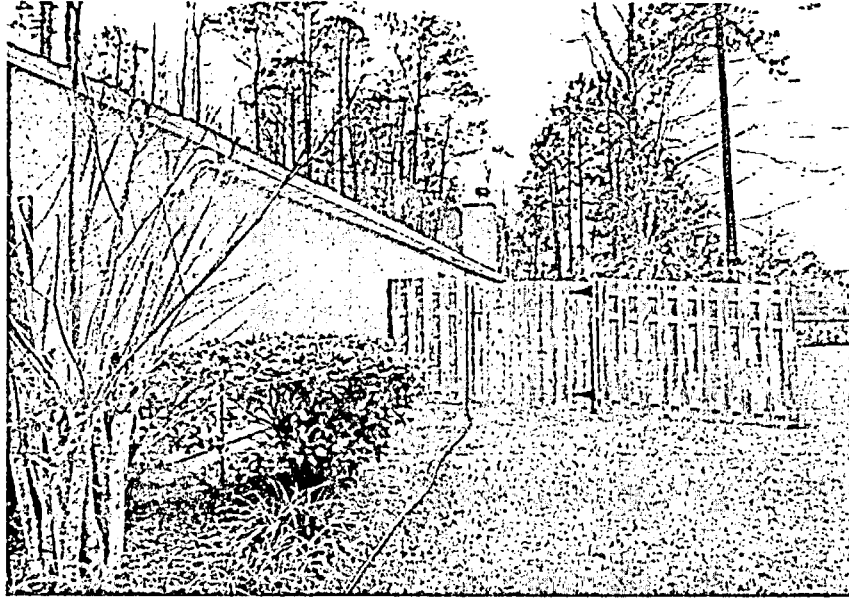
^C For exposed aggregate finishes, the second (brown) coat shall become the "bedding" coat and shall be of sufficient thickness to receive and hold the aggregate.

