Field Study Appendix

HFHI Princeville Announcement
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HFHI Princeville Announcement

HABITAT FOR HUMANITY TO BUILD 12 HOUSES IN PRINCEVILLE, N.C.

AMERICUS, Ga., Dec. 28, 2000—Habitat for Humanity volunteers from around the country will join members of the Princeville community to “build” 12 homes in Princeville, N.C., Jan. 5-15, 2001. The build, organized by Triangle Edgeworth Habitat for Humanity, is part of the Hurricane Floyd Disaster Build Program, a joint effort of Habitat for Humanity International’s Disaster Response Office and Habitat for Humanity affiliates in eastern North Carolina. These recovery houses will replace homes destroyed by flooding caused by Hurricane Floyd in September 1999.

“We are pleased that Habitat for Humanity is able to play a role in helping Princeville recover from Hurricane Floyd,” said Sam Copple, Director of Habitat for Humanity International’s Disaster Response Office. “Triangle Edgeworth HFH and the Princeville build are prime examples of how Habitat for Humanity can bring communities back from disaster. After the immediate needs of a community are met, Habitat for Humanity and its affiliates can play a vital role in reactivating and rebuilding housing damaged or lost because of the disaster.”

Lowe’s Home Improvement Warehouse, the world’s second largest home improvement retailer, is the largest sponsor of the build. Lowe’s has donated $350,000 in gifts and grants to the build and its employees are volunteering in Princeville to participate in the build. The Town of Princeville is also participating, with local and state leaders joining the build. The Federal Emergency Management Agency has provided assistance support for the build and the North Carolina Disaster Service is providing workers who will arrive several days before the build to lend pre-build support and help organize the build. Habitat for Humanity affiliates from North Carolina are also sending volunteers who will lend their support and expertise to the build.

Dedicated to eliminating poverty housing, Habitat for Humanity International is an ecumenical Christian ministry founded by Millard Fuller along with his wife, Linda. HFHI and its affiliates have built more than 200,000 homes in 78 nations, have built and sold more than 100,000 homes to partner families in 35 states, with zero-interest mortgages.

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Field Study Photographs

Princeville site – west side

Princeville site – east side
Princeville house – front view

Princeville house – end view
Return and supply ducts for package heat pump

Foundation vent
House address 100: No continuous vapor barrier
House address 100: Panned return air

House address 102: Return duct cross-section
House address 102: Warning label for subcontractor to protect crawl space techniques

House address 103: Poor HVAC duct seal
House address 103: Return duct trench

House address 104: Buried condensate drain
House address 104: Fallen batt and mold

In line filter for outside air ventilation system
Transition for outside air intake

Transition installed in foundation
House address 105: Filter for ventilation system air
– no mold on framing

House address 106: Access panel frame

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Heat pump duct crawl space wall penetration seal

House address 106: Duct seal at package heat pump
Heat pump duct crawl space penetration seal
House address 106: Foundation vent and heat pump duct wall penetration sealing

House address 106: Seal floor poly seams
House address 106: Poly seal wall in progress

House address 106: Termite view strip and wall vapor barrier
House address 106: Return duct air leakage

House address 106: Cyrus and Chris install data loggers
House address 106: Data logger installed

House address 106: Weather station
House address 107: Poor wall seal at dryer vent

House address 109: Crawl space wall insulation
House address 109: Band joist and crawl space wall insulation

House address 109: Dehumidifier and wall insulation
House address 110: Condensation sump pump – temporary until site grading completed

House address 110: Crawl space as found
House address 110: Good sandbagging

House address 110: Sandbagged access
House address 110: Poor supply seal

House address 110: Hobo data loggers for crawl space temperature and relative humidity
House address 110: Data logger sensors - hygrothermal

House address 110: Data logger installation - hygrothermal
House address 110: Final grade

Finish grading
House address 111: Faulty plumbing trap at tub

House address 111: Unsealed plumbing hole
Heat pump condensate drain to gravel-filled pit

Return closet
Return closet sensors

Crawl space dehumidifier
Calibrating ventilation air flow

Checking heat pump refrigerant charge and air flow
Sealed trunk ducts and package unit penetration
Duct Blaster as powered flow hood to calibrate crawl space supply

Taking velocity measurement reference to set remaining supplies
Balancing and butterfly dampers visible in well-supported crawl space supply duct

Sub-meter visible at left of duct cowling
Wall-insulated closed crawl space, Phase II

Floor-insulated closed crawl space, Phase II
Horizontal ground insulation added to wall insulation for Phase IV

Attaching constant air flow regulator to new ventilation intake/filter
Sealing joint between CAR and ventilation intake with duct mastic

New intake assembly in old vent penetration, CAR visible
Sealing ventilation intake to perimeter wall

Sealing duct to ventilation intake with fiberglass mesh tape and duct mastic
Sealing outside of ventilation intake to perimeter wall

Typical original-design ventilation filter after 90 days – lots of dirt trapped
Old ventilation duct prior to filter – substantial soiling

Old ventilation duct after filter
New ventilation intake opens without a tool

Filter behind the intake grill can be removed, washed, and reused
Mold Photographs

House address 100: Light mold

House address 100: Early mold
House address 101: Mold

House address 104: Light red mold
House address 105: Mold with labeling

House address 106: Slight mold
House address 107: Mold

House address 107: Mold beam and joist

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House address 107: Red mold

House address 108: Mold
House address 108: Heavy mold

House address 108: Mold in subfloor
House address 110: Mold
Princeville outdoor air sample