### Durability Studies Concrete Slab Structure: Termite Procedures

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#### SCH Proposal 10

#### Fill under concrete slab as usual

<table>
<thead>
<tr>
<th>A</th>
<th>Usually fill under slab topped with a layer of N-BSA</th>
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</thead>
<tbody>
<tr>
<td>D</td>
<td>Fill under concrete slab as usual</td>
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</table>

#### Concrete perimeter

A trench 18 inches wide and 1ft deep will be dug adjacent to the concrete and a perforated drain pipe placed in the bottom. The pipe will be covered with washed gravel.

- **West Half**
  - The washed gravel will fill the trench to the surface.

- **East Half**
  - The trench will be filled to the surface with a non-biocidal soil amendment (N-BSA) chosen from those tested in Shane Kitchens' PhD research vegetation control in the trench area will be accomplished by periodic applications of the herbicides.

#### Landscaping

- **West Half**
  - Commercially-available mulch (CAM) will surround plantings and commercially-available bait station (CABS) will be placed according to manufacturer specifications.

- **East Half**
  - CAM amended with termite repellent/termiticidal plant material chosen from those used in Shane Kitchens' PhD research. CABS fitted with battery-operated motors operating at a termite-attracting frequency as determined by Kevin Ragon's PhD research will be placed at distances equal to those on the west half.

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**Diagram:**

- **A:** Termite Procedures
- **N:** Orientation
- **D:** Fill under concrete slab as usual
- **B:** Usually fill under slab topped with a layer of N-BSA
(B) **Framing**  
North Half  
Commercially – available borate- treated studs and sill plates.

South Half  
Non-treated studs and ACQ - treated sill plates.

(B) **Concrete Perimeter**  
A drainage trench will be dug as on wall (A)

North Half  
The trench will be filled to the surface with washed gravel.

South Half  
The trench will be filled to the top of the drain pipe with washed gravel and from there to the surface with N-BSA.

(B) **Landscaping**  
CAM amended with N-BSA will be used on the entire length of the wall.

North Half  
Additional N-BSA will be added to the CAM annually.

South Half  
N-BSA will not be added to the CAM annually. No CABS will be used on this wall.

(C) **Framing**  
Commercially – available borate- treated studs and sill plates will be used on the entire wall.

(C) **Concrete Perimeter**  
Usual practice will be followed.

(C) **Landscaping**  
None - walkway

(D) **Framing**  
None - garage

(D) **Concrete Perimeter**  
Usual practice will be followed.

(D) **Landscaping**  
None - driveway
Evaluation

1. The perimeter of the concrete slab will be inspected annually for signs of termite activity (e.g., shelter tubes).

2. Mulch will be examined each spring for viable termites.

Pier-Supported Structure

Pier footings
Re-enforced concrete will be used. Depth of concrete, depth of the concrete top from the soil surface and the type of re-enforcement will determined by our Civil Engineering representative, wood piers will be placed on the solidified concrete and the holes backfilled to the surface with washed pea gravel.

(E) Pier Treatment

West Half
The lower end and the below – grade portions of each pier will be coated with a copper – borate paste (CBP) and then fitted with a plastic trash bag perforated at the bottom.

East Half
In addition to the CBP as on the West Half, downward- sloping holes will be drilled b- inches above grade on two opposing faces to accept copper borate rods (CBR).

(F) Pier Treatment

North Half
No treatment

South Half
The below – grade portion of each pier will be fitted with a commercially – available plastic sleeve containing a copper – borate impregnated pad in the bottom.

(F) Drainage Trench

An 18-inch wide and 1ft deep trench will be dug adjacent to the outer edge of the piers and a perforated drainage pip placed in the bottom. The trench will be filled to the top of the drain pip with washed gravel.
North Half
The trench will be filled to surface with washed gravel.

South Half
The trench will be filled to surface with N-BSA.

(F) **Landscaping**

   North Half
   Planting outside of the trench area will be surrounded with CAM.

   South Half
   Planting outside of the trenched area will be surrounded with CAM amended N-BSA.

(G) **Pier Treatment**

   West Half
   The bottom and below-grade portions of each pier will be coated with a copper-borate paste (CBP) and then fitted with a plastic trash bag perforated at the bottom.

   East Half
   The below-grade portion of each pier will be fitted with a commercially available plastic sleeve containing a copper–borate impregnated pad in the bottom.

(G) **Drainage Trench**

   Same as on side (F)

   West Half
   Fill the trench to the surface with N-BSA.

   East Half
   Fill the trench to the surface with washed gravel.

(G) **Landscaping**

   Plantings will be surrounded by CAM amended with N-BSA.

   West Half
   Additional N-BSA will be added annually following examination for living termites.

   East Half
   No-additional N-BSA will be added annually.
(H) Pier Treatment

   North Half
   The bottom and below – grade portions will be fitted with a commercially available plastic sleeve that does not contain supplemental preservative.

   South Half
   The bottom and below – grade portion of each pier will be fitted with a commercially available plastic sleeve containing a copper – borate impregnated pad in the bottom.

(H) Drainage Trench
   Same as on side (F). The entire trench will be filled to the surface with washed gravel.

(H) Landscaping
   Only CAM will be used around the plantings.