4) Elevations

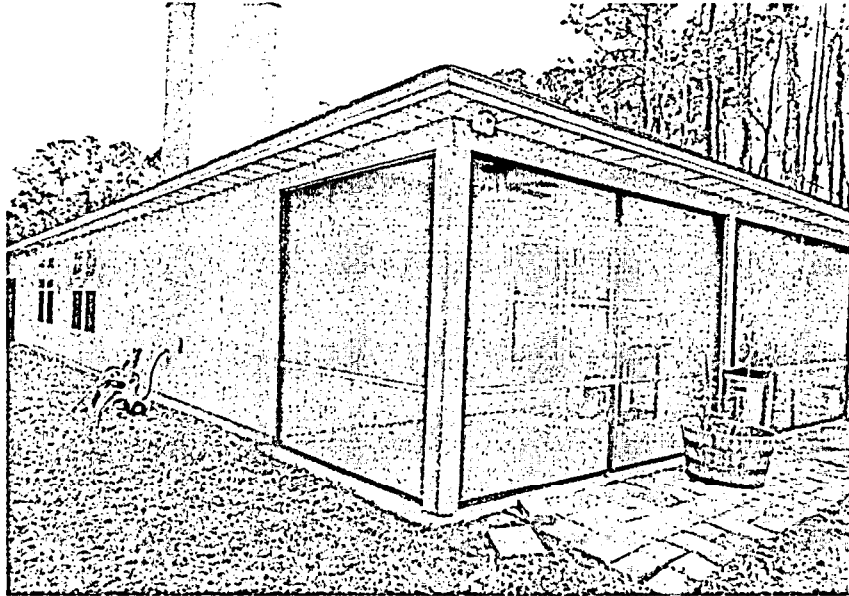
Front Elevation



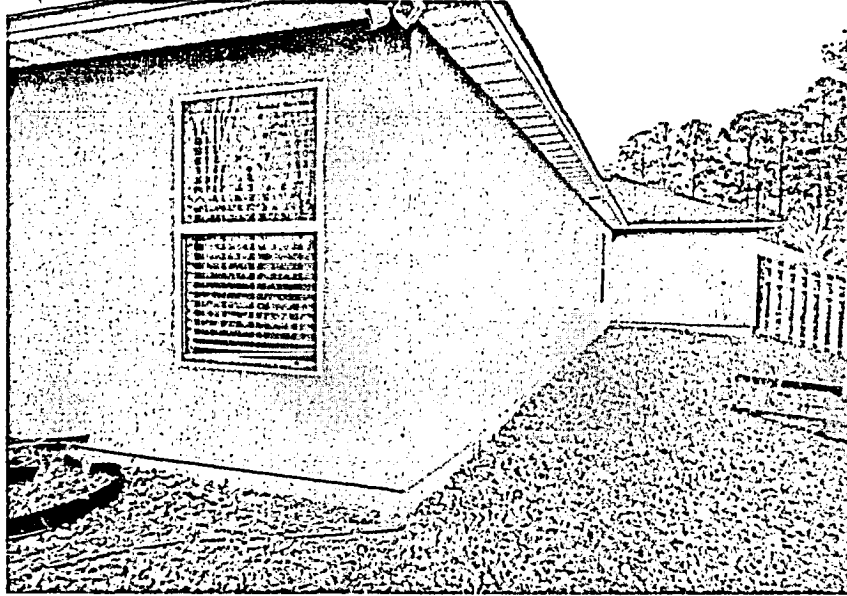
Left Elevation



Rear Elevation




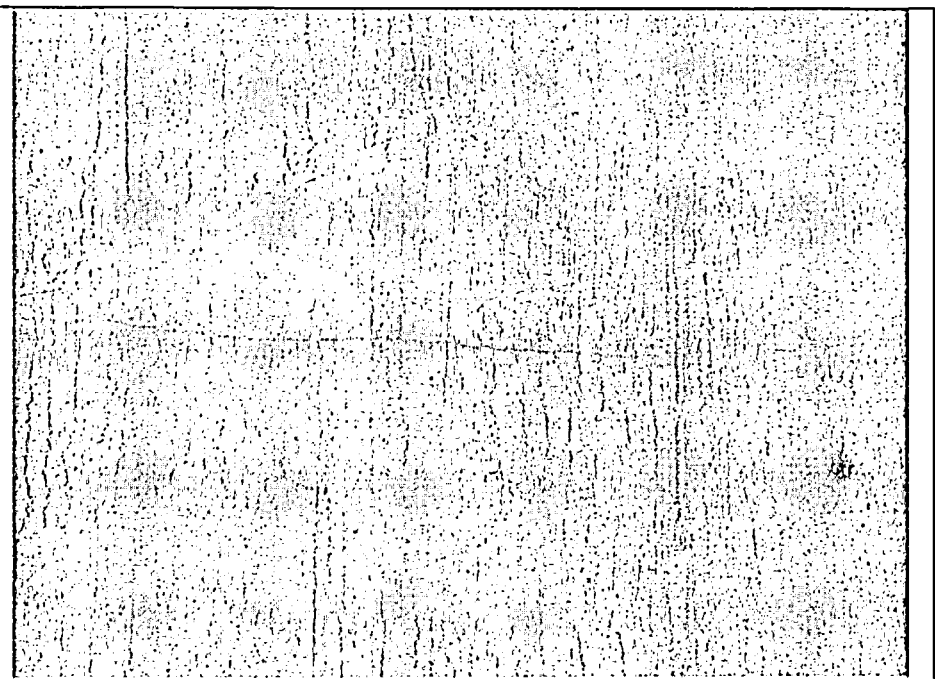

Right Elevation





5) **SS Consultation Services Inspection of Residence**

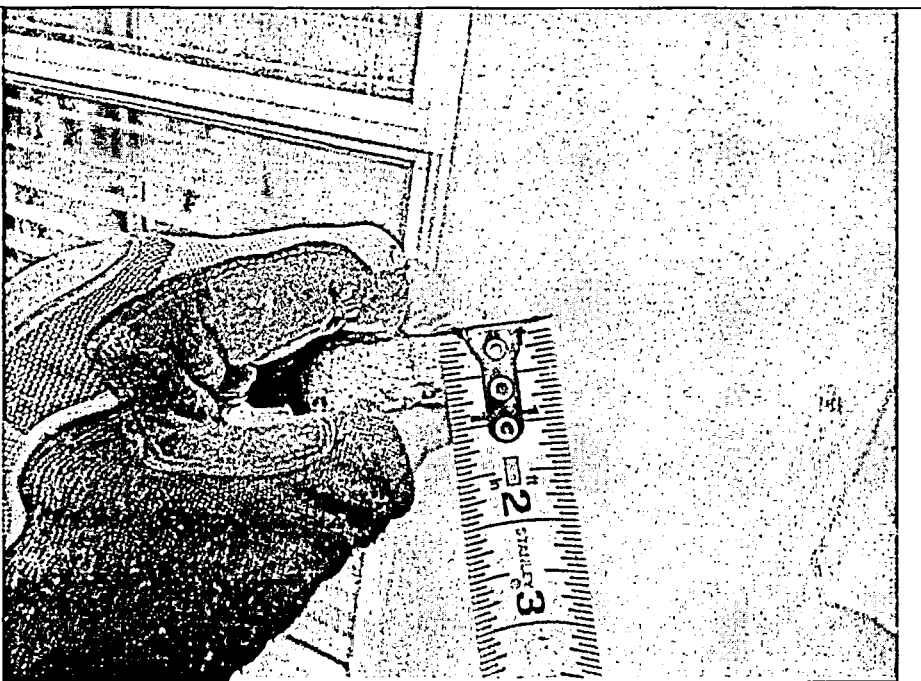
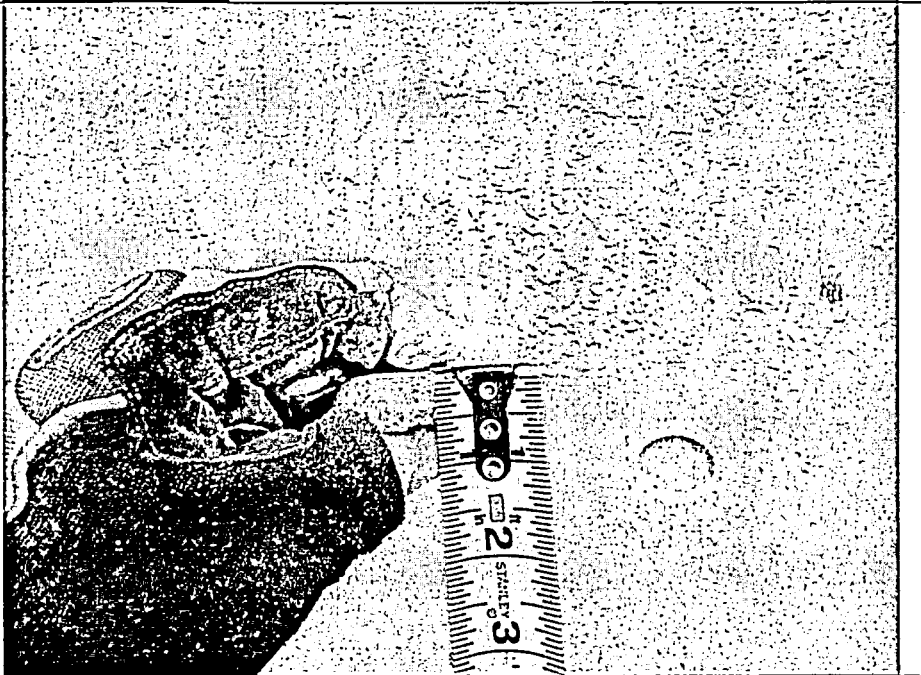
Below are deficiencies/ issues that were noted on the residence along with the applicable code and/or ASTM standard. The description of the deficiency or issue is listed first with the referenced code or standard with the photo below.

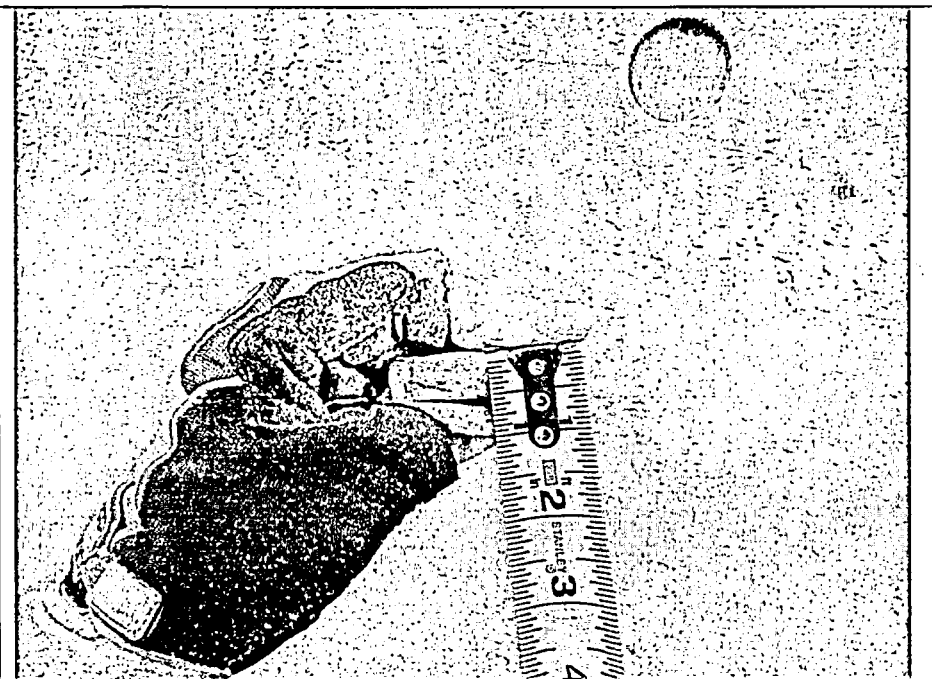

1.	Issue: Cracking in stucco allowing moisture infiltration	
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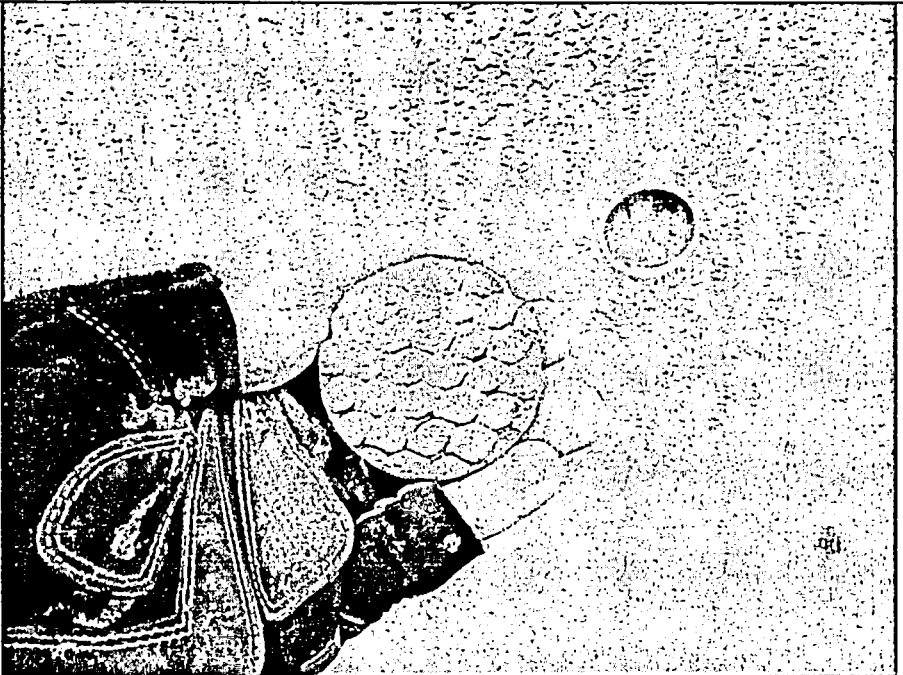
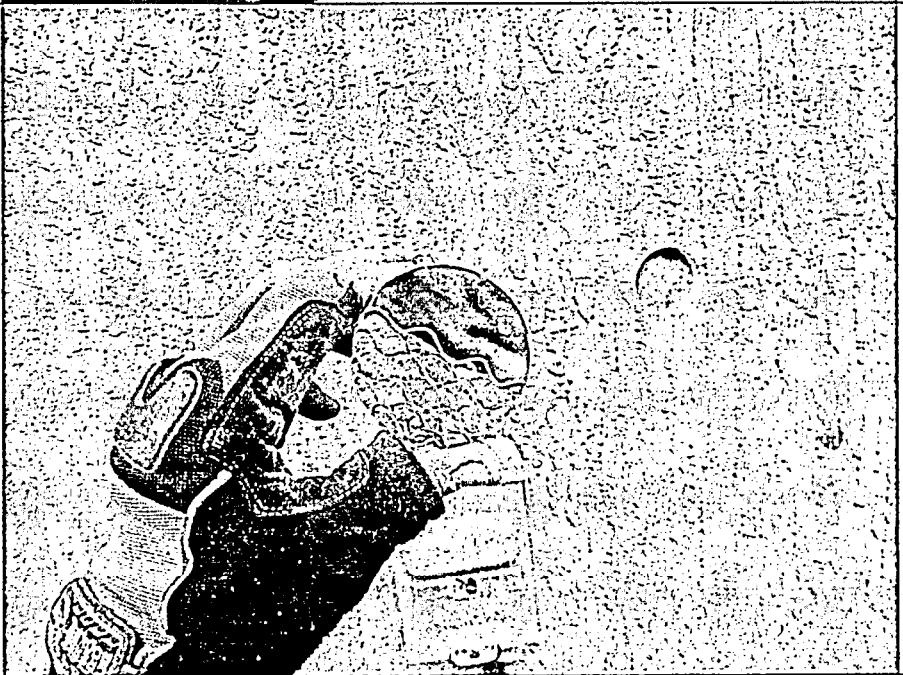
2.	Issue: Cracking in stucco allowing moisture infiltration	
3.	Issue: Cracking in stucco allowing moisture infiltration	



