QUALITY CONTROL CHECKLISTS FOR FOUNDATION INSPECTION OF RESIDENTIAL AND OTHER LOW-RISE BUILDINGS

by
The Structural Committee
of
The Foundation Performance Association
www.foundationperformance.org
Houston, Texas

Document # FPA-SC-10-1

ISSUE HISTORY (Initial issue and issues outside the Structural Committee)

Rev#	Date	Description	Subcommittee Chair	Subcommittee Members
A	02 Oct 01	For Committee Comments	Jack Spivey	Ron Kelm Jon Monteith Michael Skoller Terry Taylor Mari Mes Mike Palmer Lowell Brumley George Wozny Dan Jaggers Toshi Nobe
I	10 Jul 03	For FPA Peer Review		
0	09 Oct 03	For FPA Web Site Publishing		
0A	18 May 05	For Committee Comments	Jack Spivey	Michael Skoller Ron Kelm Mari Mes Dan Jaggers Jon Monteith Dick Peverley
0K	6 Nov 06	For FPA Peer Review		
1	19 Feb 07	For FPA Web Site Publishing		

PREFACE

This document was written by the Structural Committee and was first peer reviewed by the Foundation Performance Association (FPA) and published as Revision 0 on 9 October 2003. After obtaining additional feedback, it has been updated by the Structural Committee to Revision 1 and has again been peer reviewed. This document is made freely available to the public at www.foundationperformance.org so all may have access to the information. To ensure this document remains as current as possible, it may be periodically updated under the same document number but with higher revision numbers such at 2, 3, etc.

The Structural Committee is a permanent committee of the Foundation Performance Association. At the time of writing this document, Ron Kelm, P.E., chaired the Structural Committee of 25 to 30 active members. The committee sanctioned this paper and formed a subcommittee to write the document. The subcommittee chair and members are listed on the cover sheet of this document.

Suggestions for improvement of this document shall be directed to the current chair of the Structural Committee. If sufficient comments are received to warrant a revision, the committee will form a new subcommittee to revise this document. If the revised document successfully passes FPA peer review, it will be published on the FPA website and the previous revision will be deleted.

The intended audiences for the use of this document are field inspectors, builders, builders' superintendents, municipal inspectors, or anyone with an interest in quality construction or repair of foundations.

This document was created with generously donated time in an effort to improve the performance of foundations. The Foundation Performance Association and its members make no warranty, expressed or implied, regarding the accuracy of the information contained herein and will not be liable for any damages including but not limited to consequential damages resulting from the use of this document. Each project should be investigated for its individual characteristics to permit appropriate application of the material contained herein.

INTRODUCTION

The following checklist documents are related to two years of work completed in the late nineteen nineties by the Inspections Subcommittee of the Foundation Performance Committee (the name was since changed to Foundation Performance Association, or FPA). Jack Spivey chaired that original committee and his fellow members were:

MR. MICHAEL SKOLLER P.E.

MR. JOE EDWARDS

MR. LOWELL BRUMLEY P.E.

MR. DEAN EICHELBERGER

Meetings took place on a monthly basis and were attended by many interested parties. Special recognition should be given to Mr. Jim Dutton of Du-West Foundation Repair and Mr. Dan Jaggers of Olshan Foundation Repair. Their assistance with the foundation repair sections was invaluable. The topics for discussion were established at the onset of the meetings with the general intent to establish a set of guidelines and procedures for the inspection of foundation construction and foundation repairs incorporated into an easy to use inspection document. It was established that the best form for our purposes would be a simple checklist, which would fully cover the subject of the inspection. It was also determined that keeping each checklist to one page would afford the most user-friendly instrument for our purposes.

The original documents were presented in a Foundation Performance Committee seminar in 1998. Subsequently the documents were revised, peer reviewed, and published as Document No. FPA-SC-10 Revision 0, dated October 9, 2003, which included Checklist #'s 1-7. This Revision 1 is the result of changes and additions that were begun in February of 2005. The additions in Revision 1 are Checklist #'s 8 and 9.

The subjects of the checklists are presented in the following order:

QC Checklist #1 – POST-TENSION SYSTEM FOUNDATION MAKE-UP
QC Checklist #2 – CONCRETE PLACEMENT
QC Checklist #3 – POST-TENSION STRESSING
QC Checklist #4 – CONVENTIONAL (REBAR) FOUNDATION MAKE-UP
QC Checklist #5 – CONSTRUCTION (BUILDER'S) PIERS
QC Checklist #6 – REPAIR PIERS
QC Checklist #7 – SEGMENTED REPAIR PILES
QC Checklist #8 – PRE-CONSTRUCTION SITE REVIEW
QC Checklist #9 – POST-CONSTRUCTION SITE REVIEW

These topics were judged to represent the major types of foundation construction and foundation repairs found in the Houston area. While these topics are certainly not inclusive of every inspection situation or construction method in use, they offer a basic set of guidelines for the majority of inspections that would be encountered in typical residential construction.

The first order of business for the subcommittee was to establish a checklist heading format for each inspection. The uppermost portion of the checklist is meant to establish a context for the inspection. The basics of the site such as, the builder, subdivision, address, lot and block, are set out at the top of the

checklist. The next section is meant to establish the parameters that will govern the rest of the inspection. The most important of these deals with the plans. It was the opinion of the subcommittee that no inspection should be undertaken without a set of plans, and the plans should include the name of the engineer, the date of the plans and the detail sheet. Other pertinent details of the site that are covered in this section are the date, the time, the weather, etc. These guidelines were followed on each checklist, with variations dictated by the context of the inspection.

Once the context is established in the heading, the checklist moves on to sections relating to different aspects of each inspection. In general, these sections are documented by simply checking the item to show that it has been correctly completed. **The checkmark *(✓)* serves to show that the item has been considered and complies with the plans, whereas an *(X)* denotes that the item does not comply with the plans.** In some sections, direct questions are asked that should be answered. Finally, the lower sections of the checklists generally have reference to a drawing of the slab, the piers or piles, or the foundation being repaired. The drawings further document the conditions specific to the site and the foundation and allow the inspector to orient the data being described in the conclusion of the inspection.

Each of these checklists represents an attempt to document the events related to a specific foundation project or a specific foundation repair. It should be remembered that all the answers and data reported are typically the only documentation of what actually happened during this phase of construction. For this reason, every item is pertinent and should be given careful consideration during the inspection. Though many of the items listed are fairly common knowledge to the typical inspector or builder, it is the sequencing and nuances of certain questions and items listed, which are the greatest advantage of using the checklists.

TABLE OF CONTENTS

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #1 - POST-TENSION SYSTEM FOUNDATION MAKE-UP

Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Plan #:_____ Cable Count_____ Design Engineer_____ Superintendent_____
Plan provided at site Yes ☐ No ☐ Plan Date_____ Detail Sheet Date _____
Concrete Contractor_____ Placement Date_____ Detached Garage Yes ☐ No ☐ Permit #:_____
Weather: Previous 48 Hrs._____ Current_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE
Subdivision Lot _____ Other _____
Lot Description_____
Fill on site Yes ☐ No ☐
Compaction verified by Geotechnical Engineer:
Yes ☐ No ☐ Date_____
Will foundation make up drain: Yes ☐ No ☐
Trees removed_____
Are trees within 20' of foundation Yes ☐ No ☐

FORMS
☐ Forms secure
☐ Floats installed
☐ Proper clearance at floats
☐ Garage front closed

ADDITIONAL REVIEWS
Date_____ Time_____

SLAB
☐ Thickness_____(in)
☐ Measured: Screeds_____ String line_____ Other_____
☐ Describe Pad Material _____
☐ Level and Firm Yes ☐ No ☐

BEAMS
☐ Design Depth: _____(in) Exterior_____ Interior_____
☐ Actual Depth:_____(in) _____(in) _____(in) _____(in)
☐ Design Width:_____(in)
☐ Actual Width:_____(in) _____(in) _____(in) _____(in)
☐ Average depth into undisturbed soil_____(in)
☐ Clean of soil & debris
☐ Water in beams Yes ☐ No ☐ Average Depth_____(in)
☐ Will water drain Yes ☐ No ☐
☐ Plumbing obstructions accommodated _____
☐ Pier tops clean

TENDONS
Count: L to R_____ F to B_____ Garage_____
Total ____ Variance ___ Explain_____
Number of tendons left on site_____ Rebar_____
☐ 1/2" tendons _____ Other
☐ No tendons spaced over 6'-0"
☐ 20D nails used at castings
☐ Live ends stripped of plastic not over 1" or taped
☐ Cathead clamps all tight
☐ All intersections tied
☐ All tendons supported at intersections
☐ Dead ends have 3/4" clearance to forms
☐ All S Hooks crimped
☐ Beam tendons draped and secured by #3 rebar stakes or concrete bricks
☐ Ample chairs all tied

Tendon grid secured for concrete placement Yes ☐ No ☐

POLYETHYLENE SHEETING
☐ 6-mil Lapped and Taped ☐ Seated in bottom of beams ☐ Secured at sides ☐ Mastic/tape applied at plumbing

REINFORCING STEEL
SLAB SECTION
WWF:(Mesh) Size_____ Roll_____ Sheet_____ **OR** ☐ #3 or # ___Rebar @_____(in.) on center both ways
☐ Lapped per plans ☐ No rebar or WWF (mesh) touching forms ☐ Supported by chairs per plans

