COUNTY COUNCIL OF BEAUFORT COUNTY

ADMINISTRATION BUILDING BEAUFORT COUNTY GOVERNMENT ROBERT SMALLS COMPLEX 100 RIBAUT ROAD POST OFFICE DRAWER 1228 BEAUFORT, SOUTH CAROLINA 29901-1228 TELEPHONE: (843) 255-2180 www.bcgov.net



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RICK CAPORALE MICHAEL E. COVERT GERALD DAWSON BRIAN E. FLEWELLING STEVEN G. FOBES YORK GLOVER, SR. ALICE G. HOWARD STEWART H. RODMAN ROBERTS "TABOR" VAUX AGENDA NATURAL RESOURCES COMMITTEE Monday, November 20, 2017 3:00 p.m. Executive Conference Room, Administration Building Beaufort County Government Robert Smalls Complex 100 Ribaut Road, Beaufort

Committee Members: Brian Flewelling, Chairman Roberts "Tabor" Vaux, Vice Chairman Rick Caporale Gerald Dawson Steve Fobes York Glover Alice Howard Staff Support: Anthony Criscitiello, Planning Director Gary James, Assessor Eric Larson, Division Director Environmental Engineering Dan Morgan, Mapping & Applications Director

- 1. CALL TO ORDER -3:00 P.M.
- 2. DISCUSSION / PREVIOUS PLANNING COMMISSION MEETING
- 3. CONSIDERATION OF CONTRACT AWARD / SOLE SOURCE PURCHASE OF THREE NEW HOMES FOR THE BEAUFORT COUNTY DISABILITIES AND SPECIAL NEEDS DEPARTMENT (backup)
- 4. DISCUSSION / KEEP BEAUFORT COUNTY BEAUTIFUL BOARD (backup)
- 5. DISCUSSION OF POTENTIAL CHANGES TO COMMUNITY DEVELOPMENT CODE / COMPREHENSIVE FUTURE LAND USE MAP
- 6. PRESENTATION / TYLER TECHNOLOGIES / ENERGOV PLANNING, PERMITTING AND LICENSING SOFTWARE (backup)
- 7. DISCUSSION / REGIONAL STORMWATER UTILITY CONCEPT AND RECOMMENDED EXPLORATORY COMMITTEE (backup)
- 8. CONDEMNATION OF A DRAINAGE EASEMENT ON PROPERTY LOCATED OFF OF HALIFAX ROAD, ST. HELENA ISLAND (backup)
- 9. CONSIDERATION OF REAPPOINTMENTS AND APPOINTMENTS
 - A. Planning Commission
 - B. Southern Beaufort County Corridor Beautification Board

10. ADJOURNMENT





Agenda – Natural Resources Committee November 20, 2017 Page 2

> 2017 Strategic Plan Committee Assignments Hilton Head National Rezoning/Development Agreement Priority Investment – Capital Projects Long-Term Prioritized Requirements Passive County Parks: Plan, Funding Comprehensive Countywide System/Stormwater Utility (Agreements with Municipalities) 2018 Priority Projects: Immediate Opportunities Stormwater Management Program/Policy: Implementation Okatie River Restoration: Funding May River Action Plan Rivers and Creeks Water Quality: Evaluation Transfer of Development Rights Buckingham Plantation Community Development Plan: Amendment



COUNTY COUNCIL OF BEAUFORT COUNTY PURCHASING DEPARTMENT

102 Industrial Village Road, Bldg 2 - Post Office Drawer 1228 Beaufort, South Carolina 29901-1228

TO: Council Member Brian E. Flewelling, Chairman, Natural Resources Committee

FROM: Dave Thomas, CPPO, Purchasing Director

SUBJ:Sole Source Purchase Request of Three New Homes from Hutter Construction Corporation
and Salt Line Construction for the Beaufort County Disabilities and Special Needs Department

DATE: November 15, 2017

CONTRA CTOR INFORMATION

BACKGROUND: The Purchasing Department received a request from the Disabilities and Special Needs (DSN) Department to purchase three homes in support of replacing the Beaufort County Community Residential Care Facility located in the Town of Port Royal at 1508 Old Shell Road; this facility is aging and no longer meets Federal and State compliance requirements of those it is meant to serve. Transitioning the current residents of this facility into the requested homes will better enable DSN to provide the necessary ongoing care for them in safer, more appropriate housing, while also affording them the opportunity to be in a place which is better integrated into the fabric of Beaufort County.

These homes will be built to accommodate DSN consumers and will adhere to applicable ADA standards. In addition to having four bedrooms, each home will have two bathrooms and a staff office with a half-bath. The South Carolina Department of Disabilities and Special Needs (SCDDSN) will reimburse Beaufort County the full sale price of the current Port Royal property when sold, allowable via a budget proviso passed by the South Carolina General Assembly. SCDDSN will reimburse Beaufort County for the sprinkler system installation and \$8,000 per home for furnishings.

DSN encountered obstacles with developers not being able to accommodate the design specs for people with disabilities, as well as concerns about having DSN homes in certain communities. Consequently, staff negotiated the purchase price through competitive research after working with a local real estate agent to find suitable land and cooperative builders. The County's Small and Minority Business Provisions do not apply to this procurement. The recommended vendors are local firms.

COOT

CONTRACTOR INFORMATION	<u>COST</u>
 Hutter Construction Corporation, Beaufort, SC (home in Live Oaks development) Salt Line Construction, Port Royal, SC (home on Waddell Road) Salt Line Construction, Port Royal, SC (home on Center Drive West) 	\$ 350,000 \$ 350,000 <u>\$ 317,000</u> \$1,017,000

<u>FUNDING</u>: Fund balance account 24470011-54410 Disabilities and Special Needs - Building Acquisition. The fund balance exceeds the amount needed to purchase these three homes at \$3,483,090.99.

FOR ACTION: Natural Resources Committee meeting occurring November 20, 2017.

<u>RECOMMENDATION</u>: The Purchasing Department recommends that the Natural Resources Committee approve the contract awards to purchase the three homes from the aforementioned vendors for a total cost of \$1,017,000.

CC: Joshua A. Gruber, Interim County Administrator Alicia Holland, Assistant County Administrator, Finance Monica N. Spells, Assistant County Administrator, Civic Engagement and Outreach Bill Love, Disabilities and Special Needs Executive Director

Attachments: Home Plans and Pricing Information Section 36.16, Proviso for FY 2017-18, South Carolina House Ways and Means Committee

SUMMARY OF PROVISO CHANGES FOR FY 2017-18 AS RECOMMENDED BY THE HOUSE WAYS AND MEANS COMMITTEE

SECTION 35 - J120 - DEPARTMENT OF MENTAL HEALTH

- 35.7 AMEND (Deferred Maintenance, Capital Projects, Ordinary Repair and Maintenance) Authorizes the department to establish an interest bearing fund with the State Treasurer to deposit deferred maintenance funds and other one-time funds from any source. Authorizes the department to spend these funds for deferred maintenance, capital projects and ordinary repair and maintenance. Authorizes the funds to be carried forward and used for the same purpose.
 WMC: AMEND proviso to delete specific reference to depositing funds "appropriated" for deferred maintenance and other one-time funds from any source. Authorize the department to retain and deposit into the fund the proceeds from the sale of excess real property owned by, under the control of, or assigned to the department. Requested by Department of Mental Health.
- **35.8** ADD (Lease Payments to SFAA for SVP Program) WMC: ADD new proviso to exempt Sexually Violent Predator Program lease payments to SFAA from any across-the-board base reductions.

SECTION 36 - J160 - DEPARTMENT OF DISABILITIES AND SPECIAL NEEDS

36.7 AMEND (Unlicensed Medication Providers) Authorizes the department to license or certify select unlicensed persons in community-based programs to provide select medications. Limits the medications allowed to be administered. Requires the department to establish curriculum and standards for training and oversight. Directs that this provision does not apply to an intermediate care facility for individuals with intellectual and/or related disability.

WMC: AMEND proviso to change "selected" to "designated" unlicensed persons. Direct that unlicensed persons must have documented "successful completion of" medication training and direct that in addition to nurses, "licensed pharmacists and licensed medical doctors" may train and supervise designated unlicensed persons to provide medication. Amend the type of medications designated unlicensed persons may provide. Require a written or electronic record about each medication be provided as part of the provision of medication. Direct that nurses, pharmacists and medical doctors that train, approve, and supervise designated unlicensed persons shall be protected against tort liability. Requested by Department of Disabilities and Special Needs.

36.16 ADD (Beaufort DSN Facility) **WMC:** ADD new proviso to authorize the department to retain the full amount of proceeds from the sale of the local DSN Board of Beaufort County property. Direct that funds from the sale must be used to purchase new property for the local DSN Board that better meets the needs of those served. Authorize unexpended funds to be carried forward and used for the same purpose. Direct the department to provide a status report to the Beaufort County Legislative Delegation by June 30, 2018 that details the retention of any sale proceeds and/or expenditures of the funds.

SECTION 38 - L040 - DEPARTMENT OF SOCIAL SERVICES

38.3 AMEND (Foster Children Burial <u>Expenses</u>) Directs that the expenditure of funds allocated for burials of foster children not exceed \$1,500 per burial.
 WMC: AMEND proviso to include adults who are in DSS custody. Requested by Department of Social Services.















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□ RELEASED FOR CONSTRUCTION ○ NOT FOR CONSTRUCTION ○ DOBLE STATE ○ DOBLE STATE
NEW RESIDENCE: 608 CENTER DRIVE WEST BEAUFORT, SOUTH CAROLINA
Image: Sheet Title ELEVATIONS Drawn By: T. Michaels Chk'd By: T. Michaels
Project ID: 17-013 Sheet No. A301

<u>SYM</u>	BOLS + KEYS
_ <u>1</u> 2860	$DOOR AND WINDOW SIZE KEY D = 2'-8' WIDE \times 6'-0' HIGH$
DRAWING # — Sheet # —	$\frac{1}{3}$ = SECTION OF ELEVATION
CEILING HEIGH	ROOM TITLE <u>KITCHEN</u> 9' CLG. VINYL FLOOR FINISH
	WING TITLE
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14.00'	
Δ	= REVISION NUMBER
\square	= REVISION CLOUD
REF.	= PLAN REFERENCE NORTH
₩	SINGLE POLE SWITCH
- 6 9 ^{°°}	THREE WAY SWITCH
63 4	FOUR WAY SWITCH
₩ [□]	DIMMER SWITCH
⊖= ⊖= ₩₽	DUPLEX OUTLET WATER PROOF OUTLET
	GROUND FAULT OUTLET
⊕	SPECIALTY OUTLET
Ø	FLOOR OUTLET
	TELEPHONE JACK
- <u>2</u>	TELEVISION JACK VENT
	VENT W/ LIGHT
	SURFACE MOUNTED FIXTURE
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Ю	WALL MOUNTED FIXTURE
	FLOOD LIGHT FLOURESCENT FIXTURE
÷	CEILING FAN
	STRIP LIGHTING
Q	CEILING BOX
0	DOOR CHIME
	ELECTRICAL PANEL
6	SMOKE ALARM

CONCEPTUAL RENDERING

DUKE STREET



DRAWING INDEX

0	COVER	SHEET
-		••••==•

- FLOOR, ROOF + ELECTRICAL PLAN
- 2 FOUNDATION PLAN
- 3 DETAILS

1

- 4 ELEVATIONS
- SP1 SPECIFICATIONS
- SP2 SPECIFICATIONS
- SP3 SPECIFICATIONS

<u>GENERAL INFO.</u>

AREA CALCULATIONS FIRST FLOOR HEATED COVERED PORCHES DECK

1285 sq. ft. 147 sq. ft. 31 sq. ft.

Copyright © 2010 by Allison Ramsey A	msey Architects, Inc. All rights reserved.	NII rights rese	stved.			
	DATE •	11/03/17	THIS PLAN HAS BEEN PREPARED TO MEET TOP PROFESSIONAL STANDARDS AND PRACTICES. HOWEVER, BULDING CODES AND ENVIRONMENTAL CONDITIONS VARY FOR DIFFERENT LOCATIONS. It is the responsibility of the purchaser of this plan to perform the following	ARA		
	JOB NO. :	173134	Before Begnwyg Construction. Allison Ramsey Architects, NC. Assumes no liabuity for any home constructed from this plan. -Verify all dmensions fror to proceeding with construction	ALLISON RAMSEY Architects Inc. creating sustainable timeless design	DUKE STREET	
)	e ya nav	2	-VERIEY COMPLIANCE WITH ALL LOCAL CODES -PLANS NDICATE LOCATIONS ONLY; ENGINEERING ASPECTS SHOULD INCORPORATE ACTUAL STE CONDITIONS. 	1003 Charles St. Beaufort SC, 29902		
	DRAWING NAME : Mode	Model C 4.dwg		(843) 986-0559 www.allisonramseyarchitect.com	DEAUTORI VOUNII, SOUITI VAKULINA	













CONTRACT SPECIFICATIONS

The following project specifications are intended as a minimum standard to be used in conjunction with the Contract Drawings.

Compliance with each of the following Specification sections is necessary where applicable or referenced by said drawings:

All work associated with the Contract Drawings shall be in conformance with the latest edition of the International Residential Code, (IRC) or other codes, applicable to the jurisdiction where the project shall be constructed. The Contractor shall refer to applicable sections of the IRC as referenced herein specifically; Chapter I, Administration.

-The "Green Recommendation" subheadings outline practices recommended to be followed for a greener method of construction. These recommendations are to be followed at the builders discretion and do not imply any level of sustainability for the design. Refer to LEED for Homes Rating System

(http://www.greenhomeguide.org/documents/leed_for_homes_rating_system.pdf) and ENERGY STAR Guidelines for Qualified New Homes (http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.homes_guidelns) for more information. An asterick (*) indicates this recommendation is a mandatory pre-requisite for the LEED for Homes Rating System. The OGreen Recommended Manufacturers (and Products)^A subheadings outline some examples of Green products and are listed according to <u>www.buildinggreen.com</u>, <u>www.greenhomeguide.org</u>, and other sources.

DIVISION I GENERAL CONDITIONS

ARCHITECTURAL DRAWINGS AND SPECIFICATIONS, ERRORS AND OMISSIONS

a. The Contractor shall notify the Architect in writing of any errors, discrepancies, or omissions in the Contract Documents. b. The Contractor shall be held responsible for the results of any errors, discrepancies, or omissions which the

Contractor failed

to notify the Architect of before construction and/or fabrication of the work. SPECIFICATION AND DRAWINGS EXPLANATION: For convenience of reference and to facilitate the letting of contracts and subcontracts, these specifications are separated into titled sections. Such separations shall not, however, operate to make the Architect an arbiter to establish limits to contracts between the Contractor and Subcontractor. SUBSTITUTION: The contractor shall submit manufacturers literature and test data for the Owner's approval, for materials

or equipment which the Contractor represents as "equal" to that specified and intends to incorporate into the work. Substitution of materials, systems, or manufacturers from those specified herein by the Contractor without prior written approval from the Owner or Architect is forbidden and shall be at the sole risk of the Contractor.

TRUSS DRAWINGS: A complete set of truss drawings certified in accordance with local authority, shall be delivered to the architect.

Refer to the Engineer's calculations for any questions regarding lumber grades, beam and header sizes, footing and shear requirements.

NO deviations from the structural details shall be made without the written approval of the Structural Engineer. Approval by city/county inspector does not constitute authority to deviate from the plans or specifications. Subcontractor shall notify Contractor, and Contractor shall notify Architect of any errors, omissions, or discrepancies in the plans and/or specifications, so Architect can rectify corrections or omissions prior to commencement of construction. The Contractor and Subcontractor shall verify all dimensions and job conditions at the job site prior to commencing work. All work shall be done in compliance with local codes or IRC. DO NOT SCALE DRAWINGS.

All workmanship shall be of the highest quality and is subject to inspections by; the building department, local authorities, lending institutions, Architect or Owner.

Any one, or all of the above mentioned inspectors may inspect workmanship at any time. Any work identified as non-compliant with construction documents shall be removed and reworked, repaired, or replaced, at the discretion of the Owner or Owners Agent.

The Jobsite shall be maintained in a clean and organized manor. All Tradesman involved in the work shall be responsible for daily housekeeping and removing from the job site all trash and debris. The jobsite shall be completely clean and organized at the end of each weeks work.

It is the responsibility of each subcontractor to cooperate fully with the Job Superintendent in protecting all work through the entire course of construction. Each subcontractor shall be responsible for promptly notifying Job Superintendent of any damage existing prior to the start of their work.

ALLOWANCES

Definitions and Explanations: Allowances for certain categories of work specified herein are provided for the purpose of enabling and expediting contract pricing. A final Schedule of Allowance for materials, labor, equipment, and finishes customarily selected by the owner shall be submitted for verification and acceptance by the owner prior to commencement of the contract work.

Adjustments to the contract (up or down) due to owners selections will be issued by change order.

Allowances include but are not limited to lump sum allowances and unit cost allowances. Selection and Purchase: At earliest feasible date after award of contract, advise Owner of schedule date when final selection and purchase of each product or system described by each allowance must be accomplished in order to avoid

delays in performance of the work. The Contractor shall obtain and submit cost proposals for work represented by each allowance for use in making final selections.

Purchase products and systems as specifically selected (in writing) by the Owner. Unit-cost allowances: Submit a substantiated survey of quantities of materials, as shown in the "Schedule of Values,"

revised where necessary, and corresponding with change order quantities. Each change order amount for unit-cost type allowances shall be based solely on the difference between the actual unit purchase amount and the unit allowance, multiplied by the final measure or count of work-in-place, with customary allowances, where applicable, for cutting wastes, tolerances, mixing wastes, normal product imperfections and similar

The Owner reserves the right to establish the actual quantity of work-in-place by an independent quantity survey, measure or count.