4.	Issue: Cracking in stucco allowing moisture infiltration	 A black and white photograph showing a close-up of a stucco wall. Several horizontal cracks are visible across the surface. To the right, a portion of a window frame is visible.
5.	Issue: Cracking in stucco allowing moisture infiltration	 A black and white photograph showing a close-up of a stucco wall. Numerous vertical cracks are visible, running down the length of the wall. To the right, a portion of a window frame is visible.

<p>6.</p>	<p>Issue: Lath must be cut and tied to the control joint, otherwise it restricts movement and cracks.</p> <p>ASTM C-1063 7.10.1.4 (Lath Behind control joints) Lath shall not be continuous through control joints but shall be stopped and tied at each side.</p> <p>3.2.3 control joint, n—a joint that accommodates movement of plaster shrinkage and curing along predetermined, usually straight, lines.</p>	
<p>7.</p>	<p>Issue: The stucco does not meet the thickness required by the standards.</p> <p>ASTM C 926 Table 4 - Nominal Plaster Thickness - per Table 4, the minimum thickness of stucco installed with metal base over solid base is a 7/8" 3 coat system.</p>	


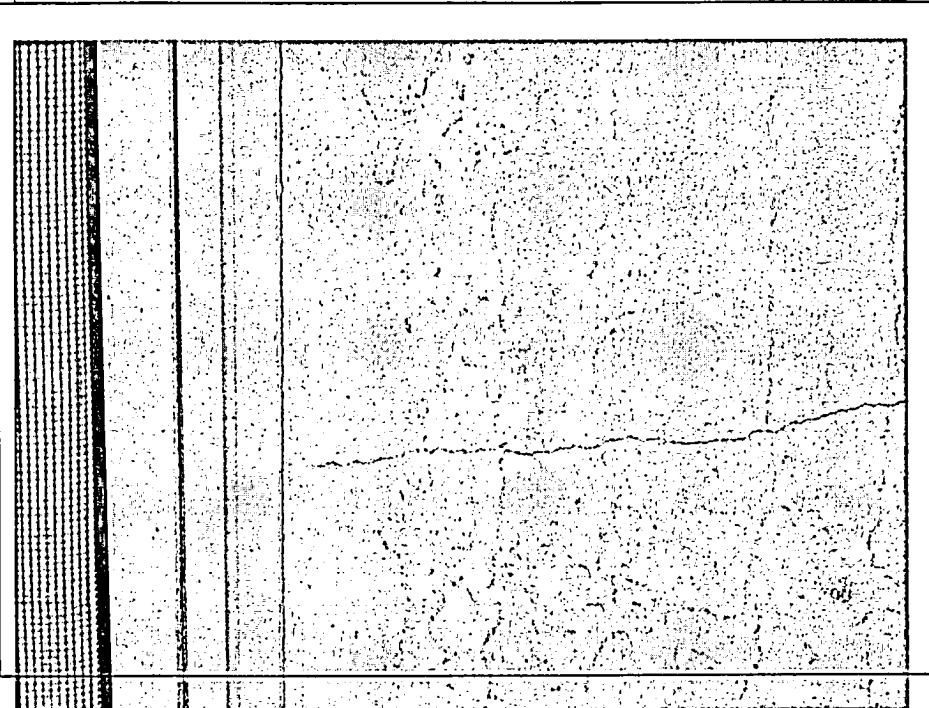
<p>8.</p>	<p>Issue: The stucco does not meet the thickness required by the standards.</p> <p>ASTM C 926 Table 4 - Nominal Plaster Thickness - per Table 4, the minimum thickness of stucco installed with metal base over solid base is a 7/8" 3 coat system.</p>	
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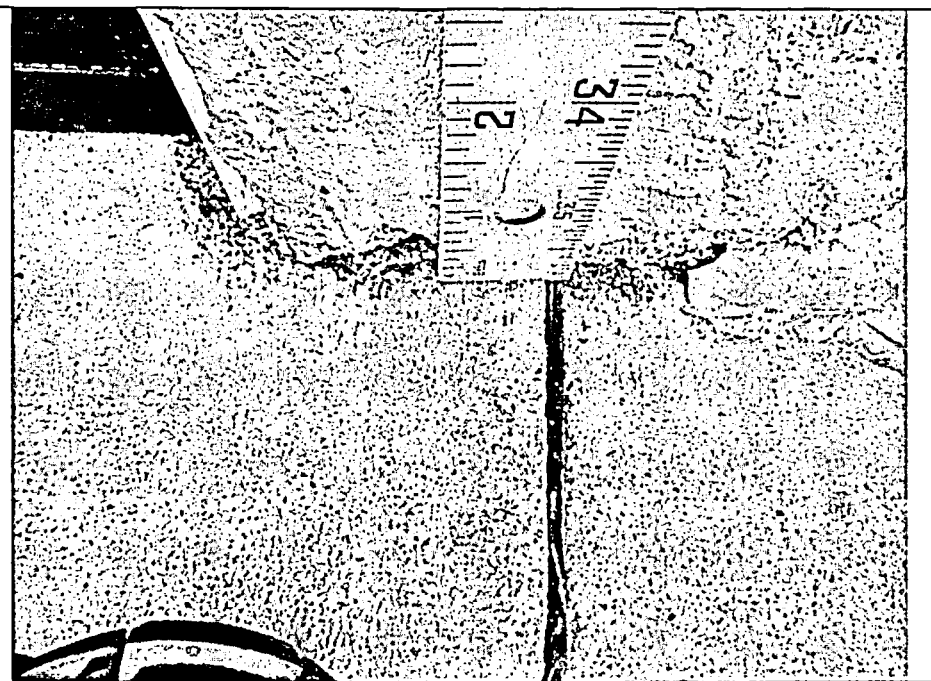
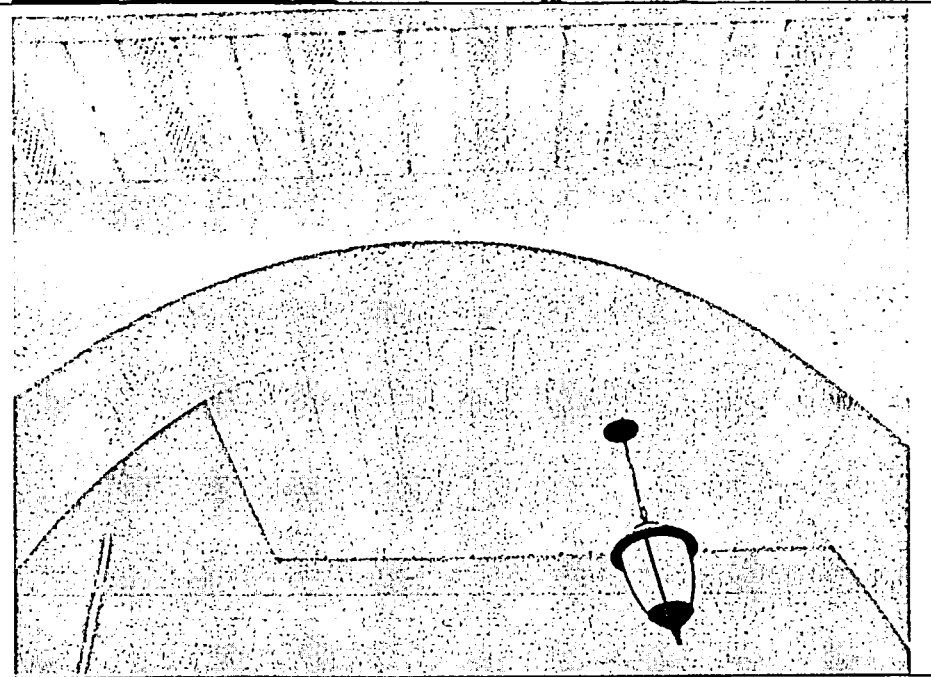
<p>10.</p>	<p>Issue: The stucco does not meet the thickness required by the standards.</p> <p>ASTM C 926 Table 4 - Nominal Plaster Thickness - per Table 4, the minimum thickness of stucco installed with metal base over solid base is a 7/8" 3 coat system.</p>	
<p>11.</p>	<p>Issue: The stucco is not embedded fully into the lath.</p> <p>ASTM C926 7.2.1 - (Embedment) The first (scratch) coat shall be applied with sufficient material and pressure to form full keys through, and to embed the metal base, and with sufficient thickness of material over the metal to allow for scoring the surface.</p>	