BEAM SECTION
Rebar: grade ____ Clearances per plan: Sides ☐ Bottom ☐ Top ☐
☐ Splices lapped per plan
☐ Corner rebar installed at corners & dead ends
Typical Rebar/Exterior Beams _____ continuous
Typical Rebar/Interior Beams _____ continuous
Corner bars installed at dead ends Yes ☐ No ☐
Bay Windows or Porches _____ Rebar _____ Stirrups _____
Extra Rebar Added _____
Diagonal Rebar at Re-entrant Corners ☐ No. of Corners_____
Nose Bars @ _____ Construction Joints _____
Anchor bolts on site Yes ☐ No ☐ Diameter _____(in) Length_____ (in)
Other Fasteners_____

IS FOUNDATION READY FOR CONCRETE PLACEMENT? Yes ☐ No ☐

SKETCH

CHANGES NEEDED:_____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #2 - CONCRETE PLACEMENT

Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan #:_____ Cable Count_____
Design Engineer_____ Superintendent_____ Q.C. Arrival Time___ Departure Time____
Copy of Foundation Makeup Report Provided Yes ☐ No ☐ Date of Copy_____ Items Repaired Yes ☐ No ☐
Concrete Contractor_____ Detached Garage Yes ☐ No ☐ Permit #:_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE
Subdivision Lot _____ Other _____
Lot Description_____
Are there obstructions at the site that would prevent access for concrete trucks Yes ☐ No ☐
Explain _____

FORMS
☐ Forms secure
☐ Floats installed
☐ Proper clearance at floats
☐ Garage closed in

ADDITIONAL REVIEWS
Date_____ Time_____

WEATHER
Weather conditions: Prior 48 Hours:_____ START:_____ FINISH:_____
Will temperature be greater than 40° F for five hours following concrete placement Yes ☐ No ☐
Will temperature be greater than 32° F for 48 hours following concrete placement Yes ☐ No ☐
Forty-eight hour forecast: HIGH TEMPERATURE:_____ LOW TEMPERATURE:_____

CONCRETE
Concrete Company _____ Batch Plant _____ Tickets on site? Yes ☐ No ☐
Delivered by truck over what distance _____ Was a pump used Yes ☐ No ☐ Pump Co._____
Mix: _____ psi Pump primer dumped outside of forms Yes ☐ No ☐
Sack Mix: ☐ 4 ½ ☐ 5 _____ Other **OR** Strength Mix Yes ☐ No ☐ Strength _____ (psi)
Additives: _____ **NO CALCIUM CHLORIDE**–APPLIES TO POST TENSION SLAB
Fly Ash: Type C? Yes ☐ No ☐ _____%
Slump as ordered from plant _____ (in)
Explain (Discrepancies if slump is different): _____
Was concrete consolidated by vibrator Yes ☐ No ☐ Other ☐ _____
Test Cylinders Taken Yes ☐ No ☐ Testing Company _____
Slump Test Taken Yes ☐ No ☐ Testing Company _____
If water is added at the jobsite, show the amounts over ten gallons and give a visual estimate of the final slump

Draw a diagram of the slab below showing the locations of each load by truck number

Truck #	Time Poured Out	Gallons Added	Placement Location	Est. Slump	Tested Slump	Temp.

Anchor bolts on site Yes ☐ No ☐ Diameter _____(in) Length_____ (in)
Other Fasteners_____
Describe provisions for curing_____

SKETCH

ADDITIONAL COMMENTS: _____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #3 – POST-TENSION STRESSING

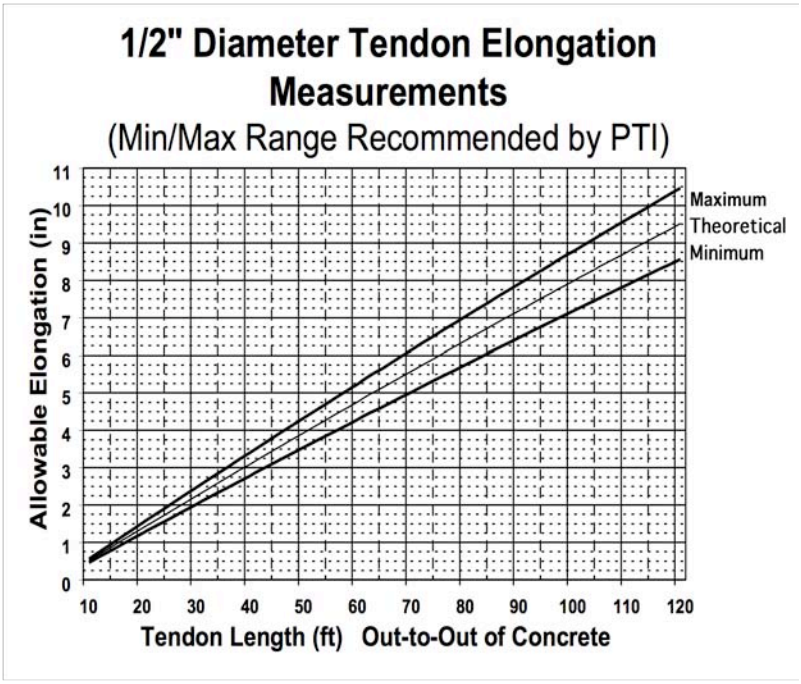
Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Plan #:_____ Cable Count_____ Design Engineer_____ Superintendent_____
Plan provided at site Yes ☐ No ☐ Weather_____ Plan Date_____ Detail Sheet Date _____
Concrete Placement Date_____ Stress Date _____ Partial Stress Date_____
Post-Tension Company_____ Permit #:_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

