

DR. CLARENCE WELTI, P.E., P.C.

GEOTECHNICAL ENGINEERING

227 Williams Street · P.O. Box 397
Glastonbury, CT 06033-0397

(860) 633-4623 / FAX (860) 657-2514

June 29, 2015

Mr. David Langdon, Facilities Manager
Town of Newington
141 Cedar Street
Newington, CT 06111

**Re: Preliminary Geotechnical Study for Proposed Town Hall Building
131 Cedar Street, Newington, CT**

Dear John:

1.0 Herewith are the boring data pertaining to the above. Six borings were drilled to a maximum depth of 44 feet below the existing grades. Groundwater level observation wells were installed in bore holes B-2 and B-4. The boring locations are shown on the attached plan, which was provided by Kaestle Boos Associates. *The borings were drilled by Clarence Welti Associates, Inc. and sampling was conducted by this firm solely to obtain indications of subsurface conditions as part of a geotechnical exploration program. No services were performed to evaluate subsurface environmental conditions.*

2.0 The **Subject Project** may include (1) renovations to the existing Town Hall building or (2) construction of new Town Hall building, with up to three stories and a possible basement. It has been assumed that the ground level and basement floors would be maintained close to the existing building floor elevations. The existing building covers a footprint of about 90,000 sf. Based on GIS topographic mapping of Newington, there appears to be about 30 feet of topographic relief across the site (Elev. 88 to Elev. 58). The grades at the existing building drop from about Elev. 78 at the Mill Street entrance to about Elev. 60 outside the police department wing. The site abuts the Mill Brook to the west. The FEMA 100 and 500 year flood limits cross into the west end of the site. ***The building design, proposed site plan and topographic survey plans have not been determined.***

3.0 The **Geologic Origin** of the natural inorganic soils is from glacial lake deposits overlying glacial moraine deposits atop the bedrock. The lake deposits consist generally of stiff silt with trace fine sand and clay to 6 to 34 feet below grade. The moraine deposits consist generally of dense fine to medium sand and silt with little gravel. The moraine extended to auger refusal on probable bedrock at 12 to 44 feet below the existing grades. The bedrock is Shale or Sandstone.

3.1 The Soil/ Rock Cross Sections from the borings are generally as follows:

West Side of Building (see boring B-1):

Asphalt to 4"; atop 6" layer of Processed Traprock Base

FILL; fine to medium SAND, some Silt, little Gravel, trace Roots to 1.3 feet

FILL; fine to medium SAND and SILT, little Gravel to 6.5 feet, medium compact

Moraine; fine to coarse SAND and SILT, some Gravel to auger refusal on probable bedrock at 12 feet below grade, very dense

South and East Side of Building (see borings B-2 through B-6):

Topsoil to 3" to 4"; or Asphalt to 2" to 3" atop 6" to 21" layer of Processed Traprock Base

FILL; fine to fine to coarse SAND, some Silt, little Gravel, trace Bricks, Cinders and Concrete; or fine to coarse SAND, some Gravel, trace Silt to 2 to 11 feet, loose to medium compact

Locally (see boring B-2); SILT, little to some Clay, trace Organics to 8.5 feet, loose/soft

SILT, trace fine Sand and Clay to 15.5 to 34.5 feet, stiff/loose to medium compact

Moraine; fine to medium SAND and SILT, little Gravel to auger refusal on probable bedrock at 36 to 44 feet, dense to very dense

3.2 The Water Table was at 7 to 16 feet below grade at the completion of the borings. The variations in the readings are due in part to the changes of the ground surface elevation between borings. Water level readings taken at the observation wells on June 19, 2015 were as follows.

Well #	Ground Water Level, below existing grade
B-2	5.4'
B-4	14.1'

4.0 The Preliminary Criteria for Foundation Type and Loading are as follows:

1. The maximum total settlement shall not exceed 1" and the maximum differential settlement shall not exceed ½ the maximum settlement.
2. The Foundations and Structures must address the seismic section of the building code

3. The Slab at Grade floors must not settle differentially more than ½" in excess of the structure subsidence.

4.1 Regarding item 2 (above), the seismic soil profile site classification is “D”. For transfer of ground shear into the soil the ultimate friction factor is **0.60**.

5.0 The **Preliminary Foundation Type** will be with spread footings. The footing subgrades shall be placed on the natural inorganic soils, or on a controlled fill after the removal of any existing fills, existing structures and organic deposits. From the borings, the foundations over most of the building area would fall on a stratum of silt with trace fine sand and clay. It is possible foundations on the west side of the building mat fall on the compact moraine soils. It should be assumed that the soil subgrade will be saturated and sensitive to remolding beneath equipment. To address this condition there will be a requirement to place a minimum 12" layer of ¾" crushed stone on a geotextile beneath the footings on the natural soils and as an initial layer beneath controlled fills. Dependent on the depth of foundations and conditions at the time of construction there may also be a requirement for the placement of a 5" layer of concrete beneath the stone. Controlled fills shall conform to section 6.0 below and shall extend horizontally beyond the footings for a distance equal to at least the depth of fill beneath the footings.

5.1 The **Allowable Bearing Pressure** on the controlled fill or on the natural inorganic soils can be 3,000 psf.

5.2 The **Lateral Soil Loading** (static) on retaining walls that are part of the building shall be based on at-rest pressure using the coefficient cited in the table below. Lateral soil loading on retaining walls apart from the building can be designed with active pressure using the coefficient cite below. The backfill for the walls shall conform to the material specification of section 6.0 above. The ultimate sliding coefficient for concrete on crushed stone over the natural soil is **0.60**.

5.3 The **Frost Protection Depth** is 3.5 feet below finish grades in areas, which are exposed to weather.

5.4 Summary of Preliminary Foundation Design Parameters:

Parameter	Value
Allowable Bearing Pressure	3,000 psf
Soil Unit Weight (Backfill) *	125 pcf
Internal Friction Angle (Backfill) *	34°
At-Rest Pressure Coefficient, K_0	0.45
Active Pressure Coefficient, K_A (level backfill)	0.28

Ultimate Sliding Coefficient, concrete on crushed stone or controlled fill	0.60
Seismic Soil Profile Site Classification	D
Mapped MCE Spectral Response Acceleration for short period, S _s	0.240
Mapped MCE Spectral Response Acceleration for 1 second period, S ₁	0.064
Frost Protection Depth	3.5 feet

* Backfill material conforming to section 6.0 below

6.0 Regarding Controlled Fill, Backfill for Retaining Walls and Excavations at Columns and Walls, plus Slab at Grade Underlayment (to 4" below the slab bottom) the material shall conform to the following or be 3/8" crushed stone:

Percent Passing	Sieve Size
100	3.5"
50 - 100	3/4"
25 - 75	No.4

The fraction, passing the No.4 sieve shall have less than 10%, passing the No. 200 sieve.

All backfill and fill must be compacted to at least 95% of modified optimum density.

The on-site excavated soils will not conform to the above gradation.

6.1 All existing fills, organic deposits and topsoil shall be removed beneath the floor slabs and replaced with controlled fill conforming to section 6.0 above. There shall be a minimum 16" of controlled fill beneath **slab on grade the floors** placed to within 4" of the slab bottom. The final 4" beneath the slab shall be with 3/8" crushed stone. A vapor retarder is required beneath the slab at grade floors.

6.1.1 Where floor slabs are below finished exterior grades there shall be (1) perimeter foundation drains, (2) a minimum 10" layer of 3/8" crushed stone beneath the floor slabs, (3) interior underdrains placed about 10 feet inside exterior wall and interior grade separation walls, (4) water stops and the footing/wall and floor wall interfaces and (5) water proofing beneath the floor and on the walls.

7.0 Regarding **Earthwork**, excavations will fall in OSHA Class C. This will require sloping excavations, which are unshored and exceed 5 feet in height, to be cut back to slopes less than 34° from the horizontal.

7.1 The natural soils will be highly sensitive to remolding under equipment. Excavations into the natural silt sub grades should be made with smooth bucket to minimize disturbance to those soils. Large areas of exposed soils without the crushed stone treatment should (where possible) be avoided. ***The on-site excavated soils are not suitable for use as controlled fill beneath the buildings, as backfill for walls, or for support of pavements.***

7.2 Long Term Slopes in earth cuts and fills shall be 2:1, or flatter. Cut slopes will have requirements for under drains and stone wedges at the base of such slopes.

8.0 Regarding **New Pavements**, natural soils and the existing fills at about 1+ feet are frost susceptible. The initial requirement will include at least 12" thick layer of subbase material, placed beneath the pavement sections. The subbase shall conform to section 6.0 above. Wet sub grades in the silt will require an initial 12"+ layer of 3/8" crushed stone before placing the sand and gravel. The tentative pavement sections above the subbase are as follows:

For passenger car parking: 3.0" bituminous concrete (two lifts) on 7" of processed stone base

Entrance Drives and truck access areas: 4.5" bituminous concrete (two lifts) on 9" of processed stone base

Concrete pavement shall be placed atop 9" layer of processed stone base

9.0 This report has been prepared for specific application to the subject project in accordance with generally accepted soil and foundation engineering practices. No other warranty, express or implied, is made. In the event that any changes in the nature, design and location of structures are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

The analyses and recommendations submitted in this report are based in part upon data obtained from referenced explorations. The extent of variations between explorations may not become evident until construction. If variations then appear evident, it will be necessary to re-evaluate the recommendations of this report.

Dr. Clarence Welti, P.E., P.C., should perform a general review of the final design and specifications in order that geotechnical design recommendations may be properly interpreted and implemented as they were intended. ***This report is preliminary since a building design and site grading have not been determined. A final report will be required to address specific areas of concern, when the information is available.***

If you have any questions, please call me.

Very truly yours,



Max Welti, P.E.



Clarence Welti Ph.D., P. E.
President, Dr. Clarence Welti P.E., P.C.

c: John Chipko, P.E.
Kaestle Boos Associates

APPENDIX

BORING LOCATION PLAN

+

TEST BORING LOGS

ISSUE DATE	
DATE	DESCRIPTION
05/12/15	ISSUED FOR GEOTECH PROPOSAL

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS,
AND GENERAL NOTES SEE SHEET R0.01