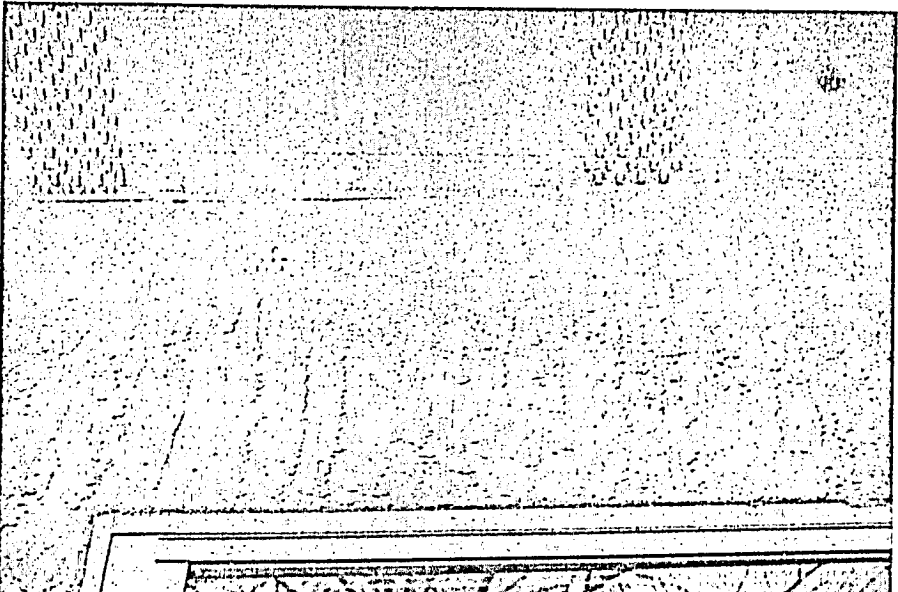
<p>12.</p>	<p>Issue: The stucco is not embedded fully into the lath.</p> <p>ASTM C926 7.2.1 - (Embedment) The first (scratch) coat shall be applied with sufficient material and pressure to form full keys through, and to embed the metal base, and with sufficient thickness of material over the metal to allow for scoring the surface.</p>	
<p>13.</p>	<p>Issue: When the paper and lath were installed, there is overlap of lath and paper over another layer of lath and paper that created a weak point that is conducive to cracking.</p> <p>ASTM C-1063 7.8.3 (paper/paper - wire/wire) Where metal plaster base with backing is used, the vertical and horizontal lap joints shall be backing on backing and metal on metal.</p>	

<p>14.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7 .1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	
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<p>16.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7 .1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	
<p>17.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7 .1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	

<p>18.</p>	<p>Issue: A weep screed must be at least 2" above paved surfaces. This is at the same level.</p> <p>7.11.5 Foundation Weep ...The nose of the screed shall be placed ... 2 in. (51 mm) above paved surfaces. The weather resistive barrier and lath shall entirely cover the vertical attachment flange and terminate at the top edge of the nose or ground flange</p>	
<p>19.</p>	<p>Issue: A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit.</p> <p>ASTM C 926 section A2.2.3 states: (horizontal and vertical intersection) - Where vertical and horizontal exterior plaster surfaces meet, both surfaces shall be terminated with casing beads with the vertical surface extending at least ¼ in. (6 mm) below the intersecting horizontal plastered surface, thus providing a drip edge. The casing bead for the horizontal surface shall be terminated not less than ¼ in. from the back of the vertical surface to provide drainage.</p>	

<p>20.</p>	<p>Issue: A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit. ASTM C 926 section A2.2.3 states: (horizontal and vertical intersection) - Where vertical and horizontal exterior plaster surfaces meet, both surfaces shall be terminated with casing beads with the vertical surface extending at least ¼ in. (6 mm) below the intersecting horizontal plastered surface, thus providing a drip edge. The casing bead for the horizontal surface shall be terminated not less than ¼ in. from the back of the vertical surface to provide drainage.</p>	
<p>21.</p>	<p>Issue: Flashing was not installed above windows to divert water from building. R703.8 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:....Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage....At</p>	

6) Summary of Deficiencies

- a) Numerous cracks are present in the stucco that are not typical of a proper stucco installation per the building code and ASTM standards.
- b) Control joints are stapled to the substrate, reducing movement, and has promoted cracking.
- c) The thickness of the stucco system does not meet the minimum requirements of the applicable Florida Building Code and ASTM standard



- d) The stucco is not embedded fully into the lath.
- e) When the paper and lath were installed, there is overlap of lath and paper over another layer of lath and paper that created a weak point that is conducive to cracking.
- f) Dissimilar materials must be separated to allow for expansion and contraction. The materials were not separated allowing cracking to occur and a pathway for moisture to enter.
- g) A foundation weep screed must be at least 2" above paved surfaces.
- h) A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit.
- i) Flashing is not installed properly above windows.

7) Conclusion

- a) In conclusion, based on the evaluation performed and the above noted deficiencies, the following conclusions are as follows:
- b) The stucco system at this residence was not installed per the applicable building code and ASTM standards.
- c) The stucco installed over the frame sections of the residence shall be removed and replaced by a Florida Certified Contractor. The scope is listed below in section 8, Scope of Work.

8) Scope of Work:

1. Permitting

- a. By law all construction projects over \$2,500 must have a NOC filed with the court house).
- b. Turn in all paper work to the municipality to receive permit.
- c. The following is a typical list of required for inspections:
- d. Framing Inspection (if applicable)
- e. Sheathing Inspection
- f. Window/ Door Installation Inspection
- g. Roof Dry In
- h. Roof in Progress
- i. Roof Final
- j. Building Final Inspection

2. General Conditions

- a. Supervision of project by Florida Certified General Contractor.
- b. Storage for Supplies
- c. Transportation for material management
- d. Cleanup of buildings

3. Stucco Removal

- a. Demolition/ Frame Repairs
- b. Removal of stucco over framed areas.
- c. Prep building for Stucco Demo (Protects windows, entry ways,, etc.)
- d. Remove all Stucco on wood framed areas.



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19

- e. A portion of the stucco over masonry will have to be removed to accept the foundation or mid wall weep screed.
 - f. Sheathing and framing will remain in place unless damaged. Any sheathing and or structural framing repair will have to be inspected by the municipality and or Structural Engineer.
4. Dry In
 - a. Install Water Resistant Barrier before black paper and lath.
 - b. Install WRB per manufacturers specifications.
 5. Window Install
 - a. Remove old windows from framed walls of residence.
 - b. Clean frame and fins to accept new sealant per sealant manufactures specifications.
 - c. Install windows per manufacturer details
 - d. Flash windows per Water Resistant Barrier manufacturer details
 - e. Waterproofing tape around Windows (per manufacturers specifications)
 - f. General contractor will need to repair the interior drywall returns where the drywall had to be removed to reinstall the windows (generally consists of: installing drywall, tape, mud, texture, primed and ready for paint).
 6. Install Black Paper/ Lath/ Accessories
 - a. Install black paper over house wrap as second WRB.
 - b. Wire lath and accessories installed per Florida Building Code and ASTM Standards
 - c. Install Expansion Joints and weeping accessories, and any and all applicable stucco accessories per Florida Building code and ASTM Standards
 7. Stucco Installation
 - a. All Stucco, stucco accessories, and lath will be installed in accordance with current Florida Building Code and applicable ASTM standards.
 - b. A 3-coat stucco system will be installed per the ASTM standards.
 8. Soffit and Gutters
 - a. Removal and reinstallation of soffit and gutters at high roof area affected by stucco repair
 9. Paint and Sealants
 - a. Seal all penetrations on building before painting
 - b. Application will be per manufacturers specifications.
 - c. Paint stucco repair to match existing using Masonry Primer and topcoat per manufacturers specifications.
 - d. Paint the masonry areas with applicable primer and topcoat to match.
 10. Foam
 - a. Install and seal foam bands and shutters after paint has cured per manufacturers specifications.
 - b. Paint foam bands and shutters





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20

8. Closure

SS Consultation Services' evaluation was based on core samples and visual inspection of the property. The evaluation was limited to the exterior stucco wall system and it is not intended to uncover hidden conditions or defects, whether structural or otherwise. Additional defects may be present behind the stucco system or in the interior as the interior was not accessible for inspection at the time. After the stucco removal, damage to wood sheathing or framing should be evaluated by an engineer and repairs made as necessary.

9. Appendices

- a) Appendix A: Photo Catalog (attached)
- b) Appendix B: Property Appraiser information (attached)

Sincerely,

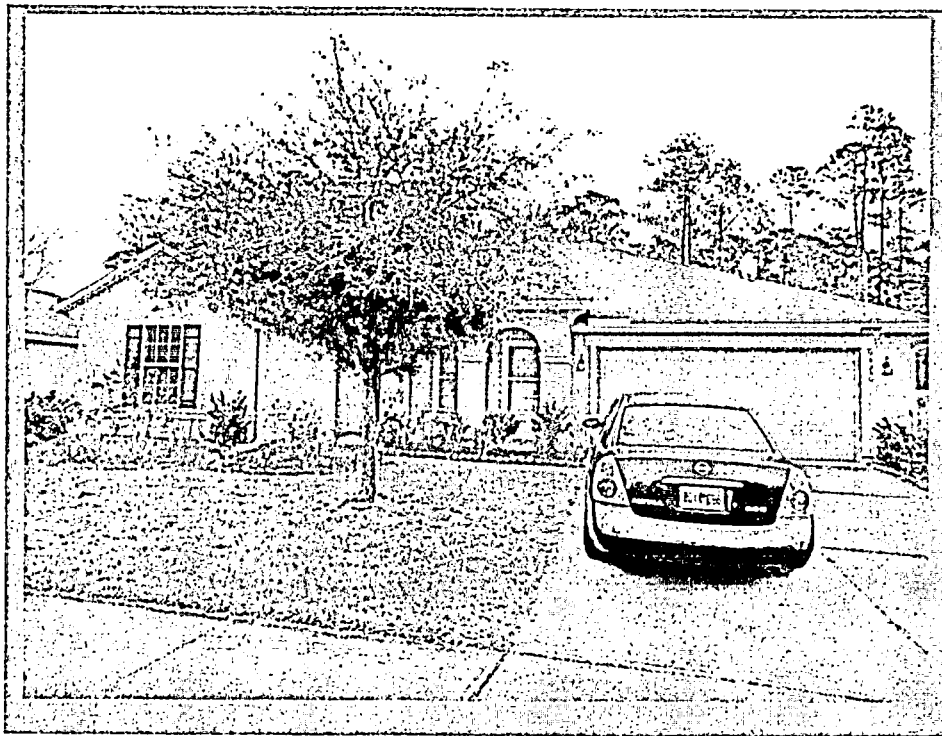
A handwritten signature in black ink, appearing to be 'S Seiler', written over a faint circular stamp.

Shawn Seiler
SS Consultation Services



Inspection Report

Cement-Based Plaster Stucco Evaluation



*The Nadakuduru Residence
11781 Carolwood Lane
Jacksonville, FL 32258*



Prepared for Neil O'Brien of
Florin Roebig



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1) General Description

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2) Observed Condition of Evaluated Areas

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- vii) **101.4 Referenced codes.** The other codes listed in Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.
- viii) **102.1 General.** Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.
- ix) **102.4 Referenced codes and standards.** The codes and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.
- x) **105.4.1 Permit intent.** A permit issued shall be construed to be a license to proceed with the work and not as authority to violate, cancel, alter or set aside any of the provisions of the technical codes, nor shall issuance of a permit prevent the building official from thereafter requiring a correction of errors in plans, construction or violations of this code.





SS Consultation Services
6121 49th Ct. E
Ellenton FL, 34222
shawn@ssconsultation.com
941-592-9210



- xi) **R703.1 General.** Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4.
- xii) **R703.6 Exterior plaster.**
 - (1) **R703.6.1** Exterior use of Portland cement plaster shall comply with the application requirements of
 - (2) ASTM C 926.
 - (3) **R703.6.2** Installation of exterior lathing and framing shall comply with the application requirements of ASTM C 1063.
- xiii) **R703.8 Flashing.** Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:
 - 1. Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage.
 - 2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
 - 3. Under and at the ends of masonry, wood or metal copings and sills.
 - 4. Continuously above all projecting wood trim.
 - 5. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction.
 - 6. At wall and roof intersections.
 - 7. At built-in gutters.
- xiv) **7.11.5 Foundation Weep Screed**—Foundation weep screed shall be installed at the bottom of all steel or wood framed exterior walls to receive lath and plaster. Place the bottom edge of the foundation weep screed not less than 1 in. (25 mm) below the joint formed by the foundation and framing. The nose of the screed shall be placed not less than 4 in. (102 mm) above raw earth or 2 in. (51 mm) above paved surfaces. The weather resistive barrier and lath shall entirely cover the vertical attachment flange and terminate at the top edge of the nose or ground flange.
- xv) **ASTM C1063 Table 3** Where plywood is used for sheathing, a minimum of 1/8 in. (3.2 mm) separation shall be provided between adjoining sheets to allow for expansion





xvi) **FBC 1403.8** In order to provide for inspection for termite infestation, clearance between exterior wall coverings and final earth grade on the exterior of a building shall not be less than 6 inches (152 mm).

xvii) **ASTM C 926 Table 4 - Nominal Plaster Thickness** - per Table 4, the minimum thickness of stucco installed with metal base over solid base is a 7/8" 3 coat system.

TABLE 4 Nominal Plaster Thickness^a for Three- and Two-Coat Work, In. (mm)

BASE	Vertical				Horizontal			
	1st Coat	2nd Coat	3rd Coat ^b	Total	1st Coat	2nd Coat	3rd Coat ^b	Total
Interior/Exterior								
Three-coat work ^c								
Metal plaster base	3/8 (9.5)	3/8 (9.5)	1/8 (3)	3/4 (22)	1/4 (6)	1/4 (6)	1/8 (3)	3/4 (16)
Solid plaster base:					Use two-coat work			
Unit masonry	1/4 (6)	1/4 (6)	1/4 (3)	3/4 (16)				3/4 (9.5), max
Cast-in-place or precast concrete	1/4 (6)	1/4 (6)	1/4 (3)	3/4 (16)				
Metal plaster base over solid base	1/2 (12.5)	1/4 (6)	1/4 (3)	3/4 (22)	1/2 (12.5)	1/4 (6)	1/4 (3)	3/4 (22)
Two-coat work:								
Solid plaster base:								
Unit masonry	3/8 (9.5)	1/4 (3)		1/2 (12.5)				3/4 (9.5)
Cast-in-place or pre-cast concrete	1/4 (6)	1/4 (3)		3/4 (9.5)				3/4 (9.5)

^a Exclusive of texture.

^b For solid plaster partitions, additional coats shall be applied to meet the finished thickness specified.

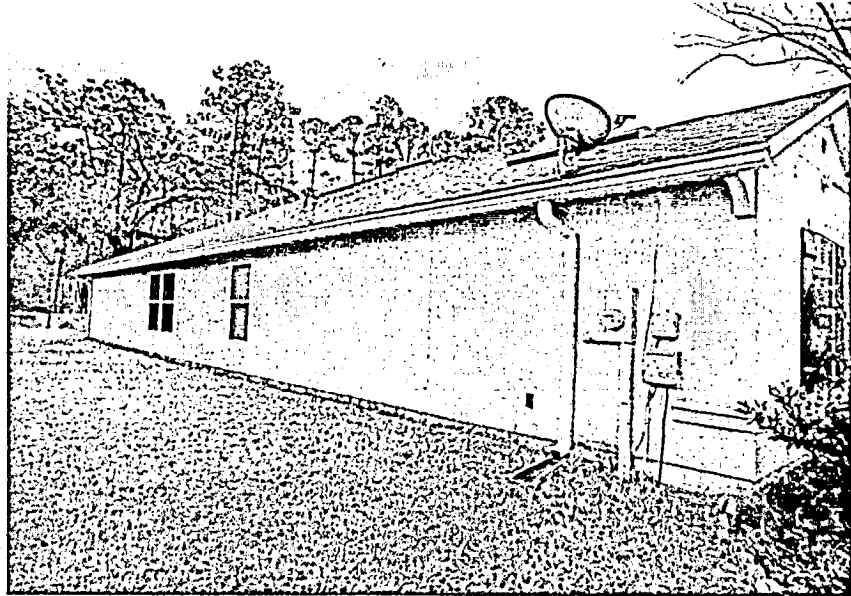
^c For exposed aggregate finishes, the second (brown) coat shall become the "bedding" coat and shall be of sufficient thickness to receive and hold the aggregate.

4) Elevations

Front Elevation



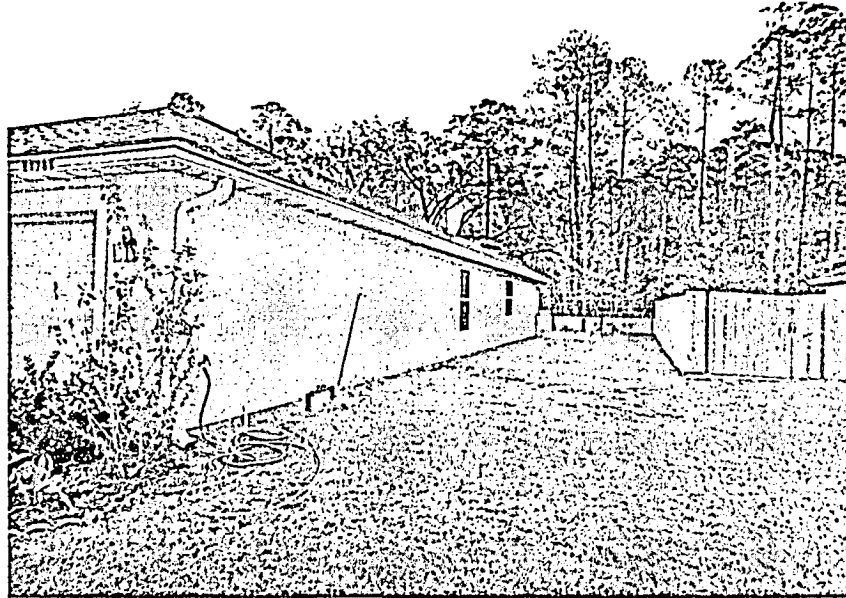
Left Elevation




Rear Elevation

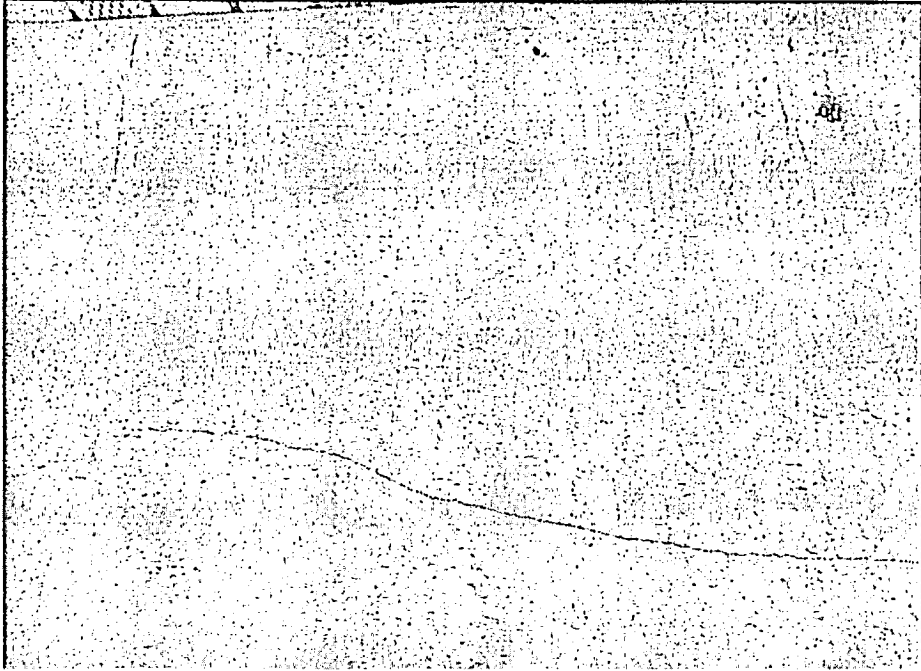
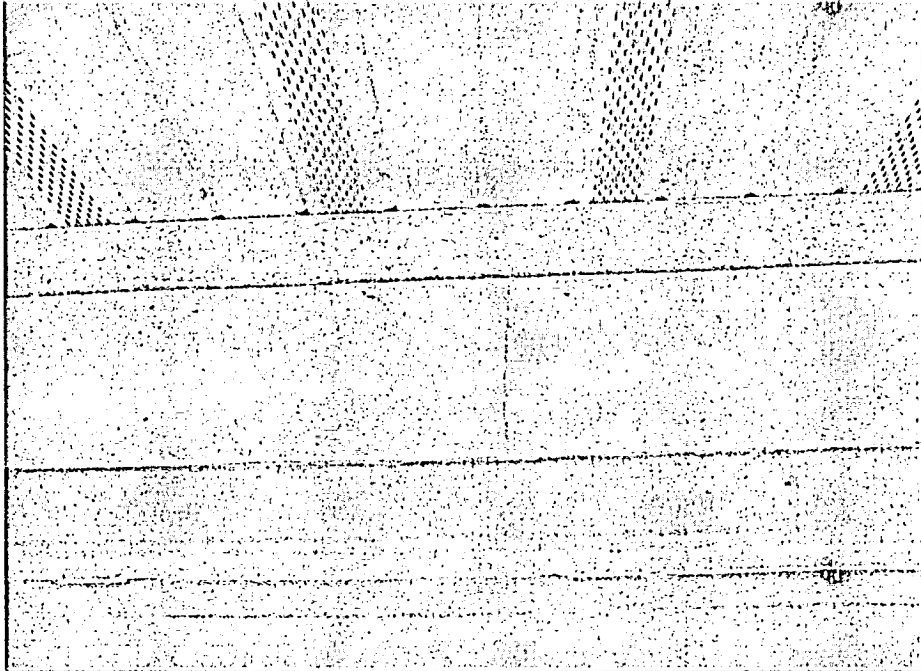


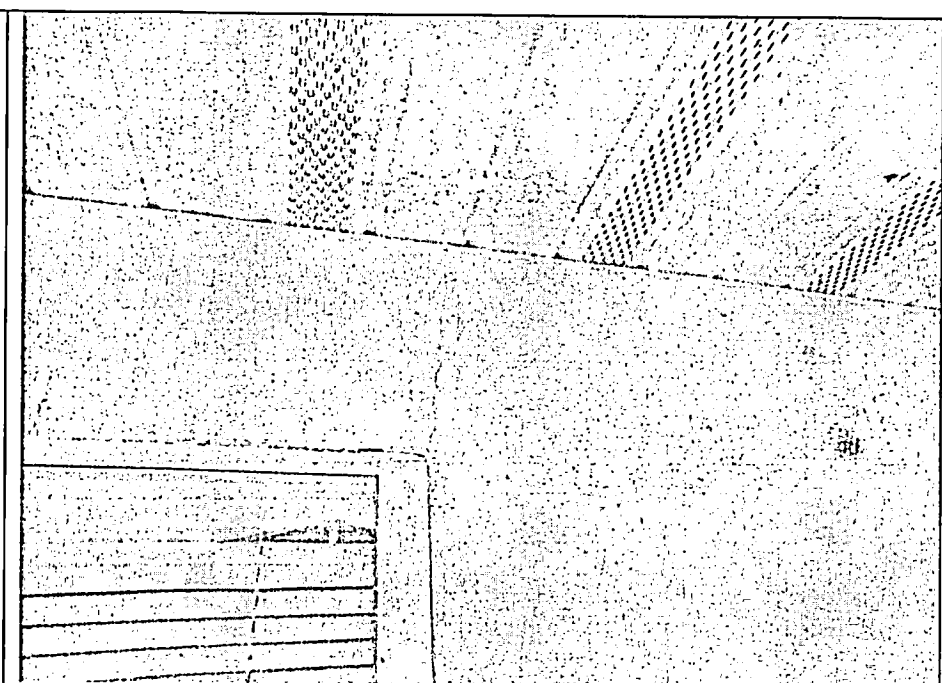

Right Elevation



- 5) **SS Consultation Services Inspection of Residence**
 Below are deficiencies/ issues that were noted on the residence along with the applicable code and/or ASTM standard. The description of the deficiency or issue is listed first with the referenced code or standard with the photo below.

<p>1.</p>	<p>Issue: Cracking in stucco allowing moisture infiltration</p>	
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<p>2.</p>	<p>Issue: Cracking in stucco allowing moisture infiltration</p>	 A black and white photograph showing a close-up of a stucco wall. A single, prominent, slightly wavy horizontal crack runs across the middle of the frame. The stucco surface has a rough, textured appearance.
<p>3.</p>	<p>Issue: Cracking in stucco allowing moisture infiltration</p>	 A black and white photograph showing a close-up of a stucco wall. Multiple horizontal cracks are visible, running across the width of the image. The cracks vary in depth and position. The stucco surface is textured and shows some signs of weathering.


