ADDENDUM 002

Date: August 14, 2020
Project: Homestead Valley Community Center Pool Renovation Project

NOTICE TO ALL BIDDERS AND PLANHOLDERS

The Contract Documents for the above-referenced Project are modified as set forth in this Addendum 002. The original Contract Documents remain in full force and effect, except as modified by this Addendum, which is hereby made part of the Contract Documents. Bidder shall take this Addendum into consideration when preparing and submitting a bid.

The following additions, revisions, alterations, deletions and/or clarifications shall be part of the Base Bid for the above stated project as much as if they were originally included in the Contract Documents.

1.0 - SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>Section No.</th>
<th>Change</th>
<th>Description of Change</th>
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<tr>
<td>1</td>
<td>073110</td>
<td>Addition</td>
<td>Previous specification did not contain section for roof shingles. This section to be added.</td>
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<td>2</td>
<td>096720</td>
<td>Addition</td>
<td>Flooring and cove bases in all wet rooms is now Epoxy. Corresponding specification section to be added.</td>
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<tr>
<td>4</td>
<td>Appendix</td>
<td>Addition</td>
<td>Geotechnical Report: Miller Pacific March 27, 2012</td>
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</table>

2.0 - DRAWINGS

NEW and REVISED SHEETS attached to this addendum: G0.1, A0.2, A3.0, A4.0, A8.1, C3, E5.1.

<table>
<thead>
<tr>
<th>Item</th>
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<tr>
<td>1</td>
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<td>Addition</td>
<td><em>Per attached revised sheet:</em> Green Building checklist added</td>
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<td></td>
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<td><strong>Per attached revised sheet:</strong></td>
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<td>Addition</td>
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<td>3</td>
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<td>Revision</td>
<td><strong>Per attached revised sheet:</strong></td>
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<tr>
<td>4</td>
<td>A3.0</td>
<td>Revision</td>
<td><strong>Per attached revised sheet:</strong></td>
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<td>5</td>
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<td>Revision</td>
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<td>6</td>
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<td>12</td>
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<th>Sheet</th>
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<tr>
<td>13</td>
<td>SP.02</td>
<td>Clarification: Sheet name and number missing. This addendum clarifies that unnamed sheet/number is Sheet SP 0.2 – Pool Demolition Plan (found between sheets SP 0.1 and SP 1.0)</td>
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<tr>
<td>14</td>
<td>C1</td>
<td>Revision/Clarification: Most northeastern structure revised to: Demolish existing raised wood retaining structure and remove soil.</td>
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<tr>
<td>16</td>
<td>C2</td>
<td>Revision: INSTALL PERMEABLE PAVERS (TREO FROM UNILOCK OR APPROVED EQUAL) BEYOND 4’ FROM POOL ACCORDING TO MANUFACTURER RECOMMENDATION (TYP.) PRIOR TO PLACING PAVER, SUBGRADE SHOULD BE MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 90% R.C., AFTER COMPACTING SUBGRADE, A FILTER FABRIC OR STABILIZATION FABRIC SHOULD BE PLACED BENEATH THE PAVER.</td>
</tr>
<tr>
<td>17</td>
<td>C1</td>
<td>Revision: Northeastern building to be demolished REMOVED. No building exists. Only a small wood raised bed and soil to be removed to receive new building.</td>
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<tr>
<td>18</td>
<td>C3</td>
<td>Revision: Per attached revised sheet: NOTE: FINAL LOCATIONS FOR SUBDRAINS TO BE DETERMINED BY GEOTECHNICAL ENGINEER. Lengths of piping have been revised as shown revised C3.</td>
</tr>
<tr>
<td>19</td>
<td>S3</td>
<td>Revision: Foundation Plan Detail: 5” SLAB-ON-GRADE W/ #4 @ 12” O.C. EA. WWAY OVER 2” SAND OVER 10.15 MIL VAPOR BARRIER OVER 4” DRAIN ROCK, TYP.</td>
</tr>
<tr>
<td>20</td>
<td>E3.1</td>
<td>Addition: SHEET NOTES: 9. SEE DETAIL 6/E5.1 FOR CONCRETE ENCSHEET GROUNDING ELECTRODE DETAIL</td>
</tr>
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</table>
10. (N) 240V, 30A/3-POLE DISCONNECT SWITCH WITH NEUTRAL, NEMA 34. NEUTRAL CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR.

21. E3.1  Addition  SHEET NOTES:
9. SEE DETAIL 6/E5.1 FOR CONCRETE ENCLOSED GROUNDING ELECTRODE DETAIL.
10. (N) 240V, 30A/3-POLE DISCONNECT SWITCH WITH NEUTRAL, NEMA 34. NEUTRAL CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING CONDUCTOR.

22. E5.1  Addition  Per attached revised sheet:
SHEET NOTES
5. NEUTRAL CONDUCTOR SHALL NOT BE CONNECTED TO THE EQUIPMENT GROUNDING TERMINAL BAR OR TO THE GROUNDING ELECTRODE. COMPLY WITH CEC 250.32.

