Neighborhood Services Department
Housing Division

2019
STANDARD NEW CONSTRUCTION SPECIFICATIONS

THIS DOCUMENT SHALL SERVE AS THE BASIS OF DESIGN FOR NEW RESIDENTIAL CONSTRUCTION AND IS SUBJECT TO MODIFICATION AND REVISION AS NOTED. EACH REVISION WILL BE IDENTIFIED BY THE YEAR IN WHICH THE STANDARD IS MODIFIED AND WILL REMAIN IN EFFECT UNTIL SUCH TIME A NEW UPDATE OR MODIFICATION IS MADE AND ADDED TO THIS PAGE.

ORIGINAL DOCUMENT	**2012**
REVISION #1	**2017**
REVISION #2	**2019**

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GENERAL DESIGN REQUIREMENTS

A. Home Size-Governed by the City of Port St. Lucie Municipal Code
   - **a. Zone R-1 (1,700 sf of living area)**
   - **b. Zone R-2 (1,200 sf of living area)**
   - **c. Zone R-3 (1,200 sf of living area)**

B. Refer to Municipal Code requirements for specific regulations relative to the property Zoning.

C. Provide at a minimum the following in the basic home plan to be approved by the Neighborhood Services Department:
   - **a. Three bedrooms**
   - **b. Two full baths**
     - **i. One with a tub combination**
     - **ii. One with an ADA accessible shower**
   - **c. Two car garage**

SECTION 1

1.0 GENERAL, DEFINITIONS

1.1 SCOPE of work shall include all labor, materials, equipment, drawings, and services necessary for the proper project completion.

1.2 VALIDITY: If any part of this document is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this code.

1.3 THESE SPECIFICATIONS shall be followed by the contractor and all subcontractors performing work on each new home construction project and are a part of each Contract for New Construction.

1.4 THE CHANGE ORDER shall take precedence over the specifications when in conflict as to the material, equipment, workmanship, etc. The Neighborhood Services Coordinator or Inspector shall make the final determination when a conflict exists.

1.5 ANY DRAWINGS included with the work write-up are for illustration and may not be exact or to scale.

1.6 TRADE NAMES or brand names are used in the Basic Specifications to establish quality, style or type of equipment or material required.

1.7 THE TERMS "EQUAL" OR "BETTER" allow for substitutions as to the trade name. The determination of equal or better shall be made by the Neighborhood Services Coordinator or Inspector. Installation of substitutions without prior approval shall be at the Contractor's risk.

1.8 THE CONTRACTOR shall be responsible for all applicable building permits and fees, connection details required for permitting, utilities and sanitation facilities, exact dimensions and construction details, and for acts and omissions of his employees and subcontractors and shall employ only qualified persons, skilled in the job to which he is assigned.

1.9 SUBCONTRACTORS shall be bound by the terms and conditions of this contract insofar as it applies to their work, but this shall not relieve the General Contractor from full responsibility under the contract nor responsibility to the owner for the proper completion of all work to be performed under the contract. The General Contractor shall not be released from his responsibility by a sub contractual agreement he may make with others.

1.10 CHANGES proposed by either the contractor or the owner shall be in writing and agreed to by the contractor, the owner, and Neighborhood Services Coordinator or Inspector, before any change in work is started. No change orders will be issued except for code related items discovered after the work has commenced.

1.11 MATERIALS shall be new, in good condition and of the grade required by the specifications. Materials damaged in shipment or prior to owner's acceptance shall be replaced at the contractor's expense.

1.12 WORKMANSHIP shall be done in accordance with the trades standards as "Workmanlike Manner" or "Acceptable Standards of Workmanship" as prescribed by the Neighborhood Services Coordinator or Inspector.

1.13 CODES: All work performed shall be in accordance with all applicable codes, laws, regulations, and rules such as: Federal, State and local Codes; Manufacturer's Specifications and recommendations for Installation; Title X standards regarding lead based paint; and Florida Statute 469 regarding asbestos and ADA Standard 2010 as applicable.

1.14 BUILDING OFFICIAL shall mean the locally appointed Building Official and/or his appointed assistant(s).

1.15 QUANTITIES may be provided as an estimate in determining the area to be covered, repaired, replaced, or installed. This estimate is not intended to be an exact determination of the amount of material required. Actual field dimensions and verifications shall be the responsibility of the contractor.

1.16 HOUSING CONSTRUCTION SPECIALIST shall mean the person(s) assigned by the City of Port St. Lucie to perform housing contract performance inspections and supervision of work. Such person(s) are not a party to housing contracts.

1.17 APPLICABILITY: Section 2 of this document applies to all work performed under the local housing program, whether indicated in the work write-up or not. Instructions in other sections are applicable only when the contract documents require a work item to be provided as described in the specification.

1.18 REPLACE shall mean to remove the existing and install a new replacement.

1.19 DEFECTIVE WORK shall mean any work not performed or installed to provide a minimum level of quality only determined by the Neighborhood Services Coordinator or Inspector. Defective Work can exist where a code inspection has been performed and accepted as meeting the minimum standard for code compliance but it may not meet the minimum for quality of workmanship as prescribed. All defective work shall be removed and replaced at the General Contractors expense to the satisfaction of the Neighborhood Services Coordinator or Inspector.

SECTION 2

2.0 SITE WORK AND INSPECTIONS:

Site work and inspections shall be in compliance with the work write-up, the Florida Building

Code, Port St. Lucie Code of Ordinances and specifications herein as required.

2.1 ADJACENT PROPERTY:

When adjacent property is affected by contract work, it shall be the contractor's responsibility to take whatever precautions are necessary for the protection of the adjacent property and to notify the owner thereof prior to such actions.

2.2 FINAL CLEAN UP:

(A) Upon completion of construction, the entire premises shall be cleaned and cleared, with debris removed and interior left clean. Provisions for the cleanup of lead paint chips or dust shall be the responsibility of the contractor. The work site premises shall be graded to blend with the surrounding area.

2.3 MANDATORY INSPECTIONS:

A. The contractor shall notify the Neighborhood Services Coordinator or Inspector and the Building Official when work is ready for inspection. The inspections listed may not be all of the inspections required. Follow the instructions on the Building Permit for inspections as noted.

B. Inspection requests shall be made to the offices of the Neighborhood Services Coordinator, Inspector or the Building Official and the Contractor shall provide a minimum of 24 hours notice when ordering an inspection.

1. Rejection or refusal by the Neighborhood Services Coordinator or Inspector and/or the Building Official to approve the work for reasons of in-completeness, code violation or inadequacy shall nullify that request for inspection. Any charge for re-inspection shall be the responsibility of the Contractor. The Building Official or designee shall be the governing authority over all code related inspections.

2. The responsible contractor in charge of the work shall have inspected the work and found it to be in compliance with Code and Contract requirements before a request for inspection is made.

3. Electric, plumbing, roofing and mechanical subcontractors shall be present or represented at their respective inspections.