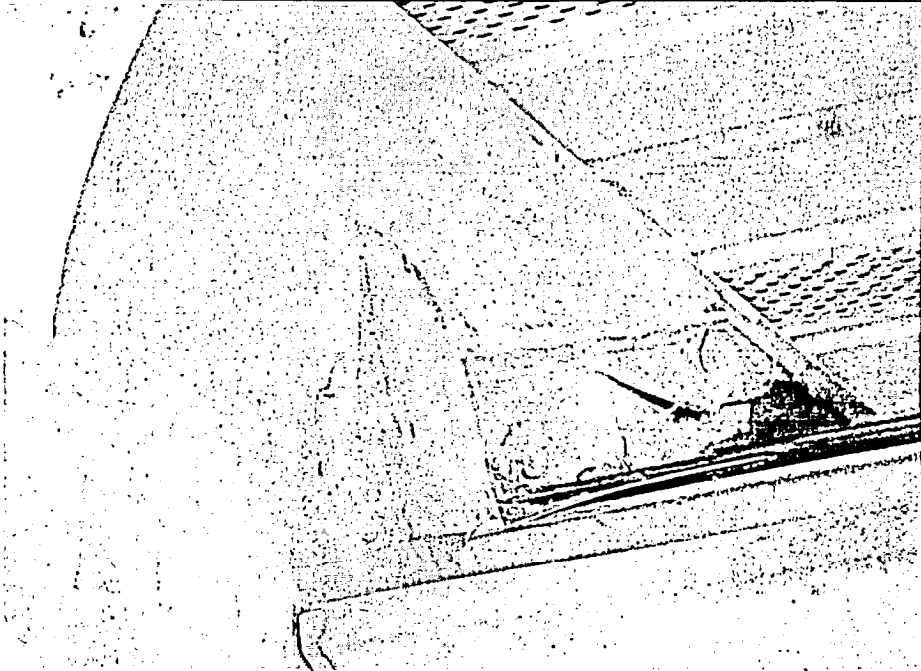
4.	Issue: Cracking in stucco allowing moisture infiltration	
5.	Issue: Cracking in stucco allowing moisture infiltration	

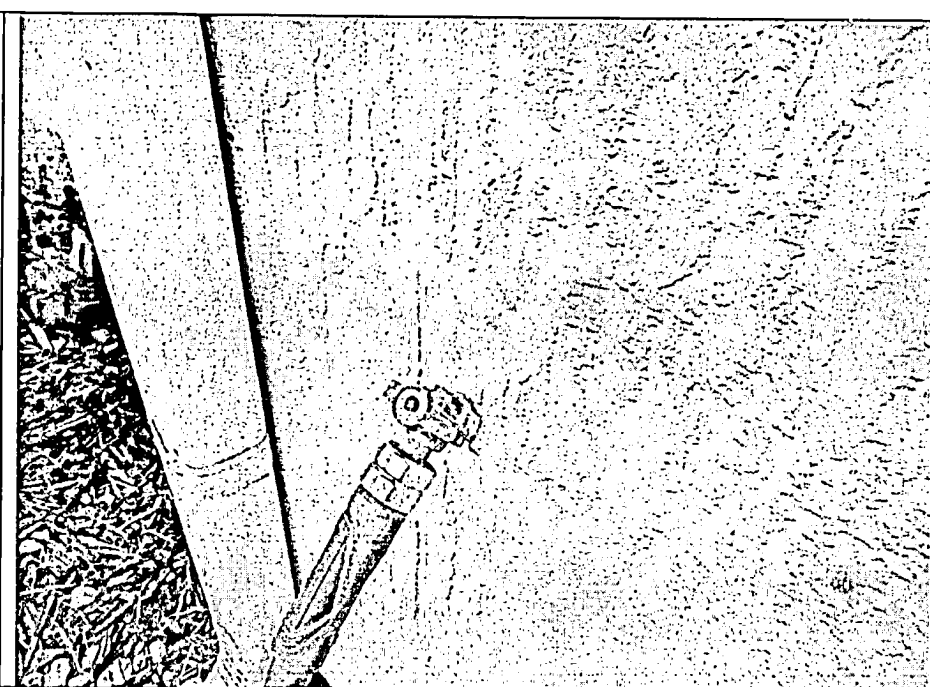

<p>6.</p>	<p>Issue: Lath must be cut and tied to the control joint, otherwise it restricts movement and cracks.</p> <p>ASTM C-1063 7.10.1.4 (Lath Behind control joints) Lath shall not be continuous through control joints but shall be stopped and tied at each side.</p> <p>3.2.3 control joint, <i>n</i>—a joint that accommodates movement of plaster shrinkage and curing along predetermined, usually straight, lines.</p>	
<p>7.</p>	<p>Issue: The staples are not long enough to properly fasten the lath to the structural framing.</p> <p>ASTM C-1063 7.10.2.2 (staples). Staples shall have crowns not less than 3/4 in. (19.05 mm) and shall engage not less than three strands of lath and penetrate the wood framing members not less than 3/4 in. (19.05 mm). When metal lath is applied over sheathing, use fasteners that will penetrate the structural members not less than 3/4 in. (19 mm).</p>	




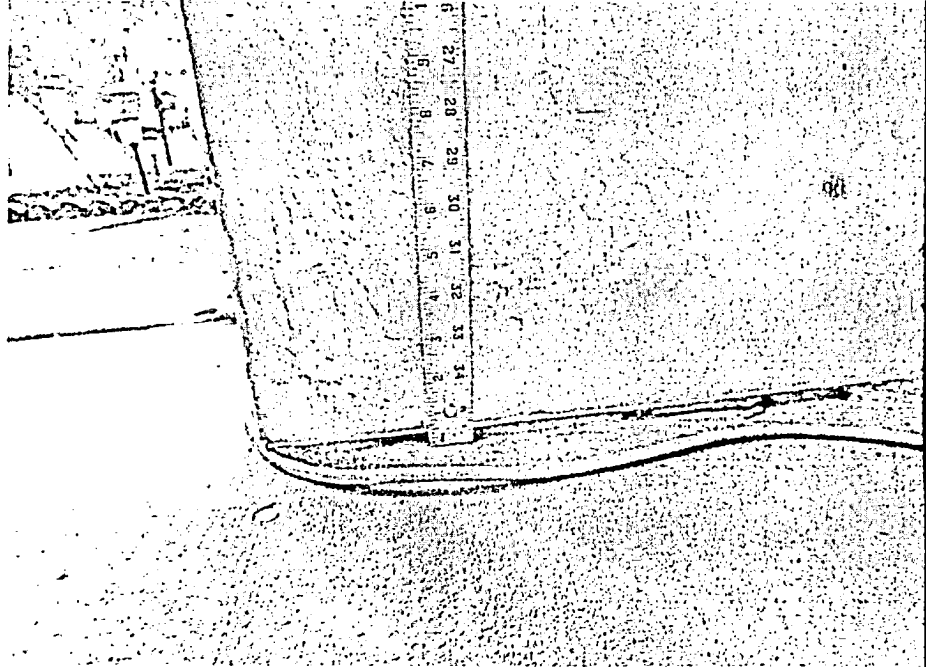


<p>8.</p>	<p>Issue: The stucco is not embedded fully into the lath.</p> <p>ASTM C926 7.2.1 - (Embedment) The first (scratch) coat shall be applied with sufficient material and pressure to form full keys through, and to embed the metal base, and with sufficient thickness of material over the metal to allow for scoring the surface.</p>	
<p>9.</p>	<p>Issue: The stucco is not embedded fully into the lath.</p> <p>ASTM C926 7.2.1 - (Embedment) The first (scratch) coat shall be applied with sufficient material and pressure to form full keys through, and to embed the metal base, and with sufficient thickness of material over the metal to allow for scoring the surface.</p>	


