CHARLOTTE.

SAFE HOME
CITY OF CHARLOTTE
NEIGHBORHOOD & BUSINESS SERVICES

ADDENDUM

Invitation to Bid HNS19-21

Documents included in Package:

1) Instruction to Bidders
2) Specs by Location/Trade (Scope of Work)
3) Subcontractor Certifications (if applicable)
4) Floor Plan / Site Drawing (if applicable)

Bid Walk & Bid Opening:

Project Address: **2000 Highland St.**

Targeted Rehabilitation Camp Green Neighborhood
LEADSAFE CHARLOTTE

Bid Walk: **11/29/2018 at 11:00 am**	
Bid Opening: **1/10/2019 at 2:00 pm**	
Client Name:	Contact Number:
Project Manager: John Sutton	Contact Number: 704-361-3881

Bid Walk and Bidding Instructions:

All bid walks are mandatory.

If you are going to be late the policy is the following:
Contact me BEFORE the start time if you are going to be late. If you are going to be more than 10 minutes late, we will proceed without you and you will not be permitted to bid.

The day of a bid walk the best way to reach me is at John Sutton (cell # 704-361-3881).

Bids must be received by the date, time and place specified. All others will be considered non responsive and disqualified.

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NEIGHBORHOOD & BUSINESS SERVICES

The Bids will be opened at 600 East Trade St. immediately following the above due date and time.

Company Acknowledgement:

The undersigned, having become thoroughly familiar with the terms, conditions, limitations, and provisions of the housing improvement work to be performed at **2000 Highland St.,** to be funded through the City of Charlotte Neighborhood & Business Services, in addition, having fully inspected the site in all particulars, hereby proposes and agrees to fully perform the work within the time stated and in strict accordance with the proposed contract documents including furnishing of any and all labor and materials, and to do all work required to complete said Work in accordance with the advised respective contractual, for the sum of money:

All labor, materials, services and equipment necessary for the completion of the Work shown on the Drawings and in the Specifications:

_____ Dollars ($ _____)

Written total

Specs Dated: 11 /2/2018	Number of Pages: 9
Addenda # 1 Dated: 1/4/2019	Number of Pages: 10
Addenda # 2 Dated:	Number of Pages:

Project start date:

Project Completion Date:

Please Print and Sign:

Company Name/Firm:

Authorized Representative Name:

Signature: Date:

CHARLOTTE.

SAFE HOME

CITY OF CHARLOTTE

NEIGHBORHOOD & BUSINESS SERVICES

Requirements For Bidders

The City awards rehabilitation bids to the lowest responsive and responsible bidder. A responsible bidder for the safe home program is one who:

1) Is a licensed general contractor in the State of North Carolina;
2) Has an Renovate, Repair & Paint Certification (http://www2.epa.gov/lead/renovation-repair-and-painting-program);
3) Is not listed on a local, state or federal debarment list;
4) Carries an appropriate amounts of insurance;
5) Can provide references verifying the contractor has completed work of a similar scope in a good workmanship like manner or successfully completed prior work for the Safe Home program. Referenced work must have been completed in one year or less from date of this invitation to bid.

A responsive bidder must:

1) Submit all requested documentation on time;
2) Meet the above requirements for responsibility at the time of bid submittal;
3) Have the capacity to meet the required schedule for the project.
4) Existing rehab projects contracted by the contractor must be on schedule.

The City reserves the right to waive any minor informalities or irregularities, which do not go to the heart of the bid submittal or prejudice other offers, or to reject, for good and compelling reasons, any or all bid submittals.

John Sutton
Rehabilitation Specialist
City of Charlotte
Neighborhood and Business Services
600 E. Trade St.
Charlotte, NC 29202
PH: (704) 336-5296
Fax: (704) 336-3489

Work Specification

Prepared By:
City of Charlotte Housing & Neighborhood Services
600 E. Trade Street
Charlotte, NC 28202
(704) 336-7600

Property Details

Address:	2000 Highland St Charlotte, NC 28208	Owner:	Christine Misenheimer
		Owner Phone:	Cell: (704) 449-1428
Structure Type:	Single Unit	Program(s):	Tested- HAS LEAD LeadSafe 2016 Healthy Homes LBP 2016 Targeted FY18 (CDBG Funds)
Square Feet:	1286		
Year Built:	1943		
Property Value:	79100		
Tax Parcel:	06708110		
Census Tract:			
Property Zone:	Council District 3		

Repairs

Description	Floor	Room	Exterior
Tear Off & Reroof Shingles		**EXTERIOR**	**Exterior**

Remove and dispose of existing roofing, inspect and repair roof deck (include 96 sq.ft. of decking replacement in bid) and install new 30 year architectural shingles. Include ice and water shield at all roof edges, felt paper, shingle over ridge vent, boots, flashing and all necessary accessories.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Work Specification

Prep & Paint Exterior Surfaces **EXTERIOR** **Exterior**

Prep and paint all exterior painted surfaces NOT on the lead scope. Properly dispose all loose materials. Secure or replace all loose, broken, rotted or deteriorated materials. Caulk and fill all cracks, voids, holes, etc. prior to applying 25-year or better Low VOC paint. Owners choice of color. All work to be done in a neat & professional manner. Use care to protect all surfaces not intended for paint coverage.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

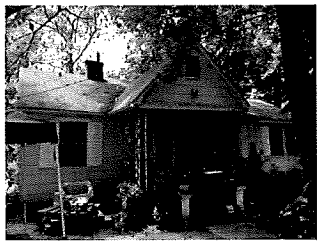
Asbestos Siding - Repair **EXTERIOR** **Exterior**

Replace missing or deteriorated asbestos siding with fiber cement equivalent. Use best practices to ensure safety of occupants and workers.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Porch Frame Columns **EXTERIOR** **Exterior**

Remove and replace existing wrought iron columns on front porch and replace with appropriately sized and proportioned white wooden or vinyl wrapped columns. Please select a square or rectangle based column and not round.



Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Ceiling Replace and Repaint **LIVING ROOM**

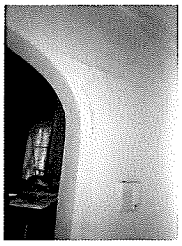
Remove existing ceiling covering, replace any deteriorated framing. Install 1/2" drywall to Code. Tape. Add 3 coats of compound and sand smooth. Repaint ceiling white.
***Installing new drywall over-top of existing ceiling finish is also acceptable.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Work Specification

Prep & Paint Room Flat **LIVING ROOM**

Remove or cover hardware and accessories not to be painted. Scrape loose, peeling, cracked and blistered areas. Clean oil, grease, fungus, dirt, and dust from surfaces. Fill holes and cracks. Prime all new materials and spot prime existing with acrylic latex. Top coat with owner's choice of low VOC acrylic FLAT latex. Painting shall include walls and any associated trim with SEMI-GLOSS latex. Replace or uncover hardware, fixtures and accessories. Any moving of furniture required shall be included.

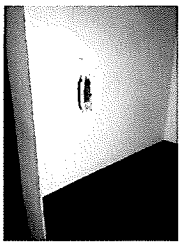


Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Replace Receptacles, Switches, and Plates **GENERAL REQUIREMENTS**

Replace all receptacles, switches and cover plates throughout entire house. Use code appropriate devices. This also includes any wall or ceiling damage repairs.



Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

~~**Floor System Repair FRONT RIGHT** **BEDROOM**~~

~~Work may include installation of 2"x 8" joists hung 16" on center, and repair/replacement of beams/girders. Include replacing all deteriorated band joists and insulating floor to code. Work could also include installation of masonry piers.~~
~~***All repairs to the floor are to be completed from underneath the home.~~

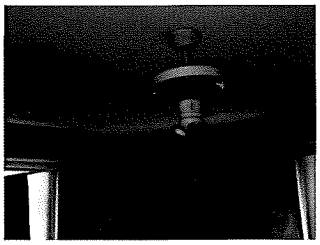
Replaced with engineers report

~~**Bid Cost:** _____ X _____ = _____~~

~~**Base** **Quantity** **Total Cost**~~

Ceiling Fan with Light Kit IN ALL 3 BEDROOMS

Install a 52" 3 speed flush mounted ceiling fan with a minimum two bulb UL approved, LED light fixture with shade and lamps. Include ceiling fan mounting box.



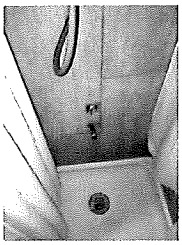
Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Work Specification

Ceramic Wall Tile - Plumbing Wall ONLY **BATHROOM - MAIN**

Install owner's choice ceramic wall tile over cement fiberboard with troweled adhesive. Include preformed base, cap, stop, return and trimmer pieces to complete installation. After at least 24 hours drying time, apply latex based portland cement grout. Clean all excess grout and apply mildew resistant white silicone caulk at all seams, fixture lips and pipe penetrations.
***Work includes KEEPING the existing shower pan. Please cut and remove the tile in the existing surround and replace the center strip where the shower controls are, and close up where existing tub faucet penetrates wall of the surround with some kind of accent tile or tile to match if possible.



Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Replace Tub/Shower Valve and Trim **BATHROOM - MAIN**

Remove the existing tub faucet and properly terminate, and replace shower valve and trim and replace with new per the Plumbing Code and the Construction Standards.

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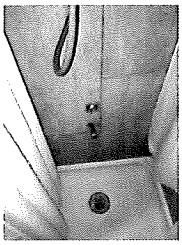


Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

GFCI Receptacle 20 AMP **BATHROOM - MAIN**

Install a flush mounted, ground fault circuit interrupted, duplex receptacle and cover plate. Fish wire and repair all tear out as needed.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Prep & Paint Room Semi Gloss **BATHROOM - MAIN**

Remove or cover hardware and accessories not to be painted. Scrape loose, peeling, cracked and blistered areas. Clean oil, grease, fungus, dirt, and dust from surfaces. Fill holes and cracks. Prime all new materials and spot prime existing with acrylic latex. Top coat with owner's choice of low VOC acrylic SEMI-GLOSS latex. Painting shall include walls and any associated trim. Replace or uncover hardware, fixtures and accessories. Any moving of furniture required shall be included.
***Color of paint should match existing and include painting the ceiling as well - all the same color.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Work Specification

Miscellaneous Plumbing Scope - Lavatory **BATHROOM - MAIN**

Install proper hot and cold supply lines to current Code to supply the pedestal sink. Include any work necessary to repair tear out.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Bath Exhaust Fan - New Installation **BATHROOM - MAIN**

Install a ceiling or through-the-wall, exterior ducted, vent fan with damper. Include power and switch wiring using #14 copper Romex. Repair any tear out.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Light Fixture Replace **DINING ROOM**

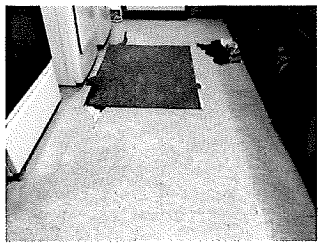
Replace or install a ceiling mounted 2 bulb or wall mounted 4 bulb strip, UL approved, LED light fixture with shade and lamps.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Resilient Flooring **KITCHEN**

Install 25 year warrantied resilient floor covering per manufacturer's specifications. Include transitions and painted or stained wood quarter-round at all perimeters to complete installation.



Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Cabinet Repair **KITCHEN**

Repair base cabinet under kitchen sink by installing plywood bottom. Finish with white semi-gloss low-VOC paint or polyurethane.

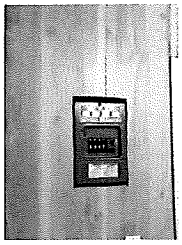
Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Work Specification

Electric Service 200 AMP **GENERAL REQUIREMENTS**

Replace electrical service with new 200 amp, main disconnect, 110/220 volt, 24 circuit panel board, meter socket, weather head, service cable, ground rods and cable. Include replacement of all sub-panels. Caulk exterior service penetration.



Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Air Admittance Valve Installation **KITCHEN**

Install an air admittance valve between the P-trap and the drain line of the kitchen sink, with the vent mounted on one leg of a sanitary tee and the other leg going to the drain. Unit must be placed to Code.
***Price should also include properly terminating existing kitchen drain and vent assembly, Strap up waist line as required. Siding Repair is in line item addressing asbestos siding.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Gas Pack **GENERAL REQUIREMENTS**

Install combination AC/furnace unit, minimum 14 SEER design per manual J and Manual D for this home.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Replace/Install Duct Work System **CRAWL SPACE**

Replace all ductwork and supply mixing box plenum. Ensure system is properly supported from ground (supply, return, and flex.) Ductwork shall be R-8 and mastic sealed.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Work Specification

Low-Boy Water Heater 40 Gallon Electric **KITCHEN**

Install a 40 gallon, glass lined, high recovery insulated to R-7, double element, electric water heater with 10 year warranty. Include pressure and temperature relief valve, expansion tank, discharge tube to within 6" of floor or to outside of structure, shut-off valve and electric supply. If it is located on an upper floor or if there is no floor drain, install a catch pan drained to the exterior. Dispose of old water heater appropriately.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Floor System Repair **KITCHEN**

Work may include installation of 2"x 8" joists hung 16" on center, plywood or tongue and groove subfloor. Include replacing all deteriorated band joists and insulating floor to code.
***Existing base cabinets and rear deck are to REMAIN. Floor system can be repaired from the top.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Exterior Handrails - Rear Deck BOTH SIDES **EXTERIOR** **Exterior**

Install handrails to current building code- specified treated lumber. Size & dimensions to code.
***Price is for (2) sets of stairs that service the rear deck.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Crawl Space Access Door **EXTERIOR** **Exterior**

Install a 3/4" pressure treated plywood access door in a 2" x 4" pressure treated frame. Provide galvanized iron hinges and hasp.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Foundation Vent Screen ALL **EXTERIOR** **Exterior**

Replace foundation vent housing with heavy duty galvanized steel screening.
***Price also includes any necessary brick repointing to install new vent screen.

Bid Cost: _____ X _____ = _____

Base **Quantity** **Total Cost**

Work Specification

Foundation Vent Well ALL **EXTERIOR** **Exterior**

Install galvanized vent well along exterior of below-grade foundation vent to divert dirt and water from infiltrating vent.
***Vents are to be installed along left face of the home. Contractor to verify number of vents as side of home was obstructed upon initial inspection.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Portable Toilet **GENERAL REQUIREMENTS**

Provide temporary toilet facilities from job start until approval of permanent facilities.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Permits Required **GENERAL REQUIREMENTS**

The contractor is responsible obtaining and paying for all permits required. Said permits shall include all items in this scope of work.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Dumpster **GENERAL REQUIREMENTS**

After procuring all required permits, place AS MANY roll-off dumpsters as needed without damaging the site. Collect construction debris using dust control methods. Remove dumpster and repair any evidence of the dumpsters use. Contractor may haul debris away daily using dump trailers.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Smoke Detector Hard Wired **GENERAL REQUIREMENTS**

Install UL approved, interconnected, ceiling mounted smoke and heat detectors permanently wired into a receptacle boxes with battery backups in bedrooms and outside of sleeping areas.
***Detector count is for (3) detectors.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Combination CO / Smoke Detector Hard Wired **GENERAL REQUIREMENTS**

Install a hard wired combination carbon monoxide and smoke detector with battery back up.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Work Specification

See Attached Lead Scope **GENERAL REQUIREMENTS**

All work shall be performed in accordance with applicable regulations and shall meet all applicable building codes. Building permits will be obtained as appropriate. Mecklenburg County requires building permits for Lead Hazard Reduction if the work involves activities subject to permitting under general conducts.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Vinyl Window **EXTERIOR** **Exterior**

Dispose of window units and any security bars. Field measure, order and install new Energy Star rated vinyl, double glazed LOW- E windows including half screens. Insulate rough opening. Install new extension jambs, casing and sill as needed, prime and paint. Exterior trim to be wrapped in PVC coated aluminum coil as needed. Repair all areas disturbed by removal and installation. This installation is to include repairing any damaged header, framing (to include king studs, jack studs etc.) sub-floor, floor joists, band joists and sill. Any windows replaced in a bathroom must have tempered glass.
***Count for this price is for (10) windows. There are (6) additional windows listed on the lead scope for a total of (16) windows. All windows are to be replaced at this home.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Dryer Vent

Install 4" rigid aluminum vent tubing from the specified dryer location to a 4" wall mounted dryer vent hood with a back flow preventer and NO screening. Fasteners shall not protrude into the interior of the exhaust duct. Seal all seams in the system with duct mastic or aluminum foil tape, not duct tape. Secure duct and hood to framing.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

See Attached Engineering Report

Provide price to make repairs addressed in the attached Engineer's Report.

Item 1: Do it as stated.

Item 2: Do B. C. and D. Instead of A., follow the requirements in the paragraph below that references the new 36"x36"x12" footing with #4 bars.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Attic Insulation Increase to R-38

Increase attic insulation to R-38, contractor to attach verification to rafter at attic access, easily seen. Include ventilation baffles to code.

Bid Cost: _____ X _____ = _____
Base **Quantity** **Total Cost**

Work Specification

Certification

Contractor Name: _____ **Total Cost:** _____

Signature: _____ **Date:** _____

LEAD ABATEMENT SCOPE OF WORK
& INSTRUCTIONS TO BIDDERS 9-Aug-18
Address 2000 Highland St
Complete the following scope of work:

Item #	Feature	Method	Number	Cost Per unit	COST
1	Exterior - Side A Door	Remove and replace with prehung exterior door.	1		
2	Exterior - Side A Porch Celing and Header	Scrape loose paint and re-paint.	1		
3	Exterior - Window 1, 2, 11, and 12 Sashes	Remove and replace window (all components).	4		
4	Exterior - Window 1, 2, 4, 8, 11 and 12 Sills	(see line item 3). Remove and replace window 4 and 8 (all components).	2		
5	Exterior - Window 11 and 12 Casings	(see line item 3).	0		
6	Exterior - Side A, C and D Soffit	Scrape loose paint and re-paint.	1		
7	Room 3 - Side A Door Jamb, Casing and Door	Remove and replace.	1		
8	Room 3 - Window 5 Sill	Remove and replace.	1		
9	Room 3 - Window 4 Sill and Casing	(Window will be replaced on rehab scope). Remove and replace interior sill.	1		
10	Room 2 - Side D Door Casing	Remove and replace.	1		
11	Interior - Window Sills	Perform specialized cleaning of all sills.	1		
			Total		

***Prices for exterior work includes repair/replacement of any rotten wood.

Contractors may submit an occupant protection plan on the form provided.

NOTES:

1 Complete all interior work in a unit in a single day.
2 Allow for replacement of 50 board feet of rotted wood.
3 Unless otherwise noted any window or door removal and replacement includes frame and trim on both sides.
4 In lieu of complete removal, window frames may be enclosed with vinyl on exterior in accordance with all project manual requirements.
5 Contact EI Group to conduct inspections prior to repainting or other putback and after vinyl siding installation.
6 Windows being placed in a bathroom need to be tempered glass.

Total Bid
Acknowledgement of Addenda (if any):

Addendum#		Date

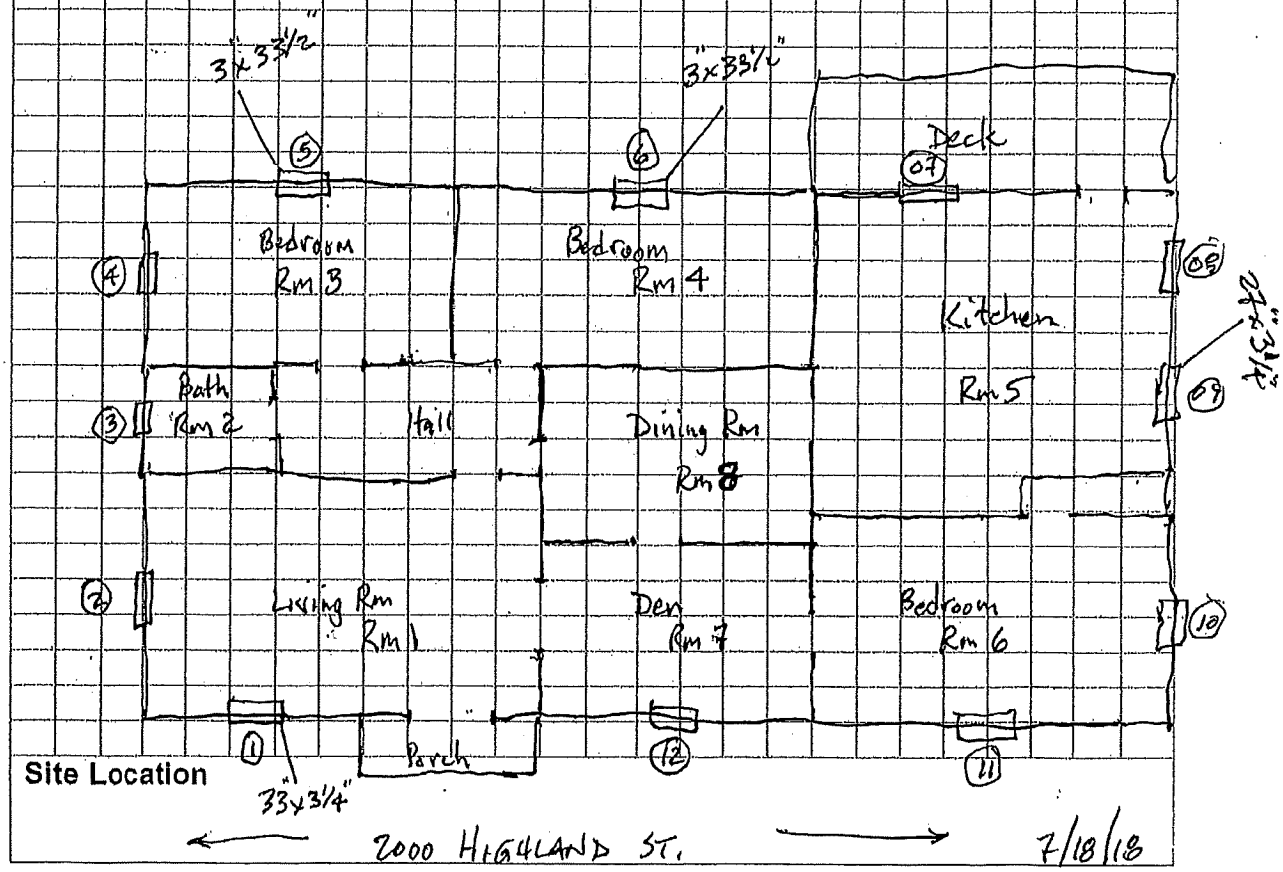
The undersigned contractor agrees to perform the scope of work for the indicated fee in accordance with applicable regulations and the project manual. The undersigned also certifies that the work will be completed within 60 days of award.

Signature of authorized contractor representative

Contractor Submitting Bid:
Address:

Phone:

Field Notes



Site Location

Howard Verna Engineering, P.C.

Structural Engineering Design
Residential and Commercial Inspection
Structural Inspection and Design of Repairs
Expert Witnesses: Structural & Construction

5109 Monroe Road, Suite A
Charlotte, NC 28205
NC License #C-3528
SC License #4185

Office 704-331-9219

E-mail dhoward@howardverna.com
or npegan@howardverna.com

Via Email to jsutton@ci.charlotte.nc.us
January 3, 2019

City of Charlotte Neighborhood Development
ATTN: John Sutton
2730 Rozzelles Ferry Road
Charlotte, NC 28208

RE: 2000 Highland Street

Dear John:

At your request, HowardVerna Engineering made a visit to the referenced address on December 20, 2018, to provide an inspection and reinforcement consultation on first floor framing and foundation reinforcement of the ±14'-6" wide by 10-0" long room at the front right corner of this home. This is a ±1,300 square foot one level house, built in 1943, with a gable roof front to rear, clad with siding and is supported over a crawlspace with pier and curtain foundation walls (see photo #1).

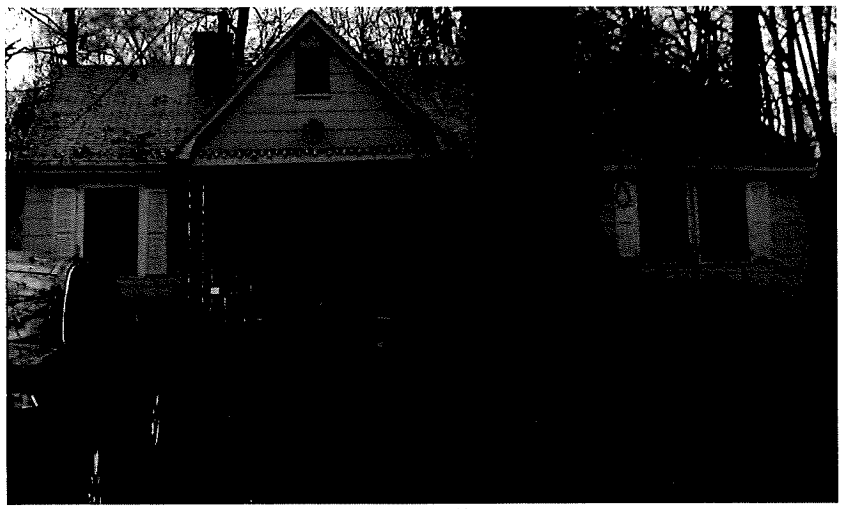


Photo #1

(All directions in this letter are from the perspective of a person facing the front of the house.)

1) The floor of the ±14'-6" x 10'-0" room at the front right corner of this home has a noticeable variation/"dip" in the floor framing toward the center of the floor when walked upon (see photo #2). Per our conversation at the time of this visit, this room is framed with 2x6 floor joists that span approximately 14'-6" from left to right. With this being the case, in order to begin to control the movement that has occurred at this floor location, a new triple 2x8 dropped girder should be installed below this

existing floor system to stabilized the movement per the First Floor Framing/Foundation Reinforcement Plan below.

Photo #2

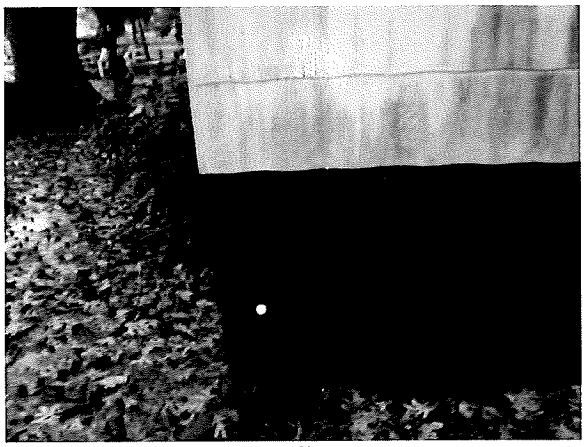


Photo #3

2) A stair step crack, up to ¾" in width has surfaced at the front and right faces of the front right corner of the foundation (see photo #3). This crack is the result of a differential settlement of the supporting soils below that has allowed this section of the foundation to rotate. This differential settlement is dur in major part to poor drainage control as no gutters are installed and water does not drain away from this section of the foundation. The most ideal approach to controlling the movement would be to:

   a. Install retrofit anchors at this corner, likely total of three;

   b. Installing gutters at the roof overhangs that release water a minimum of five feet from the foundation onto well drained locations of the lot

   c. Address the drainage by grading per section R401.3 of the 2018 North Carolina Residential Code (see Figure 1.) and/or by installing french drains

   d. Re-point the crack and monitor for further movement.

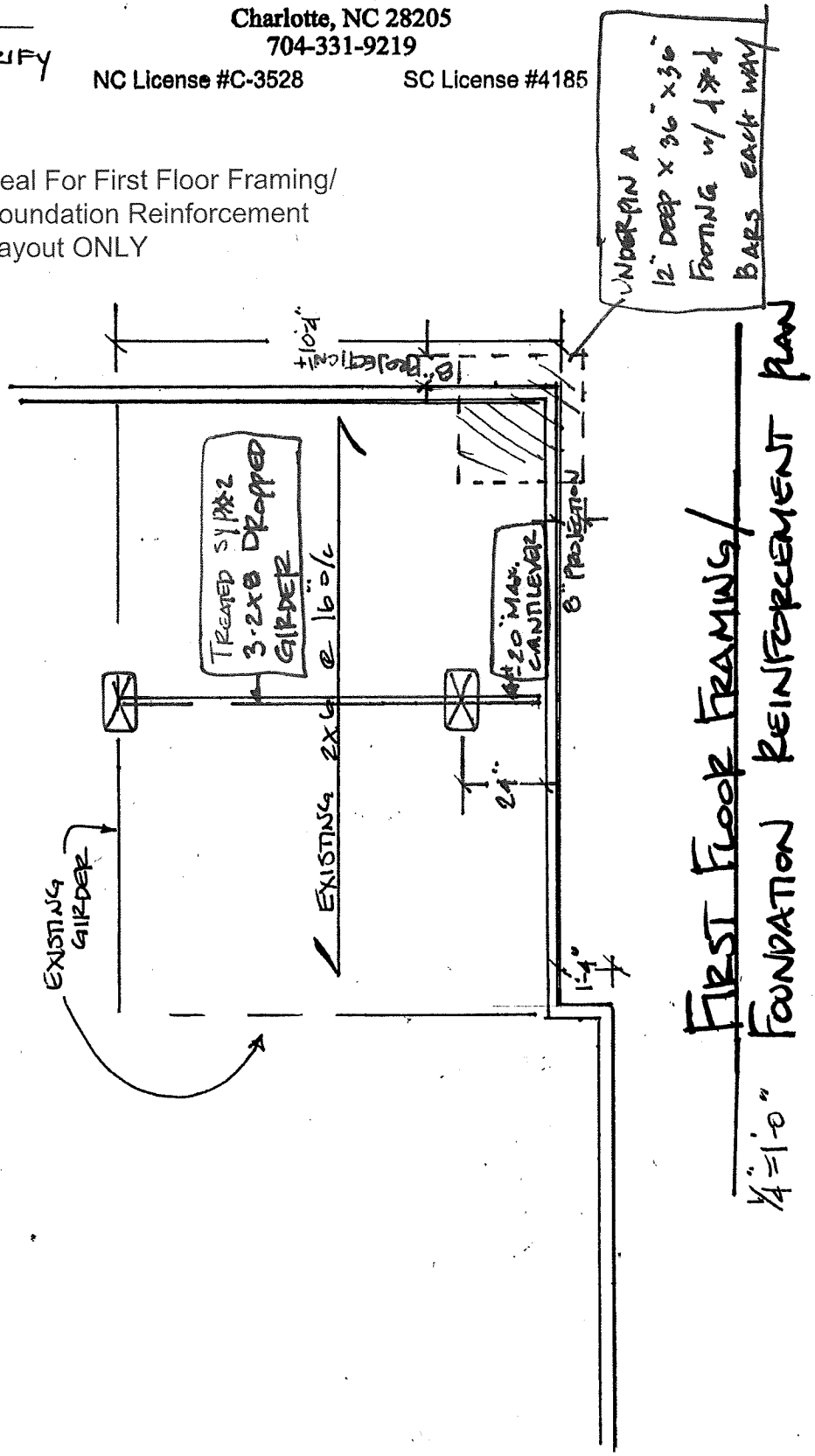
However, in this case, the most economical approach will be to underpin a new 36" x 36" x 12" footing with four #4 bars each way below this corner of the foundation per the First Floor Framing/Foundation Reinforcement Plan below, in lieu of step 2a and complete steps 2b. thru 2d. If once the footing has been underpinned, as discussed in lieu of step 2a, further movement occurs that results in a resurfaced crack greater than ⅛" in width or the surfacing of new cracks at/adjacent to this location, then further reinforcement of this section of the foundation will likely be necessary to control further movement. (rev. 01-04-19)

Howard Verna Engineering, P.C.
5109-A Monroe Rd.
Charlotte, NC 28205
704-331-9219
NC License #C-3528 SC License #4185

- CONTRACTOR TO VERIFY ALL DIMENSIONS
- SEE REPORT

NORTH CAROLINA PROFESSIONAL SEAL 32126 ENGINEER DAMON S. HOWARD 01.03.19

Seal For First Floor Framing/
Foundation Reinforcement
Layout ONLY



FIRST FLOOR FRAMING/ FOUNDATION REINFORCEMENT PLAN
1/4" = 1'-0"

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other *approved* point of collection that does not create a hazard. *Lots* shall be graded to drain surface water away from foundation walls. The *grade* shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm).

Exception: Where *lot lines*, walls, slopes or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

Figure 1.

Re-point Procedure:

The cracks in the joints of the brick veneer should be cut out to a minimum depth of one inch and re-pointed with new grout to match the old grout as closely as possible while properly retooling the joints. Retooling requires all vertical head joints to be struck first and the horizontal joints to be struck last. For an aesthetically pleasing appearance, use a creamy mortar when re-pointing the brick, colored with coloring from a building supply store to match the existing brick as closely as possible. The creamy mortar should be finger-smeared into the joint, wiped down, and then the brick cleaned of mortar overrun with pure vinegar, followed by a flushing with clean water. If repaired in this manner, the brick should resemble its original appearance once the job is complete.

With cracks greater than ¼" in width at a brick veneer OR those of any size at a brick curtain wall, it is suggested that the cracks be tied back with the use of a Simpson® Heli-Tie™ Helical Wall Tie (Simpson Strong-Tie HELIST254000 ¼" x 40" Stitching Tie or similar) per the manufacturer's specifications in conjunction with re-pointing.

These conclusions are based on preliminary and limited examinations and analyses. We reserve the right to supplement or amend these findings and/or opinions should new information become available. The scope of this service is limited to preliminary property inspection via visual means. Concealed discrepancies and/or defects may limit the accuracy and scope of this report. The recommendations and opinions contained in this report are based on our professional judgment and experience. This report does not constitute an overall review or inspection of all aspects of this property. It only represents a report of the items specifically covered. The evaluation does not include destructive or invasive testing, and is limited to the visible and accessible areas of the property. Nothing is implied or can be assumed on any items not mentioned in this report.

Should you have any questions regarding this report, please feel free to contact us at the number provided above.

Sincerely,

Damon S. Howard, P.E.
NC License #32126

DSH/vgw

NORTH CAROLINA PROFESSIONAL SEAL 32126 ENGINEER DAMON S. HOWARD 01.03.19

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