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Description	Remarks	Allowance
Appliances: Range	Allowance Includes Cords. Cutoff Valves, and Fittings required	\$
Cooktop	for complete installation. Rough-in Labor + Installation costs	\$
Oven	included in Contractors Base Bid.	\$
Microwave	27	\$
Refrigerator	"	\$
Dishwasher	"	\$
Washer	27	\$
Dryer	x x	\$
Water Heater	tt	\$
Other		\$
Appliance Total Allowance	27	\$
Cabinets: Kitchen	Allowance Includes the cost of: Installation Labor for	\$
Counter Tops	Cabinets + Counter Tops. Cabinet Hardware. Pulls. + Knobs.	\$
Bath	22	\$
Counter Tops	n	\$
Bath	<i>n</i>	\$
Counter Tops	23	\$
Cabinet Total Allowance	27	\$
Flooring: Carpet	Allowance includes the cost of materials and Labor installed.	\$
Vinyl	21	\$
Wood	n n	\$
Ceramic Tile	n	\$
Flooring Total Allowance	27	\$
Hardware: Door Hardware	Allowance includes the cost of material only. Costs of	\$
Bath Accessories	Inatallation Labor included in Contractor's Base Bid.	\$
Exterior Doors	Allowance includes the cost of material only. Costs of	\$
Interior Doors	Inatallation Labor included in Contractor's Base Bid.	\$
Windows	27	\$
Light Fixtures	Allowance includes the cost of material only. Gosts of	\$
Plumbing Fixtures	Inatallation Labor included in Contractor's Base Bid.	\$
Landscaping	Lump Sum. Labor + Material	\$

CONSTRUCTION PRACTICES

-Green Recommendation *Investigate and document options for the project's diversion of waste, including construction waste as well as carroboard packaging and household recyclables. *Document the diversion rate of the construction waste and record the waste of the land clearing separate from the

new construction.

Reduce construction waste and/or increase waste diversion to be below the industry norm: generate 25 lbs or less of net waste per square foot of conditioned floor area, increase waste diversion by diverting 25% or more of the total materials taken off the construction site from landfills and incinerators.

HOMEOWNER EDUCATION

-Green Recommendation: *Provide the home occupants with proper training about the operations and maintenance of the home's "areen" features and equipment. Provide a 1-hour walkthrough with homeowner and an O&M (Operations and Manual) to the homeowner including all documents and instructions related to the OgreenA equipment and systems.

DIVISION 3 CONCRETE

-Green Recommendation: Recyclability: Concrete to have maximum recycled content allowed per structural specifications. Local Materials: Use local products when possible (extracted, processed and manufactured within 500 miles of the

Reduce emissions: Use 30% fly ash or slag as allowed per structural specifications.

Concrete intended for structural foundations shall comply w/ Sec. R402.2 and other applicable provisions of the IRC. Codes and Standards: ACI 301 "Specifications for Structural Concrete Buildings," ACI 318, "Building Code Requirements for Reinforced Concrete." Comply with applicable provisions for highest quality except as otherwise indicated. All load bearing footings shall be placed on level, undisturbed soil to depth shown on drawings and in no case, less than the frost depth. Prior to placing footings or slabs, the Contractor shall insure that all forms and trenches are free of debris and all embedded items are in place, securely attached. This includes the work of others. Maintain 8" minimum clearance between all wood and finish grade. Materials:

Cement shall conform to ASTM C-150.

Ready mixed concrete shall be mixed and delivered in accordance to ASTM C-94, 3000 PSI. Aggregates shall conform to ASTM C-33 for normal-weight concrete and ASTM C-33 for lightweight concrete. Waterstops: Flat dumbbell or centerbulb type, size to suit joints of either rubber (CRD C-513) or PVC (CRD C 572). Moisture Barrier: Clear 6-mils thick polyethylene or 1/8" thick asphaltic core polyethylene-coated paper membrane sheet of the largest size practical in order to minimize joints. Membrane-forming Curing Compound: ASTM C309, Type 1. Reinforcing Bars: ASTM A 615, grade 60.

Welded Wire Fabric: comply with ASTM A 185. Concrete Placement: Comply with ACI, placing concrete in a continuous operation within planned joints or sections. Protect concrete from physical damage or reduced strength due to weather extremes during mixing, placement and curing. In cold weather comply with ACI 306, in hot weather comply with ACI 305. FLATNESS: Concrete floor slab flatness shall not deviate from level to 1/8" in 10 feet, maximum. Provide a smooth

trowel finish for concrete floor and wall surfaces that are to be covered with a coating or covering material applied directly to concrete. Remove fins and projections, patch or remove defective areas as directed by the Owner or Architect. Apply trowel finish to monolithic slab surfaces that are exposed to view or are to be covered with resilient flooring, paint, or other thin coating. Consolidate concrete surfaces by finish troweling, free of trowel marks, uniform in texture and appearance.

Curing: Begin initial curing as soon as free water has disappeared from exposed surface. Where possible, keep continuously moist for not less than 72 hours.

Joints: Provide construction, isolation, and control joints as indicated or required to minimize differential settlement and random cracking. Saw-cut control joints as soon as concrete has hardened sufficiently to support cutting operation and no later than 8-12 hours after placement.

SECTION 03 45 00 - PRECAST CONCRETE - CAST STONE -Green Recommendation:

Recyclability: Concrete to have maximum recycled content allowed per structural specifications. Local Materials: Use local products when possible (extracted, processed and manufactured within 500 miles of the

Reduce emissions: Use 30% fly ash or slag as allowed per structural specifications.

Specifications: Comply with recommended practices and procedures of Prestressed Concrete Institute (PCI) MNL - 116 and MNL - 117, and as herein specified. Submit samples approximately 12" x 12" x 2" to illustrate quality, texture, and color of other than as-cast surface

finishes. Concrete Materials:

Portland Cement: ASTM C 150, Type as required.

Aggregates: ASTM C 33.

Air-Entraining Admixture: ASTM C 260.

Water-Reducing Admixture ASTM C 494. Compressive strength not less than 5000 psi at 28 days. Total air content not less than 4% or more than 6%. Fabrication: Fabricate precast concrete units complying with PCI MNL-116 for structural units and MNL-117 for architectural finished exposed units, including dimensional tolerances.

Manufacturers: -Green Recommended Manufacturers and Products: Perform Wall, LLC, Perform Wall Panel System

DIVISION 4 MASONRY

project).

-Green Recommendation: Recyclability: Use recycled bricks when possible.

General: Assemblies of masonry units shall comply w/ the provisions provided in Chapter's 4, 6 and 10 of the IRC. Standards: Comply with the recommendation of Brick Institutes or America (BIA) and National Concrete Masonry

Association (NCMA). Provide solid, uncored or unfrogged units with all exposed surfaces finished for sills, treads, caps, and similar applications exposing surfaces otherwise concealed from view. Facing brick: ASTM C 216, Grade SW, to match owner's sample. Concrete Masonry Units (CMU): provide units of the dimensions indicated on drawings conforming to ASTM 90. Roughen and clean concrete bearing surfaces for the placement of the first course. Cementitious Material: Premixed Type M colored mortar of formulation required to produce color indicated. Ties and Anchoring Devises: Hot-dip qalvanized steel sheet: Carbon steel hot-dip qalvanized after fabrication to comply with ASTM A 153, Class B.

Joint Reinforcement: Galvanized truss type welded-wire units prefabricated with 0.1875" diameter deformed continuous side rods and plain cross rods into straight lengths not less than IO" and of widths to fit wall thickness indicated, with prefabricated corner and tee units.

Masonry Veneer Anchors: Two piece assemblies consisting of 0.1875" diameter wire tie section and 0.1046" thick steel anchor section, with latter incorporating strap as manufactured by Dur-O-Wall, Inc. (or equal). Masonry Wire Ties' 3/16" cold-drawn steel wire, with 1.5 oz. hot-dip zinc coating. Asphalt-Coated Copper Flashing: 5 oz. sheet copper, coated with flexible fibrated asphalt. Weepholes: Cotton sash of length required to produce 2" exposure on exterior and 18" in cavity between wythes. Extruded Polystyrene Board Insulation: ASTM C 578, Type IV, with closed cells and integral high density skin, formed by expansion of polystyrene base resin in a extrusion process. Workmanship: Install masonry units in the bond pattern indicated, or if none is indicated, in running bond. Avoid the use (by proper layout) of less-than-half-size units. Hold uniform joint sizes as indicated, or if not indicated, hold joint sizes to suit modular of masonry units.

Cut joints flush and tool slightly concave, unless otherwise indicated. Keep cavities clean of mortar droppings, and install ties spaced 16" vertically and 24" horizontally. Provide weep holes spaced 24" apart at the bottom of (and at ledges in) cavities. Install board insulation of thickness indicated in cavity wall with boards pressed firmly and adhesively applied against inside wythes of masonry. Fit board between wall ties and with edges butted tightly.

Local Materials: Use local products when possible (extracted, processed and manufactured within 500 miles of the

Reinforce horizontal joints with continuous masonry joint reinforcement, spaced 16" vertically, Install reinforcement 8" immediately above and below opening, for a distance of 2' beyond jambs of opening. Do not bridge control and expansion joints in the wall system.

Provide control and expansion joints at locations shown or as approved by the Architect.

Protect adjacent work and keep clean of mortar, debris, and other damaging conditions. Install approved flashing under copings, sills, through wall at counter flashing locations, and above elements of structural support for masonry. Protect newly laid masonry from exposure to precipitation, excessive drying, freezing, soiling backfill and other harmful

elements. Cleaning: Dry-brush masonry work at end of each day's work. After mortar is thoroughly set and cured, clean masonry by bucket and brush hand cleaning method described in BIA "Technical Note No. 20 Revised" using detergent cleaner. Manufacturers:

-Green Recommended Manufacturers and Products: Apex Block, Apex Block

Trenwyth Industries, Verastone Premium Recycled Ground Face CMU

SECTION 04 42 00 - EXTERIOR STONE CLADDING

-Green Recommendation:

Recyclability: Use reclaimed stone. Local Materials: Use local products when possible (extracted, processed and manufactured within 500 miles of the project).

Standards: Comply with industry recommendation of stone production and fabrication standards for the type of stone selected. Provide sample panels of erected stonework, built at site, using proposed stone, anchors, and jointing; one panel for each type of stone and installation. Obtain stone from one quarry with consistent color range and texture. Stone type and color to match Owner's sample.

Mortar: Type M, ASTM C 270, Proportion Specification. For colored pointing mortar, use ground marble, granite or other sound stone to

match Owner's sample

Anchorages: For anchoring into concrete, cadmium-plated or hot-dip galvanized; for anchoring into stone, Type 302/304 stainless steel.

Type, size, and load capacity as shown or required. Asphalt-Coated Copper Flashing: 5 oz. sheet copper, coated with flexible fibrated asphalt.

Clean stone

work not less than 6 days after placement with clean water and stiff-bristle brushes

DIVISION 5 METALS

-Green Recommendation: Environmentally Preferable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions. Use recycled or reclaimed products.

SECTION 05 40 00

Material Standards: Provide and install structural steel in accordance w/ AISC "Code of Standard Practice for Steel Buildings and Bridges"; AISC "Specifications for the Design, Fabrication, and Erections of Structural Steel for Buildings" including "Commentary"; AWS "Structural Welding Code", and provisions of Chapter 3 of the IRC. Structural steel and misc. iron shall conform to ASTM A-36.

Bolts, nuts and screws shall conform to ASTM A307 Grade A. Welding rods shall conform to AWS for intended use. Welding or heat bending of reinf. steel shall not be allowed without written consent of Architect. conform to AWS DI2-1. Fabrication: Comply with AISC "Specifications" and with AWS Code for procedures, appearance, and quality of welds. Steel plates shall conform to ASTM A-282 Grade A. Steel tubing shall conform to ASTM A-501.

Reinforcing steel shall conform to ASTM A-615, Grade 40 for sizes up to #3: Grade 60 for sizes #4 or larger. Welded fabric (WWF) shall conform to ASTM A-185, latest revision. Smooth wire fabric shall conform to ASTM A-85, yield

strength 60 ksi. All bars in masonry shall be lapped with a minimum of 40 bar diameters at all splices unless noted otherwise. All bars in concrete shall be lapped a minimum of 36 bar diameters at all splices unless noted otherwise with a larger

dimension Splices of horizontal rebar in walls and footings shall be staggered 4'-0" unless noted otherwise.

Dowels for walls and columns shall be the same size and spacing as the wall/column reinforcing unless noted otherwise.

SECTION 05 13 00 - DECORATIVE METAL RAILINGS

General: Provide and install handrails, railings, and guards as shown on drawings and in accordance w/ Sec. R311 and Sec. R312 of the IRC.

Porches, balconies or raised floor surfaces located more than 30 inches above the floor or grade below shall have quards not less than 36 inches in height.

Handrails shall be provided on at least on side of each continuous run of treads or flight w/ four or more risers. Structural Performance of Handrails and Railing Systems: Provide handrails and railing systems capable of withstanding a concentrated load of 200 lbs applied at any point and a uniform load of 50 lbs per lin. ft. Infill Area of Guardrail Systems: Horizontal concentrated load of 200 lbs applied to one sq. ft. at any point in the

system including panels, intermediate rails balusters, and other elements composing the infill area.

DIVISION 6 WOOD, PLASTICS, AND COMPOSITES

-Green Recommendation: Material Efficient Framing:

*Limit the overall estimated waste factor to 10% or less. Waste factor is the percentage of framing materials ordered in excess of the estimated material needed for construction.

Use any of the following framing measures to reduce waste: pre-cut framing packages, open-web floor trusses, structural insulated panels (Sip) walls, SIP roof, SIP floor, stud, joist and rafter spacing greater than 164 o.c. where possible and allowed by the IRC, size headers for actual loads, use ladder blocking or drywall clips, use 2-stud corners). Environmentally Preferable Products:

*Limit use of tropical wood but use only FSC-certified wood with proper documentation.

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions.

Use recycled or reclaimed products.

SECTION OF IO OO- ROUGH CARPENTRY

General: Buildings and structures constructed in flood hazard areas as established in Table R301.2.(1) shall be designed and constructed in accordance w/ the provisions contained in Sec. R323 of the IRC. Materials: Building materials used below the design flood elevation shall comply w/ Sec. R323.1.7 of the IRC.

Load-bearing dimension lumber for joists, beams, studs, and girders shall be identified by a grade mark in accordance w/ Sec. R502 of the IRC.

Provide seasoned lumber with 19 percent moisture content at time of dressing and shipment for sizes 2" or less in thickness. For exposed lumber, apply grade stamps to ends of back of each piece or omit grade stamps entirely and issue

certificate of grade compliance

Dimension lumber: Provided lumber of the following product classification in grade and species indicated: Light-framing: (2"-4" thick, 2"-4" wide). Construction grade. Southern Pine graded under SPIB rules.

Studs (2"-4" thick, 2"-6" wide, IO' and shorter): "Stud" or No. 3 Structural Light Framing grade, any species graded under WWPA, WCLIB, SPIB or NLGA rules.

Structural Light Framing: 2"-4" thick, 2"-4" wide): No. I Southern Pine graded under SPIB rules. Structural Joists and Planks (2"-4" thick, 5" and wider): Any species and grade complying with requirements for allowable unit stresses.

Fb (minimum extreme fiber stress bending): 1250 psi.

E (minimum modulus of elasticity): 1,600,000 psi. Fy (horizontal shear): 100 psi.

Exposed Framing Lumber: Verify that material intended for use in exposed finish locations meets species and grade requirements for compliance with "Appearance" grade requirements of ALSC National Grading Rule. Posts, Beams and Timbers (5" and thicker): No I grade Hem-Fir rules or No. 2 grade Southern Pine graded under SPIB rules.

Glued laminated timber (Glulam): Comply with ANSI/AITC A 190.1 "Structural Glued Laminated Timber" Combination Sub floor Underlayment: 3/4" APA RATED STURD-I-FLOOR, T&G if not otherwise indicated.

by manufacturer. to comply with ASTM A 153.

the building of the IRC.

installed.

Manufacturers:

Woodworkers Institute.

woodwork involved.

Manufacturers:

Subflooring: 3/4" T&G, APA RATED SHEATHING.

Wall Sheathing: 1/2" APA RATED SHEATHING.

- Roof Sheathing: 1/2" APA RATED SHEATHING. Plywood Underlayment for Resilient tile: 3/8" APA UNDERLAYMENT EXT with fully sanded face.
- Construction Panel Underlayment for Ceramic Tile: 3/4" APA RATED STURD-I-FLOOR EXP | for underlayment. Fasteners and Anchorages: Provide metal hangers and framing anchors of size and type recommended for intended use
- Hot-dip galvanized fasteners and anchorages for work exposed to weather, in ground contact and high relative humidity
- Building paper: 15 lb/sf asphalt saturated felt, ASTM D 226.
- Sill Sealer Gasket: Glass fiber resilient insulation fabricated in strip form for use as a sill sealer, I" nominal thickness
- compressible to 1/32", in rolls of 50' or 100' in length. Preservative: pressure treat lumber and plywood with water-borne preservatives to comply with AWPA C2 and C9, respectively, and with requirements indicated below:
- Wood for Ground Contact Use: AWPB LP-22.
- Wood for Above-Ground Use: AWPB LP-2.
- Treat cants, nailers, blocking, stripping and similar items in conjunction with roofing, flashing, vapor barriers, and water
- Treat sills, sleepers, blocking, furring, stripping and similar items in direct contact with masonry or concrete. Install rough carpentry work to comply with "Manual of House Framing" by National Forest Products Assoc. (NFPA) and with recommendations of American Plywood Association (APA), unless otherwise indicated. For sheathing, underlayment and other products not covered in above standards, comply with recommendations of manufacturer of product involved for use intended. Set carpentry work to required levels and lines, with members plumb and true and cut to fit. Provide wood framing members of size and spacing indicated. Do not splice structural members between supports. Firestop concealed spaces with wood blocking not less than 2" thick (nom.), if not blocked by other framing members. Fasten structural wood panel products as follows:
- Combination Subflooring underlayment and subflooring:
- Glue-nail to framing.
- Sheathing: Nail to framing. Underlayment: Glue and nail to framing.
- Air Infiltration Barrier: Cover wall sheathing with vapor permeable, water-resistant fabric composed of polyethylene fibers, 6.1 mils thick. (Tyvek or equal) in compliance with manufacturer's printed directions.