23. E5.1  Addition  Per attached revised sheet: Detail 6/E5.1 adds Concrete Encased Grounding Electrode detail.

3.0 – QUESTIONS

<table>
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<tr>
<th>Item</th>
<th>Contractor Question</th>
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<tr>
<td>1</td>
<td>Can the contractor coordinate with the school to gain access through the property?</td>
<td>No.</td>
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Prepared by,

Tara McIntire
Marin County Parks
Principal Landscape Architect/Project Manager

Bidders shall acknowledge receipt of this Addendum 002 by signing this addendum and attaching it to the bid Proposal.

Electronic signatures are acceptable.
Addendum No. 002 received by:

Signature ___________________________________________ Date ________________________________
SECTION 073110 - ASPHALT COMPOSITION SHINGLES

PART 1 - GENERAL

1.1 SECTION INCLUDES (but not necessarily limited to):
   A. Granular-surfaced, glass-fiber-mat-reinforced shingle roofing.
   B. Underlayment

1.2 RELATED SECTIONS
   A. Section 061000 – Carpentry
   B. Section 076000 – Flashing and Sheet Metal

1.3 REFERENCES
   A. American Society for Testing and Materials (ASTM):
   B. Underwriters Laboratories (UL):

1.4 SUBMITTALS
   A. Submit under provisions of Section 013000.
   B. Product Data: Submit manufacturer’s product description and installation instructions for all the products intended for use.
   C. Samples:
      1. Submit manufacturer’s standard full-size shingle color samples for selection.
2. If shingles have color variations, show samples of entire color range.

D. Installer Qualifications: Submit evidence to establish meeting requirement of 105-C below.

E. Warranty: Submit evidence that the specified roof product and related specified systems will meet requirements for the specified warranty.

1.5 QUALITY ASSURANCE

A. Code and Regulations:

1. Manufacturer’s roofing materials and systems shall be approved by the local building department.

2. Where any requirements of specifications differ from requirements of governing codes and regulations, the more stringent shall govern.

B. Fire Resistance: Shingles and accessory materials shall be listed by UL as being approved for fire-resistance rating indicated.

C. Installer Qualifications: A company with experience in installation of materials of the type included in this Section and having a minimum of 5 previous installations similar in scope to this Project.

D. Metal flashing, where built into the shingles, shall be coordinated with installation of shingles before and after setting and nailing. This portion of work shall be included in roofing water-tightness guarantee.

1.6 PRODUCT HANDLING

A. Deliver materials with manufacturer’s labels intact and legible.

B. Store materials on raised platforms, and protect with coverings at outdoor locations.

C. Do not stack bundles of shingles more than 4-feet high.

D. Store rolled goods on end.

E. Comply with the additional requirements specified in Section 01600.

1.7 PROJECT CONDITIONS

A. Do not install underlayment or shingles on wet surfaces.
B. Do not apply shingles when air temperature is below 40-degrees F, or until all other manufacturer’s recommendations and warranty requirements have been satisfied.

1.8 WARRANTY

A. Maintenance Agreement: The roofing subcontractor shall issue to Owner his maintenance agreement, countersigned by Contractor as joint guarantor, to maintain the roof and flashings in a watertight condition for a period of 2-years from date of the first local precipitation that proves the roof’s water-tightness.

B. Submit manufacturer’s standard warranty guaranteeing to correct failures in product which may occur during the warranty period, without reducing or otherwise limiting any other rights to correction which the Owner may have under the Contract Documents.

1. Warranty period: 30-year limited warranty, including 5-year non-prorated umbrella coverage.

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Manufacturer and Type: Series: “Oakridge,” by Owens-CorningRoofing & Asphalt LLC, One Owens Corning Pkwy Toledo, OH 43659; TEL: (800) 438-7465

2.2 MATERIALS

A. Shingles: Provide composition shingles with the following minimum characteristics and complying with ASTM D3018, Type I and ASTM D3462:

2. Fire-Rating: UL Class A
4. Exposure: 5-5/8 inches
5. Color: To be selected by Architect from manufacturer’s standard colors.
6. Provide factory-prefabricated hip and ridge shingles which match field shingles.

B. Fasteners: Hot-dipped, galvanized, 12-gauge barbed shank, 3/8-inch head, sharp pointed 1-1/4-inch roofing nails as required to penetrate through plywood sheathing into metal roof panels. Staples are not acceptable.

1. Where eaves are exposed to view, fasten in a manner acceptable to manufacturer that would avoid visible protruding nails.

C. Underlayment:


2. Slopes Less than 4:12: Use two layers of un-perforated, 15-lb. asphalt-impregnated felt paper overlapped a minimum of 19”, and complying with ASTM D 226, Type 1 (No. 15).

3. At shed dormer roofs and elsewhere as shown, use Grace Construction product “Ice and Water Shield,” or accepted equal (see Section 07652 – Flexible Flashing and Underlayment).

D. Asphalt Plastic Cement: Conform to requirements of ASTM D 4586.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Assure that surfaces to which shingles are to be applied are uniform, smooth, sound, clean, dry and free of irregularities.