PROPOSED NEWINGTON TOWN HALL CONCEPT

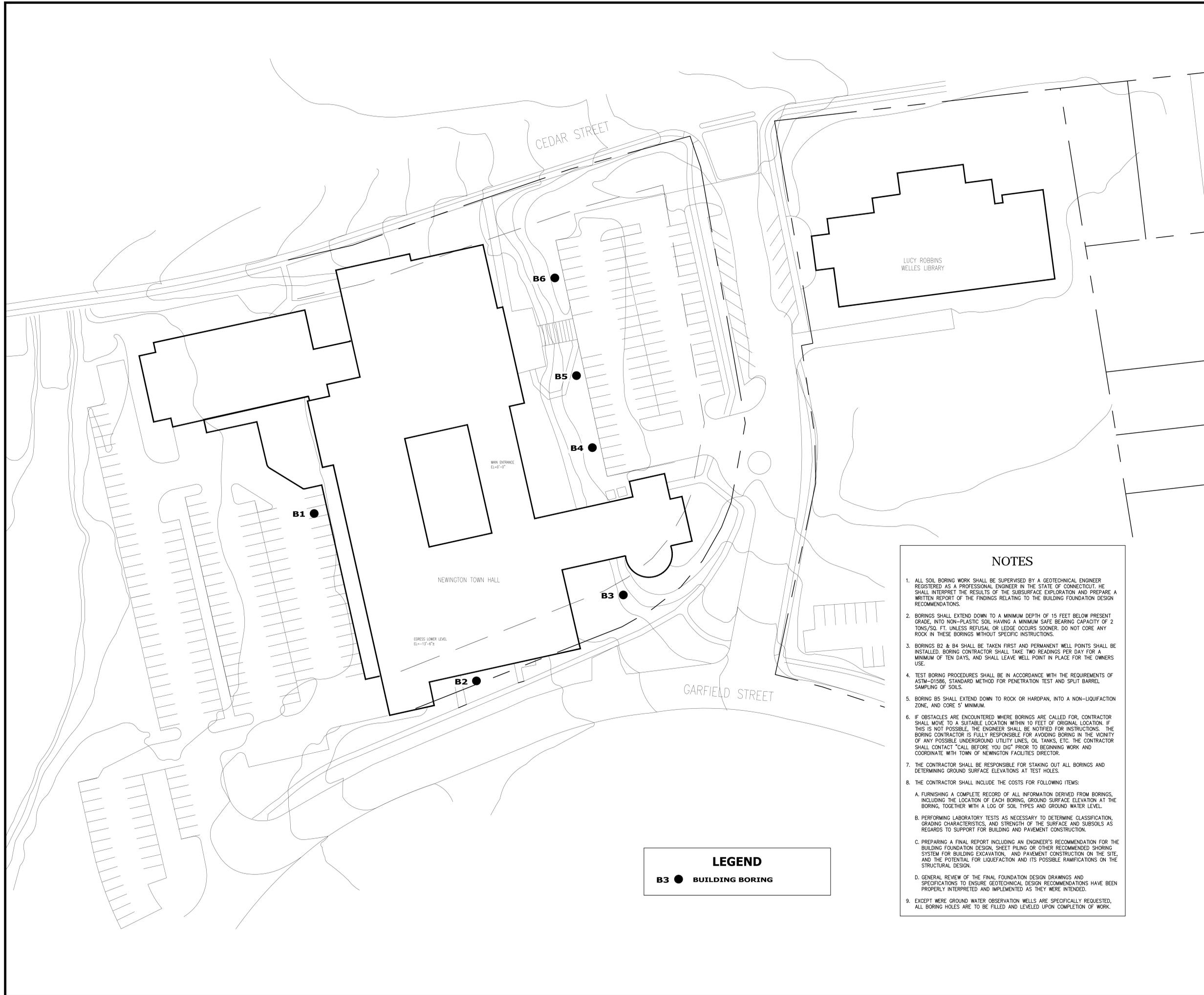
131 CEDAR STREET
NEWINGTON, CT
06111

PROJECT NO.: 14052.00

DRAWN BY: BSW

SITE BORING PLAN

DRAWING NO.:
BP1.01



LEGEND
B3 ● BUILDING BORING

- ### NOTES
- ALL SOIL BORING WORK SHALL BE SUPERVISED BY A GEOTECHNICAL ENGINEER REGISTERED AS A PROFESSIONAL ENGINEER IN THE STATE OF CONNECTICUT. HE SHALL INTERPRET THE RESULTS OF THE SUBSURFACE EXPLORATION AND PREPARE A WRITTEN REPORT OF THE FINDINGS RELATING TO THE BUILDING FOUNDATION DESIGN RECOMMENDATIONS.
 - BORINGS SHALL EXTEND DOWN TO A MINIMUM DEPTH OF 15 FEET BELOW PRESENT GRADE, INTO NON-PLASTIC SOIL HAVING A MINIMUM SAFE BEARING CAPACITY OF 2 TONS/SQ. FT. UNLESS REFUSAL OR LEDGE OCCURS SOONER. DO NOT CORE ANY ROCK IN THESE BORINGS WITHOUT SPECIFIC INSTRUCTIONS.
 - BORINGS B2 & B4 SHALL BE TAKEN FIRST AND PERMANENT WELL POINTS SHALL BE INSTALLED. BORING CONTRACTOR SHALL TAKE TWO READINGS PER DAY FOR A MINIMUM OF TEN DAYS, AND SHALL LEAVE WELL POINT IN PLACE FOR THE OWNERS USE.
 - TEST BORING PROCEDURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM-D1586, STANDARD METHOD FOR PENETRATION TEST AND SPLIT BARREL SAMPLING OF SOILS.
 - BORING B5 SHALL EXTEND DOWN TO ROCK OR HARDPAN, INTO A NON-LIQUIFACTION ZONE, AND CORE 5' MINIMUM.
 - IF OBSTACLES ARE ENCOUNTERED WHERE BORINGS ARE CALLED FOR, CONTRACTOR SHALL MOVE TO A SUITABLE LOCATION WITHIN 10 FEET OF ORIGINAL LOCATION. IF THIS IS NOT POSSIBLE, THE ENGINEER SHALL BE NOTIFIED FOR INSTRUCTIONS. THE BORING CONTRACTOR IS FULLY RESPONSIBLE FOR AVOIDING BORING IN THE VICINITY OF ANY POSSIBLE UNDERGROUND UTILITY LINES, OIL TANKS, ETC. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" PRIOR TO BEGINNING WORK AND COORDINATE WITH TOWN OF NEWINGTON FACILITIES DIRECTOR.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING OUT ALL BORINGS AND DETERMINING GROUND SURFACE ELEVATIONS AT TEST HOLES.
 - THE CONTRACTOR SHALL INCLUDE THE COSTS FOR FOLLOWING ITEMS:
 - FURNISHING A COMPLETE RECORD OF ALL INFORMATION DERIVED FROM BORINGS, INCLUDING THE LOCATION OF EACH BORING, GROUND SURFACE ELEVATION AT THE BORING, TOGETHER WITH A LOG OF SOIL TYPES AND GROUND WATER LEVEL.
 - PERFORMING LABORATORY TESTS AS NECESSARY TO DETERMINE CLASSIFICATION, GRADING CHARACTERISTICS, AND STRENGTH OF THE SURFACE AND SUBSOILS AS REGARDS TO SUPPORT FOR BUILDING AND PAVEMENT CONSTRUCTION.
 - PREPARING A FINAL REPORT INCLUDING AN ENGINEER'S RECOMMENDATION FOR THE BUILDING FOUNDATION DESIGN, SHEET PILING OR OTHER RECOMMENDED SHORING SYSTEM FOR BUILDING EXCAVATION, AND PAVEMENT CONSTRUCTION ON THE SITE, AND THE POTENTIAL FOR LIQUEFACTION AND ITS POSSIBLE RAMIFICATIONS ON THE STRUCTURAL DESIGN.
 - GENERAL REVIEW OF THE FINAL FOUNDATION DESIGN DRAWINGS AND SPECIFICATIONS TO ENSURE GEOTECHNICAL DESIGN RECOMMENDATIONS HAVE BEEN PROPERLY INTERPRETED AND IMPLEMENTED AS THEY WERE INTENDED.
 - EXCEPT WHERE GROUND WATER OBSERVATION WELLS ARE SPECIFICALLY REQUESTED, ALL BORING HOLES ARE TO BE FILLED AND LEVELED UPON COMPLETION OF WORK.

