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## **Division 1: General Requirements**

### **01011 Final Cleaning**

Brooms, cleaning supplies i.e.: glass cleaner, furniture polish, floor cleaners, brooms, mops, dust pans etc.... shall be on site for cleaning throughout the construction process and for final clean before the home is owner occupied.

### **01012 Dumpster**

A place for construction refuse will be provided on all active job sites. This can be a dump trailer or Roll Off style dumpster. On small jobs a smaller can may be allowed until such time it will no longer contain the amount of trash on the jobsite. At no point will a “trash pile” be acceptable.

### **01020 Sanitary Facilities**

A portable Sanitary Facility shall be present for every work site volunteers could be reasonably expected to work a 6 hour shift. A Sanitary Facility may be required for single events if no other options are available.

### **01021 Electricity Hookup**

This cost code is for the electric company charge to install the new wire for the actual hookup to the home.

### **01022 Temporary Electric**

All new construction sites shall have a temporary power pole installed until such time as the permanent power can be installed. Some Re-Hab and Repair Program projects may use existing power if they are GFCI protected.

### **01028 Habitat Signage**

All new construction and rehab jobsites shall have a Safety Rules sign posted and be posted on the lawn with our Home for Sale or similar sign.

### **01050 Small Tools**

All jobsites shall be adequately stocked with the tools and accessories (saw blades, bits, etc...) required for the work scheduled that day. Any large tools that will be used for multiple jobsites will be cost coded to the affiliate small tools code.

### **01071 Safety Supplies**

All jobsites shall be adequately stocked with the safety supplies needed to complete the tasks assigned for that date, to include: dust masks, gloves, safety glasses, harnesses, etc...

### **01074 Water & Ice**

Clean drinking water will be provided for all volunteers. There cannot be a single “community cup” and if using bottles they should be marked so as to prevent use by anyone other than the original owner.

**01075 Job Fuel**

Fuel cans should follow OSHA standards for safety with a spring loaded lid and have a funnel designed for use with Fuel. This code is for fuel for generators or temporary heat, not for supervisors vehicles.

**01100 Permits & Fees**

All permits, other than building permits, shall be charged here. All permits, including grading permits, shall be obtained when required.

**01110 Building Permit**

All projects shall have a building permit when required by local authorities.

**01114 Utility Fees**

This is where all utility fees shall be charged, not to include actual construction costs for utility install.

**01211 Civil Engineering**

As-Built surveys shall be performed on all new and rehab projects. This code is for all site work design, survey, and field work by civil engineering firms.

## **Division 2: Site Construction**

### **02220 Site Demolition**

Demolition and removal work shall consist of demolishing, removing and disposing of all structures and improvements within the construction limits. This work shall apply to all structures and improvements, whether on, above or below the surface of the ground or subgrade. Demolition and removal shall include but not be limited to items such as buildings, drainage structures, pipes, pavements, fences, retaining walls, guard rails and signs.

### **02230 Site Clearing**

Clearing shall consist of removing all vegetative matter such as trees, brush, downed timber, and other objectionable materials found on or above the surface of the site. It shall include: removing buildings, fences, and lumber; waste dumps and trash; salvaging of such materials as may be specified; and disposing of the debris as per public entity requirements. Perimeter erosion and sediment controls must be in place before clearing activities occur.

Grubbing shall consist of removing and disposing of all vegetative matter such as stumps, roots, buried trees, and brush encountered below the surface of the ground or subgrade, whichever is lower, that has not been included in the description of clearing. When deleterious materials are encountered below the ground line which may be detrimental to the proposed improvement, they shall be removed to a depth necessary to provide adequate support for the proposed improvement.

Demolition and removal work shall consist of demolishing, removing and disposing of all structures and improvements within the construction limits. This work shall apply to all structures and improvements, whether on, above or below the surface of the ground or subgrade. Demolition and removal shall include but not be limited to items such as buildings, drainage structures, pipes, pavements, fences, retaining walls, guard rails and signs.

### **02317 Trenching for Site Utilities**

Follow local codes for underground utilities.

### **02500 Utility Services**

### **02730 Aggregate Surfacing (Driveways)**

When planning your new crushed stone driveway, it's natural for your mind to be focused solely on the surfacing material. After all, this is the stone that you will look at every day. It's important to realize, though, that other materials will be required to complete your work. You'll need:

**Subgrade (Optional)** – The subgrade of your driveway is the compacted soil situated at the bottom of the area excavated for the drive. Here in NJ, most homeowners will find that their soil is in decent condition and can act as the sub-grade. On the other hand, if your soil isn't healthy, is crumbly and loose, or has other issues, you may need to apply a layer of soil to be compacted and act as a firm foundation for the drive.

**Sub-base** – The sub-base is the bottom layer of crushed stone that sits on top of the sub-grade. This layer is comprised of larger crushed stone aggregate and helps to provide structural strength and integrity for the driveway.

**Base** – The base layer of the driveway is made up of slightly smaller crushed stone than the sub-base layer. Sometimes stone dust or fines will be intermixed with the aggregate to reduce voids and better hold this layer in place.

**Surfacing Material** – The surface layer of gravel is poured on top of the base layer and completes the crushed stone driveway. This is the material that you select not only for its positive functional properties, but also for its appearance and esthetic value.

### **02775 Sidewalks**

Proper compaction and preparation of the subgrade beneath the sidewalk is essential. The uniformity of the compaction is just as important as the degree of compaction. Uniform compaction diminishes differential settlement of the concrete sidewalk and reduces the chance of crack development.

Although concrete can be placed directly on the subgrade, it's much better to place a granular subbase layer between the compacted subgrade and the concrete slab to provide more uniform support and to bridge over minor subgrade defects. This is particularly important in areas where the underlying subgrade soil is susceptible to shrinkage due to moisture depletion.

In cold temperatures, protect newly poured concrete sidewalks from freezing for at least five days after placement.

In warm temperatures, wet curing or the application of a liquid membrane-forming curing compound is needed to retain adequate moisture in the concrete while its strength is developing. Curing should be beginning immediately after finishing because the concrete surface can dry within 20 to 30 minutes in sunny, windy and warm conditions.

To minimize cracking, control joints should be cut into the slab at spacings of about 4 feet transversely across the length of the sidewalk and to a depth of about one-quarter the slab thickness.

### **02920 Lawns and Grass**

Rake surface to remove all debris and slope away from the house foundation. Make sure you wait for the right time of year to plant new grass seed. Kentucky bluegrass, perennial ryegrass, or tall fescue, the best time to plant is in spring or early fall. If you plant cool-season grasses in the summer or winter, there is a good chance the seeds won't establish, or the new grass won't survive the extreme heat and cold. Zoysia, centipede, or bermudagrass, early summer is the best time to plant.

### **Fences**

Fences will be evaluated for Habitat homes on a case by case basis. In instances where fences are approved, they will meet one or more of the following criteria:

- 1) to clarify property lines with neighbors or the community when there has been a prior use of Habitat owned vacant property prior to building. For example, use of the property to park vehicles.
- 2) to mitigate city fines when property has been used improperly by neighbors or community members. Dumping of trash would be an example.
- 3) to prevent the continuation of illegal or dangerous activity on a Habitat owned property.

4) when the Habitat owned property is adjacent to or directly bordering a cemetery. This would not apply to properties that are located across from a cemetery.

## **DIVISION 3 - CONCRETE SPECIFICATIONS**

### 1.) Concrete Under -Slab Preparation:

Earth where Slab is to be poured shall be cut out a minimum of 8" below finished grade of concrete slab. The existing earth at sub level shall be tamped for optimum compaction to prevent settling and movement. Once compaction is complete, 4" of compacted gravel is to be installed with a minimum 6mil clear poly is to be installed on top of stone.

### 2.) Reinforcement:

Six-inch Welded Wire Fabric is to be installed and placed on 2" chairs to hold wire in center of poured slab. Asphalt Fiber Expansion joints shall be installed where slab meets foundation vertical walls.

### 3.) Concrete Slab:

Concrete shall be a standard premixed material with a minimum 2500 psi rating and a fiber reinforcing. Asphalt Fiber Expansion joints will be installed where pour ends and new day pours begin. No anti-freeze additives shall be used.

### 4.) Finishes:

All porches and walkways shall have a broom finish and 3" border troweling. Control Joints are to be installed every 12' on walkways and where ever necessary otherwise.

### 5.) Cleaning

At the conclusion of work, Contractor shall clean down all slab pours, remove his scaffolding and equipment used in the work, clean up all debris, refuse, and surplus material, and remove them from the premises. Any damage or traces of contractor equipment, and/or suppliers, that has altered the conditions of the premises shall be repaired or replaced. This includes but is not limited to tire ruts, excavated soil not wanted by Owner, concrete wash areas or oil/hydraulic fluid spills.

## **Division 04: Masonry Specifications 04000**

### **1) Concrete Masonry Foundation**

Masonry foundation block units shall conform to section 202-2.1.1 of the Standard Specifications. Unit size shall be 16"x8"x8". Half inch Rebar shall be installed vertically in the foundation wall every 2' apart and these cells will be filled from bottom to top with concrete. Anchor bolts (1/2"x14" with an L)(the anchor bolts will have a minimum 2 1/2" projection) will be installed every 4' and in between 6" to 12" from the ends of the sill plate in accordance with a proposed layout. These cells are to be filled with concrete also. Mortar Joints shall be left clean with all excess mortar to be removed. Blocks shall be cut accurately and/or filled with grout at corners and openings such as crawl space entrance, sump pump discharge, etc... The entire foundation shall be 5 courses of blocks in height and the exterior surface shall be parged with a semi-swirl pattern. Foundation Piers shall be 24" x 24". Water proofing shall be applied over parging at and below grade.

### **2) Brick Units**

Brick Units shall be a common burnt clay brick, red in color unless specified. Porch Slab will have a Row Lock of brick around outer perimeters. Front access stairs shall be brick veneer with block foundation. Stairs shall be 6' wide and steps will be 11" treads with 7" risers (approximately). Steps will be constructed in accordance with local building codes. A sample brick will be provided prior to construction.

### **3) Mortar**

Mortar shall be a standard sand mortar, light gray in color.

### **4) Cleaning**

At the conclusion of work, Contractor shall clean down all masonry walls, remove his scaffolding and equipment used in the work, clean up all debris, refuse, and surplus material, and remove them from the premises. Any damage or traces of contractor equipment, and/or suppliers, that has altered the conditions of the premises shall be repaired or replaced. This includes but is not limited to tire ruts, excavated soil not wanted by Owner, concrete wash areas or oil/hydraulic fluid spills. Areas excavated for masonry and concrete related work will be backfilled, sloped away from the foundation, and have a smooth walking surface.



## DIVISION 0600

### 06110 Rough Framing

Exterior wood framing will be constructed of 2x6x92 5/8" with bottom plate and double top plate, SPF studs spaced 2' on center. Headers shall be 2x10 with 2x6 bottom plate, filled solid with wood. 5/8 OSB sheathing shall be fastened to the studs horizontally using 2 3/8" ring shank nails at 6" on center in the field and 4" on center on the seams. Stagger, 4-foot offset, seams as you go up the house. 2x6 blocking shall be installed on the exterior edge of the studs so as to give a continuous nailer block for the OSB to fasten to. Jack studs at doors and windows shall extend from header to bottom plate, sill plates shall be cut inside of jacks. All exterior openings less than 4' shall have a 2x10 solid construction with 2x6 bottom plate, one jack and one king stud each side. All openings 4' or wider shall have triple jacks and double king studs. All studs layout throughout the house should be continuous from the same starting point. All studs on each side of the house, and front and back, need to line up and the trusses should be lined up to be installed directly on top of the stud below. 2' metal straps shall be installed from the sill plate up each stud that extends from bottom plate to top plate. 2' metal straps shall be installed from stud to stud across flooring sill for second story construction. OSB shall be installed over the straps. "U" style hurricane straps shall be installed over the OSB on the exterior plane of the house. The overall idea is that there will be a continuous "rib" structure with straps in line from sill plate to truss connections.

Interior walls shall be 2x4x92 5/8" precut studs with bottom plate and double top plate. 2x6 studs shall be used on all plumbing walls (wet walls) installed at 16" on center spacing. Headers shall be 2x12 with 7/16" OSB in between, pushed up to the bottom of the top plate. Dead wood (blocking) shall be installed where required for Gypsum Wall Board install. Wood blocking shall be installed for cabinet, towel racks, and toilet paper holders, and other places as needed. Blocking shall be installed in bathroom walls at toilet for future install of grab bars if needed. All load points shall be constructed to carry load above.

**The more stringent specification shall rule when this specification differs from local building codes. All local building codes must be met at a minimum.**

### 06120 Wood Shed

All Sheds shall be built upon a 3.5" thick minimum 3000 psi monolithic poured slab on grade. Shed shall be framed using Pressure treated lumber at all area in contact with concrete or the ground. Bottom plate shall be attached to the concrete slab with 1/2" anchor bolts poured into the slab, or with 1/2" wedge anchors spaced no more than one foot from each corner and two feet in the field. Sheds shall be approximately 8'X8'X8' in size with a gable roof. Exterior walls are to be framed using 2x4 spf studs with pressure treated bottom plate and double spf top plate. 2x6 rafters are to line up with studs on the wall and be attached to the top plate using hurricane clips. 1/2" OSB plywood is to be used on the exterior of the walls and covered with house wrap such as Tyvek. 3-0 x 6-8 exterior fiberglass door with deadbolt and standard handle bore shall be installed, keyed to match the house when possible. The door shall be centered on the "front" of the shed and gable ends shall be on the door side. All other exterior finishes shall match the house to include: corners, siding (1x6 composite trim shall be installed at the base with siding above), facia, trim, roofing materials, and anything not specifically mentioned here. Sheds shall not have windows installed.

### **06150 Wood Decking**

All front porches shall be concrete with brick stairs and roll loc.

Back porches shall be framed with pressure treated lumber, composite planks (Trex or equivalent). Columns above the porch line shall be pre-made vinyl column or composite wrapped around 4x4 or 6x6 pressure treated posts. Handrails shall be made of vinyl to match the front porch. Pressure treated framing material shall be wrapped in  $\frac{3}{4}$ " white composite board or material to match the tread material. Risers shall have  $\frac{3}{4}$ " composite material or tread material installed so that you cannot see through the steps.

### **06170 Prefab Structural Wood**

The trusses shall be lined up with the studs to make a continuous line across the house plane.

Trusses shall be designed by a professional engineer and produced by a company qualified to produce them.

### **06200 Finish Carpentry**

Window trim: WM376 and a  $\frac{3}{4}$ " primer painted board for the interior jamb extensions. Standard Sill board shall be used as the sill.

Base Board trim: WM623 for base molding and WM129 quarter round, all primer painted.

### **06410 Cabinets**

All Cabinets for installation in habitat for Humanity Choptank homes will comply with the following minimum standards:

#### **Wall Cabinets:**

- $\frac{1}{2}$ " Plywood top and bottom
- $\frac{3}{4}$ " Plywood adjustable shelves (15 lbs. maximum weight/sq. ft.)
- $\frac{3}{4}$ " x  $1\frac{1}{2}$ " solid wood face and frame
- $\frac{3}{8}$ " plywood sides and back
- Cabinet interior features wood, or white, laminate finish
- Fully concealed, 6-way adjustable, integrated cup hinge with self-closing feature
- Butt doors on cabinets 27" – 36" wide

#### **Base Cabinets:**

- Two plywood stretcher rails
- $\frac{3}{8}$ " plywood back, bottom and sides
- $\frac{3}{4}$ " x  $1\frac{1}{2}$ " solid wood face frame
- $\frac{1}{2}$ " half depth plywood shelf
- $\frac{3}{8}$ " x 4" high plywood recessed toe-kick (recessed  $3\frac{3}{8}$ " deep)
- Cabinet interior features wood, or white, laminate finish

- Fully concealed, 6-way adjustable, integrated cup hinge with self-closing feature
- Butt doors on cabinets 27" – 36" wide

**Drawers:**

- ¾" nominal thick wood dovetailed drawer sides, front and back with clear topcoat finish
- ¼" thick plywood drawer bottom, fully captured on all sides
- Full extension undermount drawer guides with self-closing mechanism

**06415 Countertops**

Counter top board, particle board, made for counter tops shall be used as the base for the countertops. Wilsonart self-edge laminate top (or equivalent) shall be used for the surface. Backsplash shall be made from the same material as the counter top and shall run the full length of the counter. Open ends shall have a radius, not 90-degree angle, except where countertop ends at an appliance.

**06430 Wood Stairs and Railings**

Porch stairs and railings are covered under section 06150 Wood Decking.

Interior wood stairs shall be pre-made box style construction with "clear pine" finish. The treads and risers shall be painted or stained to match trim and floor as close as possible. Handrails going in the stairwells shall meet local codes and be painted or stained to match the stairs.

## **07100 Waterproofing and Damp proofing**

Outside of the exterior walls are to be faced with a house wrap of Tyvek or equivalent product. Waterproofing at foundations in Division 04000

### **07210 Building Insulation**

Foundation Walls are to be insulated with 2" rigid foam board. The product is to be glued and fastened to all exterior perimeter wall areas. Floor systems are to have 2" rigid foam insulation at band boards or spray foam insulated. Spray foam or rigid foam insulation shall have a fire-retardant coating that is tinted a different color. 10 mil minimum vapor barrier is to be installed over pea gravel in the crawlspace. Vapor barrier is to be sealed seams and sealed at exterior foundation walls.

Mud sill is to be applied onto a layer of foam sill sealer as well as a termite shield layer. Any joint configuration that limits future access must be filled with foam board prior to closing that access point. Any gaps that allow air penetration are to be filled with Great Stuff or an equivalent product.

All walls are to be constructed as to allow maximum insulation value that meets or exceeds current local codes.

Exterior walls are to be sprayed with a minimum of 1 "spray foam. The remainder of the cavity filled with vapor barrier faced insulation for maximum Thermal protection that meets or exceeds current codes.

All windows and doors are to be of a thermal code that meets or exceeds the areas minimum requirements and are to be installed by having a sill protection device and be in-bedded in a sealant of caulk around the perimeter.

The crawl area is to have an air supply from the HVAC system. A dehumidifier is to be installed that matches or exceeds the square footage area of the crawl space.

A gasketed covered sump pump is to be installed to remove any intrusive water and directed to the outside of the footing area. Sump pump shall be located near the crawlspace entrance.

### **07300 Shingles and Roof Coverings**

The roof sheathing (Zip wall system or equivalent) must be applied using 2 3/8" ring shank nails with spacing of 4" at seams and 6" at fields using H clips at all horizontal spans between trusses. Ridge vent shall have a minimum spacing to meet manufacturers specification. Ridge vent to be Cobra roll vent or equivalent. Hi-definition multi-layered capping shingles shall be used.

Underlayment to be synthetic (tiger paw or equivalent). Installed per manufacturers recommendation.

Ice and water shield should be full width at eaves and gable ends and valleys and all slopes at 4/12 and less.

White F5.5 drip edge shall be used at all roof edges. Drip edge shall be installed flush against the fascia board.

Lifetime pipe collar with metal collars shall be installed at all roof penetrations.

3x5 mill finish step flashing shall be installed at all wall intersections.

30-year architectural shingles (CertainTeed landmark or equivalent) installed to meet 130mph wind speeds (6 nails per shingle) A starter shingle row and gable row MUST be installed. The starter shingles shall have an overhang of ½" minimum beyond the drip edge at all perimeters. NO 3-tab shingles are to be used anywhere on the roof.

Soffits and ridge are to be vented as to allow free flow of outside air through the attic area. Ceilings are to be insulated to a code minimum (currently R-49).

Any exposed fasteners must be sealed. No silicone shall be used on the roof.

#### **07460 Siding**

James Hardie 8 ¼" lap siding with 7" exposure to be installed with minimum 1 ¾" stainless steel fasteners. Siding shall be fastened at each stud and one centered between studs. Fasteners shall be installed on nail line per manufacturers recommendation and maintain proper distance at field seams. Where there are field seams there shall be a piece of metal flashing installed. Use complimentary colored metal flashing for the siding color. Siding shall be painted to form a seal at all cuts using color match Hardie paint. Starter strip must be installed per manufacturer's instructions. All exposed fasteners shall be painted with color matching paint. All horizontal connection points (over windows and doors) should have a ¼" gap and ends can butt directly to surfaces that are not concrete. 2" gap from siding to roofs and porches/decks. Blind composite corners are to be used. Color matching OSI quad caulking to be used where required, mainly at doors, field seams should not be caulked. Vinyl "J" channel should be used to receive the siding at soffit and around windows. All accessory thru wall penetrations (exterior lights, dryer vents, power outlets, etc....) shall have a siding receiver. Manufacturers recommendation for cutting and handling shall be followed.

Soffits shall be vinyl panels. Under porches shall be all solid. Soffit vents shall be minimum center vent for all breathing areas.

#### **07714 Gutters and Downspouts**

All horizontal fascia areas are to have gutters applied with downspouts and splash blocks directing water area from the house footings. Downspouts shall not be located on columns unless no other place can be found.

## **Division 08 – Doors and Windows**

### **08200 Exterior Doors –**

Manufacturer – Therma-Tru

Model – Traditions; Front – S236

Rear – S262 GBGFW

Shed - S

Style – Front Entry; 4 Lite top glass, 4 Panel, Smooth Star surface, Primed, Double bore w/ 2-3/8” backset, Radius x Square (Self aligning) hinges

- Rear Entry; Half glass w/ 9 lite interior flat grids, 2 Panel, Smooth Star surface, Primed, Double bore w/ 2-3/8” backset, Radius x Square (Self aligning) hinges
- Shed - 6 Panel, Smooth Star surface, Primed, Single Bore w/ 2-3/8” backset, Radius x Square (Self aligning) hinges

Size – 3/0 x 6/8 Slab, 6-9/16” Jamb, R.O. 38-1/2” x 82-1/2”

Materials – 24ga Steel panel, Wood interior structural frame, Vinyl glazing

Frame – Wood, prehung w/ Standard brick moulding, Mill finish aluminum metal sill w/ Composite adjustable contact strip

Weather Stripping – Q-lon Compression on top & sides, Q-lon “dogs” in lower corners, Rubber multi-finned bottom sweep

Glass Package – Insulated double pane, Clear glass

- Front Entry; .21 U-value, .10 SHGC
- Rear Entry; .25 U-value, .17 SHGC

Warranty – Limited Lifetime

### **08210 Wood Doors –**

Manufacturer – Reeb/Steves

Model – Ovolo

Style – Bedrooms, Bathrooms & Closets - 6 Raised Panel, 1/8” moulded hard board skin, Wood stiles, Hollow core, 1-3/8” Thick, Wood grain textured surface, Primed, Single bore

- Closets – 2 Panel Bi-folds, 2-4 Panel Bi-pass, Hollow core, Primed

- Laundry, Utility – Fully Louvered (1-1/4" wide slats), 1-3/8" Thick, Solid wood, Pine, Primed

Size – 3/0 x 6/8 Slab in Bedrooms and Bathrooms, 4-9/16" Jamb

- As indicated necessary in Closets, Laundry room, Utility room

Warranty – Limited 5 year

### **08310 Access Doors/ Panel/ Attic Stairs –**

Manufacturer – Werner

Model – AH2210

Style – Type 1AA Folding, Aluminum Attic Ladder

Materials – Wood frame & handrail, Aluminum ladder & rungs

Size – 22.5" x 54" x 8' – 10'

Weight Load – 375lbs

Description – 3" Non-slip treads, 11 rung, adjustable leg rails

### **08500 Windows –**

Manufacturer - Viwinco

Model – S - Series

Frame – Heat fusion welded corners, Beveled Master frame, Built in J channel, Continuous nailing flanges, Outward sloped sills.

Glass Package – Clear/Low-E, U-Value = .27 or less, SHGC = .18 or less, Flat white grids between glass.

Screen Frame – Full screen, Extruded aluminum frame, Stainless Steel tension springs, Fiber reinforced vinyl mesh screen.

Hardware – White Finish

Grids (Muntons) – Flat white grids between glass.

Weather Stripping – Woolpile w/ finseal & Bulbseal

Sashes – Tilt-in, Interior glazing

Locks – (2) Security locks over 24” window width with Cam action, Recessed tilt-in locks

**08710 Door Hardware –**

**(Interior & Exterior Doors)**

Manufacturer – Kwikset, Schlage or equivalent

Style – Curved Leaver Handle

- 4” x 4” Hinges

Finish – Brushed Nickel Handles, Dead bolts, Strike plates, Door viewer and Hinges

Note - Deadbolts on front and rear doors



## Division 09: Finishes 09000

### 09050 Basic Finish Materials and Methods

Extravagant, costly and/or high maintenance finishes should be avoided. Finishes that have minimal tolerances and place unrealistic expectations should be avoided.

### 09250 Gypsum Board

Ceiling: 5/8" fire code drywall fastened with construction adhesive and minimum 1 5/8" screws 12 inches on center in field and 8 inches on center on edges.

Walls: ½" Drywall fastened 12" on center in field and 8" on center on edges.

Moisture Areas: ½" moisture resistant (MR) Drywall in bathroom(s) and bottom half of kitchen behind base cabinets.

Use gypsum type construction and follow the USG gypsum board construction manual guidelines. Three coats of gypsum finishing material will be used in exposed applications, both walls and ceilings. Finish coat and sanding will not be omitted in concealed applications.

Moisture resistant gypsum products will be used in appropriate areas/spaces. Level of finish will be – Level 4. Textured finishes will not be used on walls or ceilings.

### 09310 Ceramic Tile

This section includes the following: Ceramic tile floor applications and stone thresholds installed as part of tile installations. An approved cement board to be installed prior to tile. Prepare a solid, squeak-free subfloor and get rid of the high ridges and sink all of the fasteners. Embed the cement board in latex-modified thin-set mortar fastening to subfloor every 8 inches with a 1 ½ inch cement board screw, then tape the seams. Lay the tile in thin-set. Ceramic tile should be of an approximate size 12" X 12", plus joint width. Use tiles that provide good traction (DCOF greater than or equal to 0.42). Thresholds will be adhered using an approved adhesive. Keep remaining carton for home buyer.

### 09640 Wood Floors

A rigid composite vinyl plank flooring will be used. Read and adhere to all manufacturer's instructions before installation. All materials should be placed in area to be installed at least 48 hours prior to installation so they may acclimate to the existing temperatures and humidity levels. Always store boxes on a flat and level surface and never store boxes on their sides. Transition strips will be installed **where needed** in all room entry doorways and where tile floors meet planking.

#### Approved Item:

Manufacturer: **Global Flooring Gem**  
Collection: **Prohibition Speakeasy Collection**  
Construction: **Waterproof Rigid Core**  
Installation: **2G Click System - Floating**

Nominal Thickness: **4.7mm Total Thickness**  
Nominal Plank Size: **7" W X 48" L**  
Wear Layer: **12mil**  
Warranty: **Lifetime Residential Wear**  
Surface Finish: **Wood Grain Texture**

Keep one or two cartons of your laminate flooring **so** the home buyer can fix any potential problems in the future.

### **09910 Paint**

Interior paint should be a Sherwin Williams Super Paint indoor latex product or equivalent. Interior walls and ceilings shall be two coats of Sherwin Williams #8917 Shell White. Interior finish for doors, windows, and miscellaneous trim shall be two coats plus primer (if needed) of Sherwin Williams Super Paint latex semi-gloss. Exterior finish for doors and miscellaneous trim shall be two coats of Sherwin Williams Duration exterior semi-gloss white paint or equivalent. Exterior surfaces needing a primer should use an exterior grade latex primer. Paint all six sides of doors. Keep some remaining partial cans of paint for the home buyer, both interior and exterior or include spec with homeowner's documents.

## Division 10: Specialties

### 10430 House Numbers

House numbers should conform to 911 standards for the local jurisdiction, mounted near the front door, and be easily visible from the street. They should be mounted horizontally, but if there are space considerations they can be mounted vertically. They should be manufactured from a non-ferrous metal and be the color black.

### 10550 Postal Specialties

This section relates to mail boxes. Mail boxes should be constructed of a non-ferrous metal and be key and lock secured, manufactured assemblies, and be the color black, white, or bronze. They will be mounted on the front of the house on either side of the front door or near the street/sidewalk in accordance with Federal postal requirements (see paragraph below).

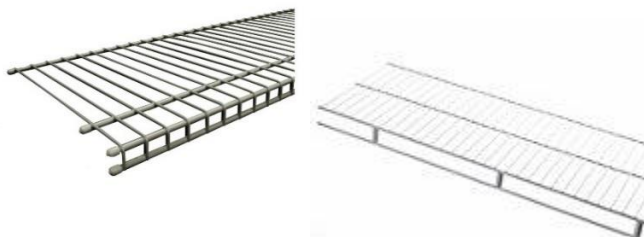
**The United States Post Office** has standard guidelines regarding mailboxes. When purchasing a mailbox, the buyer should make sure it has a seal of approval from the Postmaster General. The seal indicates the mailbox design is an approved one. Do-it-yourself mailbox designs should be submitted to the local postmaster before construction. These, too, must meet standard specifications for size and strength to receive formal approval. Also, before a new mailbox is placed on a property, the postmaster needs to be informed about its prospective location. Roadside mailboxes are required to be at least 6 to 8 feet away from the curb. The base of the mailbox must be placed 41 to 45 inches above the ground.

### 10820 Bath Accessories

All bath accessories should be manufactured from a non-ferrous metal and be a brushed nickel. There should be a least two towel rods, one toilet paper hanger, and one vanity light. A mirror should be installed over the vanity just above the sink counter top. A shower rod will also be installed in each bathroom where there is a shower tub.

### 10900 Wardrobe & Closet Items

This section includes information related to wardrobe and closet specialties installed during construction. Wardrobe and closet specialties are manufactured assemblies that organize clothing and accessories on/in shelving, rods, baskets and drawers. We will use **white metal** storage shelving assemblies that are used for general storage. Several types of metal storage shelving are available, but we will use products like the diagrams below.



## Division 11: Equipment

### 11450 Residential Appliances

Product Data: For each appliance type required indicating compliance with requirements. Each appliance must include complete operating and maintenance instructions. To the greatest extent possible obtain residential appliances through one source and from a single manufacturer if possible. If not possible, acquire appliances from the same manufacturer for the kitchen and the same manufacturer for the utility room. Have appliances delivered only after utility rough-in is complete and construction in the spaces to receive appliances is substantially complete and ready for installation. All appliances must meet the Energy Star requirements.

Water Heater: Provided by affiliate. Will be a Stiebel Eletron, Tempra 29 Tankless.

Refrigerator: Provided by Whirlpool. Must be a minimum 18 cubic feet.

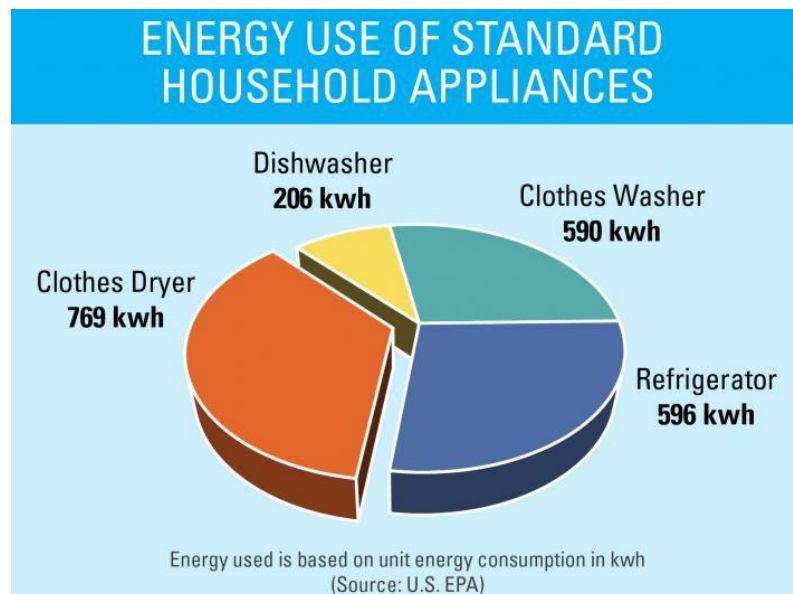
Stove/Oven: Provided by Whirlpool. Range should be electric 30" with controls in front.

Microwave: Provided by affiliate. Over the range microwave vented to the outside. There are no Energy Star rated microwaves currently on the market.

Dishwasher: Provided by affiliate.

Clothes Washer: Provided by affiliate.

Clothes Dryer: Provided by affiliate. There are no Energy Star rated dryers currently on the market.



## **Division 12: Furnishings**

### **12490 Window Treatments**

All window treatments will be a louver type blind and should be selected on window type. Horizontal blinds work well for example with double-hung windows. Interior Horizontal louver blinds shall be made of Aluminum, have 1" slats, and be white in color. All blinds are currently donated by Hunter Douglas. Wood blinds should not be used because they are cost prohibited and are combustible.

## **Division 13: Fire Suppression 13000**

### **13900 Fire Suppression**

NFPA 13D is the standard for the installation of sprinkler systems in one- and two-family dwellings and manufactured homes.

This standard shall cover the design, installation, and maintenance of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes. This standard shall not provide requirements for the design or installation of water mist fire protection systems, which are not considered fire sprinkler systems and are addressed by NFPA 750. This standard shall be based on the concept that the sprinkler system is designed to protect against a fire originating from a single ignition location. The purpose of this standard shall be to provide a sprinkler system that aids in the detection and control of residential fires and thus provides improved protection against injury and life loss. A sprinkler system shall be designed and installed in accordance with this standard to prevent flashover (total involvement) in the room of fire origin, where sprinklered, and to improve the chance for occupants to escape or be evacuated.

## **Division 15: Mechanical 15000**

### **15400 Plumbing Fixtures & Equipment**

#### **RESPONSIBILITIES OF PLUMBING CONTRACTOR:**

Contractor will make connections to supply and drain lines installed by site utilities contractor and connect to riser provided by fire suppression contractor. Fire suppression contractor will provide back flow preventer.

Drain and vents to be PVC material. Joints will be cut square, cleaned, de-burred and glued according to adhesive manufacturer's recommendations, such as clamp times and approved temperature ranges.

Size and location of vent lines to be determined by applicable codes. All lines will be properly supported to prevent sagging. Nail plates will be provided and installed where needed. Contractor will provide neoprene roof flashings, to be installed by roofing contractor. Drain and vent lines and all related accessories to be provided by contractor.

Supply lines to be CPVC material. Piping at joints will be cut square, cleaned, de-burred and glued according to adhesive manufacturer's recommendations as to clamp times, approved temperature ranges for application, and method of pressure testing. Nail plates to be installed where needed. Supply lines and all related accessories to be provided by contractor.

Contractor will install one frost proof hose bib.

Contractor will make connection to the riser manifold supplied and installed by the fire suppression contractor.

Contractor will provide and install one double bowl stainless steel sink with shut off valves and Moen Chateau (or equivalent) kitchen sink faucet.

Contractor will install tub-shower unit as provided by Habitat. Contractor will provide and install Moen bath and shower faucet (or equivalent) and tub drain.

Contractor will provide and install necessary number of A.D.A. compliant toilets to include elongated bowl, seat and shut off valve.

Contractor will supply and install heat pump water heater. Contractor will provide and install drain pan, condensate drain, shut off valves and expansion tank. The water heater shall be a Stiebel Eltron, model Tempra 29 Tankless water heater or equivalent

Contractor will provide and install a main supply shut off valve in a location easily located by homeowner.

Contractor will arrange for all necessary inspections.

### **15700 HVAC Equipment**

## **SPLIT-SYSTEM AIR CONDITIONERS**

### **MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:**

#### **DESCRIPTION OF WORK**

High-efficiency split-system heat-pump units consisting of separate evaporator-fan and compressor condenser components

#### **CLOSEOUT SUBMITTALS**

Operation and Maintenance Data: For split-system air-conditioning units to include in emergency, operation, and maintenance manuals. Also, one trip to train homeowners on use and maintenance of thermostat and units.

#### **MAINTENANCE MATERIAL SUBMITTALS**

Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

Filters: One set for each return grille.

Gaskets: One set for each access door.

Fan Belts: One set for each air-handling unit fan.

#### **WARRANTY**

Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of split-system air-conditioning units that fail in materials or workmanship within specified warranty period.

Warranty Period:

For Compressor: Five years from date of Substantial Completion.

For Parts: Five years from date of Substantial Completion.

For Labor: One year from date of Substantial Completion.

#### **MANUFACTURERS**

Basis-of-Design Product: Subject to compliance with requirements, provide high efficiency Indoor Air Handling Unit and Outdoor Heat Pump Unit models as scheduled on the drawings or comparable product by one of the following:

Carrier



Trane

York (Johnson Controls, Inc)

### **INDOOR UNITS (5 TONS OR LESS)**

Chassis: Galvanized steel with flanged edges, removable panels for servicing, and insulation on back of panel.

Insulation: Faced, glass-fiber duct liner.

Filters: MERV-8, throw-away.