☐ Are there any cracks in the surface of the slab Yes ☐ No ☐ Describe_____
_____

ADDITIONAL REVIEWS
Date_____ Time_____

Estimate size and locate on the sketch below
☐ Are elongations specified on the plans Yes ☐ No ☐
☐ Are the tendons painted at the edge of the slab Yes ☐ No ☐
☐ What is the predetermined distance between the mark and the edge of the slab ____(in)
☐ Are the wedges placed in a vertical position Yes ☐ No ☐
☐ Is there evidence of gripper marks on the gripper end of all tendons Yes ☐ No ☐ **(If no, show location on sketch below)**
☐ Are tendons stressed from two ends Yes ☐ No ☐If So, How Many _____
☐ If on site during stressing, was stressing load recorded? Yes ☐ No ☐ If yes, attach pressure readings



USE CHART IF ELONGATIONS ARE NOT LISTED ON PLAN, OR MULTIPLY TENDON LENGTH IN FEET BY 0.08 TO CALCULATE APPROXIMATE ELONGATION IN INCHES FOR LENGTH OVER 30 FEET.

SKETCH

Draw a simple sketch of the foundation configuration noting all tendon locations and their elongation measurements. Also note any problems which you have observed, particularly blowouts at corners or the garage entry and cracks.

FOLLOWING STRESS VERIFICATION:
☐ Are the tendon ends cut inside the pocket former
☐ After stressing are the nails cut
☐ Are the tendon ends grouted with a non-shrink grout

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #4–CONVENTIONAL (REBAR) FOUNDATION MAKE-UP

Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Plan #:_____ Design Engineer_____ Superintendent_____
Plan provided at site Yes ☐ No ☐ Plan Date_____ Detail Sheet Date _____
Concrete Contractor_____ Placement Date_____ Detached Garage Yes ☐ No ☐ Permit #:_____
Weather: Previous 48 Hrs._____ Current_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE
Subdivision Lot _____ Other _____
Lot Description_____
Fill on site Yes ☐ No ☐
Compaction verified by Geotechnical Engineer:
Yes ☐ No ☐ Date_____
Will make up drain: Yes ☐ No ☐
Trees removed_____
Are trees within 20' of foundation Yes ☐ No ☐

FORMS
☐ Forms secure
☐ Floats installed
☐ Proper clearance at floats
☐ Garage front closed

ADDITIONAL REVIEWS
Date_____ Time_____

SLAB
☐ Thickness_____(in)
☐ Measured: Screeds_____ Stringline_____ Other_____
☐ Describe Pad Material _____
☐ Level and Firm Yes ☐ No ☐

BEAMS
☐ Design Depth: _____(in) Exterior____Interior_____
☐ Actual Depth:_____(in) _____(in) _____(in) _____(in)
☐ Design Width:_____(in)
☐ Actual Width:_____(in) _____(in) _____(in) _____(in)
☐ Average depth into undisturbed soil_____(in)
☐ Clean of loose soil & debris
☐ Water in beams Yes ☐ No ☐ Average Depth_____(in)
☐ Will water drain Yes ☐ No ☐
☐ Plumbing obstructions accommodated _____
☐ Pier tops clean Yes ☐ No ☐

POLYETHYLENE SHEETING
☐ 6-mil.Lapped and Taped ☐ Seated in the bottom of beams secured at sides ☐ Mastic/tape applied at plumbing

CONSTRUCTION PIERS
Number of piers _____ Are pier tops clean of debris Yes ☐ No ☐

REINFORCING STEEL
Grade of Steel _____

BEAM SECTIONS
Exterior Beams: Steel size_____ Number top _____ Bottom _____ Stirrup size _____ Spacing _____(in)
Interior Beams: Steel size_____ Number top _____ Bottom _____ Stirrup size _____ Spacing _____(in)
Extra Beam depth Yes ☐ No ☐ Additional steel required _____
Proper Clearance: Bottom _____ (in) Sides _____(in) Top _____(in) Support System _____
Continuity: Splices lapped per plan Yes ☐ No ☐ Corner bars installed Yes ☐ No ☐
Rebar clean of mud and excessive rust Yes ☐ No ☐
Void Forms in bottom of beam Yes ☐ No ☐ Height _____(in) Condition_____

SLAB REINFORCING
WWF:(Mesh) Size_____ Roll_____ Sheet_____ **OR** ☐ #3 or # ___Rebar @_____(in.) on center both ways
☐ Lapped per plans ☐ No rebar or WWF (mesh) touching forms ☐ Supported by chairs per plans
Void Forms Yes ☐ No ☐ Height ___(in) Poly covering void forms Yes ☐ No ☐

ADDITIONAL REINFORCING
Diagonals: Size _____ Number in slab_____
Fireplace pads: Size of steel _____ Placement_____
Bay windows: Size of steel _____ Placement_____
Other projections: _____ Control joints_____
Construction joints: _____
Anchor bolts on site Yes ☐ No ☐ Diameter _____(in) Length_____ (in)
Other Fasteners_____

IS THE FOUNDATION READY FOR CONCRETE PLACEMENT? Yes ☐ No ☐

SKETCH

CHANGES NEEDED: _____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #5 – CONSTRUCTION (BUILDER'S) PIERS

Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Plan #:_____ Design Engineer_____ Superintendent_____ Geotechnical Engineer _____
Plan provided at site Yes ☐ No ☐ Plan Date_____ Detail Sheet Date _____
Weather at site_____ Concrete Contractor_____ Geotechnical Report #_____

(THIS FORM NOT APPLICABLE FOR SLURRY PLACED PIERS)

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE

Subdivision Lot_____ Other _____ Explain_____
Fill on site Yes ☐ No ☐
Compaction verified by Geotechnical Engineer Yes ☐ No ☐ Date_____
Trees removed Yes ☐ No ☐ Location:_____
Are trees within 20' of foundation Yes ☐ No ☐

ADDITIONAL REVIEWS

Date_____ Time_____

PIERS

Name of drilling company: _____
Can drill equipment access all pier locations Yes ☐ No ☐
Type of drilling apparatus: Truck Mounted_____ Bobcat:_____ Other:_____
Total number of piers: _____

PIER SIZES

Shaft	Bell Dia.	Pier Depth	No. Rebar	Rebar Size	Stirrups Piers	Spacing	Total
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____

SKETCH TYPICAL PIER SHOWING DEPTH

Describe the manner of measuring the bell sizes:_____
(Bell checking tool required)
Boring logs from Geotechnical report on site Yes ☐ No ☐
Describe bearing strata: _____
_____
Pocket Penetrometer reading taken from auger cutting Yes ☐ No ☐ _____ TSF Note locations below_____
Was water apparent in pier hole Yes ☐ No ☐ Depth_____" Action Taken_____

REINFORCING

Rebar placed per plan Yes ☐ No ☐
Rebar grade_____
Does rebar extend above pier top Yes ☐ No ☐ How much above_____(in) Sleeved Yes ☐ No ☐ Describe_____

CONCRETE

Will concrete truck be able to access site Yes ☐ No ☐
Concrete company:_____ Truck numbers:_____
Was pump truck used Yes ☐ No ☐
Specified strength of concrete: _____ psi
Was concrete placed on the same day as the pier drilling Yes ☐ No ☐
Estimated time of completion_____
If not, explain: _____

Draw a sketch of the structure indicating the pier placement ========>

SKETCH

ARE THE PIER HOLES READY FOR CONCRETE PLACEMENT Yes ☐ No ☐

CHANGES NEEDED: _____
_____
_____
_____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #6 – REPAIR PIERS

Owner_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Plan #:_____ Design Engineer_____ Superintendent_____ Geotechnical Engineer _____
Plan provided at site Yes ☐ No ☐ Plan Date_____ Detail Sheet Date _____
Weather at site_____ Permit #_____ Geotechnical Report #_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE

Subdivision Lot _____ Other _____ Explain_____
Soils Report on site Yes ☐ No ☐ Bearing Soils at what depth _____(ft)
Test hole drilled to what depth _____(ft) Bearing soils at _____(ft)
Underground plumbing test Yes ☐ No ☐ Water lines under slab Yes ☐ No ☐
Site obstructions to drilling, Describe:_____
Trees/shrubs removed or relocated Yes ☐ No ☐ Location(s)_____

ADDITIONAL REVIEWS

Date_____ Time_____
Were builder's piers present Yes ☐ No ☐

UNDERPINNING

Name of repair contractor: _____
Method of repair:_____
Total number of piers: _____ Interior _____ Exterior _____

PIER SIZES

Shaft	Bell Dia.	Pier Depth	No. Rebar	Rebar Size	Stirrups Piers	Spacing	Total
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____
_____(in)	_____(in)	_____ (ft)	_____	_____	_____	_____ (in)	_____

Sketch Typical Pier Showing Depth

Describe the manner of measuring the bell sizes:_____
(Bell checking tool required)
Describe bearing strata: _____
_____
Pocket Penetrometer reading Yes ☐ No ☐ _____ TSF Note locations below_____
Was water apparent in pier hole Yes ☐ No ☐ Depth_____(in) Action Taken_____

REINFORCING

Rebar per plans Yes ☐ No ☐
Rebar grade_____

HELICAL PIERS

Test hole depth _____(ft) Bearing Data _____ Pier Log Onsite Yes ☐ No ☐
Helix Size _____ Bracket Style _____ Shaft Diameter _____

CONCRETE

Will concrete truck be able to access site Yes ☐ No ☐ Was pump truck used Yes ☐ No ☐
Concrete company:_____ Truck numbers:_____ Batch Time _____ Onsite Time_____
Specified strength of concrete: _____ psi Slump as delivered _____ Water added Yes ☐ No ☐ Amount_____(gal)
Was concrete placed on the same day as the pier was belled Yes ☐ No ☐
Projected time of completion of concrete placement _____
If not, explain: _____
ESTIMATED MAXIMUM LIFT _____(in)
VOIDS TO BE GROUTED (MUD JACKED) Yes ☐ No ☐

Draw a sketch of the structure indicating the pier placement ====>

SKETCH

ARE THE PIER HOLES READY FOR CONCRETE PLACEMENT Yes ☐ No ☐

CHANGES NEEDED: _____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #7 – SEGMENTED REPAIR PILES

Builder_____ Subdivision_____ Date_____ Time_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site-specific Yes ☐ No ☐
Plan #:_____ Design Engineer_____ Superintendent_____ Geotechnical Engineer _____
Plan provided at site Yes ☐ No ☐ Plan Date_____ Detail Sheet Date _____
Weather at site_____ Permit #_____ Geotechnical Report #_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE

Subdivision Lot _____ Other _____ Explain_____
Soils Report on site Yes ☐ No ☐ Bearing Soils at what depth _____(ft)
Test hole drilled to what depth _____(ft) Bearing soils at _____(ft)
Underground plumbing test Yes ☐ No ☐ Water lines under slab Yes ☐ No ☐
Site obstructions to drilling, Describe:_____
Trees/shrubs removed or relocated Yes ☐ No ☐ Location(s)_____

ADDITIONAL REVIEWS

Date_____ Time_____
Were builder's piers present Yes ☐ No ☐

UNDERPINNING

Name of repair contractor: _____
Piling system:_____
Total number of piles: _____ Interior _____ Exterior _____

FIELD OBSERVATIONS

Pile Size Round	Pile Size Square	(A) Segment Length	(B) Number of Segments	(C) Pile Cap Size	(D) Pile Cap Quantity	(E) Distance From Top of Slab To Top of Pile Cap	Total Depth From Top of Slab	Observed Measurement of Lift at Refusal
_____(in)	_____(in)	_____ (in)	_____	_____	_____	_____	_____ (ft)	_____ (in)
_____(in)	_____(in)	_____ (in)	_____	_____	_____	_____	_____ (ft)	_____ (in)
_____(in)	_____(in)	_____ (in)	_____	_____	_____	_____	_____ (ft)	_____ (in)
_____(in)	_____(in)	_____ (in)	_____	_____	_____	_____	_____ (ft)	_____ (in)
_____(in)	_____(in)	_____ (in)	_____	_____	_____	_____	_____ (ft)	_____ (in)

(A x B) + (C x D) + E = TOTAL DEPTH

Total number of pilings observed driven to completion _____ *(Minimum five is recommended)*
Was pile log available at the site Yes ☐ No ☐ Explain _____
Were the piles shimmed immediately upon completion of being driven Yes ☐ No ☐
If no, explain _____
Is the piling cap horizontal Yes ☐ No ☐ If no, explain _____
Were the piles driven without interruption Yes ☐ No ☐ If no, explain _____
Were builders piers detached prior to jacking Yes ☐ No ☐
Were final shims determined to be tight Yes ☐ No ☐
What is the method of interlock _____
Were interior piles installed Yes ☐ No ☐ If so, were tunnels used Describe _____
Was dewatering system used and maintained in excavating and tunnels Yes ☐ No ☐
Describe materials used in backfilling tunnels _____
Describe method of protecting tunnel entrance from water intrusion _____
Was jetting required to install piles Yes ☐ No ☐ Explain_____
ESTIMATED MAXIMUM LIFT _____(in)
VOIDS TO BE GROUTED (MUD JACKED) Yes ☐ No ☐

Draw a sketch of the structure indicating the pier placement ====>

SKETCH

CHANGES NEEDED: _____

Quality Controller's Signature **Superintendent's Signature**

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #8 – PRE-CONSTRUCTION SITE REVIEW

Builder_____ Subdivision_____ Date_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Architectural Plan # _____ Date_____ Architect/Designer Phone Number_____
Site Survey_____ Date_____ Surveyor Phone Number_____
Geotechnical Report #_____ Date_____ Geotechnical Engineer Phone Number_____
Foundation Plan #_____ Date_____ Design Engineer Phone Number_____
Superintendent_____ Superintendent Phone Number _____
Plan provided at site Yes ☐ No ☐ Permit #_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE DESCRIPTION:
ADDRESS Does the site have an address or legal only Yes ☐ No ☐ Is it posted onsite Yes ☐ No ☐ Where_____
GOVERNING AUTHORITY Municipality _____
SUBDIVISION LOT Center lot ☐ Cul de sac ☐ Corner lot ☐ Zero lot line ☐ Other ☐
ACREAGE LOT Describe size and characteristics of the site _____
LOT USAGE Single Family Residence ☐ Townhouse ☐ Multi-Family ☐ Other ☐
UTILITIES Electricity ☐ Water ☐ Gas ☐ Porta Can ☐ Sewer : Municipal ☐ Septic ☐
FENCING Type _____ Will it be removed or altered _____
LOT ACCESS Paved street ☐ All weather road ☐ Other ☐ _____
PAD FILL Will fill be necessary Yes ☐ No ☐ Estimated height _____ Recommended fill type _____
Compaction Testing Co._____ Will pad fill extend a minimum of five feet beyond house footprint Yes ☐ No ☐

TREE INVENTORY:
TREES ONSITE Do trees presently exist on site Yes ☐ No ☐ Describe_____
Do trees exist within thirty feet of the foundation Yes ☐ No ☐ Describe_____
What is the history of the trees on the site in the past five years _____
_____ Are aerial photos available Yes ☐ No ☐

TREES OVER 4" DIAMETER WITHIN 30' OF SLAB Number _____ Species _____
Trunk Diameter _____ Remove ☐ Remain ☐
Are trees marked for removal Yes ☐ No ☐ Per the Geotechnical Report describe the method of dealing with tree excavations and organic material _____
Has the geotechnical criteria been fulfilled Yes ☐ No ☐ If no what should be done _____

DEMOLITION AND SITE CLEARANCE
Have significant structures been removed from the site Yes ☐ No ☐ Describe_____
Did these structures have foundations or piers Yes ☐ No ☐ Were they removed Yes ☐ No ☐
Do the following utilities pre-exist: Plumbing lines ☐ Gas lines ☐ Sewer lines ☐ Electrical communication lines ☐ Site drainage lines ☐ Describe existing utilities _____
Is there evidence of previous drainage ditches Yes ☐ No ☐ Filled in ponds or low spots Yes ☐ No ☐ Other areas which have been altered by added fill or excavation Yes ☐ No ☐ Describe_____

NATURAL DRAINAGE Where does the site drain to_____
Will alterations to the site disturb the natural drainage Yes ☐ No ☐ Describe_____
Can natural drainage be maintained during construction Yes ☐ No ☐ Describe_____
Does the site drainage overflow onto the adjacent property Yes ☐ No ☐ Describe_____
Does the surrounding property drain onto the site Yes ☐ No ☐ Describe_____

CONTROLLED DRAINAGE Where will the site drain to _____
Will the drainage be FHA TYPE A ☐ or TYPE B ☐ What municipality controls the drainage_____
Is there a drainage plan relative to the site if so describe Yes ☐ No ☐ _____ If no will there be a plan Yes ☐ No ☐
Is the site in the flood plain Yes ☐ No ☐ Describe_____
Can positive drainage be maintained thru the construction process Yes ☐ No ☐ Describe_____
Can storm water run off be properly managed Yes ☐ No ☐ What provisions have been made for proper control _____
_____

SURVEY
Does a survey of the site exist Yes ☐ No ☐ Date _____ Surveyor _____ County Number _____
Does a survey of the site exist Yes ☐ No ☐ Date _____ Surveyor _____ County Number _____
Legal Description _____ Easements noted Yes ☐ No ☐ Building set backs Yes ☐ No ☐
Are the iron rods flagged Yes ☐ No ☐ Have conditions on the site changed since the survey Yes ☐ No ☐
Explain changes _____
Is the plot plan on site Yes ☐ No ☐ Will the final floor height afford positive drainage around the house Yes ☐ No ☐
What is the proposed elevation for the slab _____ How is it determined_____

SKETCH

☐ *Attach a sketch of the site showing the placement of the house, the site drainage patterns and the location of the existing trees*

CLIENT_____ **QUALITY CONTROL COMPANY**_____

QC Checklist #9 – POST-CONSTRUCTION SITE REVIEW

Builder_____ Subdivision_____ Date_____
Site Address_____ Lot_____ Blk_____ Sec_____ Plan site specific Yes ☐ No ☐
Architectural Plan # _____ Date_____ Architect/Designer Phone Number_____
Site Survey_____ Date_____ Surveyor Phone Number_____
Geotechnical Report #_____ Date_____ Geotechnical Engineer Phone Number_____
Foundation Plan #_____ Date_____ Design Engineer Phone Number_____
Superintendent_____ Superintendent Phone Number _____
Plans provided at site Yes ☐ No ☐ Permit #_____

Check (✓) If Items Comply With The Plans
(X) If Items Do Not Comply With The Plans

SITE DESCRIPTION:
ADDRESS Does the site have an address or legal only Yes ☐ No ☐ Is it posted onsite Yes ☐ No ☐ Where_____
GOVERNING AUTHORITY Municipality _____
SUBDIVISION LOT Center lot ☐ Cul de sac ☐ Corner lot ☐ Zero lot line ☐ Other ☐
ACREAGE LOT Describe size _____
LOT USAGE Single Family Residence ☐ Townhouse ☐ Multi-Family ☐ Other ☐ _____
UTILITIES Electricity ☐ Water ☐ Gas ☐ Sewer : Municipal ☐ Septic ☐
FENCING Type _____ Will it be removed or altered _____
LANDSCAPE FILL: Was fill necessary to fine grade the yard Yes ☐ No ☐ Average Height_____
Type of fill: Native Soil ☐ Select Structural ☐ Bank Sand ☐ Bull Rock ☐ Other _____
For sloping lots does the fill extend beyond the house footprint for min. of 5'-0" Yes ☐ No ☐
Is the grading flatter than a 3 to 1 ratio, horizontal to vertical Yes ☐ No ☐
LANDSCAPING: Is the landscape plan completed Yes ☐ No ☐ If no describe what remains_____
Do the flower beds drain Yes ☐ No ☐ If no describe_____
Is an irrigation system installed Yes ☐ No ☐ If yes has it been leak tested Yes ☐ No ☐
Is the yard sodded Yes ☐ No ☐ Describe the areas that are not sodded_____
Are gravel borders installed around the foundation Yes ☐ No ☐ Does the gravel have a impermeable liner Yes ☐ No ☐
Are they installed as part of a functional French Drain system with a discharge away from the foundation Yes ☐ No ☐
POOLS: Is there a pool Yes ☐ No ☐ Describe_____
Is the pool deck drainage system designed to divert and discharge water away from the foundation Yes ☐ No ☐
If no describe the problem_____
What is the distance of the pool from the foundation _____ feet Describe_____
TREES ON SITE: Do trees presently exist on site Yes ☐ No ☐ Describe_____
Do trees exist within twenty fee of the foundation Yes ☐ No ☐ Describe_____
TREE SURVEY FOR TREES WITHIN 30 FEET OF FOUNDATION:

Location	Species	Trunk Diameter	Estimated Height

Describe the general health of the trees _____

SURFACE DRAINAGE: Where does the site drain to_____
Have alterations to the site changed the natural drainage Yes ☐ No ☐ Describe_____
Does the site drainage overflow onto the adjacent property Yes ☐ No ☐ Describe_____
Does the surrounding property drain onto the site Yes ☐ No ☐ Describe_____
CONTROLLED DRAINAGE: Where does the drainage system discharge_____ What governing authority mandates the requirements for the drainage _____ Is there a drainage plan relative to the site Yes ☐ No ☐ Describe _____
Is the site in the flood plain Yes ☐ No ☐ Unknown ☐ What is the source of this information _____
Is there evidence that positive drainage was not maintained through the construction process Yes ☐ No ☐ Unknown ☐
Is there evidence of drainage provisions for storm water run off to be properly managed Yes ☐ No ☐ Explain_____
Does the house have gutters Yes ☐ No ☐ Describe_____
Do the gutters divert water a minimum of 5 ft. away from the slab Yes ☐ No ☐ Are splash blocks in place Yes ☐ No ☐
Where does the A/C overflow drain_____ Is valley run off adequately dispersed Yes ☐ No ☐
Other impediments to effective drainage _____

FINAL SURVEY:
Have conditions relative to the site survey changed Yes ☐ No ☐ Easements ☐ Aerial Easements ☐ Setbacks ☐ Other ☐
What conditions at the site have changed since the form survey Flatwork ☐ Fences ☐ Pool ☐ Other changes _____
Are the iron rods flagged and rods clearly marked for the owner Yes ☐ No ☐
Does the final survey show elevations of the yard and the directions of the slope away from the slab Yes ☐ No ☐
Is the slope from the slab least 6 inches and 10 feet Yes ☐ No ☐ List problem areas_____
Does the final survey show elevation of the top of slab relative to mean sea level Yes ☐ No ☐
Has an elevation survey of the slab been completed Yes ☐ No ☐ As per TRCC recommendations Yes ☐ No ☐
Does maximum differential elevation measurements of the slab exceed 1 ½" Yes ☐ No ☐ Describe_____
Is there minimum slab exposure of 6" around perimeter Yes ☐ No ☐

SKETCH

☐ *Attach a sketch of the site showing the placement of the house, the site drainage patterns and the location of the existing trees*