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT TOWN OF NEWINGTON		PROJECT NAME TOWN HALL	
						LOCATION 131 CEDAR STREET, NEWINGTON, CT.	
	AUGER	CASING	SAMPLER	CORE BAR.	OFFSET	SURFACE ELEV.	HOLE NO. B-1
TYPE	HSA		SS		LINE & STA.	GROUND WATER OBSERVATIONS	
SIZE I.D.	3.75"		1.375"		N. COORDINATE	AT 7.0 FT. AFTER 0 HOURS	START DATE 6/9/15
HAMMER WT.			140 lbs		E. COORDINATE	AT FT. AFTER HOURS	FINISH DATE 6/9/15
HAMMER FALL			30"				
DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.	
	NO.	BLOWS/6"	DEPTH				
0					ASPHALT	0.30	
	1	7-5-5-5	1.00'-3.00'		GREY FINE-CRS. SAND AND GRAVEL, TRACE SILT	0.80	
					RED/BR. FINE-MED. SAND, SOME SILT, LITTLE GRAVEL, TRACE ROOTS - FILL	1.3	
	2	6-6-13-7	3.00'-5.00'		RED/BR. FINE-MED. SAND AND SILT, LITTLE GRAVEL - FILL		
5							
	3	4-5-5-13	5.00'-7.00'				
					RED/BR. FINE-CRS. SAND AND SILT, SOME GRAVEL	6.5	
10							
	4	33-24-25	10.00'-11.50'				
					AUGER REFUSAL @ 12.0'	12.0	
15							
20							
25							
30							
35							
LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%						DRILLER: J. BREWER INSPECTOR:	
						SHEET 1 OF 1	HOLE NO. B-1

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT TOWN OF NEWINGTON			PROJECT NAME		
							TOWN HALL		
						LOCATION			
						131 CEDAR STREET, NEWINGTON, CT.			
	AUGER	CASING	SAMPLER	CORE BAR.	OFFSET	SURFACE ELEV.		HOLE NO. B-2	
TYPE	HSA		SS		LINE & STA.	GROUND WATER OBSERVATIONS		START DATE 6/8/15	
SIZE I.D.	3.75"		1.375"		N. COORDINATE	AT none FT. AFTER 0 HOURS			
HAMMER WT.			140 lbs		E. COORDINATE	AT FT. AFTER HOURS	FINISH DATE 6/8/15		
HAMMER FALL			30"						
DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.			
	NO.	BLOWS/6"	DEPTH						
0	1	3-4-5-4	0.00'-2.00'		TOPSOIL	0.25			
					RED/BR. FINE-CRS. SAND, SOME SILT & GRAVEL, TRACE BRICK - FILL				
	2	2-3-4-1	2.00'-4.00'						
5	3	1-0-0-2	4.00'-6.00'		DARK BR. SILT, LITTLE CLAY	4.0			
	4	2-3-7-10	6.00'-8.00'		DARK BR. SILT, SOME CLAY	7.0			
					RED/BR. SILT, TRACE FINE SAND	8.5			
10	5	3-4-5	10.00'-11.50'						
15	6	6-12-12	15.00'-16.50'		RED/BR. FINE-CRS. SAND AND SILT, LITTLE GRAVEL	15.5			
20	7	12-24-18	20.00'-21.50'						
25	8	60	25.00'-25.25'		BOTTOM OF BORING @ 25.3'	25.3			
					NOTE: SOILS WERE SATURATED BELOW 6 FEET				
					2" DIA. WELL @ 25.0'				
					10.0' OF SCREEN (.010 SLOT)				
					15.0' OF RISER				
					0' OF STICKUP				
					SAND FROM 25.0' TO 13.0'				
35					BENTONITE SEAL FROM 13.0' TO 12.0'				
LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%						DRILLER: J. BREWER			
						INSPECTOR:			
						SHEET 1 OF 2	HOLE NO. B-2		

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033	CLIENT	PROJECT NAME
	TOWN OF NEWINGTON	TOWN HALL LOCATION 131 CEDAR STREET, NEWINGTON, CT.

DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.
	NO.	BLOWS/6"	DEPTH			
					BACKFILL FROM 12.0' TO 0.5'	
					CONCRETE FROM 0.5' TO SURFACE	
					7" DIA. ROADWAY BOX COVER	
40						
45						
50						
55						
60						
65						
70						
75						

LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%	DRILLER: J. BREWER
	INSPECTOR:
SHEET 2 OF 2	HOLE NO. B-2

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT TOWN OF NEWINGTON			PROJECT NAME		
							TOWN HALL		
						LOCATION			
						131 CEDAR STREET, NEWINGTON, CT.			
	AUGER	CASING	SAMPLER	CORE BAR.	OFFSET	SURFACE ELEV.		HOLE NO. B-4	
TYPE	HSA		SS		LINE & STA.				
SIZE I.D.	3.75"		1.375"		N. COORDINATE	GROUND WATER OBSERVATIONS		START DATE 6/9/15	
HAMMER WT.			140 lbs		E. COORDINATE	AT 16.4 FT. AFTER 0 HOURS			
HAMMER FALL			30"			AT FT. AFTER HOURS		FINISH DATE 6/9/15	
DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS			ELEV.	
	NO.	BLOWS/6"	DEPTH						
0	1	3-4-2-5	0.00'-2.00'		TOPSOIL 0.30				
					RED/BR. FINE SAND, SOME SILT, TRACE GRAVEL, CINDERS & CONCRETE - FILL				
	2	4-7-6-4	2.00'-4.00'						
5	3	4-7-4-6	4.00'-6.00'						
10	4	1-31-12	10.00'-11.50'		RED/BR. SILT, TRACE FINE SAND & CLAY 11.0				
15	5	5-6-7	15.00'-16.50'						
20	6	4-5-6	20.00'-21.50'						
25	7	10-12-13	25.00'-26.50'						
30	8	2-2-2	30.00'-31.50'						
35					RED/BR. FINE-MED. SAND, SOME SILT & GRAVEL 33.5				

LEGEND: COL. A:
SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON
PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%

DRILLER: J. BREWER
 INSPECTOR:

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033	CLIENT	PROJECT NAME
	TOWN OF NEWINGTON	TOWN HALL LOCATION 131 CEDAR STREET, NEWINGTON, CT.