B. Verify that installation of metal flashings has been completed.

C. Verify that Work of other trades that penetrate roof deck have been completed.

D. Do not start Work until conditions are satisfactory.

3.2 INSTALLATION

A. Underlayment: Comply with code and manufacturer’s instructions where they exceed or conflict with the following:
1. Apply felt layers as required by CBC.

2. Nail metal drip-edge along eaves before felt is laid, and to rakes after felt is laid.

3. Lay 1-layer of felt horizontally over entire roof, lapping each course over lower course 2-inches minimum at horizontal joints and 4-inch side lap at end joints.

4. Lap 6-inches from both sides over hips and ridges.

5. Secure underlayment to deck with sufficient fasteners to hold in place until shingles are applied.

B. Shingles: Comply with code and manufacturer’s instructions where they exceed or conflict with the following:

1. Use shingles with tabs cut off as a double course starter strip.
   a. Starter strip shingles shall overhang eaves and rake by 1/2-inch.
   b. Nail starter strip using same spacing as for shingles, and locate nails about 3-inches up from the bottom edge.
   c. Avoid nailing where cutouts will occur on the first course of shingles.

2. Snap chalk lines to guide application, and maintain level lines parallel with eaves and ridge.

3. Cut off at rakes allowing 1/2-inch overhang.

4. Run each row at least 4 shingles across roof before proceeding to next row.

5. Unless otherwise required by manufacturer, place one nail 1-inch from the end of each shingle, and one nail 12-inches from each end; 4 nails in each shingle. All 4 nails must be placed on a line 5-5/8-inches above the butt edge of the shingle.

6. Avoid vertical alignment of shingle joints in alternate courses.

7. Provide at least double coverage at all points.

8. Penetrations and Walls:
   a. Apply shingles up to base of wall or penetration using step flashing.
b. For penetrations, cut base flashing for upper and lower side.
   i) Apply both set in black plastic cement.
   ii) The lower flashing only goes on top of shingles.
c. Apply shingles up to vent pipe and cut hole in next shingle to go over pipe. Set shingle in black plastic cement.

C. Metal (Copper) Drip Edges:

1. Place metal drip edge tight with fascia boards at all rake and wave edges, and extend minimum 3-inches back from roof edge, bend downward over the fascia boards. Weather-lap joints 2-inches and solder. Fasten in place with copper nails spaced 8-10 inches apart.

2. At eaves, place drip edge directly onto deck below underlayment. At rakes, place drip edge over underlayment.

3.3 ADJUSTING AND CLEANING

A. Replace damaged shingles.
B. Remove excess shingles and debris from Site.

END OF SECTION 07311.
SECTION 096720 -SEAMLESS EPOXY QUARTZ AND MARBLE-CHIP FLOORING

1. GENERAL

1. SECTION INCLUDES
   A. Fluid applied epoxy quartz and marble-chip flooring and cove base.
   B. Everlast Glaze.

1. SUBMITTALS
   A. Submit under provisions of Section 013300.
   B. Product Data: Manufacturer's data sheets on each product to be used, including:
      1. Preparation instructions and recommendations.
      2. Storage and handling requirements and recommendations.
      3. Installation methods.
   A. Selection Samples: For each finish product specified, submit two samples 4 by 4 inches (102 mm by 102 mm) in size illustrating color, chip size and variation, and matrix color.
   B. Verification Samples: For each finish product specified, submit two samples 4 by 4 inches (102 mm by 102 mm) in size in color, chip size and variation, and matrix color, representing actual product scheduled.

2. QUALITY ASSURANCE
   A. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
      A. Finish areas designated by Architect.
      B. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
      C. Refinish mock-up area as required to produce acceptable work.

2. DELIVERY, STORAGE, AND HANDLING
   A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
   B. Store materials in accordance with the manufacturer's instructions.
1. Store materials in dry, enclosed area with adequate protection from moisture.
2. Keep containers sealed until ready for use.

C. Storage Temperature: Store between 65 degrees F (18 degrees C) and 90 degrees F (32 degrees C).

3. PROJECT CONDITIONS
   A. Roof shall be completed and building enclosed prior to flooring commencement.
   B. Maintain temperature range of between 65 degrees F (18 degrees C) and 90 degrees F (32 degrees C) 24 hours before, during, and 72 hours after installation of flooring.
   C. Ventilate area where flooring is being installed. Post and enforce NO SMOKING or OPEN FLAME signs until flooring has cured.
   D. Provide uniform lighting of 50 fc in area of installation.
   E. Restrict traffic from area where flooring is being installed or is curing.

4. WARRANTY
   A. Provide ten year warranty under provisions of Section 01770.
   B. Warranty: Include coverage for delamination (separating of layers) of floor and cove base materials and degradation of surface finish.

C. PRODUCTS

5. MANUFACTURERS
   A. Acceptable Manufacturer: Everlast Epoxy Systems Inc, which is located at: 637 NW State Road 47 ; Lake City, FL 32025; