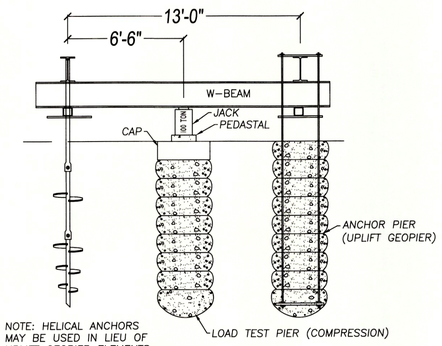
GEOPIER® ELEMENT FOUNDATION CONSTRUCTION NOTES:

1. GEOPIER FOUNDATION SUPPORT IS AS DESIGNED BY GEOPIER FOUNDATION COMPANY, INC., DAVIDSON, NORTH CAROLINA (DESIGNER).
2. THESE DESIGN DRAWINGS ARE PREPARED BY THE DESIGNER FOR US IN GEOPIER CONSTRUCTION. THE GEOPIER SYSTEM SHALL BE INSTALLED BY APPROVED INSTALLERS LICENSED BY GEOPIER FOUNDATION COMPANY. UNAUTHORIZED USE OF THESE DRAWINGS IS PROHIBITED.
3. GEOPIER ELEMENT LAYOUT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR (GC). GEOPIER ELEMENTS SHALL BE INSTALLED IN THE FIELD WITHIN 6–INCHES OF LOCATIONS SHOWN ON THESE PLANS.
4. GEOPIER ELEMENT DESIGN SHALL BE CONFIRMED BY A MODULUS TEST PERFORMED AT THE SITE. PLEASE REFER TO THE DESIGN SUBMITTAL FOR TEST LOCATION AND SPECIFICATIONS.
5. A QUALIFIED, FULL–TIME QUALITY CONTROL (QC) REPRESENTATIVE PROVIDED BY THE GEOPIER INSTALLER (INSTALLER) SHALL BE RESPONSIBLE FOR INSTALLATION OF THE GEOPIER ELEMENTS IN ACCORDANCE WITH THE DESIGN AND SHALL REPORT ALL GEOPIER FOUNDATION CONSTRUCTION ACTIVITIES TO THE DESIGNER. IF AUTHORIZED BY THE OWNER, THE QC REPRESENTATIVE SHALL COORDINATE QC ACTIVITIES WITH THE TESTING AGENCY HIRED BY THE OWNER. UNDER NO CIRCUMSTANCES SHALL THE TESTING AGENCY DIRECT GEOPIER INSTALLATION PROCEDURES.
6. GEOPIER ELEMENTS SHALL BE BASED ON THE FOLLOWING CRITERIA UNLESS OTHERWISE APPROVED IN WRITING BY THE DESIGNER:
   A. DEPTHS SHALL BE WITHIN 3 INCHES OR DEEPER THAN THE DEPTHS SHOWN ON THE PLANS UNLESS REFUSAL IS ENCOUNTERED ON FORMATIONAL MATERIAL.
   B. THE AVERAGE COMPACTED LIFT THICKNESS DURING EACH DAY'S PRODUCTION SHALL BE APPROXIMATELY 12 INCHES.
   C. THE DISPLACEMENT PIER QUALITY CONTROL MANUAL SHALL GOVERN THE MANDREL WITHDRAWAL PROCEDURES UNLESS OTHERWISE APPROVED BY THE DESIGNER.
   D. CROWD STABILIZATION TEST (CST) SHALL BE PERFORMED ON THE FIRST FIVE (5) INSTALLED PIERS (INCLUDING PRE–PRODUCTION PIERS) TO ESTABLISH ACCEPTANCE CRITERIA FOR THE MAXIMUM ALLOWABLE DEFLECTION OF THE MANDREL UNDER THE FULL–STATIC CROWD PRESSURE OF THE CLOSED–ENDED MANDREL. THE CST SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES:
      1. CST SHALL BE PERFORMED BY SHUTTING THE HAMMER ENERGY OFF AT THE TOP OF A COMPACTED LIFT IN THE BOTTOM ONE–HALF OF THE PIER.
      2. ONCE THE HAMMER ENERGY IS OFF AND THE MANDREL IS RESTING ON TOP OF THE LAST COMPACTED LIFT, STATIC CROWD PRESSURE SHALL BE APPLIED TO THE PIER FOR A PERIOD OF TEN SECONDS. THE CORRESPONDING DEFLECTION OF THE MANDREL IS THEN NOTED AND RECORDED.