DEPTH	SAMPLE			A		STRATUM DESCRIPTION + REMARKS	ELEV.
	NO.	BLOWS/6"	DEPTH				
	9	24-38-32	35.00'-36.50'				
40						AUGER RERUSAL @ 39.0' 2" DIA. WELL @ 38.0' 10.0' OF SCREEN (.010 SLOT) 28.0' OF RISER 0' OF STICKUP SAND FROM 38.0' TO 26.0' BENTONITE SEAL FROM 26.0' TO 25.0' BACKFILL FROM 25.0' TO 0.5' CONCRETE FROM 0.5' TO SURFACE 7" DIA. ROADWAY BOX COVER	39.0
45							
50							
55							
60							
65							
70							
75							

LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%	DRILLER: J. BREWER INSPECTOR: <hr/> SHEET 2 OF 2 HOLE NO. B-4
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CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033				CLIENT TOWN OF NEWINGTON			PROJECT NAME TOWN HALL		
							LOCATION 131 CEDAR STREET, NEWINGTON, CT.		
	AUGER	CASING	SAMPLER	CORE BAR.	OFFSET	SURFACE ELEV.		HOLE NO. B-5	
TYPE	HSA		SS		LINE & STA.	GROUND WATER OBSERVATIONS		START DATE 6/8/15	
SIZE I.D.	3.75"		1.375"		N. COORDINATE	AT 16.0 FT. AFTER 0 HOURS	FINISH DATE 6/8/15		
HAMMER WT.			140 lbs		E. COORDINATE	AT FT. AFTER HOURS			
HAMMER FALL			30"						
DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.			
	NO.	BLOWS/6"	DEPTH						
0					ASPHALT	0.25			
	1	9-7-7-5	1.00'-3.00'		GREY FINE-CRS.SAND AND GRAVEL, TRACE SILT - FILL				
			2.00'-2.00'		GREY FINE-CRS. SAND, SOME GRAVEL, TRACE SILT - FILL	2.0			
	2	5-4-7-7	3.00'-5.00'						
5	3	5-5-5-5	5.00'-7.00'		RED/BR. SILT, TRACE FINE SAND	6.0			
10	4	5-5-6	10.00'-11.50'						
15	5	8-6-7	15.00'-16.50'						
20	6	6-5-10	20.00'-21.50'						
25	7	10-12-14	25.00'-26.50'						
30	8	1-3-5	30.00'-31.50'						
35						34.5			
LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%						DRILLER: J. BREWER INSPECTOR:			
						SHEET 1 OF 2		HOLE NO. B-5	

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033	CLIENT	PROJECT NAME
	TOWN OF NEWINGTON	TOWN HALL
		LOCATION
		131 CEDAR STREET, NEWINGTON, CT.

DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.
	NO.	BLOWS/6"	DEPTH			
	9	20-27-24	35.00'-36.50'		RED/BR. FINE-MED. SAND AND SILT, LITTLE GRAVEL	
40	10	35-37-40	40.00'-41.50'			
45					AUGER REFUSAL @ 44.0'	44.0
					NOTE: SOILS WERE SATURATED BELOW 10 FEET	
50						
55						
60						
65						
70						
75						

LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%	DRILLER: J. BREWER
	INSPECTOR:
SHEET 2 OF 2	HOLE NO. B-5

CLARENCE WELTI ASSOC., INC. P.O. BOX 397 GLASTONBURY, CONN 06033	CLIENT	PROJECT NAME
	TOWN OF NEWINGTON	TOWN HALL
		LOCATION
		131 CEDAR STREET, NEWINGTON, CT.

DEPTH	SAMPLE			A	STRATUM DESCRIPTION + REMARKS	ELEV.
	NO.	BLOWS/6"	DEPTH			
	9	31-60	35.00'-36.00'		AUGER REFUSAL @ 36.0'	36.0
40						
45						
50						
55						
60						
65						
70						
75						

LEGEND: COL. A: SAMPLE TYPE: D=DRY A=AUGER C=CORE U=UNDISTURBED PISTON S=SPLIT SPOON PROPORTIONS USED: TRACE=0-10% LITTLE=10-20% SOME=20-35% AND=35-50%	DRILLER: J. BREWER
	INSPECTOR:
SHEET 2 OF 2	HOLE NO. B-6