Condensate Drain Pans

### **OUTDOOR UNITS (5 TONS OR LESS)**

Casing: Steel, finished with baked enamel, with removable panels for access to controls, weep holes for water drainage, and mounting holes in base. Provide brass service valves, fittings, and gage ports on exterior of casing.

Compressor: Hermetically sealed with crankcase heater and mounted on vibration isolation device. Compressor motor shall have thermal- and current-sensitive overload devices, start capacitor, relay, and contactor.

Compressor Type: Scroll.

Variable speed compressor motor with manual-reset high-pressure switch and automatic reset low-pressure switch.

Refrigerant Charge: R-410A.

Heat-Pump Components: Reversing valve and low-temperature-air cutoff thermostat.

Fan: Aluminum-propeller type, directly connected to motor.

Motor: Permanently lubricated, with integral thermal-overload protection.

### **DIFFUSERS, REGISTERS, GRILLES**

Provide diffusers, registers, and grilles to distribute the quantity of air specified evenly over the intended space without causing dead spots or air velocities exceeding 50 fpm in the occupied zone.

Coordinate location with lighting and ceiling pattern. Perform minor duct modifications to suit.

Add internal baffles where necessary to avoid drafts due to air impingement on nearby partitions, columns, etc.

Install dryer vents in accordance with manufacturer's recommendations

## **ACCESSORIES**

Thermostat: Deluxe Seven (7) Day Programmable wall--mounted system control to remotely control compressor and evaporator fan, with the following features:

Compressor time delay.

24-hour time control of system stop and start.

Liquid-crystal display indicating temperature, set-point temperature, time setting, operating mode, and fan speed.

Fan-speed selection including auto setting.

Refrigerant Line Kits: Soft-annealed copper suction and liquid lines factory cleaned, dried, pressurized, and sealed; factory-insulated suction line with flared fittings at both ends.

Snow stand/snow feet to elevate the unit.

Disconnect kit: to disconnect electrical power to the fan coil so service or maintenance

Tests and Inspections:

Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.

Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.

Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

Prepare test and inspection reports.

## **STARTUP SERVICE**

Complete installation and startup check according to manufacturer's written instructions.

## **DEMONSTRATION**

Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain units. Installers of the units must be ACCA certified or the Energy Star Certified test is able to provide an ACCA Certified of the units.

## **CLEAN UP**

Contractor shall clean up and haul off all generated trash and excess materials.

## Division 16: Electrical 16000

All electrical work performed for Habitat for Humanity Choptank will be completed in accordance with the current National Electrical Code approved by the local inspection board for either/or Talbot and Dorchester Counties.

Electrical service:

- Underground service of 200-amp, Square-D Service panel with breakers.
- Stibel Eltron, model Tempra 29 needs 3 - 30amp breakers.
- Wire: 4/0 Al THHN service entrance cable to the panel. (disconnect if required after the meter.
- 14 gauge. NM Romex for all lighting circuits. 12 gauge. NM Romex to Kitchen circuits (2 circuit are required). Dining /Laundry areas supplied with 12 gauge. NM Romex also. Required wire size to special circuits as per code.
- Ceiling boxes in living room and all bedrooms, kitchen, etc. and will be capable of supporting ceiling fan/light combo and must be **switched separately**.

Light Fixtures:

- Portfolio 13.12 two globe fixture (Lowe's) or equal in bedrooms, living room, dining room, foyer entrance, hallways, and kitchen main area.
- One recessed LED light above kitchen sink and/or according to pendant.
- Single globe fixture or 2-foot LED strips in furnace room and walk-in closets.
- Hollywood bar type lighting over bath sinks.
- Panasonic Whisper Fan model 5505.05, in bath (2<sup>nd</sup> floor or full bath depending on home layout) for required 24-hour air exchange per Energy Star.
- Additional Baths to have Delta Breeze 80 cfm. All fixtures choices by Habitat.
- Paddle fans with lights are required in living room and all bedrooms. Model and size of fans to be determined by Habitat. Habitat will provide ceiling fan/light combination but be installed by contractor and must be switched separately.

Electric Devices:

- All light switches to be "rocker" style (White) and located 48" above the finished floor (AFF). Receptacles and cover plates to be (White) in color and located 18" (AFF), per plan and per code.
- Provide a dedicated circuit and outlet at 48" (AFF) in the coat closet for the security system.
- HVAC equipment will be in the crawlspace and will have a motorized damper between floors (for two story houses).
- Include 10-year lithium battery smoke detectors, located per code.
- All outlets (White) and covers (White) to be located by code.
- Install two lights in the basement/ crawlspace placed to provide best lighting. Place switch at the access entrance.
- Outside lights at both front and back will be provided by Habitat. Weather protected duplex GFCI receptacles provided by contractor.
- Provide a GFCI duplex outlet in the basement or crawlspace for a sump pump and a dehumidifier located near sump pit.

- All outside, basement, laundry, bathrooms, and kitchen receptacles located within 6 ft of running water, shall be protected by a GFCI device or to current code.
- Exhaust fan in the upstairs bathroom shall be provided by Habitat and wire to run on low 24 hours a day.
- Exhaust fan/light combo for downstairs bathroom will be provided by Habitat.
- Provide (4) cable jacks, one in the living room and one in each bedroom. Location determined by homeowner prior to drywall installation.
- One telephone jack, location to be determined by homeowner prior to drywall installation.
- Install 4 LED CAN lights in the kitchen, 4 evenly spaced and one pendant fixture switched separately over the sink, all switched at one time. No dimmer switch used. (this is for two story houses – on one story houses the lights will be surface mounted).