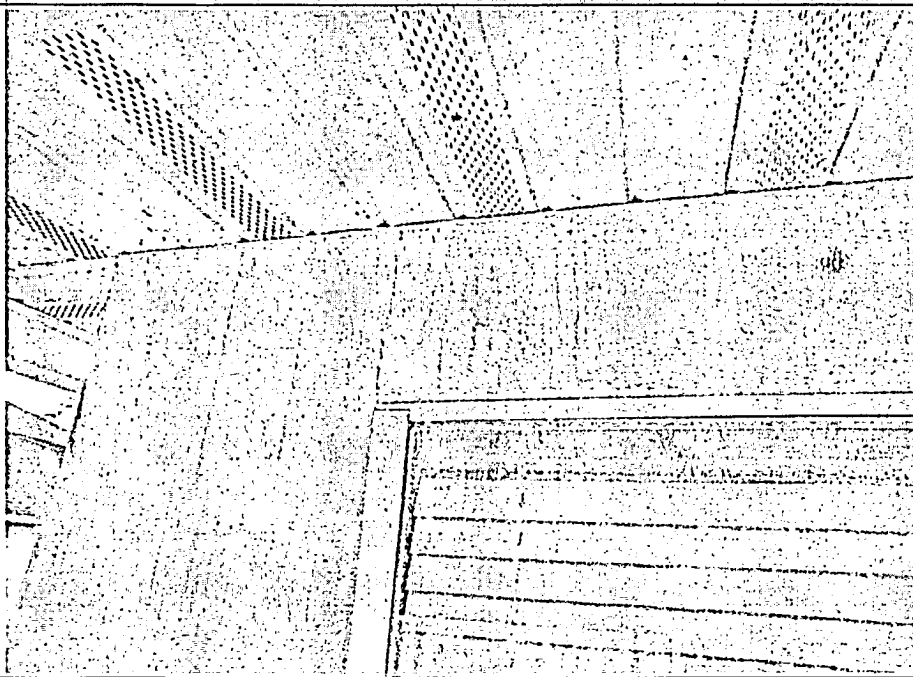
<p>10.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7.1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	
<p>11.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7.1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	

<p>12. Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7.1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	
<p>13. Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7.1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Nonload-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	



<p>14.</p>	<p>Issue: Dissimilar materials must be separated to allow for expansion and contraction.</p> <p>ASTM C 926 7.1 .4 (Dissimilar Materials) Separation shall be provided where plaster abuts dissimilar construction materials or openings.</p> <p>ASTM C-1063 7.11.3 (dissimilar material)—Non-load-bearing members shall be isolated from load-bearing members, and all penetrating elements, with casing beads or other suitable means, to avoid transfer of structural loads, and to separate from dissimilar materials</p>	
<p>15.</p>	<p>Issue: A weep screed must be at least 2" above paved surfaces. This is at the same level.</p> <p>7.11.5 Foundation Weep ... The nose of the screed shall be placed ... 2 in. (51 mm) above paved surfaces. The weather resistive barrier and lath shall entirely cover the vertical attachment flange and terminate at the top edge of the nose or ground flange</p>	

<p>16. Issue: A foundation weep screed must be at least 6" above finished grade.</p> <p>FBC 1403.8 (Foundation weep screed) In order to provide for inspection for termite infestation, clearance between exterior wall coverings and final earth grade on the exterior of a building shall not be less than 6 inches (152 mm).</p>	
<p>17. Issue: A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit.</p> <p>ASTM C 926 section A2.2.3 states: (horizontal and vertical intersection) - Where vertical and horizontal exterior plaster surfaces meet, both surfaces shall be terminated with casing beads with the vertical surface extending at least ¼ in. (6 mm) below the intersecting horizontal plastered surface, thus providing a drip edge. The casing bead for the horizontal surface shall be terminated not less than ¼ in. from the back of the vertical surface to provide drainage.</p>	

<p>18.</p>	<p>Issue: A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit. ASTM C 926 section A2.2.3 states: (horizontal and vertical intersection) - Where vertical and horizontal exterior plaster surfaces meet, both surfaces shall be terminated with casing beads with the vertical surface extending at least ¼ in. (6 mm) below the intersecting horizontal plastered surface, thus providing a drip edge. The casing bead for the horizontal surface shall be terminated not less than ¼ in. from the back of the vertical surface to provide drainage.</p>	
<p>19.</p>	<p>Issue: Flashing was not installed above windows to divert water from building. R703.8 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:...Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage....At</p>	

6) Summary of Deficiencies

- a) Numerous cracks are present in the stucco that are not typical of a proper stucco installation per the building code and ASTM standards.
- b) Control joints are stapled to the substrate, reducing movement, and has promoted cracking.
- c) The staples are not long enough to properly fasten the lath to the structural framing.
- d) The stucco is not embedded fully into the lath.



SS Consultation Services
6121 49th Ct. E
Ellenton FL, 34222
shawn@ssconsultation.com
941-592-9210

167

- e) Dissimilar materials must be separated to allow for expansion and contraction. The materials were not separated allowing cracking to occur and a pathway for moisture to enter.
- f) A foundation weep screed must be at least 6" above finished grade.
- g) A foundation weep screed must be at least 2" above paved surfaces.
- h) A weeping accessory must be present at any horizontal and vertical intersection to allow moisture to exit.
- i) Flashing is not installed properly above windows.

7) Conclusion

- a) In conclusion, based on the evaluation performed and the above noted deficiencies, the following conclusions are as follows:
- b) The stucco system at this residence was not installed per the applicable building code and ASTM standards.
- c) The stucco installed over the frame sections of the residence shall be removed and replaced by a Florida Certified Contractor. The scope is listed below in section 8, Scope of Work.

8) Scope of Work:

1. Permitting

- a. By law all construction projects over \$2,500 must have a NOC filed with the court house).
- b. Turn in all paper work to the municipality to receive permit.
- c. The following is a typical list of required for inspections:
- d. Framing Inspection (if applicable)
- e. Sheathing Inspection
- f. Window/ Door Installation Inspection
- g. Roof Dry In
- h. Roof in Progress
- i. Roof Final
- j. Building Final Inspection

2. General Conditions

- a. Supervision of project by Florida Certified General Contractor.
- b. Storage for Supplies
- c. Transportation for material management
- d. Cleanup of buildings

3. Stucco Removal

- a. Demolition/ Frame Repairs
- b. Removal of stucco over framed areas.
- c. Prep building for Stucco Demo (Protects windows, entry ways,, etc.)
- d. Remove all Stucco on wood framed areas.
- e. A portion of the stucco over masonry will have to be removed to accept the foundation or mid wall weep screed.





SS Consultation Services
6121 49th Ct. E
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shawn@ssconsultation.com
941-592-9210

18

- f. Sheathing and framing will remain in place unless damaged. Any sheathing and or structural framing repair will have to be inspected by the municipality and or Structural Engineer.
4. Dry In
 - a. Install Water Resistant Barrier before black paper and lath.
 - b. Install WRB per manufacturers specifications.
5. Window Install
 - a. Remove old windows from framed walls of residence.
 - b. Clean frame and fins to accept new sealant per sealant manufactures specifications.
 - c. Install windows per manufacturer details
 - d. Flash windows per Water Resistant Barrier manufacturer details
 - e. Waterproofing tape around Windows (per manufacturers specifications)
 - f. General contractor will need to repair the interior drywall returns where the drywall had to be removed to reinstall the windows (generally consists of: installing drywall, tape, mud, texture, primed and ready for paint).
6. Install Black Paper/ Lath/ Accessories
 - a. Install black paper over house wrap as second WRB.
 - b. Wire lath and accessories installed per Florida Building Code and ASTM Standards
 - c. Install Expansion Joints and weeping accessories, and any and all applicable stucco accessories per Florida Building code and ASTM Standards
7. Stucco Installation
 - a. All Stucco, stucco accessories, and lath will be installed in accordance with current Florida Building Code and applicable ASTM standards.
 - b. A 3-coat stucco system will be installed per the ASTM standards.
8. Soffit and Gutters
 - a. Removal and reinstallation of soffit and gutters at high roof area affected by stucco repair
9. Paint and Sealants
 - a. Seal all penetrations on building before painting
 - b. Application will be per manufacturers specifications.
 - c. Paint stucco repair to match existing using Masonry Primer and topcoat per manufacturers specifications.
 - d. Paint the masonry areas with applicable primer and topcoat to match.
10. Foam
 - a. Install and seal foam bands and shutters after paint has cured per manufacturers specifications.
 - b. Paint foam bands and shutters





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8. Closure

SS Consultation Services' evaluation was based on core samples and visual inspection of the property. The evaluation was limited to the exterior stucco wall system and it is not intended to uncover hidden conditions or defects, whether structural or otherwise. Additional defects may be present behind the stucco system or in the interior as the interior was not accessible for inspection at the time. After the stucco removal, damage to wood sheathing or framing should be evaluated by an engineer and repairs made as necessary.

9. Appendices

- a) Appendix A: Photo Catalog (attached)
- b) Appendix B: Property Appraiser information (attached)

Sincerely,

A handwritten signature in black ink, appearing to be 'S Seiler', written over a faint circular stamp or watermark.

Shawn Seiler
SS Consultation Services