SECTION OG 17 00 - SHOP-FABRICATED STRUCTURAL WOOD

Truss design drawings: Truss design drawings, prepared in conformance w/ Sec. R802.10 of the IRC, shall be provided to

official and approved prior to installation. Truss design drawings shall include the information specified in Sec. R&02.10.1

- Bracing: Trusses shall be braced to prevent rotation and provide lateral stability in accordance w/ the requirements specified in the truss design drawings.
- Alterations to truss: Truss members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional.
- Standards: Comply with NFPA National Design Specification and with TPI standards including "Quality Standard for Metal Plate Connected Wood Trusses", Commentary and Recommendations for Handling and Erecting Wood Trusses", Commentary and Recommendations for Bracing Wood Trusses" and the following:
- "Design Specification for Metal Plate Connected Wood Trusses."
- "Design Specification for Metal Plate Connected Parallel Chord Wood Trusses."
- Provide design of total truss system by a structural engineer licensed to practice in jurisdiction where trusses will be
- Steel roof truss: The design, quality assurance, installation, and testing of cold-formed steel trusses shall be in accordance w/ Sec. R804 of the IRC and the AISI Standard for Cold-formed Steel Framing-Truss Design (COFS/Truss).

SECTION 06 40 00 - EXTERIOR ARCHITECTURAL WOODWORK

- Quality Standard: Comply with applicable requirements of "Architectural Woodwork Quality Standards" by AWI. Softwood lumber: Comply with PS 20 and applicable grading rules or respective grading and inspecting agency for species and product indicated. Fabricate to sizes and patterns indicated using seasoned lumber. Use pieces made from solid lumber for transparent finished work, and glued up or solid at Contractor's option for painted work.
- Exterior Standing and Running Trim: Boards and worked lumber products complying with requirements indicated below
- including those of grading agency listed with species. Species: Western Red Cedar: WWPA or WCLIB.
- Grade: B & Btr 1 & 2 Clear.
- Texture: Surfaced (Smooth).
- Exterior Door Frames: Grade Premium.
- Siding Board Type: Lumber milled to pattern and size indicated, complying with requirements indicated below including those of grading agency used with species: Species: Western Red Cedar: WWPA or WCLIB.
- Grade: A Grade VG.
- Texture: Surfaced.
- Exterior Miscellaneous Ornamental Items: Grade Premium.
- Install finish carpentry work plumb, level, true and straight with no distortions, Shim as required using concealed shims. Scribe and cut finish carpentry items to fit adjoining work. Anchor finish carpentry work securely to supports and substrates using concealed fasteners and blind nailing where possible. Use fine finish nails for exposed nailing except as indicated, countersunk and filled flush with finish surface.
- Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces from maximum length of lumber available. Cope at returns; miter at corners to produce tight fitting joints. Use scarf joints for end-to-end joints. Beveled Siding: Attach to studs with non-corrosive siding nails of length to penetrate studs at minimum of I-1/2" and to comply with siding manufacturer's recommendations.

-Green Recommended Manufacturers and Products: (per BuildingGreen.com) Armster Reclaimed Lumber Co., Reclaimed-Wood Lumber and Products Industries Malbec, Inc., Certified PR Shingles

SECTION 06 40 23 - INTERIOR ARCHITECTURAL WOODWORK

- AWI Quality Standard: Comply with applicable requirements of "Architectural Woodwork Quality Standard" by American
- Samples: Submit finished samples of each wood species and profile indicated; for transparent finish, of each material indicated for opaque finish, of each color, pattern, and type of plastic laminate and each type of cabinet hardware. Species for Transparent Finish: Rift-sawn red oak.
- Species for Opaque Finish: Any closed-grain hardwood listed in reference wood working Standard.
- Hardwood Plywood: HPMA FE. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3.
- Interior Standing and Running Trim: Grade Premium.
- CABINETS AND COUNTER TOPS:
- Allowances: See Division I for amount and procedures for purchase and payment (overrun or underrun). The costs of handling and installation are covered by the allowance.
- Grain Matching: Run and match grain vertically for drawer fronts, doors, and fixed panels.
- Comply with veneer and other matching requirements indicated for Blueprint matched paneling.
- Laminate Clad Cabinets: Grade Custom Flush overlay. High-pressure decorative laminate selected from laminate manufacturer's full range of standard colors, patterns, and finishes.
- Concealed Cabinet Hardware: Provide cabinet hardware and accessory materials associated with architectural cabinets. Comply with ANSI/BHMA A 156.9 "American National Standard for Cabinet Hardware."
- Exposed Cabinet Hardware: See Section 01020 Allowances for exposed hardware.
- Shop-apply prime/base coat to interior trim for opaque finish, in compliance with requirements indicated in section O9 painting. Transparent Finish for Open-Grain Woods: Provide the following shop applied finish in compliance with AWI "Architectural Woodwork Quality Standards."
- Grade: Premium. AWI Finish System #3: Conversion varnish.
- Staining: Match Owner's Sample Install woodwork to comply with AWI Section 1700 for same grade specified in Part 2 of this section for type of
- Paneling: Anchor paneling to supporting substrate with concealed panel hanger clips. Blind nail back-up strips and similar associated trim and framing.

-Green Recommended Manufacturers: (per BuildingGreen.com)

Humabuilt Healthy Building Solutions, Wheatcore Doors and Cabinets



DIVISION 7 THERMAL AND MOISTURE PROTECTION -Green Recommendation:

Utilize a closed crawlepace system as defined by the IRC when possible. If a conventional vented crawlepace is used, assure to seal all penetrations and gaps in building envelope that are not used for ventilation.

Environmentally Preterable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions.

Use recycled or reclaimed products.

General: Provide thermal and moisture protection in accordance w/ applicable standards of the IRC. Concrete and masonry foundation waterproofing: In areas where high water table or other severe soil-water conditions are known to exist.

Weather Protection: Roof decks shall be covered w/ approved roof coverings secured to the building or structure in accordance w/ the provisions of Chapter 9 of the IRC.

SECTION OT 10 00 - WATERPROOFING AND DAMPROOFING

Exterior foundation walls that retain earth and enclose habitable or useable spaces located below grade shall be waterproofed w/ membrane extending from the top of the footing to the finished grade in accordance w/ Sec. R406.2 of the IRC.

SECTION OT II 13 - BITUMINOUS DAMPROOFING

Concrete and masonry foundation damproofing: Except where required to be waterproofed by Sec. R406.2, foundation walls that retain earth and enclosed habitable or usable spaces located below grade shall be damproofed from the top of the footing to the finished grade in accordance w/ Sec. R406.1 of the IRC.

SECTION OT 21 OO THERMAL INSULATION

-Green Recommendation:

*Install insulation that meets or exceeds the R-value requirements in Chapter 4 of the International Energy Conservation Code.

*Install insulation to meet the Grade II specifications set by the National Home Energy Rating Standards. Use low emission insulation and comply with California Practice for Testing of VOC's from Building Materials Using Small Chambers (www.dhs.ca.gov/ehib/IAQ/VOCS/Practice.htm) Use recycled content of 20% or more when possible.

Use soy-based spray foam insulation when possible.

-Green Recommended Manufacturers and Products:

BioBased Spray Foam Insulation

Thermal insulation shall be installed in accordance w/ provisions provided in Sec. R316 of the IRC. Insulating materials, including facings, such as vapor retarders or vapor permeable membranes installed within floor-ceiling assemblies, roof-ceiling assemblies, wall assemblies, crawl space and attics shall have a flame-spread index not to exceed 25 w/ an accompanying smoke-developed index not to exceed 450 when tested in accordance w/ ASTM E

Thermal performance requirements: The min. required insulation R-value or the area-weighted average maximum required fenestration U-factor for each element in the building thermal envelope shall be in accordance w/ Sec. NIIO2 and the criteria in Table NIO2.1 of the IRC.

SECTION OT 24 00 - EXTERIOR INGULATION AND FINISH SYSTEMS -

General: All Exterior Insulation Finish Systems (EIFS) shall be installed in accordance w/ the manufacturer's installation instructions and the requirements of Sec. RTO3.9 of the IRC.

Decorative trim shall not be faced nailed through the EIFS.

The EIFS shall terminate not less than 8 inches above the finished ground level.

Installer qualifications: EIFS system installers shall be certified in writing by system manufacturer as qualified for installation of system indicated.

Manufacturers: Subject to compliance with requirements, provide CLASS PM system of one of the following: Dryvit System, Inc.

Senergy Inc.

Simplex Div., Anthony Industries, Inc.

STO Industries, Inc.

Comply with system manufacturer's current published instructions for installation of system as applicable to each type of substrate indicated. Offset joints of insulation from joints in sheathing. Provide mock-up samples for the Owners selection of colors and textures from Manufacturer's full line of offerings.

SECTION OT 31 13 - ASPHALT SHINGLES

The installation of asphalt shingles shall comply w/ the provisions of Sec. R905 of the IRC.

Sheathing Requirements: Asphalt shingles shall be fastened to solidly sheathed decks.

Slope: Asphalt shingles shall only be used on roof slopes of two units vert. in 12 units horiz. or greater. For roof slopes from two units vert. in 12 units horiz. up to four units vert. in 12 units horiz, double underlayment application is required in accordance w/ Sec. R905.2.7 of the IRC.

Underlayment: Unless noted otherwise, required underlayment shall comply w/ ASTM D226, Type I, or ASTM D 4869, Type I, Self-adhering polymer modified bitumen sheet shall comply w/ ASTM D 1970.

Asphalt Shingles: Asphalt shingles shall have self-seal strips or be interlocking, and comply with ASTM D 225 or D 3462. Attachment: Asphalt shingles shall have the minimum number of fasteners as required by the manufacturer. For normal application, asphalt shingles shall be secured to the roof w/ not less than four fasteners per strip shingle or two fasteners per individual shinale.

Where the roof slope exceeds 20 units vert. in 12 units horiz, special methods of fastening are required. For roofs located where the basic wind speed per Fig. R301.2(4) Is 110 mph or greater, special methods of fastening are required.

Special fastening methods shall be tested in accordance w/ ASTM D 3161, modified to use a wind speed of 110 mph. Shingles classified using ASTM D 3161 are acceptable for use in wind zones less than 110 mph. Shingles classified using ASTM D 3161 modified to use a wind speed of 110mph are acceptable for use in all cases where special fastening is

Flashing: Flashing for asphalt shingles shall comply w/ Sec. R905.2.8 of the IRC. Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture permeable materials, and at intersections w/ parapet walls ands other penetrations through the roof

Flashings shall be installed at wall and roof intersections; wherever there is a change in roof slope or direction; and around roof openings.

Material shall be corrosion resistant w/ a thickness of not less than 0.019 (No. 26 galvanized sheet). Valleys: Valley linings shall be installed in accordance w/ manufacturer's installation instructions before applying shingles. Valley linings of the types allowed in Sec. R905.2.8.2 and in accordance w/ Table R905.2.8.2 of the IRC shall be permitted.

SECTION OT 31 29 - WOOD SHINGLES AND SHAKES

Wood Shingles: The installation of wood shingles shall comply w/ the provisions of Sec. R905.7 of the IRC. Deck requirements: Wood shingles shall be installed on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall not be less than I-inch by 4-inch nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners.

Deck slope: Wood shingles shall be installed on slopes of three units vert. in 12 units horiz. or greater. Material Standard: Wood shingles shall be of naturally durable wood and comply w/ the requirements of Table R905.7.4 of the IRC and in accordance w/ grading rules as established by the Cedar Shake and Shingle Bureau. Application: Wood shingles shall be installed according to Chapter 9, Sec. 905.7. and the manufacturer's installation instructions.

Weather exposure for wood shingles shall not exceed those set in Table R905.7.5. of the IRC.

Fasteners for wood shingles shall be corrosion-resistant w/ a min. penetration of 1/2 inch into the sheathing. Wood shingles shall be attached to the roof w/ two fasteners per shingle, positioned no more than 3/4 inch from each edge and no more than I inch above the exposure line.

Valley flashing: Roof flashing shall be not less than No. 26 gauge corrosion-resistant sheet metal and shall extend IO inches from the centerline each way for roofs having slopes less than 12 units vert. in 12 units horiz, and 7 inches from the centerline each way for slopes of 12 units in 12 units horiz. and greater.

Manufacturers: -Green Recommended Manufacturers:

Ecostar, Seneca Cedar Shake Tiles

SECTION OT 61 00 - SHEET METAL ROOFING -Green Recommendation: Use metal roofing with an SRI index rating of at least 29.

Metal roof panels shall comply with provisions of Chapter 9, Sec. R905.10 of the IRC.

the IRC and the manufacturers installation instructions. Deck Requirements: Metal roof panel roof coverings shall be applied to a solid or spaced sheathing, except where the roof covering is specifically designed to be applied to spaced supports. Slope: The minimum slope for lapped, nonsoldered seam metal roofs without applied lap sealant shall be three units

vertical in 12 units horiz. The minimum slope for lapped, nonsoldered seam metal roofs w/ applied lap sealant shall be one-half vert. unit in 12 units horiz.

The minimum slope for standing seam roof systems shall be one-fourth unit vert. in 12 units horiz. Material Standards: Metal-sheet roof covering systems that incorporate supporting structural members shall be designed in accordance w/ the International Building Code. Metal-sheet roof coverings installed over structural decking shall comply w/ Table R905.10.3.

Attachment: Metal roofing fastened directly to steel framing shall be attached in accordance w/ Sec. R905.10.4 of the RC

Separate aluminum sheets from contact w/ wood, masonry and steel (structure, panels or fasteners), by either a 15-mil coating of fibroid asphalt paint or by tapes or gaskets of type recommended by panel manufacturer. Except as otherwise recommended by manufacturer, fasten aluminum work w/ non-magnetic stainless steel fasteners, gasket where needed for waterproof performance.

Flashing: Flashing shall be installed in such a manner so as to prevent moisture entering the wall and roof through joints in copings, through moisture-permeable materials, and at intersections w/ parapet walls ands other penetrations through the roof plane.

Flashings shall be installed at wall and roof intersections; wherever there is a change in roof slope or direction; and around roof openings.

Material shall be corrosion resistant w/ a thickness of not less than 0.019 (No. 26 galvanized sheet).

SECTION OT 92 00 - JOINT SEALANTS

-Green Recommendation:

*Use fire-rated caulk in all attic applications. Use environmentally friendly adhesives and sealants- see Table 26 in Leed for Homes requirements.

Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under service and application conditions, as demonstrated by testing and field experience. Colors: Provide color of exposed joint sealers as selected by Owner from manufacture's standard colors. Elastomeric Sealant Standard: Provide manufacturer's standard chemically curing, elastomeric sealant of base polymer indicated, complying with ASTM C 920 requirements. One-Part Non-acid Curing Silicone Sealant: Type S, Grade NS, Class 25.

One-Part Mildew-Resistant Silicone Sealant: Type S, Grade NS, Class 25, Uses NT, G, A, and O, formulated with fungicide, intended for sealing interior joints with nonporous substrates exposed to high humidity and temperature extremes. Plastic Foam Joint-Fillers, Preformed, open-cell polyurethane foam. General: Comply with joint sealer manufacturer's instructions applicable to products and applications indicated.

DIVISION & OPENINGS

-Green Recommendation: Environmentally Preferable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions.

Use recycled or reclaimed products.

12.78	Performance Requirements (in ACH50)			
Leed Criteria	IECC Climate Zones 1-2	IECC Climate Zones 3-4	IECC Climate Zones 5-7	IECC Climate Zone 8
Reduced Envelope Leakage (*required)	7.0	6.0	5.0	4.0
Greatly Reduced Envelope Leakage	5.0	4.25	3.5	2.75
Minimal Envelope Leakage	3.0	2.5	2.0	1.5

General: Provide and install doors and windows in accordance w/ manufacturers installation instructions. Comply w/ provisions of AAMA/NWWDA 101/1.5.2; AAMA/WDMA 101/1.5.2/NAFS; ASTM E 330; and Sections R308, R310, R311, and R613 of the IRC.

Performance: Exterior windows and doors shall be designed to resist the design loads specified in Table R301.2(2) adjusted for height and exposure per Table R301.2(3). Means of Egress: Not less than one exit door conforming to Sec.R311, MEANS OF EGRESS, shall be provided for each

dwelling unit. Windborne debris protection: Protection of exterior windows and glass doors in buildings located in hurricane-prone

regions from windborne debris shall be in accordance w/ Sec.R301.2.1.2.

SECTION OB 14 00 - WOOD DOORS

-Green Recommendation: Products with any sign of damage, mildew, and other contamination shall be rejected. Examine all door frames before installation to ensure they are installed plumb, true and level. Wall space around door frames shall be filled with insulation.

Materials: Wood: Use FSC-certified systemably harvested wood from well-managed forests and attain proper identification from

Wood Veneer: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper identification

from vendor. Venser shall be manufactured in a facility approved by an agency accredited by the Forest Stewardship Council (FSC.)

Karona, Inc.

Morgan Products, Ltd.

Nicolai Company

Sauder Industries Limited, Door Division.

F.E. Schumacher Co., Inc. Sun-Dor-Co.

-Green Recommended Manufacturers and Productss: (per BuildingGreen.com) Albany Woodworks, Inc., Reclaimed-Wood Products Algonia Hardwoods, Inc., Certified Wood Doors Alternative Timber Structures, Inc., Interior and Exterior Doors Crossroads Recycled Lumber, Reclaimed Wood Products Eggers Industries, Certified Wood Doors

Executive Door Company, Recycled-Content Wood Doors Marshifield DoorSystems, Certified Stave Core Doors Lunden Door, GreenDor Agiber Doors VT Industries, Inc., Agrifiber Core Architectural Doors

Exterior Doors: Assemble doors with "wet-use" adhesives, and comply with NWWDA Premium or select Grade.

Wood Species: Fir, Plain sawn/sliced Panel Configuration: Raised.

NWWDA Design Group: 1-3/4: Front Entrance Doors (Exterior) Interior Doors: Premium or Select. Wood Species: Idaho White, Lodgepole, Ponderosa or Sugar Pine, plain sawn/sliced.

Panel Configuration: Raised NWWDA Design Group: 1-3/8" Interior Panel Doors.

Glazed Opening: Trim glazed openings with solid wood moldings of profile indicated, removable one side. Transom and Side Panels: Fabricate panels to match adjoining doors in materials, finish and quality of construction. Exterior doors: Factory-treat exterior doors after fabrication with water repellent to comply with NWWDA 1.5.4. Flash top of out-swinging doors with manufacturer's standard metal flashing. Install doors to comply with manufacturer's instructions, applicable requirements of referenced quality standard, and as indicated. Alian and fit doors in frames with uniform clearances and bevels. Machine doors for hardware. Seal cut surfaces after

fitting and machining

*Reduced Envelope Leakage- meet the air leakage requirements shown below as tested by an energy rater:

Manufacturers: Subject to compliance with NWWDA 1.5.6. requirements, provide panel wood doors by one of the following:

SECTION 08 33 23 - OVERHEAD COILING DOORS -Green Recommendation: Materials:

Wood: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper identification from

Performance: Overhead Doors shall be designed to resist the design wind loads specified in Table R301.2(2) and as adjusted for height and exposure in Table R301.2(3) of the IRC.

Sectional Overhead Doors: Provide complete automatic operating door assembles including frames, sections, brackets, guides, tracks, counterbalance, hardware, operators, and installation accessories.

Nood Door Section for transparent finish: Panel-type door sections, complete with wood jamb and head mold, glazing stops and glazing, as shown. Stiles and rails of clear, straight, kiln dried Douglas Fir, West Coast hemlock of Sitka spruce, not less than 1-3/4" thick. Use clear all heartwood, redwood or cedar for head and jamb molds. Panel inserts, 1/4" thick, smooth 2 sides, tempered hardboard with wood veneer, complying with ANSI 135.4 Class I Fabricate doors of mortise and tenon or rabbeted construction with dowels, pins and waterproof glue. Treat doors, with

2-minute immersion water-repellent and toxic treatment. Provide continuous galv. steel reinforcing, horizontal and diagonal, as required for panel size. Installation: Set door, track and operating equipment complete with necessary hardware, jamb and head mold stops,

anchors, inserts, hanger and equipment supports in accordance with mfrs. installation instructions. Electric Door Operators: Automatic garage door openers, if provided, shall be listed in accordance w/ UL 325. Provide size and capacity as recommended by door manufacturer, complete with NEMA approved electric motor and

factory pre-wired motor controls, remote control station and accessories. Provide safety edge device extending full width of door bottom. Manufacturers:

-Green Recommended Manufacturers: (per BulldingGreen.com)

Real Carriage Door Company, Reclaimed-Wood Carriage Doors Ankmar, LLC, CladPanel Garage Door

SECTION OB 52 00 - WOOD WINDOWS

-Green Recommendation: Products with any sign of damage, mildew, and other contamination shall be rejected. Examine all window frames before installation to ensure they are installed plumb, true and level. Wall space around window frames shall be filled with insulation.

Follow minimum Energy Star Standards for Energy Performance Requirements outlined in the following table, whichever is more stringent:

ENERGY STAR Requirements for Window and Glass Doors (source: Leed for Homes Requirements, Table 18) Metric Northern North Central South Central Southern

U-factor	≤0.35	≤ 0.40	≤ 0.40	≤ 0.55
SHGC	Any	≤ 0.45	≤ 0.40	≤ 0.35
U-factor	≤ 0.31	≤ 0.35	≤ 0.35	≤ 0.55
SHGC	$\leq Any$	≤ 0.40	≤ 0.35	<i>≤ 0.33</i>
U-factor	≤ 0.28	≤ 0.32	≤ 0.32	≤ 0.55
SHGC	$\leq Any$	≤ 0.40	≤ 0.30	≤ 0.30
	SHGC U-factor SHGC U-factor	SHGCAnyU-factor ≤ 0.31 SHGC $\leq Any$ U-factor ≤ 0.28	SHGCAny ≤ 0.45 U-factor ≤ 0.31 ≤ 0.35 SHGC $\leq Any$ ≤ 0.40 U-factor ≤ 0.28 ≤ 0.32	SHGC Any ≤ 0.45 ≤ 0.40 U-factor ≤ 0.31 ≤ 0.35 ≤ 0.35 SHGC $\leq Any$ ≤ 0.40 ≤ 0.35 U-factor ≤ 0.28 ≤ 0.32 ≤ 0.32

(Table from Leed for Homes Rating System, Table 18, p. 63)

Install windows with low air leakage rates

-Less than 25 cfm per LF of sash opening for double hung windows

-Less than .10 cfm per LF for casement, awning, and fixed windows -Limit skylights to less than 3% WFA (window to floor area is the ration of window area to floor area.

Nood: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper identification from

Wood Veneer: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper Identification from vendor.

Veneer shall be manufactured in a facility approved by an agency accredited by the Forest Stewardship Council (FSC.)

Provide and install window units in configurations shown on drawings and in accordance with Federal, State, Local, \$ neighborhood quidelines.

Performance: Windows shall be designed to resist the design wind loads specified in Table R301.2(2) and as adjusted for

and exposure in Table R301.2(3) of the IRC.

Provide units that comply w/ Sec. R308, Glazing and Sec. R613, Exterior Windows and Glass Doors, of the IRC. Egress: Comply w/ requirements of Sec. R310 of the IRC regarding min. window openings required for emergency escape and rescue.

Comply with ANSI/NWMA "Industry Standard for Wood Window Units I.S. 2-80" by National Woodwork Manufacturers Association (NWMA), except to extent more stringent requirements as indicated.

Manufacturers: Provide casement, awning or double hung true divided lite units as indicated on the plans: each operating sash equipped with pair of counter balancing mechanism, lift handle, latch at meeting rail, produced by one of the following:

Anderson Corp. Bayport. Caradco Corp/Bendix, Rantoul, IL

Hurd Millwork, Flagstaff, AZ

Marvin Windows, Warroad, MN

Pella Windows, Pella, IA

Weather Shield Mfg. Inc., Medford, WI -Green Recommended Manufacturer and Productss: (per BuildingGreen.com)

J.S. Benson Woodworking & Design, LLC- Certified Wood Windows

Jeld-Wen Windows & Doors, Wilmar Collection High Performance Windows

Loewen Windows, Heat Smart Window

Marvin Windows & Doors, High Performance Wood Windows Milgard Manufacturing Inc., High Performance Windows

Paramount Windows, Inc., High Performance Wood Windows

Pella Corporation, Designer Series Weather Shield Manufacturing Inc., High Performance Wood Windows

SECTION 08 TI 00 - DOOR HARDWARE

Hardware Allowances: See Division I for amount and procedures for Allowance Items. The costs of handling and installation are not covered by the allowance and shall be included in the base bid. General Hardware Requirements: Submit final hardware schedule organized by "hardware sets", to indicate specifically the product to be furnished for each item required on each door. Furnish template to fabricator of doors and frames, as required for preparation to receive hardware. Install each hardware item to comply with manufacturer's instructions and recommendations.

Set thresholds for exterior doors in full bed of butyl-rubber of polyisobutylene mastic sealant. Remove excess sealant and clean adjacent surfaces.

SECTION OB TI OO.IT WEATHERSTRIPPING, THRESHOLDS, AND SEALS -Green Recommendation:

Shop priming recommended. All paints and stains to be low VOC and meet the standard of the Green Seal Standard 6C-03. All sealants and adhesives to meet the standards of the South Coast Air Quality Management District Rule

Provide adequate weatherstripping to reduce envelope leakage as shown in table 18 above.

All exterior doors and doors to unheated spaces shall be weather-stripped. Provided aluminum interlocking thresholds with 3" x 3" aluminum angle finish strips, weatherstrip head and jambs with vinul bulb set in aluminum strip, or approved

Provide concealed, non-ferrous spring-metal or vinyl-gasket type, applied to each edge of each operable sash. Preglaze wood windows units with sealant and 1/8" float or sheet glass or clear fused-glass-edged insulating glass if shown on drawings.

Insect Screens: Manufacturer's standard removable units, for each operable sash, or extruded aluminum framing, with 18 x 14 replaceable coated aluminum 0.013" wire mesh and vinyl retainer spline.

Shop Prime Coat Finish: Manufacturer's standard wood primer, FS TT-P-2, applied to exterior-exposed surfaces only. Installation: Install units true and plumb and in accordance w/ Sec. R613 of the IRC and the manufacturers installation instructions.

DIVISION 9 FINISHES -Green Recommendation: Environmentally Preferable Products: Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions. Use recycled or reclaimed products.

SECTION OF 29 00 - GYPSUM BOARD

R702.3.5 of the IRC. Georgia-Pacific Corp.

United States Gypsum Co. -Green Recommended Manufacturers and Products: (per BuildingGreen.com) 6-P Supsum Corporation: DensArmor Plus and DensShield

Edges: Tapered. Install and finish gypsum board to comply with ASTM C 840.

SECTION 04 30 00 - TILING

Manufacturers:

-Green Recommendation: Council (FSC.)

Chickasaw/Memphis Hardwood Flooring Co. Kentucky Wood Floors, Inc. -Green Recommended Manufacturers: (per BuildingGreen.com) EcoTimber, Hand-Scraped Flooring, EcoTimber Exotics, EcoTimber Classics

manufacturer

USC.

Clean and repair/patch sub-floor and apply leveling compound and substrate primer in accordance with flooring manufacturer's instructions.

-Green Recommendation:

General: All Gupsum board materials and accessories shall be installed in conformance w/ Sec RT02.3 and Table

Application: Gypsum sheathing shall be attached to exterior walls in accordance w/ Table R602.3(1) Interior gypsum board shall not be installed where it is directly exposed to the weather or to water.

Manufacturers: Subject to compliance with requirements, provide gypsum board of types indicated (in maximum lengths available to minimize end joints) and related products by one of the following:

Gold Bond Building Products Div., National Gypsum Co.

Exposed Gypsum Board: ASTM C 36, 1/2" thickness. Use 5/8" type X where indicated. Type: Regular, (except water-resistant in wet areas).

Trim Accessories: ASTM C 840: manufacturer's standard trim accessories, including corner bead and edge trim of

beaded type with face flanges for concealment in joint compound. Gypsum Board Joint Treatment Materials: Factory-prepackaged, vinyl-based products complying with ASTM C 475 and ASTM C 840, and paper reinforcing tape, unless otherwise indicated.

Material Standards: Comply with ANSI A 13.1 Standard Specification for Ceramic Tile and ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile." TCA Installation Guidelines: TCA "Handbook for Ceramic Tile Installation," comply with the most stringent TCA installation methods indicated for each application.

Colors, Textures, and Patterns: For tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, comply with the finish schedule or match Owner's sample. Marble Thresholds: Group "A", ASTM C 503, for exterior use with minimum hardness of 10.0 per ASTM C 241, white with honed finish unless otherwise indicated.

Setting Materials: Provide setting materials for thick-set installation in accordance with TCA recommendations for applications and substrate conditions.

-Green Recommended Manufacturers: Crossville Incorporated, Eco Cycle Ceramic Tile

SECTION OF 64 00 - WOOD FLOORING

Wood: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper identification from

Wood Veneer: Use FSC-certified sustainably harvested wood from well-managed forests and attain proper identification from vendor. Veneer shall be manufactured in a facility approved by an agency accredited by the Forest Stewardship

Parquet Flooring: Manufacturer's standard 5/16" thick solid wood parquet flooring, factory-assembled with paper face, in units of the size and pattern indicated

Wood Strip Flooring: Manufacturer's standard straight edge tongued-and-grooved and end-matched solid wood flooring, 25/32" thick x 2-1/4" strips, 2'-0" minimum length and averaging 4'-6" long, double channeled base. Manufacturer: Subject to compliance with requirements, provided flooring by one of the following:

Anderson Hardwood Floors, Inc.

Bruse Hardwood Floors/Triangle Pacific Corp.

Stain: Penetrating type, non-fading wood stain of color required to match Owner's sample.

Wood Filler: Paste type wood filler, pigmented if necessary to matching sample.

Floor Sealer: Penetrating type, pliable, wood-hardening finish/sealer, Penetrating Seal #21 by Hillyard Chemical Co., or Penetrating Triple XXX Seal-O-San by Huntington Laboratories, Inc., or equivalent sealer as recommended by flooring

Floor Wax: Liquid, solvent-type, slip-resistant, FS P-W-158, Type 1, Class 2.

Cork Expansion Strip: Composition cork expansion strip FS HH-C-516, Type I-B, Class 2. General: Comply with flooring manufacturer's instructions and recommendations for installation.

Conditioning: Do not proceed with wood floor work or delivery of materials until building is enclosed and humidity has stabilized at approximate level anticipated for sustained occupancy. Deliver wood flooring in advance of installation as recommended by manufacturer, but not less than 7 days before installation, in order to permit natural adjustment of moisture content. Open packages that are sealed to allow for climatization. Protect completed wood flooring during remainder of construction period with heavy Kraft paper or other suitable covering, so that flooring and finish will be without damage or deterioration at the time of acceptance.

SECTION OF 65 00 - RESILIENT FLOORING

Flooring Allowances: See Division I for amount and procedures for purchase and payment (overrun or underrun). The costs of handling and installation are not covered by the allowance.

Submit samples of each type, color and pattern of resilient flooring and accessories: Full size for tile, 6" x 9" for sheet flooring, and 2-1/2" long for accessories, and maintenance instructions for each type of flooring. Colors and patterns: As scheduled or shown, or as selected by Owner from manufacturer's standard colors and

Vinyl Composition Tile: FS 55-T-312, Type IV, composition 1, 12" x 12" x 1/8".

Filled Vinul Sheet with Backing: FS L-F-475, Type II, Grade A, manufacturer's recommended static load limit of 100 psi, 72" minimum sheet width manufacturing by Armstrong World Industries.

Installation: Comply with flooring manufacturer's recommendations for type(s) of materials, project conditions, and intended

SECTION 09 68 00 - CARPETING

All carpet must comply with the Carpet & Rug Institute's Green Label Plus Program

Flooring Allowances: See Division I for amount and procedures for purchase and payment (overrun or underrun). The

costs of handling and installation are covered by the allowance. Install Carpet on clean, dry, properly prepared substrate per manufacturer's recommendations and as follows:

Pre-plan installation for uniform direction of pattern and lay of pile, and proper sequencing with other work. Locate seams away from heavily traveled areas, centered under doors and without seams in direction of traffic of doorways and similar traffic patterns. Provide stretch-in tackless installation using glued and/or nailed tack strips with edges of carpet sealed at wall bases. Tape and/or sew seams in accordance with manufacturers recommendations. Cement padded cushion to substrate. Lay padding seams perpendicular to carpet layout. Stretch carpet both directions in accordance with manufacturers instructions.

Install edge guards at exposed edges. Bind edges with cloth tape and thread where not concealable. On stairs and similar substrates, anchor carpet with concealed nailing or other secure method, without seams at high-wear locations. Save carpet scraps, defined as mill ends less than 9" long and pieces larger than 3 sq. ft. in area and wider than 8", and deliver to Owner's storage space as directed. Dispose of smaller pieces.

Return to installation at time convenient to Owner and occupants, approximately 6 months after occupancy, and restretch carpet to eliminate wrinkles. Repair faulty seams and other faults in installation. Manufacturers:

-Green Recommended Manufacturers and Products: Interface, Inc., FLOR, Bentley Prince Street Cool Carpet

Milliken Floor Covering, Modular Carpet



SECTION OF 91 00 - PAINTING -Green Recommendations: Materials: Use only architectural paints and coatings that meet the standards below:

Component	Applicable Standard (VOC Content)	Reference
Paints, coatings, and primers applied to interior walls and ceilings	Flats: 50g/L Nonflats: 150g/L	Green Seal Standard GS-11, Paints, 1 st Edition, May 20, 1993
Anticorrosive and anti-rust paints applied to interior ferrous substrates	250g/L	Green Seal Standard GC-03, Anti- Corrosive Paints, 2 nd Edition, Jan.7, 1997
Clear wood finishes	Varnish: 350g/L Lacquer: 550g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings
Floor coatings	100g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings
Sealers	Waterproofing: 250g/L Sanding: 275g/L All others: 200g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings
Shellacs	Clear: 730g/L Pigmented: 550g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings
Stains	250g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings

Surface preparation, prime and finish coats specified are in addition to shop-priming and surface treatments.

Paint exposed surfaces whether or not colors are designated in "schedules," except where a surface or material is indicated not to be painted or is to remain natural. Where an item or surface is not mentioned, paint the same as similar adjacent materials or surfaces.

Samples for verification purposes: Submit samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrates: define each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture is achieved.

Single Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats. Final acceptance of colors will be from job applied samples. Material Quality: Provide the manufacturer's best quality paint material of the various coating types specified. Paint

material containers not displaying manufacturer's product identification will not be acceptable. Acceptable Manufacturers:

Pittsburah Paints

Porter Paints Benjamin Moore Paints

Duron Paints

Sherwin-Williams Co.