      3. RESULTS OF THE INITIAL CSTS SHALL BE PROVIDED TO THE DESIGNER FOR REVIEW AND ESTABLISHMENT OF ACCEPTANCE CRITERIA AND FREQUENCY OF CSTS. THE FREQUENCY OF CSTS MAY VARY DEPENDING ON THE SOIL CONDITIONS; HOWEVER, CSTS SHALL BE PERFORMED ON NO LESS THAN 10% OF THE PRODUCTION PIERS OR AS APPROVED BY THE DESIGNER.
   E. GEOPIER ELEMENT AGGREGATE RELATIVE DENSITY SHALL BE RECORDED PERIODICALLY THROUGHOUT THE DAY. THE AVERAGE BLOW COUNTS OBTAINED UTILIZING A DYNAMIC CONE PENETROMETER (DCP) IN ACCORDANCE WITH ASTM STP–399, SHALL BE GREATER THAN 15 BLOWS FOR 1.75 INCHES OF PENETRATION (BPI). NO MORE THAN 10% OF DCP TESTS CONDUCTED ON EACH DAY SHALL BE BELOW 15 BPI. NOTE: USE OF DCP TESTS ARE NOT APPROPRIATE FOR OPEN GRADED AGGREGATE SUCH AS #57 STONE.
   F. GEOPIER ELEMENT AGGREGATE SHALL BE APPROVED BY THE DESIGNER AND THE SAME AGGREGATE USED IN A SUCCESSFUL MODULUS TEST UNLESS OTHERWISE APPROVED IN WRITING BY THE DESIGNER.
7. WHEN OBSTRUCTIONS ARE ENCOUNTERED THAT CANNOT BE REMOVED WITH CONVENTIONAL GEOPIER INSTALLATION EQUIPMENT, THE GC SHALL BE RESPONSIBLE FOR REMOVING THE OBSTRUCTIONS. IF THE GC DOES NOT DO SO IN A TIMELY MANNER THAT DOES NOT INTERRUPT GEOPIER PRODUCTION, THE INSTALLER MAY REMOVE OBSTRUCTIONS(S) AND SHALL BE REIMBURSED FOR COSTS INCURRED, INCLUDING LABOR, EQUIPMENT, AND MATERIALS. IN THE EVENT OBSTRUCTIONS ARE ENCOUNTERED BELOW THE DESIGNED BOTTOM OF FOOTING ELEVATION THE OBSTRUCTION SHALL BE REMOVED AS OUTLINED ABOVE. THE RESULTING EXCAVATION SHALL THEN BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE AREA SHALL BE TESTED BY THE OWNER'S TESTING AGENCY AND THE COMPACTION TEST RESULTS SHALL BE SUBMITTED TO THE INSTALLER AND THE DESIGNER.
8. GEOPIER ELEMENTS NOT MEETING THE REQUIREMENTS DEFINED IN THE DESIGN AND MODULUS TEST SHALL BE REINSTALLED TO MEET PROJECT REQUIREMENTS UNLESS OTHERWISE APPROVED IN WRITING BY THE DESIGNER.
9. FOOTING ELEVATIONS ARE THE RESPONSIBILITY OF THE GC AND SHALL BE REPORTED IN WRITING TO THE INSTALLER'S QC REPRESENTATIVE PRIOR TO INSTALLING GEOPIER ELEMENTS.
10. UTILITY LOCATIONS ARE THE RESPONSIBILITY OF THE GC. THE DESIGNER SHALL BE NOTIFIED OF ANY CONFLICTS WITH GEOPIER LOCATIONS SHOWN ON THE PLANS. NEW UTILITY EXCAVATIONS SHALL BE LIMITED TO THE ZONE DEPICTED ON DETAIL 1 OF THIS SHEET. IF EXCAVATIONS ARE PLANNED WITHIN THE GEOPIER "NO DIG" ZONE, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY TO DISCUSS EXCAVATION OPTIONS.
11. GEOPIER ELEMENTS ARE LOCATED AT THE INTERSECTION OF REFERENCE GRID LINES OR AT THE CENTERLINE OF STRIP FOOTINGS UNLESS DIMENSIONED OTHERWISE. PLEASE REFER TO THE "FOOTING DETAILS" ON THIS SHEET FOR SPECIFIC PIER LOCATIONS AND DIMENSIONS RELATIVE TO THE FOOTING.
12. AFTER COMPLETION OF GEOPIER INSTALLATIONS, THE GC IS RESPONSIBLE FOR PROTECTION OF THE WORK. THIS INCLUDES, BUT IS NOT LIMITED TO, PROPER SITE DRAINAGE TO PREVENT PONDING OF WATER ABOVE THE GEOPIER ELEMENTS AND APPROPRIATE CONTROL AND COORDINATION OF EARTHWORK AND ANY SUBSEQUENT DRILL ACTIVITIES SUCH AS ELEVATOR SHAFT CONSTRUCTION, TO PREVENT DAMAGE TO INSTALLED GEOPIER ELEMENTS.
13. ALL GEOPIER ELEMENTS HAVE A MINIMUM DIAMETER OF 20 INCHES AND A MINIMUM SHAFT LENGTH AS OUTLINED IN THE ATTACHED "GEOPIER SCHEDULE" IN THE DESIGN SUBMITTAL AS MEASURED FROM THE BOTTOM OF FOOTING UNLESS OTHERWISE NOTED ON THESE PLANS OR AGREED UPON BY THE DESIGNER AND THE OWNER'S REPRESENTATIVE.
14. THESE DRAWINGS ARE BASED ON THE STRUCTURAL DRAWINGS PROVIDED BY DAVIS PATRIKIOS CRISWELL ENGINEERS ON SHEET S–201 DATED 05/19/14.
15. THE "GEOPIER LOCATION PLAN AND FOOTING DETAILS" ARE FOR GEOPIER ELEMENT NUMBER, LOCATION, AND LAYOUT ONLY. FOOTING LOCATIONS, SIZES, AND ORIENTATION SHOWN ON THESE PLANS ARE FOR INFORMATION ONLY. PLEASE REFER TO THE STRUCTURAL PLANS FOR SPECIFIC FOUNDATION DIMENSIONS AND LOCATION. THE DESIGNER ACCEPTS NO RESPONSIBILITY FOR THE LOCATION OF FOOTINGS SHOWN ON THESE PLANS. THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY IF INFORMATION ON THESE PLANS CONFLICTS WITH STRUCTURAL OR ARCHITECTURAL DRAWINGS.
16. THE GEOPIER FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL INFORMATION PROVIDED IN THE SUBSURFACE EXPLORATION BY ARDAMAN AND ASSOCIATES, INC. IN THEIR EXPLORATION OF 12/20/13. GEOPIER FOUNDATION COMPANY, INC., HAS RELIED ON THIS INFORMATION AND WE HAVE NO REASON TO SUSPECT ANY OF THE INFORMATION IN THE REPORT IS IN ERROR. GEOPIER FOUNDATION COMPANY, INC. IS NOT RESPONSIBLE FOR ERRORS OR OMISSIONS IN THE REPORT THAT MAY AFFECT THE PARAMETER VALUES IN OUR DESIGN. IF THE SUBSURFACE OR SITE CONDITIONS DIFFER FROM THOSE UTILIZED IN THE DESIGN THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY.
17. GEOPIER FOUNDATION DESIGN LOADS ARE AS PROVIDED BY DAVIS PATRIKIOS CRISWELL ENGINEERS. IN THE EVENT THE STRUCTURAL LOADS VARY, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY.

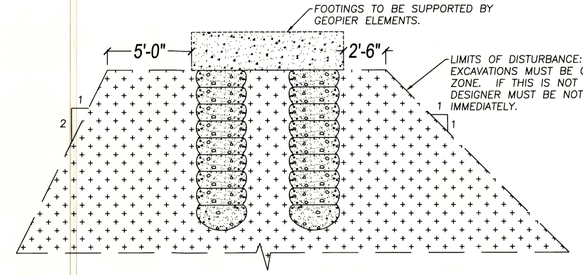
CONCRETE FOUNDATION CONSTRUCTION SUPPORTED BY GEOPIER® NOTES:

1. ALL EXCAVATIONS FOR FOUNDATIONS SUPPORTED BY GEOPIER ELEMENTS SHALL BE PREPARED IN THE FOLLOWING MANNER BY THE GC: OVEREXCAVATION BELOW THE BOTTOM OF FOUNDATION SHALL BE LIMITED TO THREE INCHES. THIS INCLUDES LIMITING THE TEETH OF EXCAVATORS FROM OVEREXCAVATION BEYOND THREE INCHES BELOW THE FOUNDATION ELEVATION.
2. FOUNDATION CONCRETE SHALL BE PLACED IMMEDIATELY FOLLOWING FOUNDATION EXCAVATION AND APPROVAL, PREFERABLY THE SAME DAY AS THE EXACAVATION. FOUNDATION CONCRETE SHALL BE PLACED ON THE SAME DAY IF THE FOUNDATION IS BEARING ON MOISTURE–SENSITIVE SOILS. IF SAME DAY PLACEMENT OF FOUNDATION CONCRETE IS NOT POSSIBLE, OPEN EXCAVATIONS SHALL BE PROTECTED FROM SURFACE WATER ACCUMULATION. A LEAN CONCRETE MUD–MAT MAY BE USED TO ACCOMPLISH THIS. OTHER METHODS MUST BE PRE–APPROVED BY THE DESIGNER.
3. PRIOR TO CONCRETE OR MUD MAT PLACEMENT, THE TOP OF THE EXCAVATED SOIL AND GEOPIER ELEMENTS SHALL BE COMPACTED WITH A STANDARD, HAND–OPERATED IMPACT COMPACTOR (I.E. JUMPING JACK COMPACTOR). COMPACTION SHALL BE PERFORMED OVER THE ENTIRE FOUNDATION SUBGRADE TO COMPACT ANY LOOSE SURFACE SOIL AND LOOSE SURFACE GEOPIER AGGREGATE.
4. WATER SHALL NOT BE ALLOWED TO ACCUMULATE IN THE FOUNDATION EXCAVATIONS PRIOR TO CONCRETE PLACEMENT OR ALLOWED TO ACCUMULATE OVER THE POURED FOUNDATION.
5. EXCAVATION AND SURFACE COMPACTION OF ALL FOUNDATION SUBGRADES SHALL BE THE RESPONSIBILITY OF THE GC.
6. THE TESTING AGENCY SHALL INSPECT EACH FOUNDATION AND APPROVE IT IN WRITING ON THE SAME DAY THAT THE CONCRETE OR MUD MAT IS PLACED IN THE FOUNDATION EXCAVATION. THE APPROVAL SHALL STATE THAT ALL FOUNDATION SUBGRADE, INCLUDING MATRIX SOILS AND GEOPIER TOPS, HAVE NOT BEEN OVEREXCAVATED MORE THAN THREE–INCHES BELOW THE BOTTOM OF THE FOUNDATION, HAVE BEEN KEPT FREE OF WATER ACCUMULATION, AND HAVE BEEN REASONABLY COMPACTED WITH A HAND–HELD MECHANICAL IMPACT COMPACTOR ON THE SAME DAY THAT THE CONCRETE WAS PLACED.
7. IN THE EVENT THAT FOUNDATION BOTTOM PREPARATIONS, AS DESCRIBED ABOVE, ARE NOT PERFORMED OR DOCUMENTED IN ACCORDANCE WITH THIS SECTION, ANY WRITTEN OR IMPLIED WARRANTY WITH RESPECT TO GEOPIER FOUNDATION PERFORMANCE CAN BY CONSIDERED VOID.

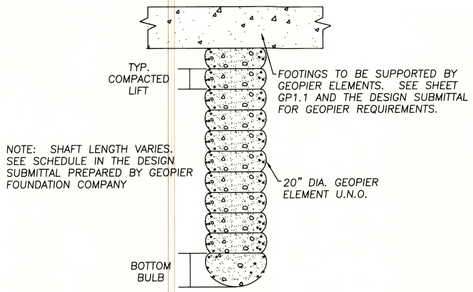


NOTE: HELICAL ANCHORS MAY BE USED IN LIEU OF UPLIFT GEOPIER ELEMENTS.

② MODULUS TEST SETUP
NOT TO SCALE

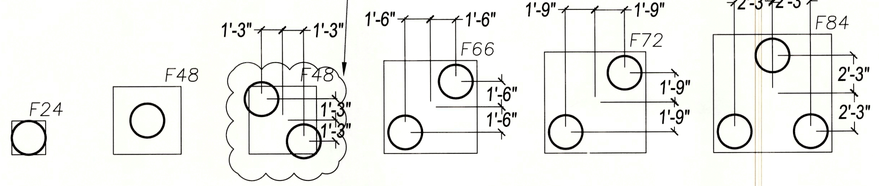


① ADJACENT EXCAVATION DETAIL
NOT TO SCALE



③ TYPICAL GEOPIER® ELEMENT
NOT TO SCALE

FOOTING SHALL BE RESIZED TO 5'x5' TO ACCOMODATE GEOPIER MINIMUM SPACING REQUIREMENTS



④ FOOTING DETAILS
NOT TO SCALE

SHOP DRAWING REVIEW
ENGINEERS REVIEW RESPONSE REQUIRED OF CONTRACTOR
No Exceptions Taken Resubmit
Rejected Returned Without Review
Note Markings Other
Comments Attached
Review is for general conformance with the design concept and Markings or comments shall not relieve the Contractor from compliance with the requirements of the plans and specifications. The Contractor is responsible for the dimensions and accuracy for confirming and correlating all quantities and dimensions, for selecting fabrication processes and techniques of construction, coordinating his work with that of all other trades and performing his work in a safe manner. Review does not indicate approval of any deviation from the plans and specifications unless such deviation has been brought to the attention of the Engineer in writing and he has given written approval of each such deviation.
DAVIS PATRIKIOS CRISWELL ENG.
G.P. 3/3/15

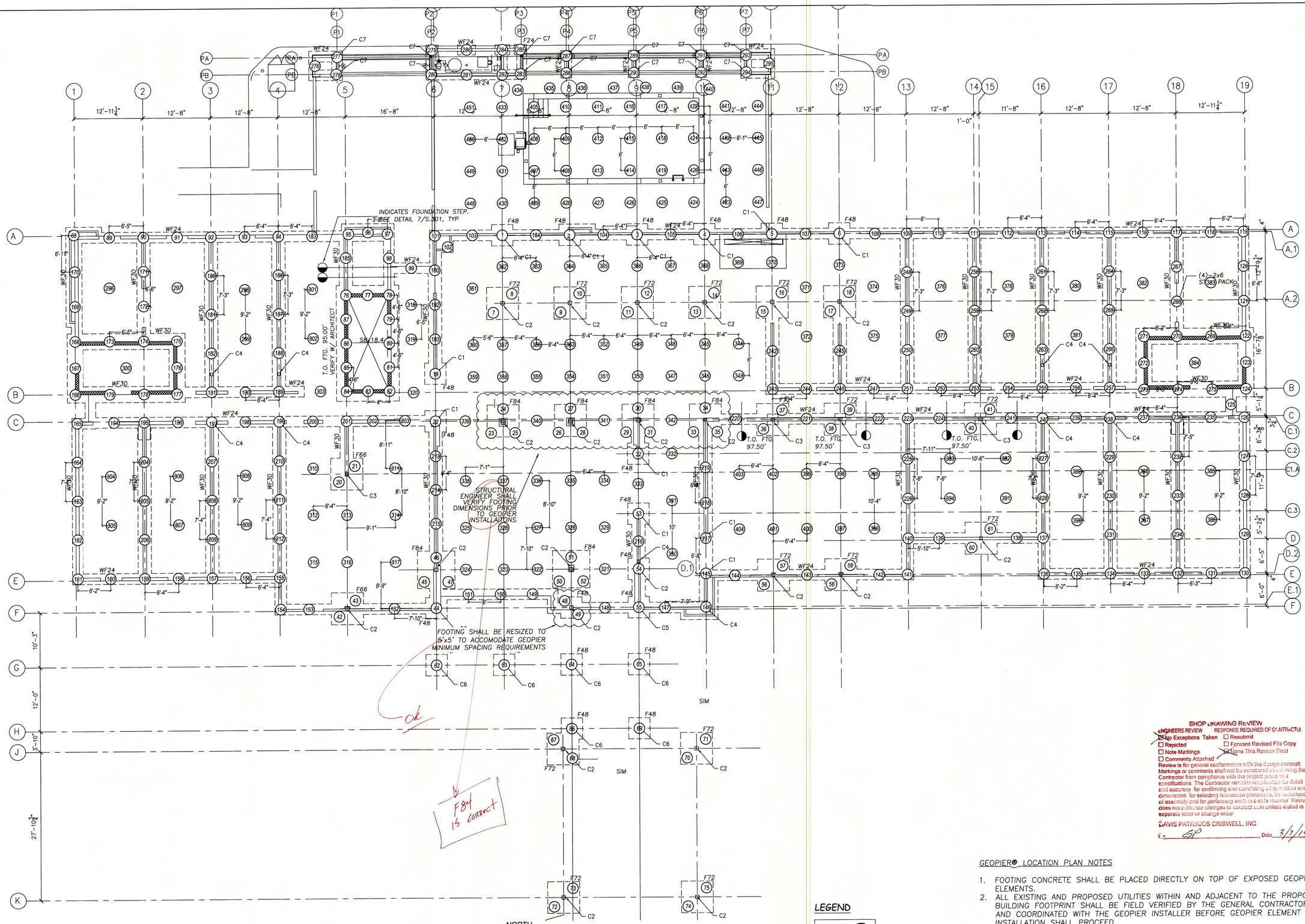
ZONE	REV.	DESCRIPTION	DATE	APPROVED
REVISIONS				