C. No work shall be done on any part of a building or structure beyond the point indicated herein until such inspection has been made, approved, and signed off for each successive step of construction as indicated, but not limited to each of the following:

1. Demolition Inspection: To be made after demolition or removal and before replacement work begins.

2. **Foundation Inspection: To be made after necessary excavations have been made, forms erected and reinforcing steel has been placed. Foundation surveys are required to be submitted to the Building Department upon installation of the foundations and prior to proceeding with other work.**
3. **Pier Inspection: To be made after piers are completed.**
4. **Reinforcement Inspection: To be made after all reinforcing steel is in place and before pouring concrete.**
5. **Rough Plumbing Inspection: To be made after completion of rough in as required by PSL Building Department.**
6. **Rough Electrical Inspection: To be made after completion of rough in as required by PSL Building Department.**
7. **Framing Inspection: To be made at each floor level and after all framing, fire blocking, furring and bracing are in place, and when sub-flooring, plumbing, and electrical work is roughed in.**
8. **Sheathing Inspection: To be made upon completion of roof or wall sheathing.**
9. **Roofing Inspection: To be made in accordance with manufacturer's installation specifications and at the completion of fastening the anchor sheet and flashing (including eaves drip or gravel stop), prior to tar and gravel flood coat, and upon completion of the roof covering.**
10. **Window and Door Inspection: To be made after windows and doors are installed and before attachments and connections to the building frame are concealed.**
11. **Gypsum Inspection: To be made after gypsum board (drywall or lathing) is fastened, spackled and taped, but before paint or other finish is applied.**
12. **Painting Inspection: To be made upon invoicing.**
13. **Insulation Inspection: To be inspected before being concealed.**
14. **Plumbing Inspection: To be made after completion of all plumbing work.**
15. **Electrical Inspection: To be made after completion of all electrical work.**
16. **Special Inspections: To be made of all mechanical installations, awnings, etc., and at such intervals during the progress of the work as may be required by the Neighborhood Services Coordinator or Inspector or Building Official and upon completion of work.**
17. **Other Inspections: To be made as the Neighborhood Services Coordinator or Inspector, owner, contractor or Building Official may reasonably request.**
18. **Final Inspection: to be made after all work has been completed and the structure is ready for use or occupancy, and the contractor has obtained a Certificate of Occupancy from the Building Official.**

D. No reinforcing steel, structural work, plumbing, electrical, mechanical, gas or roofing shall be covered or concealed in any manner whatsoever without the approval of the Building Official and/or the Inspector. The Inspector and/or the Building Official reserve the right to request the removal of any covered installation and the cost of re-installation or items or materials shall be borne by the Contractor. The Building Official or assigns shall be the governing authority over all code related inspections.

E. The Building Official or Inspector reserves the right to conduct tests to determine compliance with codes and specifications, including, but not limited to, tests of materials and strengths (for example, grab bar thrust resistance). Damage to the property resulting from the failure

of work to meet required strength, resistance or other performance standards shall be corrected by the contractor at his own expense.

2.4 PEST CONTROL INSPECTION:

A. The general contractor shall obtain a local licensed pest control operator for the extermination of pests and insects when required by contract documents or local building department.

B. Exterminators and exterminating procedures shall be in compliance with State and Federal regulations, such as State Law Chapter 482 and HRS Chapter 10D-55 Entomology and local building code.

C. Upon completion of work, a certificate of extermination and one-year warranty signed by the licensed operator shall be provided to the City of Port St. Lucie and the owner if applicable.

SECTION 3

3.0 CONCRETE:

Compliance with the contract documents, Florida Building Code, and Fill specifications, herein as required. All structural concrete shall be minimum 3000 psi in 28 days. All slabs and sidewalks shall be a minimum of 2500 psi in 28 days. Fibermesh concrete is allowed to be used where reinforcing is required for slabs and exterior concrete. The drawings as presented will dictate the requirements for concrete and reinforcing as indicated by the signed and sealed structural drawings. No changes are to be made to the structural requirements without the written consent of the designer of record.

3.1 SOIL AND COMPACTION:

A. Concrete footings and slabs shall be poured on undisturbed soil or soil compacted to a minimum of ninety five percent (95%) of standard laboratory density, or as directed by a licensed structural or foundation engineer.

B. Furnish to the City of Port St. Lucie test results for compaction that meets or exceeds the prescribed compaction density from a licensed testing laboratory. Provide the testing results to the City of Port St. Lucie Building Department to become part of the building record.

C. Areas to receive fill shall be free of vegetation, rocks, debris, deleterious and foreign materials and graded to drain away from building.

3.2 CONCRETE CONSTRUCTION:

A. Concrete shall be ready-mixed concrete of no less than three thousand (3,000) pounds per square inch (PSI) strength in twenty-eight (28) days for structural and two thousand five

hundred (2,500) pounds per square inch (PSI) strength in twenty-eight (28) days for slabs and exterior flat work.

1. **Ready-mixed concrete shall be certified by delivery ticket as to component mixture and any additional components (water, etc.) added at job site shall be written on the ticket.**

2. **No concrete shall be re-tempered after it has taken an initial set or deposited more than one and one-half (1 1/2) hours after mixing.**

3. **No concrete shall be poured when surrounding temperature is lower than 40 degrees Fahrenheit.**

B. Areas to receive concrete, either formed or unformed, shall be squared, leveled and plumbed prior to pouring. The complete formed area shall be poured in one continuous pour. Cold joints will not be allowed. Areas where new concrete abuts concrete that has cured must be doweled into the existing to resist settlement and expansion joints provided with sealant to allow for expansion.

C. When forms are used they shall be of sufficient strength and properly braced to resist movement.

D. Grade stakes and/or key cove shall be used to control concrete depths in larger irregular concrete pours.

E. No structural loads shall be placed on finished concrete for twenty-four (24) hours after placement. No vehicle loads or material handling loads shall be applied to the slabs for 28 days. Distribution of materials on the slabs may commence after 7 days minimum.

3.3 <u>CONCRETE FINISH</u>:

A. Concrete shall be finished level to avoid ponding of water.

B. Interior concrete shall be smooth trowel finished and sealed or as required by the architect. Do not apply curing compounds to areas that are to receive tile.

C. Exterior concrete walkways shall be broom finished perpendicular to path of travel.

D. Exposed edges of all concrete shall be edged with edging trowel.

E. Control joints in sidewalks shall be at a maximum distance of 5' apart and expansion joints shall be at a maximum of 25'. Expansion joints shall have ½" expansion material and dowels at 12" o.c. to resist settlement of the walkways.

3.4 <u>CONCRETE FOOTING</u>:

A. Concrete footing design, connection details and other permit requirements by the Building Department shall be designed by a licensed architect or engineer.

B. All structural drawings are to be signed and sealed by a design professional licensed in the State of Florida.

3.5 CONCRETE SLABS:

A. Concrete slabs shall be no less than four inches (4") thick. For interior floor slabs, a minimum of six (6) mil polyethylene (visqueen) vapor barrier shall be installed between the ground and concrete.

B. All concrete slabs shall be reinforced as required by the architect or the licensed designer of record. Fiber mesh concrete may be used if allowed by the designer of record.

C. All exterior steps, ramp landings, or stairs shall rest upon a poured concrete slab, extending a minimum of four inches (4") out from sides and back of steps, with an apron extending a minimum of thirty-six inches (36") out in front of steps. Steps, as well as handrails (when required) shall be anchored to the concrete. Ramps have specific approach requirements to meet Florida Building Code Accessibility. Provide approaches and landings as indicated by the building code along with handrails and guardrails compliant with the requirements if they are applicable within the specific design.

D. Perimeter of slab shall be recessed one and one-half inches by nine inches (1 ½" x 9") to fit 8" masonry or ICF with vertical steel placed per plan. All structural masonry or concrete beams and walls shall be designed to conform to the Florida Building Code and ASCE 7-10 for loads on structures including wind loads per the location of the building.

3.6 EXTERIOR CONCRETE:

A. All concrete slabs shall be provided with control joints approximately ten feet (10') apart in each direction. Control joints shall be cut into the slab ¼ the depth of the slab minimum. Control joints dividing the slabs shall be with a keyed joint or with an expansion joint with dowels on 12" centers.

B. All exterior concrete slabs shall be pitched to drain away from dwelling and shall not puddle (hold water) more than one-eighth inches (1/8") deep in any location.

C. Concrete slabs located more than thirty inches (30") above the floor or exterior grade below shall be equipped with guardrails per the Florida Building Code.

3.7 CONCRETE PIERS, COLUMNS, BEAMS, AND LINTELS:

Concrete piers, columns, beams, and lintels shall be designed and erected to carry the dead and live loads to be imposed on them as to size, components, and bearing, and shall be

designed by a Florida licensed professional and all drawings shall bear the seal and signature of the designer. Structural drawings shall show the imposed loads and the design of all structural members resisting such loads. All permit requirements shall be the responsibility of the contractor.

SECTION 4

4.0 MASONRY/ICF Exterior walls:

Comply with the Florida Building Code and all applicable ASTM standards relative to reinforced masonry and ICF systems.

A. Reinforced Masonry

1. **All reinforced masonry shall comply with the requirements of the Florida Building Code and ASTM C90.**

2. **All reinforced masonry shall be running bond and all reinforcing shall have a full cell of grout from the slab to the grade beam or bond beam at the top of the wall.**

3. **Clean outs shall be placed at the bottom of the wall in each cell to be grouted with steel.**

4. **Clean the cells from top to bottom of all mortar prior to ordering an inspection and before closing the inspection port at the bottom.**

5. **Grout the cells from top to bottom with 3000 psi coarse or fine grout per the designer of record specification and per ASTM C 404. Vibrate the cell with a pencil vibrator to consolidate the grout in the cell. Place lifts at 4'-5' maximum and allow for consolidation without over vibration of the grout. Self-consolidating grout (SCG) may be used in lieu of the vibration method only with approval of the designer of record.**

6. **Normal fine or coarse grout must be placed with an 8 to 11 inch slump per ASTM C 476.**

7. **SCG must be tested by using ASTM C 1161 to test the flow and stability.**

8. **Do not grout masonry that has not cured for at least 4 hours.**

9. **Lifts cannot exceed 12'-8". For lifts of greater height, the designer of record shall provide guidance as well as the Building Official or designee.**

10. **Grout all bond beams and lintels that require grouting with the walls.**

11. **Provide grouted cells adjacent to all openings per the design and allow for grout cells at each corner (one in each wall next to each other). Provide 90 degree corner bar reinforcing at the intersection of all bond beams and foundations.**

12. **Formed concrete beams may be used in lieu of bond beams. Refer to the structural design documents signed by a professional for the detail required.**

13. **All inserts for tie downs and attachments are to be placed or installed at the time of the grouting or concrete placement or as prescribed by the designer of record.**

14. **No masonry shall be laid when surrounding temperature is lower than forty (40) degrees Fahrenheit.**

B. ICF (Insulated Concrete Form)

1. **ICF forty-eight inches by sixteen inches by nine inches (48" X 16" X 9") unless otherwise specified in drawings and shall comply with the American Society for Testing Materials (ASTM).**

2. **ICF block shall be staggered horizontally in vertical courses when used in wall construction.**

3. **Anchorage and/or reinforcement shall be required when concrete blocks support sills, girders, joists, framing or lintels (by means of anchor bolts, straps, and/or durawall).**

4. **Provide all accessories and bucks for door and window openings. Install per the ICF manufacturers recommendations and details if they are not provided by the design professional.**

5. **Anchor bolts, as required by the design professional, shall be sized to accomplish the load transfer of loads and stresses in the design.**

6. **Anchor straps for girders, joists and framing shall be indicated by the design professional and shall be listed on the drawings as required with the resisting load calculations.**

4.1 <u>STUCCO</u>:

1. **Stucco shall comply with requirements of the American Society for Testing and Materials (ASTM) and the American National Standard Institute, Inc. (ANSI).**

2. **Stucco on masonry shall be installed using a ¾" thick stucco application that consists of three (3) layers. A scratch coat, a brown coat, and a finish coat. The finish coat texture shall be determined by the designer and contractor with approval from the City of Port St. Lucie Neighborhood Services Department.**

3. **Stucco applications on wood sheathed surfaces shall be installed using the standard application method prescribed by Tyvek with one layer of Tyvek stucco wrap over the sheathing and one layer of Tyvek building wrap over the stucco wrap before the wire lath with no paper backing. The asphalt paper backing is not an acceptable water intrusion barrier and should not be used.**

4. **Stucco soffits are not acceptable over non-sheathed framing systems. Use the same system as for wood sheathed surfaces for stucco applied in a non-vertical condition.**

5. **All stucco trim accessories are to be stucco only made from vinyl edge treatments. No foam trim is allowed to be used.**

SECTION 5

5.0 INGRESS AND EGRESS PROTECTION:

Ingress and egress protection shall be in compliance with the design drawings and the Florida Building Code. Compliance with the Florida Building Code Accessibility is mandatory for all access and egress points along a common path of travel for homes to be deemed ADA accessible. Single family homes under the Fair Housing Act are exempt from Federal ADA requirements with the following stipulation.

"However, any housing (including single family detached homes) constructed by federal, state, or local government entities or constructed using any federal, state, or local funds may be subject to accessibility requirements under laws other than the Fair Housing Act. These laws -- particularly Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act, and the Architectural Barriers Act -- have requirements for accessibility that exceed those contained in the Fair Housing Act."

Specific requirements will be determined on a case by case basis for the home and Owner. Provisions are included in these specifications that allow for the addition of ADA compliance to each home. Specific care should be taken to ensure that accessibility can be obtained without structural changes to the home.

5.1 STEPS OR STAIRS:

A. Steps or stairs shall not be less than three feet (3') in width. There shall not be any instance in which more than a single step of 6" will be allowed for new slab floor construction. This

means there shall not be any transition from floor to floor or floor to sidewalk that will exceed 6".

5.2 LANDINGS:

A. Stairs, steps and ramps shall be provided with landings at the top, at the bottom, and at any change in direction. No door shall open immediately over a step or stair. A landing shall be provided at the same elevation as the floor of the door it serves.

B. Landings shall be no less than three feet (3') in width and level in grade with a maximum slope of 1:48 in any direction. Refer to Florida Building Code Accessibility for ramp and landing requirements.

5.3 RAMPS, LANDINGS AND PLATFORMS:

A. A ramp shall be no less than thirty-six inches (36") in clear width and no greater in slope than one foot (1') of vertical height in twelve feet (12') of horizontal length.

B. A ramp shall not change in grade from the bottom to the top, or between platforms.

C. A ramp shall be provided with a landing at the bottom of the ramp and a platform at the top of the ramp, at intervals of no more than thirty feet (30') in length, at any change in direction of travel and at any door opening as follows:

1. The bottom landing or approach to a ramp shall be no less than three feet in width by six feet in length (3'x 6') or approach to the ramp.

2. The top platform of a ramp shall be determined by the configuration and approach to the door or entry. This is subject to the direction of the approach to the entry or exit at the ramp. Use the guidance from the Florida Building Code Accessibility to determine the condition and the minimum requirements for the ramp and landings.

3. Where a door opens onto a ramp, a platform shall be provided of no less than five feet (5') in length or path of travel and at the same elevation as the floor of the door it serves. The width of the landing will be determined by the approach to the door per the Florida Building Code Accessibility.

D. Ramps and platforms shall be provided with handrails and guardrails per the conditions of the Florida Building Code. Guardrails are required for ramps that will equal or exceed 30" from ground level on any open side. Handrails are required on both sides parallel to the accessible path.

E. Ramps up to 6" but not exceeding 6" in height are allowed to slope 1:12 and they are not required to have handrails.

F. Exterior ramps shall be made of non-slip materials.

5.4 HANDRAILS:

Handrails shall be provided, designed, and built to comply with the requirements of The Florida Building Code Buildings, The Florida Building Code Residential and The Florida Building Code Accessibility as to dimensions for height, width, spacing, horizontal thrust, strength, number, and protection. As to the specific requirement to apply, the condition of use shall govern along with the City Building Official acceptance.

A. Handrails shall be provided on stairs, steps and ramps rising more than thirty inches (30") above a floor or grade.

B. The top member of a handrail shall be smooth surfaced. The top of a guardrail may be used for the handrail only if the height of the guardrail is at or below 38" down to 36".

C. Handrails shall be located no less than thirty four inches (34") and no more than thirty-six inches (36") above the leading edge of a tread.

5.5 GUARDRAILS:

A. Guardrails shall be provided, designed and built to comply with the requirements of The Florida Building Code as to dimensions for height, width, spacing, horizontal thrust, strength, number and protection and shall comply as follows:

1. Guardrails shall be provided at unenclosed floor openings, landings, platforms, ramps, balconies or porches which are more than thirty inches (30") above grade, and on unenclosed sides of stairs, steps, and ramps rising more than thirty inches (30").

2. Guardrails shall be provided with intermediate rails, lattice work, or ornamental pattern constructed so that a sphere six inches (6") in diameter cannot pass through.

3. Guardrails on steps shall be to the height specified for handrails. All other locations shall have a minimum of thirty-six inches (36") in height.

4. The top member of a guardrail shall be sanded smooth.

5.6 DOORS:

A. All doors used for ingress and egress shall be six feet eight inches (6'8") in height and three feet (3' 0") in width and hung with a clearance around the perimeter of no less than one-sixteenth inch (1/16") and no more than one-eighth inch (1/8").

B. All doors shall be hung in jambs and casings that are plumb and level. All hardware shall be mortised true as to fit.

1. **New exterior pre-hung jambs shall be no less than one and one-fourth inches (1 1/4") thick with an allowance for a screen door assembly and shall be sanded smooth and protected from weather immediately upon completion of hanging by painting.**

2. **Rabbited exterior jambs shall be no less than one and one-fourth inches (1 1/4"), and shall not be rabbited to less than five-eighths inch (5/8").**

C. Exterior doors shall be solid core fiberglass or insulated metal, six panel, columnist or better and no less than one and three-fourth inches (1 3/4") thick and no less than thirty-six inches (36") in width. All exterior doors and garage doors shall be tested and rated to comply with a wind resistance rating for the area of use. Stickers indicating the rating shall be visible on the doors and not painted over.

1. **Exterior doors shall open to the exterior rather than the interior of a dwelling.**

2. **Exterior doors shall be weather tight and provided with three (3) four inch by four inch (4" x 4") pre-finished hinges, and aluminum or wood threshold with vinyl strip (sized to fit opening), and a keyed lock of quality equal to "Schlage A Series" lever type or better (installed in accordance with manufacturer's specifications). A thumbed deadbolt with a minimum one inch (1") bolt is also required and shall be keyed alike. All exterior and entry doors (garage entry) shall have the same configuration as noted above for each door.**

3. **Exterior doors shall be protected from weather immediately upon completion of hanging by painting.**

4. **All overhead garage doors shall have a 1/3 hp (minimum) electric opener installed with two (2) remotes provided.**

D. Interior doors shall be hollow core wood, birch or better, six (6) panel, columnist or better no less than one and three-eighths inches (1 3/8") thick and no less than thirty six inches (36") wide unless otherwise specified. Closet doors should be sized not to allow more than twelve inches (12") of blind spots inside closet ends on both sides

1. **New interior pre-hung jambs shall be no less than five-eighths inch (5/8") thick and painted per the painting requirements.**

2. **Interior doors shall be provided with three inches (3") wide trim and with three (3) three and one-half by three and one-half inch (3 1/2" x 3 1/2") pre-finished hinges, and the proper lock (passage or privacy). Locks shall be equal to "Schlage A Series" or better, lever type to match exterior doors and shall be installed in accordance with manufacturer's specifications and ADA compliant.**

3. **Interior doors shall be installed to accommodate floor covering plus approximately one-fourth (1/4) to one-half (1/2) inch for ventilation when required, and shall be sanded smooth and painted per the painting requirements.**

4. **Interior pocket doors shall comply with specifications for interior doors as to size, thickness, locks, clearance, and finish.**

E. Closet doors will be six panel, columnist, by-pass, pocket, bi-fold or louvered designed to fit the intended opening and installed as to manufacturer's specifications and include a passage latch.

F. Doors provided for areas requiring mechanical or combustible ventilation shall comply with local fire ordinances and the Florida Fire Prevention Code.

G. Screen doors must be aluminum and shall be installed with either pneumatic or spring closers. A bug strip, screen guard and locking device shall be provided.

H. Access doors or coverings for openings into attic areas shall be as follows:

1. **An interior attic access door constructed of half inch (1/2") plywood painted to match ceiling of no less than twenty-two inches by thirty-six inches (22" x 36") shall be provided in addition to one opening in the garage ceiling twenty-two inches by forty-eight inches (22”x 48”) with pull down stairs.**

2. **Access door shall be tightly fitted.**

5.7 <u>WINDOWS</u>:

A. Windows shall include framing, locks, casing, sills, trim, screens, and weather protection, PGT or equivalent. Bathroom windows shall be obscured glass to five feet (5') above the floor. The Florida Building Code is also applicable to windows that are near doors and shower areas that require tempered glass.

B. Windows shall be sized to fit openings unless otherwise specified.

C. All windows exposed to weather shall be provided with flashing above window and caulked around the perimeter.

D. Windows shall be caulked between framed opening and window upon installation and caulked around perimeter of window after installation.

E. Windows shall comply with the light, ventilation, and egress requirements of the Florida Building Code.

F. Windows shall be provided with proper locks and shall have the capability to remain in the open position desired without the use of props.

G. All windows shall be provided with sill of solid surface or cultural marble.

H. Windows shall be Low Solar Gain Low-E glazed thermal break aluminum Miami Dade compliant, impact resistant, with self-storing screens, and installed in accordance with manufacturer's specifications relative to the wind load resistance for the location of the

installation. Trim around window as needed to provide a complete installation, with no noticeable defects in materials or workmanship.

I. Window screens shall be aluminum frame with either a charcoal fiberglass screen mesh or not less than eighteen by fourteen (18 x 14) strands per inch with a strand diameter of .011 or an aluminum mesh. Screen shall be stored and protected (not installed) until all exterior work and painting is completed.

J. Emergency escape and rescue required. Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) measured from the finished floor to the bottom of the clear opening.

K. Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet (0.530 m2).

L. Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet (0.465 m2).

M. Minimum opening height. The minimum net clear opening height shall be 24 inches (610 mm).

N. Minimum opening width. The minimum net clear opening width shall be 20 inches (508 mm).

O. Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

SECTION 6

6.0 FRAMING:

Framing shall be in compliance with the signed and sealed drawings by the design professional, the Florida Building Code and specifications herein as required.

6.1 FLOOR SLABS:

A. All floor slabs shall be level within the allowances as prescribed by the American Concrete Institute (ACI 117) and conforming to FF=25 and FL=20.

B. All wood floors shall conform to the Florida Building Code requirements as applicable.

6.2 WALL FRAMING:

A. Studs shall be two inches by four inches (2" x 4") unless plumbing requires two inches by six inches (2" x 6") for passage of pipes. Maximum spacing shall be sixteen inches (16”) on center for load bearing and non-load bearing walls. (All exterior load bearing walls shall be reinforced masonry or ICF.)

B. Unless reinforced, studs shall not be notched more than one-fourth (1/4) of their depth, or drilled through the wide face more than one and one-fourth inch (1 1/4") in a four inch (4") stud or two inches (2") in a six inch (6") stud.

C. Reinforced masonry walls shall be furred out with one inch by two inch (1" x 2") pressure treated wood (AWPA UC2). ¾” poly styrene insulation shall be fitted between the furring strips. Furring shall be nailed into block walls sixteen inches (16") on center into the solid portions of the block.

6.3 <u>CLOSETS</u>:

A. Clothes closets shall be sized with a minimum interior depth of two feet (2') and shall have a door.

1. A closet shelf shall not be higher than six feet (6') from the floor and shall support thirty (30) pounds per linear foot with a vertical deflection of no more than one-fourth inch (1/4").

2. A closet rod for clothes hanging shall not be higher than five feet (5') above the floor and shall support ten (10) pounds per linear foot with a vertical deflection of not more than one-fourth inch (1/4").

3. There shall be a clearance between the shelf and rod of no less than two inches (2").

4. Closet shelving shall be ¾” paint grade plywood with door casing trim along the face edge wall to wall, painted per specification. Shelving made be constructed using other methods similar to the described but in no case shall wire shelving be used.

5. Closet rod shall be a chrome plated supported pipe meeting the loading requirements.

B. Linen closets shall be no less than twelve inches (12") in depth and width and shall have at least four (4) shelves, and shall have a door.

1. Shelves shall be spaced no less than twelve inches (12") apart with the top shelf no higher than six feet (6') above the floor and the bottom shelf no less than twelve inches (12") above the floor.

2. Shelves shall support thirty (30) pounds per linear foot with a vertical deflection of no more than one-fourth inch (1/4").

3. Closet shelving shall be ¾" painted plywood with door casing trim along the face edge wall to wall, painted per specification.

6.4 ROOF AND CEILING FRAMING:

A. Roof trusses and floor trusses when provided, shall be engineered by a Florida licensed engineer and stamped by the Engineer, to assure the trusses are designed properly for the application.

B. Roof framing shall include all accessory items including but not limited to trusses, rafters, collar ties, jack rafters and all saddles and attachment devices per the engineered design.

C. Eaves shall extend at least twenty four inches (24") from vertical wall & be constructed according to the drawing and comply with the Florida Building Code for wind resistance at the overhangs.

1. Soffit materials shall be rib-wire lath & stucco no less than three-quarter inch (3/4") thickness, or twelve inch (12") wire. Note the requirement to have solid sheathing backing at the soffits to use stucco.

2. Soffit materials may also be Hardie Board soffit material and fascia installed per the manufacturer's recommendation.

3. Fascia material shall be cedar, Hardie board or approved equal.

4. Eave ventilation is not required for non-vented attic space. Refer to the Building Code Requirements for the use of foam insulations and non-vented attics.

6.5 SCREEN PORCHES:

(A) Screen porches may be provided with the required design information included in the drawings and the specific structural engineering signatures of a licensed professional.

SECTION 7

7.0 ROOFING:

Roofing shall be in compliance with the Florida Building Code, manufacturer's specifications and specifications herein as required. SRI (Solar Reflectance Index) value must be a 29 or greater.

7.1 ROOFING REQUIREMENTS:

All roofing conducted shall conform to Florida Building Code. Wind resistance shall be determined by the location of the installation. The uplift resistance and other wind load requirements shall be noted on the drawings by the design professional for the location being

served. A gutter and down spout system should be installed in areas where erosion and damage to paving or base of walls may occur.

A. Scheduling of roofing inspections shall be the responsibility of the contractor, allowing a minimum of twenty four (24) hours for coordination of inspections or as directed by the local building official.

B. Roofing shall not be done during inclement weather.

C. Roofing shall include all underlayment, felt shall be minimum thirty pound (30 lb.), all metal flashing, and all roof coverings as follows:

1. Sheathing shall consist of five-eighth inch (5/8") CDX plywood. Sheathing shall be exterior grade material only. A sheathing inspection shall be performed by the building inspector prior to installation of shingles. All sheathing shall be nailed according to the latest edition of the Florida Building Code

2. Metal flashing, valley flashing, chimney flashing, wall flashing, counter flashing, cant strips, chimney crickets and flashing all protrusions through the roof such as pipes, vents and stacks.

3. Underlayment shall be installed per the requirements of the Florida Building Code relative to the slope of the roof as prescribed.

4. Roof covering shall be fiberglass shingles unless noted otherwise.

7.2 <u>FIBERGLASS SHINGLES</u>:

Fiberglass shingles shall be minimum <u>Architectural Grade</u> and provided for all dwellings having a pitch of three-twelfths (3/12) or more, and shall be installed according to manufacturer's specifications.

A. Fiberglass shingles shall be no less than a Class "A" fire and wind rating nor less in weight than two hundred fifteen (215) pounds per square (100 sq. ft.) and shall be provided with no less than a thirty (30) year limited warranty, and shall be attached per the NOA for the wind load at the specific area of application. Underlayment application shall be per the Florida Building Code.

B. Color shall be SRI (Solar Reflectance Index) value of 29 or greater.

7.3 <u>VENTILATION</u>:

A. Non-ventilation of attic space shall be according to the Florida Building Code and specifications set by the design professional for a sealed conditioned attic.

B. Ventilation of the home shall conform to the Florida Building Code and the Florida Energy Code requirements.

SECTION 8

8.0 EXTERIOR WALLS:

Exterior wall shall comply with the design drawings, the Florida Building Code, ASTM standards and manufacturer's specifications and specifications herein as required by the design professional signing the structural drawings.

8.1 EXTERIOR WALL REQUIREMENTS:

A. Exterior walls shall provide safe and adequate support for all loads imposed upon them, and prevent the entrance of water or excessive moisture from blowing rain or other moisture intrusion.

B. Stucco thickness shall be 3/4" applied to masonry in three coats.

C. Exterior wood sheathing and siding shall not be less than twelve inches (12") above the ground unless pressure treated or naturally decay resistant.

D. Hardie Board Siding shall include vapor barrier, building wrap, inside and outside corner trim, window and door flashing and/or trim, appropriate moldings and trim, caulking and flashing between abutting bottom and top ends of panel siding as prescribed by the manufacturer's installation instruction.

E. Horizontal siding joints shall be made over supports, staggered with not more than three joints on the same stud, except at ends. Install Hardie siding per the manufacturer's recommendation.

SECTION 9

9.0 INTERIOR COVERINGS:

Interior coverings shall be in compliance with the drawings, the Florida Building Code, manufacturer's specifications and specifications herein as required. A four inches (4") tall baseboard should be installed at all base of interior walls.

9.1 WALLS AND CEILINGS:

A. Drywall walls (minimum 1/2") and ceilings (minimum 5/8") are required. Use moisture and mold resistant drywall in bathrooms and provide tile backer board at all tile locations with

building wrap behind the backer board to prevent moisture intrusion in the wall cavity over time. Installation of tile over drywall is not allowed.

9.2 DRYWALL:

A. Drywall shall be no less than one-half inch (1/2") in thickness on the walls, five eights inches (5/8") on the ceilings and shall include metal corner beads, taping, finishing, and all trim moldings.

B. Drywall shall not be fastened nor glued directly to masonry walls. Attach drywall to walls and ceilings with screws only. Do not nail.

C. Ceilings in bathrooms shall be smooth finish with enamel paint. All other ceilings shall be finished in the following manner: knockdown only.

D. All walls shall be smooth finish-Level 4 drywall finish.

E. Moisture resistant sheetrock such as National Gypsum XP shall be used on walls and ceilings in moisture prone areas such as bathrooms. Use Durock or other brand of backer board as prescribed for tile and high moisture areas.

A. Type 'X' fire rated drywall shall be installed on walls and ceilings of garage.

9.3 TILE FLOORING:

A. All living space shall be tile with the exception of all bedrooms and bedroom closets.

B. Tile flooring shall meet FHA standards and be installed to comply with manufacturer's specifications and recommendations. Flooring in kitchens and bathrooms and marked area on drawings must be tile.

A. Porcelain floor tile to be a grade 2 with a minimum of three color selections
B. Porcelain wall tile for shower/tub enclosures, to be grade 3 tile installed on durock/concrete board with a minimum of three color selections

C. Owner/City shall have a choice of style and color with in bid price range. One dollar and 50 cents to two dollars and 50 cents ($1.50- $2.50) per sq. ft – not installed.

9.4 BAMBOO WOOD FLOORING:

A. All bedrooms and bedroom closets option are to be pre-finished solid or engineered bamboo wood flooring installed according to the manufactures specifications and with a JANKA hardness rating of twenty-eight hundred to three thousand (2800 to 3000).

B. Owner shall have the choice between bamboo and carpet along with the color.

9.5 CARPETING AND PAD:

A. Carpeting and pad shall be FHA approved, minimum 25 oz. single level cut pile pattern with a minimum 3 color choices. Removal, padding, floor prep and installation per manufacturer's specifications; carpeting materials shall be builder-grade, entry-level materials.

B. Carpeting seams shall be kept to an absolute minimum and all edges securely fastened to avoid separating. No more than one seam per room will be allowed where the width or length of the carpet exceeds the roll length or width.

SECTION 10

10.0 INSULATION:

Insulation shall be in compliance with the design professional's details and specifications, Florida Building Code Energy and the calculated requirements for Energy efficiency as related to the specific location. An EPL (Energy Performance Level) display card is mandatory and required by the Building Department for occupancy.

10.1 CEILING INSULATION

A. Closed cell spray foam insulation on underside of the roof decking is required.

B. All attic areas above living area shall be conditioned space with the underside of the roof decking coated with closed cell foam insulation. (R-38 is required) Approximately 6 inches of insulation is required. Refer to manufacturers tested R ratings for thickness and reference building envelope calculations for reduction in insulation R rating relative to envelope calculations.

C. Contractor to confirm with insulation manufacturer as to ignition barrier requirements for their product and apply whatever is required per the requirement.

C. A certification sticker shall be affixed to the access opening upon completion.

1. Sticker shall state the type of insulation and "R" rating and shall be dated and signed by the Contractor upon completion.

2. The contractor shall not sign or date the certification sticker until he has inspected the work and is assured of its compliance with manufacturer's specifications.

10.2 WALL INSULATION:

A. Wall insulation with reinforced masonry walls shall be 3/4" polystyrene foam with an R=4 between 1 x 2 furring strips-24" o.c. on the interior walls.

B. Wall insulation with a rating of no less than "R 20" shall be provided in all exterior walls of a dwelling when using ICF construction. All wall penetrations shall be filled using a low VOC sealant or weather stripping.

10.3 FLOOR INSULATION:

A. Floor insulation is not required for slabs on grade unless there is a requirement for increased R value in the slab by the energy calculations. There may be perimeter insulation installed if required. See the drawings for guidance with the energy calculations and requirements.

10.4 PLUMBING INSULATION:

All water pipes shall be insulated. Buried insulation below the ground or under dwellings with a continuous foundation wall shall also be insulated and have plastic sleeves on the pipe to prevent stress on the pipe from settlement or thermal movement. Insulation shall be foam sleeve, securely installed. Insulate all interior water lines to prevent heat loss and to stop pipe sweat from cold water.

SECTION 11

11.0 CABINETS:

Compliance with manufacturer's specification and design specifications herein is required.

11.1 CABINET REQUIREMENTS:

A. Cabinets shall be raised panel standard in size, style and finish and shall include doors, drawers, hinges, handles and closures, and be securely installed true and plumb without conflict in the cabinet layout.

B. Wall and base cabinetry shall be constructed of no less than three-eighths inch (3/8") thick plywood or approved solid wood with wood veneer. Pressed board or engineered wood is not acceptable.

C. Shelves shall not be less than three-eighths inch (3/8") thick and support no less than twenty-five (25) pounds per linear foot.

D. Vertical surfaces of cabinets (front, sides, doors, and drawers) shall be clad with plastic laminate or sealed with varnish, shellac, lacquer, polyurethane or oil based enamel paint.

E. Base cabinets and vanities which abut a wall shall be provided with tops that have back splashes, including side splashes for corner walls. Plywood and solid surface composite is the preferred top type. This type of countertop consists of a plywood backing with a thick solid surface layer on top. Provide samples and options for three different types within the same price range.

F. All interior surfaces shall be painted with low VOC paint or moisture protective finish. No use of Urea-Formaldehyde (UF).

G. Owner shall have choice of a color for the tops and a type of finish for the cabinets.

11.2 <u>VANITY CABINETS</u>:

A. Imitation molded marble top with integral sinks shall be used for vanity top.

B. Vanity cabinets shall be no less than thirty inches (30") nor more than thirty-four inches (34") in height. Width shall be a minimum of thirty inches (30"), space permitting, and not less than twenty inches (20") wide in any case.

C. No use of Urea-Formaldehyde (UF).

D. ADA compliant homes shall have an ADA compliant lavatory per the Florida Building Code Accessibility

11.3 <u>MEDICINE CABINETS</u>:

A. Medicine cabinets are required.

B. Medicine cabinets shall have a minimum of three (3) shelves and a mirror, unless otherwise specified.

C. For medicine cabinets with electrical features, see the specifications.

D. Medicine cabinets for ADA must meet the reach requirements as specified and the mirror locations. Special locations may be required for access to the mirror and cabinet with the lavatory.

11.4 <u>KITCHEN BASE CABINETS</u>:

A. Counter top shall be no less than twenty-five inches (25") in depth, width or protrusion. Counter top shall include a back splash around any perimeter abutting a wall of no less than four inches (4") in height.

B. Base cabinets, including counter tops shall be thirty-six inches (36") in height, and toe recess shall be provided.

E. Drawers shall be provided in at least one or more base cabinets. Drawers shall be at least twenty-one inches (21") long and five and one-fourth inches (5 1/4") deep.

F. Kitchen cabinet layout shall be as designed by the design professional and agreed to by the City of Port St. Lucie.

G. No use of Urea-Formaldehyde (UF).

11.5 KITCHEN WALL CABINETS:

A. Wall cabinets shall be no less than twelve inches (12") in depth. No use of Urea-Formaldehyde (UF).

B. Wall cabinets installed over a counter or base cabinet shall be installed no less than fifteen inches (15") or more than eighteen inches (18") above the counter or base cabinet.

C. Cabinets shall be no less than the following vertical lengths:

1. **over base cabinets, thirty inches (30").**
2. **over range (if specified on the drawings), eighteen to twenty (18”-20”) relative to the use of a range hood (adjust accordingly)**
3. **over refrigerator, fifteen inches (15").**

11.6 APPLIANCES:

All appliances provided for the same home are to be the same brand and three color choices (white, bone or black). Frigidaire brand appliances will not be accepted.

A. Refrigerators shall be a minimum of eighteen (18) cubic feet in size, frost free, 2 adjustable shelves minimum, top freezer model, five year warrantee on compressor, cords included and Energy Star rated.

B. Range shall be electric, free standing with anti-tip bracket, conventional, thirty (30) inch wide, smooth glass top with 2 large burners & 2 small burners, window in oven door, storage drawer below, self-cleaning, oven light, cord included and Energy Star rated.

C. Range hood, electric, thirty (30) inch wide, duct free, under cabinet style, 2 minimum speed exhaust fan, separate light, mitered side and hemmed bottom edge for safety & easy cleaning.

D. Dishwasher, 24 inch built-in, electronic, sound insulation, energy star rated, minimum 4 wash cycles and 8 wash settings, adjustable rack heights, delayed start option, cord included and Energy Star rated.

SECTION 12

12.0 PLUMBING:

Plumbing is to be in compliance with the drawings, Florida Plumbing Code, manufacturer's specifications, and specifications included with the drawings as required

12.1 PLUMBING REQUIREMENTS:

A. Plumbing workmanship shall conform to accepted good practices of the plumbing trade and be performed under the supervision of a State of Florida or City of Port St. Lucie licensed plumber.

B. The contractor shall be responsible for layout and installation of all plumbing.

C. Shut-off valves shall be installed on water lines at each fixture, except bathtubs and showers. All installations shall include new materials, faucets, supply tubes, waste and vent plumbing, and or new toilet seats.

D. Contractor to provide complete assemblies for the plumbing fixtures and all plumbing accessories such as toilet tissue dispensers, towel holders, shower rods, etc. required to be fully functional. All accessories shall be chrome or nickel plated to match all faucets, etc that shall be chrome or nickel plated.

12.2 PLUMBING FIXTURES:

A. Bathtubs shall be white enameled steel equal to American Standard, Crane or Kohler, or equivalent.

a. Bathtubs shall be no less than sixty inches long by thirty inches wide by fifteen inches deep (60" x 30" x 15").

b. The bottom surface of a bathtub shall be slip resistant.

c. Backing for grab bars shall be installed to sustain a dead load of two hundred and fifty (250) pounds for five (5) minutes. Backing for grab bars shall be installed in all bathrooms thirty-one (31") to thirty-eight inches (38") above the concrete floor along back wall of the tub at least fifty-two inches (52") long.

d. Comply with Florida Building Code Accessibility requirements for all accessible hardware and accessories.

e. Provide blocking sufficient for installation of all accessories whether provided or not to comply with the Accessibility Code per application.

B. Showers

a. Showers shall be no less than sixty inches long by thirty six inches wide (60" x 36").

b. The bottom surface of a shower shall be slip resistant.

c. Backing for grab bars shall be installed to sustain a dead load of two hundred and fifty (250) pounds for five (5) minutes. Backing for grab bars shall be installed in all bathrooms thirty-one (31") to thirty-eight inches (38") above the concrete floor along back wall of the shower at least fifty-two inches (52") long.

d. Comply with Florida Building Code Accessibility requirements for all accessible hardware and accessories.

e. Provide blocking sufficient for installation of all accessories whether provided or not to comply with the Accessibility Code per application.

C. Waterclosets shall be elongated, white vitreous china equal to American Standard, Crane or Kohler, or equivalent with white toilet seat.

a. Water closets shall be no less than fourteen inches (14") high from finished floor to rim.

b. Waterclosets shall include back flow preventer water control with volume regulator, flush valve and trip lever.

c. Waterclosets shall be high efficiency designed to have a dual flush option and utilize not more than one point one (1.1) gallons of water per flush for liquid flush and one point six (1.6) gallons of water per flush for solids.

D. Lavatories shall be vanity type not less than eighteen inches (18") round, space permitting. A one-piece molded lavatory and vanity top may be installed.

E. Laundry shall have hot and cold water supply and drainage for a washing machine. Install a washer box into the wall and a recessed dryer box for dryer hose connection.

12.3 KITCHEN SINKS:

Kitchen sinks shall be double compartment, insulated stainless steel with washerless fittings, and be not less than thirty-three inches by twenty-two inches by eight inches (33" x 22" x 8"). No less than 20 gauge in thickness. Sink faucet shall be of the water saver type point five to one (.5-1.0) gal per minute.

12.4 FITTINGS:

A. Bathtub, shower, and lavatory faucets may be single or double control and shall be washer less type equivalent in quality to American Standard, Crane or Kohler and of metal construction.

B. Shower heads shall be designed to utilize no more than one point five (1.5) gallons of water per minute.

12.5 WATER LINES:

Water lines shall be (option 1-Copper Type M), (option 2-CPVC) or (option 3-PEX) & properly insulated and protected. The options are in the order of preference and shall be determined by the City of Port St. Lucie as to the correct use and application of the selected type.

12.6 WATER HEATER:

Option 1:
A glass lined, quick recovery electric water heater connected to a time clock shall be provided and installed. A minimum five (5) year warranty shall be provided. Installation shall comply with plumbing codes. Size shall be a minimum fifty (50) gallon tank. Tank and piping must be insulated with foam jackets.

Option 2:
A glass lined, quick recovery electric water heater with a standalone heat pump shall be provided and installed. A minimum five (5) year warranty shall be provided. Installation shall comply with plumbing codes. Size shall be a minimum fifty (50) gallon tank. Tank and piping must be insulated with foam jackets.

Option 3:
Solar heated panel mounted on roof with an eighty (80) gal water heater installed in garage. (roof trusses must reflect this added load on plans)

SECTION 13

13.0 ELECTRICAL:

Electrical shall be in compliance with the drawings, the Florida Building Code, the National Electric Code (latest edition adopted by the local government), policies of local Utility Company and specifications herein as required.

13.1 ELECTRICAL REQUIREMENTS:

A. Electric service shall be no less than two hundred (200) amps and shall include the appropriate distribution panels, circuits and circuit breakers and shall be properly grounded per NFPA 70, NEC.

B. All electrical wires, junctions, boxes, fixtures, etc. shall be properly installed and fastened to dwelling.

C. Bathrooms shall have a GFI receptacle compliant with the NEC. All kitchen countertop receptacles except for dedicated receptacles shall be ground fault protected. All exterior receptacles shall be ground fault protected. A ground fault receptacle shall be provided at each exterior grade door on the outside of the home.

D. Bedrooms to have a double switch at doorway to operated ceiling fan and one outlet along the bedroom wall or to operate a light at the ceiling fan. All bedroom circuits are to have AFCI (Arc Fault Circuit Interrupter) breakers per the NEC.

E. Laundry room/area shall have dedicated electrical service 220/240 volts for a clothes dryer and a dedicated 110/120 for a washing machine.

13.2 SMOKE DETECTORS:

A. Smoke detectors shall be located in each bedroom, central hallway, garage, kitchen and installed per manufacturer's instructions and per Florida Building Code. All smoke detectors shall be hardwired in sequence on a dedicated circuit and have battery backup. Wiring shall allow for all detectors to alarm when one alarms.

13.3 LIGHTING: LED or Fluorescent bulbs

A. All lighting shall be permanent fixtures, wall switch controlled. Unless otherwise indicated on the electrical lighting drawing, fixtures shall be ceiling mounted (except bathroom).

C. Bathroom lighting shall be wall-mounted above the lavatory and a fixture in the ceiling unless otherwise indicated, and shall be not less than one hundred (100) watt equivalent. All bulbs shall be either fluorescent or LED.

D. Kitchen lighting shall be arranged according to the drawings. Lighting may be 80 watt equivalent centrally located, or more than 80 watt equivalent distributed in two fixtures.

13.4 VENTILATION:

A. Exhaust fans, energy star rated, for kitchen or bathroom shall be properly vented through duct out the soffit, unless otherwise noted. Each bathroom shall have an exhaust fan. Exhaust fan must be energy star rated and capable of meeting the air changes as required for exhaust for the size of the space.