-Green Recommended Manufacturers and Products: Sherwin Williams Co., Harmony Benjamin Moore, Pristine Eco Spec

Pittsburgh Paints, Pure Performance

Examine substrates and conditions under which painting will be performed for compliance with requirements. Do not begin application until unsatisfactory conditions have been corrected

Preparation: Remove hardware and accessories, plates, machined surfaces, lighting fixtures, and items in place that are not to be painted, or provided protection prior to surface preparation and painting. Remove items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting, reinstall items removed using workmen skilled in the trades involved.

Clean surfaces before applying paint or surface treatments. Schedule cleaning and painting so dust and other contaminants will not fall on wet, newly painted surfaces.

Surface Preparation: Clean and prepare surfaces to be painted in accordance with manufacturer's instructions for each particular substrate condition.

Application: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

Minimum Coating Thickness: Apply material at the manufacturer's recommended spreading rate. Provide total dry film thickness of the system as recommended by the manufacturer. Apply additional coats when undercoats or other conditions show through final coat, until paint film is of uniform finish, color and appearance. Paint colors, surface treatments, and finishes are determined by the Owner if not otherwise indicated on the drawings.

DIVISION IO SPECIALTIES

-Green Recommendation: Environmentally Preferable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions.

Use recycled or reclaimed products.

SECTION 10 28 19 -TUB AND SHOWER DOORS:

Shower enclosures (unless otherwise shown on the drawings): Provide aluminum-framed 3/16" tempered glass, or approved shatterproof laminated safety glass or plastic. Provide sliding panels with towels bars. All enclosures shall be minimum height of 6'0" above finish floor.

DIVISION II EQUIPMENT

-Green Recommendation:

install High-Efficiency Appliances that meet or exceed ENERGY STAR standards and have an ENERGY STAR label. Use local products when possible (extracted, processed and manufactured within 500 miles of project).

Equipment Allowances: See Division I for amount and procedures for purchase and payment (overrun and underrun). The costs of handling and installation of Appliances are not covered by the allowances and shall be included in the base bid. General: Installation of appliances shall conform to the conditions of their listing and label and the manufacturer's installation instructions.

See Mechanical System Requirements, Chapter 13, Sec. MI307, APPLIANCE INSTALLATION, of the IRC. Verify all rough-in dimensions for all built-in appliances.

Residential equipment required is indicated on drawings. Include cords, valves, duct hoods, vents, as required for a complete installation.

DIVISION 12 FURNISHINGS

-Green Recommendation: Environmentally Preferable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Use products with low emissions.

Use recycled or reclaimed products.

SECTION 12 35 30 - RESIDENTIAL CABINETS

Cabinet Allowances: See Division I for amount and procedures for purchased and payment (overrun or underrun). The costs of handling and installation including hardware and drawer pulls are covered by the allowance. Sizes, Shapes and Types: Provide the sizes and types of units as shown, complete with drawers, doors, shelves,

compartments for appliances and fixtures, and special features as indicated. Installation: Anchor cabinet units securely in place with concealed (when doors and drawers are closed) fasteners, anchored into structural support members of wall construction. Comply with manufacturer's instructions and

recommendations for support of units. Counter Tops: Attach counter tops securely to base units. Spline and glue joints in counter tops: provide concealed

mechanical clamping of joint. Provide cut-outs for fixtures and appliances as indicated: smooth cut edges and coat with waterproof coating or adhesive. Complete hardware installation and adjust doors and drawers for proper operation.

DIVISION 22 PLUMBING

Green Recommendation: Environmentally Preferable Products:

Use local products when possible (extracted, processed and manufactured within 500 miles of project). Water Reuse:

Design and install a rainwater harvesting and storage system for landscape irrigation or indoor water use. The storage system must be sized to hold all water from a 14 rain event. Design and install a graphater reuse system with a tank or dosing basin for landscape irrigation use or indoor water use. Grauvater can be collected from clothes washer, shower, faucets and other source. If available, utilize a municipal recycled water system.

Fixtures:

Use high efficiency fixtures and fittings:

Faucets: average flow rate must be ≤ 2.0 gpm (gallons per minute). Showers: average flow rate must be ≤ 2.0 gpm (gallons per minute). Toilets: average flow rate must be ≤ 1.3 gpm (gallons per minute) or meet ASME All2.19.14 requirements or meet

the U.S. EPA WaterSense Spec.

Use dual flush toilets when possible.

Efficient Sustems:

Design and install an energy-efficient hot water distribution system. Insulate all hot water piping with R-4 insulation and ensure the 40 degree elbow bends are adequately insulated. Design and install Energy-efficient Domestic Hot Water(DHW) Equipment

Soil and Waste Piping: Shall be approved PVC extending 5'0" beyond exterior wall. Vent piping shall be approved PVC. All vent piping penetrating roof shall be properly flashed with G.I. roof jacks and painted to match roof. Where possible, route all vents to rear side of ridges or to the least visible location. Clean-outs: Provide cleanout at 50' o.c; at end of all branched section, at change of direction at base of all accessible traps and at all points necessary to remove obstructions. Clean-outs shall be set flush with walls, floors and or grades. Plumbing Fixtures and Equipment: Furnish all fixtures, complete with all compression stops, strainers, tailpieces, trim, etc. All exposed brass tubing supplies, cast brass traps, and waste pieces shall be polished chrome plated. Finish all piping through walls, floors or ceiling with chrome plated wall flanges or escutcheons. Hot and Cold Water Piping: Water piping shall be copper or approved equal. Tubing under or within concrete slab shall be type "K" tubing above slab shall be type L. No fittings shall occur under slab. Connections between copper and ferrous piping shall be made with dielectric or approved isolation fittings. Provide 150 psi hydrostatic test on all water piping system prior to covering.

Gas Pipina: Shall be installed in accordance w/ Chapter 24, Fuel Gas, IRC Water Heaters: Provide temperature/pressure relief valve within 6" from top of heater and pipe to exterior of building using copper or steel piping (plastic not allowed). Water heaters shall be installed with minimum 6" unobstructed clearance at front and 2" at sides and rear. When installed in garage, place on raised platform 18" above finished floor. (Refer to heating Section for combustion air requirements) Miscellaneous Plumbing Items:

Washer stub-outs: Provide hot and cold water and drain at washer locations. Locate as required to conceal from view after appliance is installed.

Hose Bibs: Furnish and install as shown on the drawings. If not shown, provide minimum of 2 Hose Bibbs. Provide capped tees for lawn sprinkler connections. Install hose bibs as tight to exterior wall as connections allow. Through penetrations: Piping penetrating fire-resistance-rated wall or floor assemblies shall comply w/ Sec. R317.3 of the IRC.

Isolate hot and cold water lines from the framing with 1/4" thick felt, carpet padding, or equal. The wall cavity containing water piping or plastic waste and vent lines must be packed solid with open-faced insulation (sprayed-on cellulose okay).

Common supply or waste line connections passing through sound separations are prohibited.

DIVISION 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC) -Green Recommendation:

General Design:

*Design and size HVAC equipment properly according to ACCA Manual J, the ASHRAE Handbook of Fundamentals or equivalent procedure. HVAC equipment must meet the ENERGY STAR for Homes National Builder Option Package outlined in table below. Install certified and labeled ENERGY STAR programmable thermostat.

	End Use	Central AC and air source heat pumps	Furnaces (gas, oil or propane)	Boilers (gas, oil or propane)	Ground Source Heat Pump- open loop	Ground Source Heat Pump- closed loop	Ground Source Heat Pump- direct expansion
*Good HVAC Design and Installation (Climate Zones 4-8)	Cooling Heating	≥ <i>13 SEER</i> ≥ <i>8.2 HSPF</i>	≥ 90 AFUE	≥ <i>85 AFUE</i>	≥ 16.2 EER ≥ 3.6 COP	≥ 14.1 EER ≥ 3.3 COP	≥ 15 EER ≥ 3.5 COP
*Good HVAC Design and Installation (Climate Zones 1-3)	Cooling Heating	≥ <i>14 SEER</i> ≥ <i>8.2 HSPF</i>	≥ 80 AFUE	≥ 80 AFUE	≥ 16.2 EER ≥ 3.6 COP	≥ 14.1 EER ≥ 3.3 COP	≥ 15 EER ≥ 3.5 COP

Air Conditioning Refrigerants:

*Conduct a Refrigerant Charge Test to ensure performance. Install an HVAC system with non-HCFC refrigerants or do not use refrigerants.

Indoor Air Quality:

Complete all the requirements of the US EPA's Energy Star w/ Indoor Air Package. Conduction Venting- All of the following are required: *no unvented compustion appliances to be used, *a carbon monoxide monitor must be installed on each floor, *all fireplaces and woodstoves must have doors ,*space and water heating equipment that involves combustion must be closed, have a power vented exhaust, or located in a detached utility or open air facility. Use a blower-door test to measure the pressure difference created by the presence of a chimney-vented appliance and limit the risk of backdrafting where the pressure difference is \leq 5 Pascals.

Forced Air Systems:

*Minimize energy consumption due to thermal bridges and/or leaks in the heating and cooling system. Limit duct leakage rate to outside the conditioned envelope. The tested leakage rate must be ≤ 4.0 cfm at 25 Pascals per IOO square feet of conditioned floor area for each installed sustem. *Ducts to be installed in interior walls and to be fully ducted. If installed in exterior walls, extra insulation is needed to maintain the overall UA for an exterior wall without ducts. *Minimum R-6 insulation to be used around ducts in unconditioned spaces. *Conduct Room by Room load calculations per ACCA Manuals J and D, or ASHRAE Handbook of fundamentals for ducted and non-ducted systems and install ducts accordingly. Assure each room has adequate return air flow through multiple returns, transfer grilles or jump ducts. Openings should be sized to I square inch of cfm of supply, and pressure differential between closed rooms and adjacent spaces should be less than 2.5 Pascals. Use Anti-stratification system when possible, that re-circulates hot air that has risen to upper areas into lower areas.

Nonducted HVAC Systems

distribution pipes in conditioned space.) Install outdoor reset controls based on outdoor air temperature. *Conduct Room by Room load calculations per ACCA Manuals J and D, or ASHRAE Handbook of fundamentals for ducted and non-ducted systems and install ducts accordingly. Design and install flow control valves on every radiator of Hydronic systems for a room by room system or install two distinct zones with independent thermostat controls.

*Use at least R-3 insulation around distribution pipes in unconditioned spaces. (If possible, keep the boiler and

Moisture Control:

Maintain relative humidity below 60% with additional dehumidification equipment or a central HVAC system with additional controls to operate in dehunidification mode.

*Install nonpaper-faced backer board on walls around tub, showers and spa areas "Use water resistant flooring in kitchens, bathrooms, laundry rooms, entry areas within 3' of exterior door and spa areas; do NOT use corpet

finstall drain and drain pan in hot water heater if it is in or over living space.

*Install drain and drain pan, or accessible single-throw supply valve to clothes washer if it is in or over living space. *Exhaust druer directly to outdoors

*Install drain and drain pan to condensing clothes dryer

Outdoor Air Ventilation

*Design and install a whole building ventilation system that complies with ASHRAE Standard 62.2-2007 (unless built in a mild climate (fewer than 4,500 infiltration degree-days)).

Local Exhaust

*Design and install local exhaust systems in all bathrooms and kitchens to meet requirements of ASHRAE Standard 62.2-2001 Section 5. *Design and install the fans and ducts to meet requirements of Section 7 of ASHRAE Standard 62.2-2007.

"Exhaust air directly to the outdoors

"Use Energy Star labeled bathroom exhaust fans.

Use an occupancy sensor, an automatic humidistat controller, an automatic timer or a continuously operating exhaust fan for bathrooms.

Air Filterina

*Install air filters ≥ MERV 8 for forced air systems and nonducted HVAC systems. Maintain adequate pressure and air flow in all mechanical ventilation systems.

Contaminant Control

Seal all permanent ducts and vents to minimize contamination during construction and remove seals after construction is

Flush the home for 48 hours prior to occupancy but after all phases of construction are completed.

Radon Protection

If located in EPA Radon Zone I, design and build with radon-resistant construction techniques prescribed by the EPA, IRC or equivalent standard.

Garage Pollutant Protection

*No HVAC systems in garage; place all air-handling equipment and ductwork autside the fire-rated envelope of garage. When possible, detach garage completely from house

Tightly seal shared surfaces between garage and conditioned spaces. -- If space is above garage: seal all penstrations, seal all connecting floor and ceiling joist bays, and paint wall and ceilings to avoid carbon monoxide penetration through gypsum board. If space is adjacent to garage: weather-strip all doors, place carbon-monoxide detectors in rooms adjacent, seal all penetrations and seal all cracks at base of the walls. Install an exhaust fan in garage rated for continuous operation.

Installation: Heating and Cooling equipment and appliances shall be installed in accordance w/ the IRC and the manuf. installation instructions. Access: Equipment shall be located w/ respect to building construction and other equipment to permit maintenance,

servicing and replacement. Clearances shall be maintained to permit cleaning of heating and cooling surfaces: replacement filters, blowers, motors,

controls and vent connections; lubrications of moving parts; and adjustments. Sizing: Heating and Cooling equipment shall be sized based on building loads calculated in accordance w/ ACCA Manual J

or other approved heating and cooling calculations methodologies. Flood Hazard: In areas prone to flooding as established by Table R301.2 of the IRC, heating and cooling equipment and appliances shall be located or installed in accordance w/ Sec R323.1.5 of the IRC.

Duct Design: Duct systems serving heating, cooling and ventilation equipment shall be fabricated in accordance w/ the provisions of Chapter 16, of the IRC and ACCA Manual D or other approved methods.

Venting Required: Fuel-burning appliances shall be vented to the outside in accordance w/ their listing and label and manufacturer's installation instructions except appliances listed and labeled for unvented use. Venting systems shall consist of approved venting systems that are integral parts of labeled appliances.

Gas-Fired appliances shall be vented in accordance w/ Chapter 24 of the IRC. Electrical distribution systems shall comply w/ Part VIII, Chapters 33 through 42, of the IRC; the NEC, and NFPA 70.

Materials: Materials and equipment shall be new and listed by Underwriter's Laboratories, Inc., and all work shall conform with the requirements of the National Electrical Code and NFPA 70. Circuits: Electrical system layouts are generally diagrammatic and location of outlets and equipment is approximate.

Exact location of outlets and circuiting shall be governed by structural conditions and obstructions as well as applicable sections of the NEC.

- a) Lighting Circuits: 15 AMP with #14 AWG conductors (120V).
- b) Receptacle Circuits: 20 AMP with #12 AWG conductors (120).

c) Provide 2 separate appliance circuits at kitchen, 20 AMP with #12 AWG conductors (120). Convenience Receptacles: Shall be placed maximum 12'-0" on centers along room perimeter and Maximum 6'-0" from end walls, and at all furnishable walls exceeding 2'-0" from end wall, and at all furnishable walls exceeding 2'-0" in length.

- a) All receptacles shall be grounded type.
- b) Locate receptacles 8" above floor and countertops, unless otherwise noted.
- c) Install 240V receptacles where noted on the drawings.
- d) All switched receptacles shall be one half hot.

DIVISION 26 ELECTRICAL -Green Recommendation:

*Install at least four Energy Star labeled light fixtures or Energy Star labeled compact fluorescent light bulbs in high use

Install Energy Star labeled fixtures wherever possible. Renewable Energy

Design and install a renewable electricity generation system by using energy modeling to estimate the energy supplied by the system and the annual reference electricity that a typical home would consume in a given year and can be calculated by using the 2006 Mortgage Industry National Home Energy Rating Standards Guidelines. Home design should be at least 3% better than annual reference load.

Light Switch: Located at 48" above finish floor and 8" above counter tops, unless otherwise noted. Verify counter height W/ Owner.

System Grounding: Provide accessible junction box and necessary conducts for grounding main electrical system in accordance w/ Sec. E3507.1 of the IRC and Sections 250.20(b)(1) and 250.24(a).

Smoke Detectors: Provide approved smoke detector and alarm system conforming to UBC Standard 43-6 at locations shown on the drawings.

Aluminum wire shall not be used in electrical wiring within the dwelling unit.

All equipment installed outdoors and exposed to weather shall be "weather-proof" Provide a separate 20 ampere laundry circuit.

Provide ground fault circuit interrupter (GFI) protection at all bathrooms, powder rooms, outdoor receptacles and aaraaes

in accordance w/ Sec. E3802 of the IRC.

Verify minimum flood elevation prior to placement of devices, equipment, and appliances.

-Green Recommendation: Site Selection:

-land that is at or below the 100-year floodplain (as determined by FEMA). -land that is named a habitat for any endangered or threatened species (as determined by state or federal -land that is within 100 feet of water

Select a lot that is within % mile of open space accessed by the public or private community. Build homes with an average housing density of 7 or more divelling units/acre, or a single home on 1/7 acre.

Site the building so that the glazing area on the north and south facing walls is at least 50% greater than the sum of the glazing area on the east and west walls. Orient the building so that the east-west axis of the building is within 15 degrees of due east and due west. The root south-facing area should have a minimum of 450 s.f. of area oriented properly for solar applications.

Site Stewardship:

-provide swales to divert surface water from hillsides. -In sloped areas, keep soil stabilized on sloped areas by using tiers, erosion blankets, compost blankets or other measures. Protect trees and plants with "tree protection area" fence delineated on site plan and on lot. Only develop and disturb necessary amount of site; leave as much undisturbed as possible.

Landscaping: "Use native plants: do not introduce invasive plant species into landscape. Use drought tolerant plants and turf or install irrigation system to reduce water usage. Do not use turf in areas with a slope of 25% or more or in densely shaded areas. If possible, limit the use of turf.

Heat Island Effects:

Surface Water Management: Use retaining walls and terracing for permanent erosion control on steep sites. Use permanent stormwater controls such as vegetated swales, on-site rain gardens, dry wells, or rainwater cisterns designed to manage runoff from home. If feasible in design, install a vegetated roof for at least 1/2 the roof area. Use permeable materials such as pavers, turfstone, gravel and others for driveways and patios.

applicable. specific requirements.

-Green Recommendation:

disturbed.

DIVISION 31 EARTHWORK

Do not develop, build or pave on portions of site that meet the following criteria:

Build on a previously developed lot it possible, or on a site that is adjacent to a previously developed site. Select a lot that is within ½ mile of existing infrastructure (water and sewer lines).

Building Orientation for Solar Design:

*implement a plan of erosion control during construction to include:

-stockpile and protect disturbed topsoil from erosion.

-control the path and velocity of runoff with slit fencing or other measures. -protect on-site storm sewer inlets, streams and lakes with straw bales, silt fencing, or other measures.

Locate trees and other plants to shade hardscape areas. Use light-colored high-albedo materials to pave sidewalks, patios and driveways. Examples include white concrete, light gray concrete, open povers and/or any material with a SRI index of at least 29.

All earthwork shall be performed in accordance with applicable standards enforced by jurisdiction of which the project is

Earthwork shall be performed in accordance with recommendations contained in the soils report provided by the Owner, if

The soils report shall be considered as part of the construction documents. Refer to foundation plan and details for

All footings shall bear on firm, fully compacted, natural soil or on approved compacted fill. All imported soil shall be acceptable to the Soils Engineer. Sub-grade failing to meet compaction requirements shall be re-compacted and tested until specified results are achieved at no additional expense to Owner. Refer to Civil Engineer's grading and plot plans. Refer to the Landscape Architect's grading and construction documents for fine grading. All finish grades shall be placed so as to provide positive drainage away from the building.

SECTION 31 31 16 - TERMITE CONTROL

implement one or more of the following measures below.

-Keep all wood (i.e., siding, trim, structure) at least 12 inches above soil. -Seal all external cracks, joints, penetration, edges, and entry points with caulking. Where openings cannot be

caulked or sealed, install rodent and corrosion proof screens (e.g., copper or stainless steel mesh). Protect exposed foundation insulation with moisture-resistant, pest -proof cover (e.g., fiber cement board, galvanized insect screen).

-Include no wood-to-concrete connections or separate any exterior wood-to-concrete connections (e.g., at posts, deck supports, stair stringers) with metal or plastic fasteners or dividers.

-install landscaping such that all parts of mature plants will be at least 24 inches from the home. -in areas named Gmoderate to heavy through Gvery heavy on the termite infestation probability map (See IRC -

all of the Southeast) implement one or more of the following measures: -Treat all cellulosic material (e.g., wood framina) with a borate product to a minimum of 3 feet above the foundation

-Install a sand or diatomaceous barrier

-Install a steel mesh barrier termite control system.

-Install a non-toxic termite bait system. (Recommend terminix or equal) -Use noncellulosic (i.e., not wood or straw) wall structure.

-Use solid concrete foundation walls or masonry wall with top course of solid brick bond beam or concrete filled

General: In areas favorable to termite damage as established by Table 301.2(1) of the IRC, methods of protection shall be in accordance w/ applicable provisions of sections R319 and R320. Chemical soil treatment: The concentration, rate of application, and treatment method of the termiticide shall be

consistent w/ and never less than the termiticide label. Soil treatment shall not be applied until all fine grading and prep is complete. Once applied, Termiticide shall not be

DIVISION 32 EXTERIOR IMPROVEMENTS

SECTION 32 14 00 - UNIT PAVERS

-Green Recommendation:

Permeable paving, installed by an experienced professional. Permeable paving must include porcus above-ground materials (e.g., open pavers, engineered products) and a 6-inch porcus subbase, and the base layer must be designed to ensure proper drainage away from the home.

DIVISION 33 UTILITIES

SECTION 33 46 00 - SUBDRAINAGE

Foundations and foundation drainage shall comply w/ Chapter 4, Sec. R401, of the IRC.

Concrete or masonry foundations: Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Materials shall be in accordance w/ Sec. R405 of the IRC.



ORDINANCE NO. 2017/____

AN ORDINANCE TO CREATE THE KEEP BEAUFORT COUNTY BEAUTIFUL BOARD AS AN AFFILIATE OF KEEP AMERICA BEAUTIFUL AND PALMETTO PRIDE FOR THE PURPOSE OF LITTER CONTROL, BEAUTIFICATION, AND WASTE REDUCTION FOR BEAUFORT COUNTY.

WHEREAS, Keep Beaufort County Beautiful (KBCB) has been an active organization, created as a non-profit organization under South Carolina law since 1986; and

WHEREAS, KBCB has operated with the support of County staff from the Department of Solid Waste and Recycling; and

WHEREAS, KBCB has a mission to educate and empower the Beaufort County Community (including governments, businesses, schools, and citizens) to participate directly in improving the environment through an all-out effort in beautification, litter control, and waste reduction; and

WHEREAS, KBCB has maintained its status as an affiliate of Keep America Beautiful (KAB) and Palmetto Pride by meeting the requirements of a KAB affiliate including filing the required annual reports; and

WHEREAS, KBCB has managed volunteers for the SCDOT Adopt A Highway program; and

WHEREAS, being chartered by County Council will acknowledge the success of the KBCB and solidify the organization within the County structure and provide for continued staff support for the purposes set forth below; and

WHEREAS, a county chartered organization will not have an adverse impact on the traditional funding sources from Palmetto Pride and further will have no adverse impact on affiliate status with KAB; and

WHEREAS, it is the intention of the existing Keep Beaufort County Beautiful Board of Directors to dissolve the existing non-profit and become a county chartered organization.

NOW, THEREFORE, BE IT ORDAINED, by Beaufort County Council that there is hereby created a Keep Beaufort County Beautiful Board and that such Board shall be organized and operated according to the following Charter Provisions. The Beaufort County Code of Ordinances is hereby amended by inserting the following Article VII Sections 62-58 through 62-67 into Chapter 62: Chapter 62- Solid Waste

Article VII Section 62-58. - Litter Control and Beautification Board

Sec. 62-58. - Title.

The name of the organization shall be known as the Keep Beaufort County Beautiful Board (KBCBB).

Sec. 62-59. - Composition.

The board shall be comprised of the following membership:

- (a) One member from County Council District 1.
- (b) One member from County Council District 2.
- (c) One member from County Council District 3.
- (d) One member from County Council District 4.
- (e) One member from County Council District 5.
- (f) One member from County Council District 6.
- (g) One member from County Council District 7.
- (h) One member from County Council District 8.
- (i) One member from County Council District 9.
- (j) One member from County Council District 10.
- (1) One member from County Council District 11.

Sec. 62-60. - Filling of vacancies; removal of board members; terms.

- (1) A vacancy on the board is filled in the same manner as provided for under sections 2-191 through 2-198 of the Beaufort County Code of Ordinances, upon nomination of the respective member of County Council.
- (2) Board members are subject to removal procedures provided in Sec. 2-193 of the Beaufort County Code of Ordinances.
- (3) Board members shall serve at the pleasure of county council. Board members shall be appointed to one (1) term. A term of appointment shall be for four (4) years. No board member shall serve for more than four (4) consecutive terms except that county council may approve a fifth term by unanimous vote.

- a. Upon passage of this Charter, all eleven (11) board members shall be appointed by county council.
- b. For Districts one, two, three, four, five, and six the board members shall be reappointed after the initial two (2) years for a full four (4) year term, thereby staggering appointments of board members. The initial two (2) year term shall not count toward the four (4) term limit.
- c. For Districts, seven, eight, nine, ten, and eleven, the board members' term shall expire after the full four (4) year term and vacancies be filled by re-appointment, or filled by new appointment.

Sec. 62-61. – Officers, officers' duties, and elections of officers.

The members shall elect three (3) officers from its membership, a chairperson, a cochairperson and a secretary. A majority of board members present and voting, when a quorum is established, shall elect the officers.

- (1) <u>Chairperson</u>- The chairperson shall be responsible for leading the Board in program development and policy consistent with the Keep American Beautiful objectives. The chairperson shall be spokesperson for the Board at functions, prepare and work with the county staff in preparation of reports including but not limited to the annual Keep America Beautiful report and perform such other duties as the Board shall elect.
- (2) <u>Co-Chairperson</u>- The co-chairperson shall serve as the Chairperson in his or her absence, and shall discharge such other duties as the Board shall direct.
- (3) <u>Secretary</u>- The secretary shall keep minutes of all Board meetings and shall forward the approved minutes to the appropriate County staff person for record keeping and storage. The secretary shall also perform such other duties as the Board shall direct.

Sec. 62-62. - Meetings.

The board shall meet at the call of the chairperson, at least quarterly, and shall be conducted in compliance with the South Carolina Freedom of Information Act. Minutes shall be kept of any meetings and the minutes shall be stored in the Department of Solid Waste and Recycle or the Records Management Department of the County. A majority of the number of members on the board shall constitute a quorum for transaction of business at any meeting. A majority of those present and voting shall be required to decide any issue after a quorum has been established.

Sec. 62-63. - Purpose.

The purpose of the board will be to educate and empower the Beaufort County Community (including governments, businesses, schools, and citizens) to participate directly in improving the environment through an all-out effort in beautification, litter control, and waste reduction.

Sec. 62-64. - Objectives.

The objectives of the board include but are not limited to:

- A. Conduct and promote continuing education programs; and
- B. Develop new programs which will result in the sustained reduction of litter, graffiti and increase recycling in Beaufort County; and
- C. Encourage stricter code enforcement regarding litter and dumping; and
- D. Review and recommend appropriate legislative changes regarding environmental ordinances in Beaufort County; and
- E. Encourage placing, planting and preservation of trees, flowers, shrubs and objects of ornamentation in Beaufort County; and
- F. Maintain affiliate certification with Keep America Beautiful; and
- G. File the required annual report to Keep America Beautiful; and
- H. Pursue and secure funding from available sources.

Sec. 62-64- Keep America Beautiful Affiliation

The board shall maintain the Keep America Beautiful affiliation status and utilize the KAB resources whenever possible. The board's activities are limited to the boundaries of Beaufort County but should not be construed to exclude activities within the municipal boundaries located in Beaufort County.

Sec. 62-65. - Annual budget.

The board shall submit a recommended annual budget to Beaufort County Council for review and adoption indicating all anticipated sources of revenue, all anticipated expenditures, and any remaining funds that have been carried over from previous years. Additionally, the board shall advise and make recommendations to county council on the expenditure of any and all county funds that may be appropriate to it as well as the design and implementation of any improvement projects that will occur on land owned, maintained, or subject to the control of Beaufort County Council.

Sec. 62-66. - Appointment of other committees.

The board may appoint such other standing, special, or advisory committees from time to time as it deems appropriate. Members of such committees may include board members, as well as individuals representing specialized interests in areas that would be beneficial to the board carrying out its purpose. Sec. 62-67. - Conflict of interest.

The board shall adhere to all conflict of interest prohibitions and disclosure requirements provided in South Carolina Code of Laws § 8-13-700 et seq., as well as any applicable provisions of the Beaufort County Code of Ordinances.

Adopted this _____ day of _____, 201____.

COUNTY	COUNCIL	OF BEA	UFORT	COUNTY

BY:_____

D. Paul Sommerville, Chairman

APPROVED AS TO FORM:

Thomas J. Keaveny, II, Esquire Beaufort County Attorney

ATTEST:

Ashley M. Bennett, Clerk to Council

First Reading: Second Reading: Public Hearing: Third and Final Reading:



Quoted By:	Garth Magness
Date:	11/14/2017
Quote Expiration:	11/30/2017
Quote Name:	Beaufort County-LGD-EG-PLM
Quote Number:	2017-28498
Quote Description:	EnerGov PLM - SaaS

Sales Quotation For

Beaufort County P. O. Drawer 1228 Beaufort, South Carolina 29901-1228 Phone (843) 470-3677

EnerGov SaaS - Silver

Description		Monthly Fee	Users/Units	Annual Fee
Core Software:				
EnerGov Licensing & Regulatory Suite (LRM)		\$169.00	10	\$20,280.00
EnerGov Permitting & Land Management Suite (PLM)		\$164.00	34	\$66,912.00
Extensions:				
EnerGov Citizen Self Service - Permitting & Land Mgmt (PLM)		\$1,667.00	Site License	\$20,000.00
EnerGov e-Reviews		\$2,417.00	Site License	\$29,000.00
EnerGov GIS		\$0.00	1	\$0.00
EnerGov IG Workforce Apps		\$49.00	20	\$11,760.00
EnerGov My GovPay		\$0.00	1	\$0.00
EnerGov Report Toolkit		\$0.00	1	\$0.00
EnerGov Standard Technical Support		\$0.00	1	\$0.00
EnerGov VirtualPay		\$0.00	1	\$0.00
	Sub-Total:			\$147,952.00
	Less Discount:			\$22,230.00
2017-28498 - EnerGov PLM - SaaS	CONFIDENTIAL			1 of

EnerGov SaaS - Silver Description Monthly Fee Users/Units Annual Fee TOTAL: \$125,722.00

EnerGov Professional Services

Description	Hours	Unit Price	Extended Price	Year One Maintenance
Data Conversion - Tyler Munis	1	\$0.00	\$0.00	\$0.00
EnerGov Configuration Services	1200	\$175.00	\$210,000.00	\$0.00
EnerGov Custom Report Development (3 pack)	5	\$9,000.00	\$45,000.00	\$0.00
EnerGov Fundamentals Training	40	\$175.00	\$7,000.00	\$0.00
EnerGov Onsite Training & Production Support Services	120	\$175.00	\$21,000.00	\$0.00
EnerGov Project Management Services	370	\$175.00	\$64,750.00	\$0.00
Integration - Tyler Content Manager	1	\$0.00	\$0.00	\$0.00
Integration - Tyler Munis GL	1	\$0.00	\$0.00	\$0.00
	TOTAL:		\$347,750.00	\$0.00

Summary	One Time Fees	Recurring Fees
Total SaaS	\$0.00	\$125,722.00
Total Tyler Software	\$0.00	\$0.00
Total Tyler Services	\$347,750.00	\$0.00
Total 3rd Party Hardware, Software and Services	\$0.00	\$0.00
Summary Total	\$347,750.00	\$125,722.00
Year One Contract Total	\$473,472.00	
Estimated Travel Expenses	\$25,500.00	

Optional EnerGov SaaS - Silver

Description		Monthly Fee	Users/Units	Annual Fee
Extensions:				
ePortal - Tyler Incident Manager and Click2Report		\$1,667.00	Site License	\$20,000.00
	Sub-Total:			\$20,000.00
	Less Discount:			\$2,000.00
	TOTAL:			\$18,000.00

for Six (6) months from the Quote date or the Effective Date of the Contract, whichever is later.

Customer Approval:	Date:	
Print Name:	 P.O. #:	

All primary values quoted in US Dollars

Comments

e-Planning requires BlueBeam Revu or Adobe Acrobat Pro.

EnerGov monthly fees are rounded, excluding cents.

Includes up to 55 business transactions, 5 GeoRules and 10 IAA events

Also includes integration to Tyler Cashiering and Tyler Content Manager as appropriate.



EnerGov Permitting, Land & License Management

Tyler's Flagship Land Management Suite





Company Background

Market Position, Experience, Product Offering & Support



Company Overview

- Founded in 1966
- Publicly Traded NYSE TYL
- 900M 2017 Projected Revenues
- 4200 Employees (Public Sector)
- Over 15,000 Government Clients





Industry Leading Experience

- 50 Years Public Sector
- Singular Focus Public Sector
- Strong Regional Footprint
- 98% Client Retention Rate











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Savannah

EnerGov is a Best in Class Solution

- Key Component of Tyler
 Ecosystem
- Integrates with County's Existing Munis Financial Application
- Flexible, Extensible & Sustainable





Mobile Apps



eReviews

eReviews Portal Workspace

> Licensing & Regulatory Business Licensing Tax Remittance Professional License Exams Rental Property

• energov

Permitting & Land Management

Permitting Planning Inspections Projects Impact Management Code Enforcement

ENERGOV GIS

Core Framework

Cashiering Central Contacts Location Manager Content Manager Workflow

Asset Management

Assets & Equipment Projects Requests Work Orders

Public Access

ePortal oData Social Media Citizen Apps IVR (Telephony)

Citizen Request & Response

Requests Inspections Code Enforcement



Notable Benefits

Citizen Self-Service, Enhanced Reporting, GIS Integration, Enterprise Workflow, Mobility & Munis Integration



Enhanced Citizen Self Service

- Online Permit & License Applications & Digital Plans Submission
- Online Application Status Checks
- Online Inspection Requests
- Online Payments Processing
- Online Access to Meetings, Hearings and Approvals





Powerful Reporting Tools

- Customizable Key
 Performance Dashboards
- Extensive Reporting Library
- Report Automation
- MS Office Integration





Robust ArcGIS Integration

- ESRI-Based Mapping Technology
- GIS-based Analytics
- Spatially-enabled Workflows
- Notification Generation





Enterprise Workflow

- Visual Workflow
- Connects Disparate Depts. and Activities
- Version Control
- Automation Controls




Powerful Mobile Capabilities

- Intuitive & Robust
- Maximize Time in Field
- GIS Routing Capabilities
- Standardized Checklists
- Photo Capture
- Email & Printing Functions





Seamless Munis Integration

- Automated Financial Integration with County's Existing Tyler Munis system
- Tyler Cashiering Integration
- Tyler Content Manager
 Integration
- Tyler Hub and Munis Dashboard Integration





Implementation Overview

Staged Methodology, Business Process Assessment, Best Management Practices Recommendations





Support Overview

Account Management, Availability, Continuing Education & Evergreen



Account Management

- Atlanta Division Headquarters
- Unlimited Support available via
 Telephone, Email and Desktop Streaming
- Hours of support 7:00 AM 8:00 PM EDT
- One vendor for all issues



Continuing Education

- Quarterly Webinars (New Releases)
- Regional User Group Meetings
- Annual Tyler Connect Conference
- Tyler University
 - Online E-Learning
 - Certification Courses
 - Virtual Labs, Exams etc.