GEOPIER® NOTES AND DETAILS

HOME2 SUITES
WEST MONROE, LOUISIANA

GEOPIER®
GEOPIER FOUNDATION COMPANY
21123 WHITELOCK DRIVE
HOUSTON, TEXAS 77095
PH: 832/427-5241

PROJECT NUMBER PLA–224
DRAWN BY SMG
CHECK BY KJW
DATE 02/23/15
SHEET NUMBER GP0.1



1 GEOPIER LOCATION PLAN
1/8" = 1'-0"

SHOP DRAWING REVIEW
ENGINEERS REVIEW — RESPONSE REQUIRED OF CONTRACTOR
☒ No Exceptions Taken ☐ Resubmit
☐ Rejected ☐ Forward Revised File Copy
☐ Note Markings ☒ None This Review Final
☐ Comments Attached
Review is for general conformance with the design concept. Markings or comments shall not be construed as relieving the Contractor from compliance with the project plans and specifications. The Contractor remains responsible for detail and accuracy for confirming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly and for performing work in a safe manner. Review does not authorize changes to contract sum unless stated in separate letter or change order
DAVIS PATRIKIOS CRISWELL, INC
By: GP Date: 3/2/15

LEGEND
TYP. 20" GEOPIER ELEMENT
1 TYP. GEOPIER ELEMENT NUMBER

GEOPIER® LOCATION PLAN NOTES

1. FOOTING CONCRETE SHALL BE PLACED DIRECTLY ON TOP OF EXPOSED GEOPIER ELEMENTS.
2. ALL EXISTING AND PROPOSED UTILITIES WITHIN AND ADJACENT TO THE PROPOSED BUILDING FOOTPRINT SHALL BE FIELD VERIFIED BY THE GENERAL CONTRACTOR AND COORDINATED WITH THE GEOPIER INSTALLER BEFORE GEOPIER ELEMENT INSTALLATION SHALL PROCEED.
3. PLAN FOR GEOPIER LOCATION ONLY. PLEASE REFER TO DAVID PATRIKIOS CRISWELL ENGINEERS PLANS FOR FOOTING LAYOUT AND ORIENTATION.
4. GEOPIER ELEMENTS UNDER WALL FOOTINGS AND/OR MISCELLANEOUS FOUNDATION ELEMENTS SHALL BE LOCATED IN THE FIELD AS SHOWN, DIMENSIONED FROM CONTROL POINTS ESTABLISHED FROM STRUCTURAL AND/OR ARCHITECTURAL PLANS.
5. CONTROL JOINTS FOR FLOOR SLAB SHALL COINCIDE WITH AND INTERSECT AT GEOPIER LOCATIONS.

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

GEOPIER® LOCATION PLAN

HOME2 SUITES

WEST MONROE, LOUISIANA

GEOPIER®
GEOPIER FOUNDATION COMPANY
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PH: 832/427-5241

PROJECT NUMBER	PLA-224
DRAWN BY	SMG
CHECK BY	KJW
DATE	02/23/15
SHEET NUMBER	GP1.1