B. Lighted range hoods shall include 2-speed exhaust fan. Non-vented charcoal filtered systems may be installed in lieu of vented if specified. Hoods shall be sized to match

opening for range or cooktop, and shall be securely attached to appropriately sized and elevated wall cabinet. The exhaust to the exterior if applicable must not be into an outdoor space such as a patio, etc.

C. Where the air infiltration rate of a dwelling unit is less than 5 air changes per hour when tested with a blower door at a pressure of 0.2 inch w.c (50 Pa) in accordance with Section R402.4.1.2 of the Florida Building Code, Energy Conservation the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with Section M1507.3.

D. Provide all tests for duct leakage, etc. as required by the Florida Building Code.

13.5 CARBON MONOXIDE DETECTORS

A. Carbon Monoxide Detectors shall be installed as per Rule 9B-3.0472 (one detector per floor level)

For purposes of this rule, the following definitions shall apply:

CARBON MONOXIDE ALARM. A device for the purpose of detecting carbon monoxide, that produces a distinct audible alarm, and is listed or labeled with the appropriate standard, either ANSI/UL 2034 - 96, Standard for Single and Multiple Station CO Alarms, incorporated herein by reference, or UL 2075 - 04, Gas and Vapor Detector Sensor, incorporated herein by reference, in accordance with its application. Both documents may be obtained by writing to: Codes and Standards Section, Department of Community Affairs, 2555 Shumard Oak Boulevard, Tallahassee, Florida 32399-2100.

FOSSIL FUEL. Coal, kerosene, oil, fuel gases, or other petroleum or hydrocarbon product that emits carbon monoxide as a by-product of combustion.

B. Every building having a fossil-fuel-burning heater or appliance, a fireplace, or an attached garage shall have an operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes.

C. Alarms shall receive their primary power from the building wiring when such wiring is served from the local power utility. Such alarms shall have battery back up.

D. Combination smoke/carbon monoxide alarms shall be listed or labeled by a Nationally Recognized Testing Laboratory.

SECTION 14

14.0 HVAC:

HVAC shall be in compliance with the drawings and energy calculations along with the Florida Building Code Mechanical and Energy Conservation. Provisions for the electrical, gas and mechanical requirements of the Florida Building Code and energy codes, manufacturer's specifications and specifications herein as required. HVAC systems **are to be operational at the final inspection and all systems are to be fully functional.**

14.1 AIR CONDITIONING:

A. The air conditioning unit serving every habitable room in a dwelling unit, including bathrooms and halls, shall be capable of maintaining a temperature of at least sixty-five (65) degrees Fahrenheit at three feet (3') above the floor on any day of the year.

B. Air Conditioning unit must be Energy Star rated with a min. SEER rating of 16.

C. Heating shall be by heat strip within the air handling unit. The load calculations shall determine the amount of heat required.

D. HVAC units shall be installed by licensed HVAC contractors and installed in a conditioned space inside the home. (not to be installed in conditioned attic space)

E. Provide an A/C Condenser Security cage (Suggested, 3 way adjustable, W x D adjustable 30 to 51 in, H adjustable 34 to 59 in. - Manufacturer, AC Guard Security Cage Mfr. Model # ACGU distributors web site- (www.ac-guard.com/distributor.html). Expand the slab to hold the condenser and the cage with additional space for garbage can storage at each location.

14.2 UNIT DESIGN AND CALCULATIONS:

A. BTU (British Thermal Units) shall be used to figure the amount of the cool load.

B. Air systems shall include ductwork and appropriate supply and return vents to distribute air evenly throughout the dwelling. Air supply vents shall have a closeable register in each room. A digital programmable thermostat shall be located appropriately to control temperature evenly throughout the dwelling.

C. All Air Handling Units shall be condenser supplied units having a minimum SEER rating of sixteen (16) with an emergency ten kilowatt (10k) heat strip and Energy Star rating. Trane or equivalent.

D. Introduction of outside air shall be done according to the latest Florida Building Code Mechanical requirements for ventilation.

14.3 DUCT SYSTEM:

A. All duct work shall be properly sealed using mastic at all connections.

B. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the documentation procedure. Ducts shall be supported directly from fire-resistance-rated structural elements of the building by substantial, noncombustible supports.

SECTION 15

15.0 PAINTING AND FINISHING:

Painting and finishing shall be of low VOC and in compliance with the drawings, the manufacturer's specifications, and the specifications herein as required.

Painting shall be in accordance with the paint manufacturer's specification and the design professional instruction in the drawings. Minimum painting for interior is a one coat primer and two coats of finish paint on all painted surfaces.

15.2 APPLICATION OF PAINT:

A. Paint shall be applied to a mil thickness of no less than five (5) mils per coat. Minimum 24 hrs. drying time in between coats or as specified by the manufacturer.

B. For three (3) coat application, the first coat shall be prime coat or sealer coat, as applicable.

C. A minimum of three (3) coats of paint (including the primer) shall be applied to new surfaces. Additional coats may be required to obtain full coverage.

D. Bathroom and kitchen walls shall be painted with latex enamel semi-gloss washable paint.

E. Interior and exterior wood surfaces shall be covered with oil base or latex paint unless otherwise directed by the drawings. All pressure treated wood shall be painted with oil based paint when the wood has reached a dry enough state to receive the paint without issues.

15.3 APPLICATION OF STAIN, SEALER:

A. Stain shall be applied evenly to obtain selected shade.

B. Varnish or shellac shall be sanded smooth between coats. Minimum of two coats on finishes is required.

15.4 SELECTION:

A. Contractor shall assure that paint selected is appropriate for surface (masonry, exterior wood, stucco, etc.).

SECTION 16

The work site shall be graded to blend with the surrounding area. No water run off shall be introduced to neighboring properties and all finish grade elevations shall be set to comply with the provisions of the City of Port St. Lucie Building Department guidelines for separation of materials to the ground surface.

16.0 LANDSCAPE:

A. The entire lot (from edge of pavement to rear property line) shall be sodded with bahia sod and watered until the sod has taken root and stabilized.

B. Four (4) trees per lot shall be installed. Any trees that are approved and listed in the PSL Code of Ordinances, Chapter 158 under Landscape are appropriate. All trees shall meet the landscape code requirement of the City's Landscape Code. The selected trees must be planted in accordance with FPL's Right Tree Right Place guidelines detailed here: https://www.fpl.com/reliability/trees/tree-location.html

C. A 4" reinforced concrete driveway shall be installed to provide paved pathway for vehicles from the public roadway to garage and proper apron provided where driveway meets public roadway. Refer to section 3 for concrete reinforcement and specifications.

D. A reinforced concrete walkway of forty eight inches (48") min. width shall be installed to provide a pathway to pedestrians from driveway to front entryway of the house. Refer to section 3 for concrete reinforcement and specifications and section 5 for information on ramps, steps, landings and platforms.

E. There shall be vision blocking fencing provided around the A/C and garbage pad. Describe and detail the specific type in the drawings.

F. All access to the homes shall be ADA compliant per ADA 2010 Standard.

SECTION 17

17.0 APPLIANCES:

PRODUCT DESCRIPTION AND RATING
Appliances should be builder-grade with Energy Star rating. Colors shall match already existing appliances, where feasible, with basic colors of white, bone, or black. The following are required.

1. **Electric range/stove**
2. **Range hood**
3. **Dishwasher**
4. **Refrigerator**

17.1 INSTALLATION

All appliances must be installed in accordance with manufacturer's specifications.

17.2 WARRANTIES AND MANUALS

Contractors must provide standard manufacturers' warranties and manuals for newly installed appliances.