Tyler Evergreen Program

- Provides Perpetual Product Updates
- Zero Re-Licensing Fees (even for platform and technology shifts)
- Continual Investment in Product Development





Questions?



Southern Lowcountry Regional Planning Commission (SoLoCo) Stormwater technical subcommittee

Meetings - October 6, 2017 and October 17, 2017 - 10am - 12pm

Attendees (Oct. 6): Eric Larson (BC), Kim Jones (ToB), Neil Desai (CoB), Bill Baugher (ToB) Attendees (Oct. 17): Eric Larson (BC), Bryan McIlwee (ToB), Jeff Buckalew (ToHHI), Jeff Netzinger (ToHHI), Lisa Wagner (JC), Neil Parsons (CoH), Rhett Lott (CoH), Tony Maglione (ToPR)

- Introductions Eric Larson explained the purpose of the SoLoCo and the directive from the committee to compare stormwater standards to determine the "highest" regulatory standards within the region. Larson went further to suggest that the analysis should go beyond the "highest" standard, but should include a discussion of what standards SHOULD be applied if done regionally and what implementation of a regional standard via a regional regulatory authority.
- 2. SoLoCo directive
 - a. Matrix of standards

Each jurisdiction went over their standards on the matrix and explained the intent of their standards. Redevelopment seems to be the greatest area of differences. BC requires sites to design to the natural state, not existing conditions. Bluffton looks at redevelopment to maintain runoff condition but not necessarily get back to a natural, undisturbed condition. Typically, land development codes help with reductions due to landscaping, etc. ToHHI & ToPR are similar and require post development. CoB, JC, and ToR have thresholds in which redevelopment can occur to lesser design standards than development.

- i. "Highest" standards
 - Peak Controls Beaufort County and Hardeeville. 100 year, 24 hour duration is required. It is noted most communities do not regulate above the 25 year event with the 100 year storm as a check for emergency spillways on ponds and "retention" situations.
 - 2. Water quality controls Beaufort County. BC requires Nitrogen, Phosphorus, and bacteria levels after construction to match predevelopment (natural rates). It is noted that depending on certain development and land use cases, the natural condition has higher pollutant levels can post construction runoff. Jasper County and Ridgeland use a percent reduction of the developed runoff loading. Again, pending on the natural condition, this standard may be higher because the % reduction might be less than existing conditions.
 - 3. Runoff Volume controls Beaufort County requires a 1.95" retention requirement. However, BC does not mandate that any of the volume be infiltrated. Bluffton requires a 1" infiltration of the volume increased created by development. Given that most standards have an intent to mimic natural hydrology of the site, requiring some volume to be infiltrated is deemed desirable, even if the amount is less.
 - 4. Area of disturbance threshold Beaufort County, City of Beaufort, Hardeeville, and Town of Port Royal require stormwater management on

all sites. Hardeeville leaves it general, on purpose, to allow for case by case considerations. It was noted that Beaufort County requires Step 2 On-Lot volume control for SFR and therefore may be higher than the other standards. Other have exceptions to allow limited, smaller projects can occur without the need for stormwater management plans.

- Effective Impervious cover control Only Beaufort County has this standard. The group held some discussion on this theory. BC determined this to be an effective way to reduce volume, peak, and pollutant loading. There was general consensus that this is <u>A</u> way to manage runoff, but not the <u>ONLY</u> way.
- 6. Redevelopment standards Beaufort County code does not have a lessened standard for redevelopment, therefore hold all development to the same standard, making it the highest standard. It was noted that BC is not facing redevelopment pressures within its boundaries so having a separate standard is not an issue. However, other jurisdictions are facing these pressures. There was general consensus that some type of redevelopment standard was needed to set some limits on the "lessening" of standards in redevelopment projects.
- ii. "Best" standards Following the "highest" discussion, the group discussed what the best standards to be adopted regionally need to be. Considerable research and discussion would be needed to establish regional standards. The points below were brainstorming ideas that would need to be considered.
 - 1. Consider a overlay district in sensitive watersheds. Require higher standards to address impairments, pollutants, and/or flooding within a watershed or subwatershed.
 - 2. Watershed based planning. Similar to overlays, these could be implemented across political boundaries unlike zoning overlays (unless of course zoning became regional as well.) (Would need to decide on standard HUC 10, HUC 12, or other). Standards could be tailored based on the impairment; inland watersheds would likely need different standards than coastal watersheds. This same idea could be used for quantity controls also; it may not be necessary to detain or retain all volumes for watersheds such as the Savannah River.
 - 3. Is 10% impervious control necessary? Is it meeting the intent? Is 10% enough or does it need to be higher? Is it too high? Our other standards achieve the same goals and may or may not be considered "higher" or "best" standards to be applied. Consider a range of percentages that would be considered; the Center for Watershed Protection research had recommended a range of values, not absolutes. Beaufort County's change in 2016 to require this standard IN ADDITION TO the Peak, Water Quality, and Volume Control standards may have become too restrictive. It was suggested that BC consider going back to the earlier, optional "goal" requirement.
 - 4. Retention standard may need infiltration to meet intent of restoring watershed to more natural state. (See discussion above)
 - 5. Redevelopment standards may be to differ based on problems within the watershed. (See discussion above). Beaufort County's pre-development standard of being natural, undeveloped state may be too restrictive in

areas where site constraints may make these standards not feasible. Standardizing redevelopment standards is probably the biggest way to minimize the "jurisdiction shopping" issues.

- iii. "Regional" standards See "best" standards comments.
 - 1. Obstacles to overcome:
 - a. Adopting a regional standard will likely result in Beaufort County jurisdictions needing to lower their standards, while Jasper County communities will need to raise their standards. Will BC be willing to lessen standards? There will be increased costs for development in JC.
 - b. Different levels of service Urban areas need more services than rural. Will other jurisdictions want to take one private systems like ToHHI has? Will rural areas be willing to pay for higher LOS elsewhere?
 - c. Some programs are not MS4 yet and regional standards can be seen as voluntary over-regulation in those communities. There was lenghty discussion about DHEC's authority and when, not if, the MS4 designation will come to the other jurisdictions not currently permitted.
- 3. Regionalization

Beaufort County administration proposes that there is a better way to manage stormwater other than 8 separate stormwater departments trying to implement a regional set of stormwater. They have asked everyone to consider a formation of a regional stormwater authority, organized similar to how BJWSA was established for drinking water and sanitary sewer. To facilitate this discussion, each jurisdiction discussed their current staffing and capabilities.

- a. Benchmarking existing departments (Manpower, Equipment)
 - i. Beaufort County major assets in manpower and equipment. Also large administrative staff for utility (funding) management. Full MS4 regulatory program staff.
 - ii. Town of Hilton Head Island professional staff only. No O&M do contract services.
 - iii. Town of Bluffton Administrative and regulatory staff. Public works staff is small and does SW and roads with limited service.
 - iv. City of Beaufort Has crew and equipment for O&M and management staff for CIP. Not as large as Beaufort County
 - v. Town of Port Royal Public Works department with minimal staff and equipment and limited service. Outsourced professional services and O&M.
 - vi. Jasper County Public Works department performs O&M. Small department with multiple functions besides stormwater. Contract larger projects. Professional services are via use of consultant.
 - vii. City of Hardeeville Public Works crew small and limited services. One professional staff member. Consultant services used for plan review and as needed.
 - viii. Town of Ridgeland No Public Works department. All stormwater O&M provided by SCDOT. Professional services outsourced to consultant.
- b. What does a Regional Agency look like?

- i. Perception In Beaufort County, municipal bodies feel like there is a loss of control to the County under current relationships. SWUB, SWIC, IGA, etc. need to be redone to become regional; can't continue as-is. General consensus that a new stand-alone agency "wipes the slate clean" and gives everyone a fresh start to redefine stormwater management.
 - 1. Economic impacts How will this benefit each community?
 - 2. Environmental benefits How will this improve water quality and prevent flooding?
 - 3. Why? "What's in it for me?", "I don't have a problem yet?"
 - 4. How do you convince the public on a regional concept when existing level of service is consider acceptable. There may be a concern that LOS will change for the worse.
- ii. A exploratory committee of staff is needed to research how a quasi-government agency would be structured. Outside specialists, such as consultants or managers of similar type agencies throughout the southeast, could be brought in to advise us. Items to be discussed would include:
 - Funding Utility fees may need to be different based on a level of service in different areas, such as watersheds. Collection options need to be discussed. What happens when a major event, such as a hurricane, affects rates due to damages needed to be repaired.
 - 2. Business / Administration Transition of existing staff and resources. Appointing Board members and hiring management staff.
 - 3. Operations Could combining efforts provide more manpower for repairs, complaint driven responses? If so, this could be a plus.
 - 4. Capital
 - a. Comment Combining efforts will provide higher funding levels for regionally significant projects. It will allow for doing bigger projects with the larger funding source.
 - 5. Research / Monitoring Higher potential for meaningful research when focused regionally.
 - 6. Public Engagement
 - a. Comment Need for personal touch. Some jurisdiction(s) may be more focused on a higher level of customer service than other might feel necessary. More will likely be a desire to have a level of service that does not go down if regionalized.
 - b. Community buy-in to a regional authority will only be successful with a public education effort. We need to explain the current different levels of service within each jurisdiction and how that may change or improve under a regionally authority.
- c. Next Steps for Regionalization? Get administration and elected leadership to support this concept and allow staff to form an exploratory committee.

Comparison of Stornwater Management Design Standards in Beaufort and Jasper Counties

11/1/16, amended 4/27/17, 10/5/17, & 10/17/17

Note: Determination of "highest standard" found in Bold Outlined Boxes. Qualifying comments made in committee meeting minutes.

	Peak Control	Water Quality Control	Runoff Volume Control	Area of Disturbance Threshold	Impervious Cover Control	Redevelopment
Beaufort County	2,10, 25, 50 &100 yr Storm pre=post	Nit., Phos., Bacteria (Pre- development loading)	1.95" retention	All projects, regardless of size (inlcuding single-family) "All proposed development and redevelopment shall comply with stormwater volume and pollution control requirements"	10% effective area	Redevelopment treated the same as new development. Redeveloped sites that do not have existing detention/retention facilities or volume control must retrofit entire site to meet current performance standards.
Тонні	25 yr Storm	No std. ¹	1" retention ²	0.5 acres	No Std.* (Planning/Zoning regulations limit max impervious surface)	Redevelopment treated the same as new development. Pre-development = existing conditions for redevelopment
ToB ⁸	2, 10, 25 yr Storm	Phos. Only (under 20 acres) ¹⁰ . Sites over 20 acres must model pre and post development & identify pollutants of concern based on land use. (POC is subjective based on land use)	1" infiltration ³ ; pre-development volume = post development volume for 95th percentile storm (1.95" 24 hr. storm) and DHEC Standard	All projects (excluding individual single-family lots ¹³ and individual commercial lots ¹⁴), regardless of size. and DHEC Threshold	No Std., (Disconnect impervious to max extent practicable)	Redevelopment treated the same as new development. Pre-development = existing conditions for redevelopment
Сов	25 yr Storm (staff checks for DHEC standards if DHEC submittal required)	Nit., Phos., Bacteria ⁴	1.95" retention ⁵	All projects, regardless of size (inlcuding single-family ¹⁵) "All proposed development and redevelopment shall comply with stormwater volume and pollution control requirements"	No Std.	Lesser standards if less than a 20% increase in impervious cover. (Staff encourage water quality to the MEP. POC and MEP criteria is subjective based on site conditions and land use.)
Jasper	2, 10, 25 yr Storm 100year accommodated with no harm	80% TSS, 30% TN, 60%Bacteria load reduction	85th percentile event	Same as DHEC. Residential is exempt unless part of a major subdivision.	No Std.	Redevelopment greater than 5,000 sq. ft. is considered Development and the entire site must be updated.
Hardeeville ¹¹	2,25,50 &100 yr Storm pre=post	detention over 72 hours. Can be waived under certain conditions. Allows City to implement higher standards if certain things require it.	No Std.	All Projects. "any construction or development affecting the quantity and/or quality of stormwater runoff shall be in acordnace with a Stormwater Management Plan approved by the city"	No Std.	No specific rules
Ridgeland ¹²	2, 10, 25 yr Storm 100year accommodated with no harm	80% TSS, 30% TN, 60%Bacteria load reduction	85th percentile event	Same as DHEC. Residential is exempt unless part of a major subdivision.	No Std.	Redevelopment greater than 5,000 sq. ft. is considered Development and the entire site must be updated.
ToPR ¹⁷	25 yr Storm	Nit., Phos., Bacteria	1.95" retention ⁹	All projects, regardless of size (inlcuding single-family ^{15, 16}) "All proposed development and redevelopment shall comply with stormwater volume and pollution control requirements"	No Std.	Redevelopment must address runoff volume increases to match pre-development volumes only. The Town developed a map identifying sites that will be considered redevelopment.
DHEC ^{6,7}	2- and 10-year, 24- hour storm	No std.	½ inch of runoff from the entire site. First ½" from the entire site or the first 1" from the built upon area, whichever is greater. Projects within 1000' of shellfish beds retain the first 1.5"	1 acre, if not within 1/2 mile of coastal water body All projects, regardless of size, within ½ mile of a receiving water body in the coastal zone	No Std.	No specific rules on redevelopment. In general considers "pre-development" to mean pre-1992 (when state regs were adopted)
Suggested "best" standards (Should use watershed based decisions to define specifics) (Fee in-lieu of program could allow meeting standards with a regional project if site constraints prevent meeting standards on-	25 year storm is sufficient. State standards may be higher so wouldn't be needed to be required locally. Design should check the 100 yr. storm to prevent BMP damage or downstream impacts	Nit., Phos., Bacteria, freshwater. Make criteria watershed based.	Infiltration should be a componet when suitable soils are present. Percentile storm event to be determined based on watershed needs. Could have two standards for the entire site or just impervious areas.	All projects should have stormwater management with reasonable exceptions, such as: Agricultural, Silviculture, disturbances below a minimum disturbance (5,000 sq. ft.?), single family residence construction, or similar conditions to be determined after further research.	10% effective area standard could be used as an alternate approach rather than peak control, volume control, and pollutant loading calculations. Rather than having an absolute value, prehaps an acceptable range should be used (ie. 10%-20%)	Pre-development = existing conditions for redevelopment Watershed base standards may require higher level of stormwater management

standards onsite.)

¹ Reference to the County's BMP manual suggests the water quality standard is the same IF a BMP is used on a project.

² Retention volume dissipated by infiltration, evaporation, or other methods. Required for impervious areas only, not entire site.

 $^{\rm 3}$ 1" infiltration required for Class A and B soils only.

⁴ Pollutant removal is exempt in residential zones and historic areas

⁵ Redevelopment must address runoff volume increases from new impervious surfaces only

⁶For the purpose of redevelopment, DHEC has typically considered 'pre-development' to be the state of the site prior to 1992 (when state regs kicked in). DHEC requirements apply to all redevelopment where intial development occurred after 1992.

⁷NPDES MS4 permit imposes requirement MS4s to improve pre-development hydrology on redeveloped sites.

⁸Bluffton mandates all projects must have minimum of 3 BMPs: 1 wet detention, 1 vegetative, and 1 filter/infiltration

⁹ Redevelopment must address runoff volume increases to match pre-development volumes only

¹⁰ Assumes all other pollutants met with phos. Control

¹¹ All standards are written to allow for case by case considerations of which standards are applicable to the site.

¹² Ridgeland Adopted Jasper County Standards.

¹³ Individual single-family lot distubing equal to or less than 0.5 acres within 1/2 mile of Coastal Receiving Waters (CRW) or disturbing less than 1 acre not within 1/2 of CRW

¹⁴ ALL parking provided offsite

¹⁵ Staff reviews SFR site plans for grading to assure drainage problems associated with runoff aren't created and negatively impact adjacent properties.

¹⁶ Single Family Residential permits must submit pre- and post- topographic info. to review conveyance only.

¹⁷ Standards based on 2006 version of the Beaufort County BMP manual, with exceptions.

Beaufort County Stormwater Management Utility Board (SWMU Board) Meeting Minutes

October 18, 2017 at 2:00 p.m. in Executive Conference Room, Administration Building, Beaufort County Government Robert Smalls Complex, 100 Ribaut Road, Beaufort, South Carolina

Draft Minutes 11/03/2017

Board Members

Ex-Officio Members

Present Marc Feinberg Allyn Schneider Larry Meisner James Fargher Patrick Mitchell William Bruggeman	Absent Don Smith	Present Andy Kinghorn Scott Liggett Kim Jones	Absent Van Willis	
Beaufort County Staff		Visitors		
Eric Larson		Neil Desai, City of Beaufort		
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David Wilhelm Melissa Allen Visitors Neil Desai, City of Beaufort Alan Warren, USCB Lab Steve Andrews, Andrews Engineering Paul Moore, Ward Edwards Brian McIlwee, Town of Bluffton York Glover, County Council

- 1. Meeting called to order
- 2. Introductions
- 3. Public Comment(s)
- 4. Reports
- 5. Unfinished Business

A. Proposed Revision to County Code of Ordinance Chapter 99 for Transportation Exemption

B. Stormwater Regionalization Update - Mr. Larson recapped that last month as the spokesman for the County Admin he proposed to the community the idea of a regional stormwater utility, to create an authority like BJWSA. Southern Low Country (SoLoCo) Regional Planning Commission (elected officials south of the Broad and Jasper County) recently reconstituted and the topic of stormwater came up; they wanted to determine what are the highest standards in Beaufort and Jasper County are in regards to stormwater. The County chaired the committee and two meetings were held (Oct 6 and Oct 17) to fulfill SoLoCo's request. It was determined that Beaufort County's standards are highest across the board with many other jurisdictions meeting them in different areas. The committee moved from the highest standards to the suggested "best" standards if stormwater was regionalized. The general consensus was that no one was opposed to meeting again and there is potential benefit to consider regional authority.

Mr. Marc Feinberg asked if the bottom row of the chart [suggested best standards] is Best Management Practices or what makes everyone happy. Mr. Larson explained that there are a few boxes that are less than what the County has now, but some of the County's standard could be tweaked a little bit, as they may have gone too far on a few things. The County does what is above and beyond in the region and in the nation. He explained the bottom row contains good practices; perhaps they should be called reasonable practices. There is some logic as to why the highest standards listed may not be the "best."

In response to Mr. Feinberg's comment about two adjacent districts with different standards sharing a watershed and stating there has to be a really good reason as to why they are different, Ms. Jones said she would say (she thinks) that's SoLoCo's argument for going through the exercise [to review standards]. She commented that if you look at what is the most restrictive of what is currently on the books, you can "Frankenstein" an ordinance, but if you are going through the exercise would you not want to open it up and take a look at it county-wide/regional wide and put together a "pretty monster" instead. She thinks a recommendation from the Board, at the least, is needed to have an avenue to take back to their elected officials to open the opportunity to investigate what a regional utility would look like.

Mr. Kinghorn said the reality is that it is a technical and political problem that needs to be dealt with and he would encourage proceeding with discussions.

In response to Mr. Bruggeman's question about the ultimate objective becoming one utility, Mr. Larson clarified that SoLoCo wanted to get to a unified stormwater standard over both counties. They wanted to compare standards and it was seen, by technical staff, as an opportunity to be more proactive and give them the best standards and discuss the best way to roll out unified standards.

Mr. Bruggeman expressed concerns about the County lowering some standards (such as the 10% effective being 10-20%), as he doesn't understand how that would benefit the County.

In response to a question from Mr. Patrick Mitchell, Mr. Larson said that the "best" standards would meet MS4 requirements as they are still better than DHEC's standards. This is written in generalities, as this is just the beginning of the conversation. Mr. Larson appreciated Mr. Bruggeman's concern that the County may have to go down in standards as a compromise, but said to look at communities that don't have anything, but if applied regionally would become an additional layer of regulation.

Mr. Bruggeman mentioned he doesn't understand how Ridgeland standards can compare to Beaufort County when Beaufort County is 50% salt water. Mr. Mitchell indicated that better standards don't always equal better results. Mr. Larson pointed out that in the chart in the best standard suggestions it is noted that standards may need to be watershed based decisions (ie: is the watershed impaired?).

Mr. Meisner shared the idea that boundaries could be based on the different watersheds or distance to a watershed. He suggests the process should move forward and have members of development and engineering community provide input as well.

Mr. Kinghorn asked if the two meetings contained the same content. Mr. Larson said some were able to attend both meetings and the second meeting started off with minutes from the first and expanded from there.

Mr. Larson, in response to a question, explained there is a level of interest to pursue this, as there are developmental pressures that they want to get ahead of it. He mentioned there are some reservations, but everyone seemed open minded to conversation.

Mr. Larson mentioned discussion took place about implementation schedules and how fast would you try to do it realizing that there are budgets, long range plans, and existing employees; there are a lot of questions that would need to be addressed. Mr. Kinghorn suggested input from BJWSA may be helpful, as they have gone through something similar creating their utility.

Mr. Liggett suggests we need a problem statement (what are we finding a solution to?) so that the SoLoCo reps can return to their Councils to understand how this could fit into their priorities (need involvement by elected official).

A consensus (ex-officio and voting members) was taken to see if regionalization is something that should be pursued; a majority showed interest in the idea of continuing discussion.

A motion was made to recommend to the jurisdictions representatives to move forward in looking at making the stormwater standards more uniform and possibly moving into a regional stormwater utility.

Discussion - Mr. Feinberg asked how the Board can tell the jurisdictions to go back and discuss this. Mr. Larson said this is the only board countywide to meet monthly to talk about how they spend their money and run their program, and this is a utility discussion. He thinks the exofficio members would be willing to take recommendations back to their boss, based on the result of today's meeting.

Mr. Liggett said he interpreted the [consensus] vote that the Board considers that at the municipal level stormwater should be included as part of the discussion of regionalism. Mr. Liggett said hasn't heard a problem statement. Mr. Larson indicated a problem statement is that we (potentially) have five separate MS4 permits/programs within Beaufort County, with three more in Jasper County, and we are stepping on each other's toes. One larger staff could be more efficient than eight programs running separately.

Mr. Larson explained that this Board functions "County" not countywide, it doesn't have the level of detail for the municipalities as it does from the County. He suggested a short term solution to a regional approach may be to reconstitute the board and give everyone equal voting rights. He expressed the municipalities have great working relationships, but they operate differently and have different agendas. A regional authority could take on all issues at once and address them in a systematic way and provide some consistency.

Mr. Liggett explained that the way we operate is about 20 years old and that the ex-officio members are non-voting because of the intergovernmental agreements and having the ability to vote may be too powerful. It may be time to relook at that for the future, as back then it was thought that best way to ensure some level of equity was to have ex-officio to supplement the intergovernmental agreements. There was a time in the intergovernmental agreements that the County had the burden of carrying the MS4 permits for the municipalities and now there are the individual permits.

Following discussion, the Board voted and approved (4:2) to recommend proceeding forward with the discussion of uniform stormwater standards and initiate discussions for regional stormwater authority.

Draft minutes from the October 6th and October 17th meetings and the standards chart are attached to the minutes.

C. Road Paving and Stormwater

6. New Business

A. 2018 SWMU Board Meeting Schedule

- 7. Public Comment(s)
- 8. Executive Session
- 9. Matters Arising Out of Executive Session
- **10. Next Meeting Agenda**
- 11. Meeting Adjourned



BEAUFORT COUNTY STORMWATER UTILITY 120 Shanklin Road Beaufort, South Carolina 29906 Voice (843) 255-2805 Facsimile (843) 255-9436 wstormwater@bcgov.net



MEMORANDUM

TO:Natural Resources Committee
Stormwater Utility BoardFROM:Eric W. Larson, PE, AICP, CPSWQ, CFMDATE:October 18, 2017SUBJECT:Condemnation for Easement – Brown tract off of Halifax Road

The attached easement agreement and exhibit has been proposed by staff, at the request of adjacent property owners and County Council member York Glover. After multiple unsuccessful attempts of communication and negotiation, it is now recommended to begin formal condemnation procedures to acquire the easement. This easement is the last piece needed to maintain a regional system.

Barefoot Farms





BEAUFORT COUNTY PUBLIC WORKS STORMWATER MANAGEMENT UTILITY

120 Shanklin Road Beaufort, South Carolina 29906 Voice (843) 255-2694 Fax (843) 255-9420



Do Not Discard; Response Required

January 26, 2017

ALEX BROWN 304 BIG MAMAS RD VARNVILLE, SC 29944

Re: Drainage Easement Request TMS # R300 016 000 178A 0000

Dear Sir/Madam:

The Public Works Stormwater Utility is currently in the process of maintaining the drainage system on and around the parcel identified as Tax Map # **R300 016 000 178A 0000**. This maintenance will benefit you and the surrounding residences. In order to maintain the drainage system, Beaufort County, by this letter, is requesting a drainage easement (see attached "Drainage Easement"). This request is displayed more specifically on "Exhibit A" and described in the document entitled "Drainage Easement." Your timely cooperation is necessary to complete this project and would be greatly appreciated.

Please carefully review the document and, if agreeable to its terms, please sign, notarize, and return in the postage-paid envelope provided as soon as possible.

If you have any questions or need the documents notarized, please contact Patty Wilson at 843-255-2694, 843-812-1144, or email <u>pwilson@bcgov.net</u>. Thank you for your assistance in this matter.

Sincerely,

atty Wilson

Patty Wilson Right of Way Manager Engineering Department

Attachments: Drainage Easement Exhibit A

EXECUTION INSTRUCTIONS

Please use the following numbers as a guide for execution. You will need both an unofficial witness and a Notary Public present at execution. These individuals may not be relatives of the person signing.

- 1) Signature of ALEX BROWN
- 2) Signature of 1st Witness
- 3) Signature of Notary/2nd Witness (do not affix seal on this line)
- 4) Signature of Notary (show expiration date of commission)

NOTE: When a document is signed out of the state of South Carolina, please have the Notary Public indicate the state and county in which the document is executed and witnessed along with their notary's seal and stamp where applicable.

COUNTY OF BEAUFORT

DRAINAGE EASEMENT

For and in consideration of One Dollar (\$1.00) and improvement of drainage on Grantor's land, the receipt whereof is hereby acknowledged, ALEX BROWN HRS OF % FRED J. BROWN, 304 BIG MAMAS RD, VARNVILLE, SC 29944 (Grantor"). Grantor, does hereby grant and convey unto Beaufort County ("Grantee"), its successors and assigns, a non-exclusive easement, as shown on the drawing attached hereto as <u>Exhibit "A"</u>, in, over, and upon the property owned by Grantor known as R300 016 000 178A 0000 and situated on Saint Helena Island, County of Beaufort, State of South Carolina.

)

For or in connection with the construction, operations, maintenance, and/or reconstruction, collectively known as "work" of a "stormwater drainage system", including but not limited to a ditch, berm, pipe, basin, and other best management practices, to improve the drainage on the above described lands as necessary for Beaufort County to comply with its the federally required MS4 permit, such activity to include excavation, widening, deepening, straightening, laying pipe, installing best management practices, etc. for or in connection with the work of such a stormwater drainage system.

- 1. This easement includes the right of ingress and egress at any time over and upon the above described land, for the purpose of work of the stormwater drainage system as referred to above.
- 2. There is reserved to the Grantee, Beaufort County, the right and privilege to use the above described land of the Grantor for the purposes of the work on the stormwater drainage system.
- 3. The Grantee is responsible for the work of the stormwater drainage system improvements herein described.
- 4. Special Provisions
 - a. The Grantee shall have the right to clear and remove all brush and trees to a width necessary to perform work on the above mentioned stormwater drainage system. Provided, however, if the Grantor desires to salvage merchantable timber from the area to be cleared, he will do so prior to the time the contractor begins work. It is understood that the Grantee will advise the Grantor at least <u>10</u> days in advance of construction.
 - b. Stormwater drainage systems will follow natural draws or present drainage ways as near as practical.
 - c. If the Grantor desires to salvage levees, fences, culverts, or bridges that interfere with the work of the stormwater drainage system, he will have the opportunity to do so prior to the Grantee commencing work.

It is agreed that buildings, fences, signs or other obstructions will not be erected by Grantee, its successors, assigns, or administrators within the limits of the easement herein conveyed.

TO HAVE AND TO HOLD the aforesaid easement in, over and upon the above described land of the Grantor, with all the rights, privileges and appurtenances thereto belonging or in any wise appertaining, unto the Grantee, its successors and assigns, forever.

IN WITNESS WHEREOF, the Grantor has executed this instrument on the _____day of _____, 20____.

Witnesses:

(2) (Witness #1) (1) Name:_____

ALEX BROWN

(1) Name:

(3) (Witness #2) (Notary Public May Sign)

STATE OF SOUTH CAROLINA)) COUNTY OF BEAUFORT)

ACKNOWLEDGEMENT

I, the undersigned, a Notary Public for South Carolina, do hereby certify that **ALEX BROWN** personally appeared before me this day and, in the presence of the two witnesses above named, acknowledged the due execution of the foregoing instrument.

Witness my hand and seal this ____ day of _____, 20___.

(4)______ Notary Public for ______ My Commission Expires: ______

County Use Only:

Location: Beaufort County Township: Saint Helena Island Tax Map No. 16 Parcel No.178A

Form No: SWU110216





The document(s) herein were provided to Council for information and/or discussion after release of the official agenda and backup items. Topic: Date Submitted: Submitted By: Venue: Email / Exploratory Committee November 20, 2017 Eric Larson Natural Resources Committee

Topic:	Email / Exploratory Committee
Date Submitted:	November 20, 2017
Submitted By:	Eric Larson
Venue ambrille	Natural Resources Committee

From:Larson, Eric.Sent:Monday, November 20, 2017 3:23 PMTo:Lamb, KellysSubject:Fwd: Additional item for NRC 11/20/17 item 7

Sorry to not include you.

Eric W Larson Director, Environmental Engineering & Land Management Director, Disaster Recovery Manager, Stormwater Utility

Begin forwarded message:

From: <<u>Charcen@bogovinet</u>> Date: November 20, 2017 at 3:21:33 PM EST To: '<u>Brian E_Flewelling''</u> <u>brianf@bogovinet</u>>, <u>showard@bogovinet</u>>, <u>"Roberts Tabor Vaux</u> Jr." <u>{tvaux@bogovinet</u>>, <u>mike covert incovert@bogovinet</u>>, <u>sfobes@bogovinet</u>>, <u>{abennett@bogovinet</u>`, Jushua Guber <u>{jgruber@bogovinet</u>>} Subject: Additional item for NRC 11/20/17 item 7

See below. Thanks.

Eric W Larson Director, Environmental Engineering & Land Management Director, Disaster Recovery Manager, Stormwater Utility

Larson's Comments to SWUB 9/20/17

Good afternoon members of the Stormwater Utility Board. Thank you for this opportunity to speak today. Allow me a few minutes to cast a vision. In recent weeks, the County has been invited to the table to think and act regionally. Elected officials south of the Broad River and Jasper County have reconstituted the Southern regional planning committee. Shortly after electing a chairman, their first item of business was stormwater. In that room, the Mayors and County Council chairmen made comments like "Standardization of stormwater requirements" and "creating the highest standards possible to protect the environment." North of the Broad River, the City of Beaufort, at the request of local and state elected officials, asked for the formation of a Special task force to address stormwater issues in the Mossy Oaks subdivision, where the City believes the issue is multi-jurisdictional and too large of a project for the City to take on alone.

Yet we are diverging. We have multiple MS4 jurisdictions in the County. It is only a matter of time before the urbanized clusters in Beaufort and Jasper County, who have the population density to qualify as an MS4, will be designated and permitted by DHEC. We could see 8

separate MS4 permits with differing standards if we don't change our way of thinking. Example of this divergence can be seen now. The County updated its BMP Manual last year. Although we invited feedback from the municipalities, it was pretty much developed in a silo. The Town of Bluffton is currently considering updating its standards. In addition, The Town of Bluffton has the May River Watershed advisory committee that meets monthly. In conversations with Neal Desai, City Engineer for the City of Beaufort, he tells me the City fully intends to develop its own stand-alone stormwater standard. We are duplicating efforts and in some cases driving a wedge between jurisdictions and encouraging jurisdiction shopping by developers, who are looking for the cheapest and easiest way to make a profit.

We need standardization of services and regulations. We are duplicating services to the community and unnecessarily driving up costs to our rate payers. We don't have to look far for examples of regionalism. Our own Beaufort Jasper Water and Sewer Authority acts as a quasi-governmental yet stand alone "utility" that is self-funded and provides services over multiple jurisdictions. I have first-hand knowledge of other examples such as the Sanitation District #1 in Northern Kentucky that provides consolidated Sanitary and Stormsewer services over 3 counties and 20+ municipal governments. Louisville Kentucky's Metropolitan Sewer District provides Sanitary and Stormwater services for the entire Metropolitan Statistical Area of Louisville encompassing numerous cities, towns, and villages within Jefferson County. In my last job as a City Engineer and MS4 manager, my community was part of a regional alliance consisting of 7 MS4s across 6 counties. There are countless others across the nation that are set up similarly. Given the geography of the region, our Metropolitan Statistical Area will never extend to the Charleston area or cross state lines to Savannah, so Beaufort and Jasper Counties need to consider the idea that 1 program is better than 8.

This Board was originally envisioned to be regional. Early drafts of the ordinance gave voting rights to all municipalities equally. I do not think it was ever the intent to have 5 MS4 programs in one county. There apparently was not the political will to make that happen. As evident by the recent meetings of the SoLoCo and City Task Force, I think that will has changed it now is the time to act. It is no accident that DHEC withheld review of the County's and the Town of Hilton Head Island's MS4 permit applications nearly 6 months until the Town of Bluffton submitted their permit application. DHEC reviewed the permits concurrently and issued identical permits on the same time schedule. They too saw the value in regional partnership and encouraged us to partner to implement the permits.

We need to re-think what we've done in the past. We have resources at our disposal. The Center for Watershed Protection is nationally recognized as a leader and vision of the future of stormwater. The County's volume control standards are based on their principles. Bill Hodges, retired Stormwater Engineer for Savannah and former board member now works for the Center and lives right here in Bluffton. He is currently negotiating a contract with the Town of Bluffton for their code update. I am confident I could bring my colleagues from KY to the table to offer advice on how to set up a regional authority. We need to set up an exploratory committee to engage with a consultant and begin thinking through what a regional authority might look like. Questions that need answers range from how a regional authority affects the differing SWU fee rates across the County to what happens to the staff and assets owned by each jurisdiction if individual stormwater departments are eliminated in lieu of a new utility.

This is what Gary Kubic hired me for four years ago. I am not asking for a vote today, but I am recommending that this Board consider this, ask the municipalities to discuss this idea among themselves and come back in October and ultimately recommend to the county and municipal

governments of Beaufort and Jasper Counties to begin these discussions, set up a task force, and let's flesh out the details of what a regional stormwater authority might look like.

If we aren't willing to look at this and be proactive about the future, then we need to rethink the constitution of this Board to be a County Board only and quit operating under this thin veil of partnerships, all the while we continue to diverge in our missions to protect water quality in this region.

Thank you for your time.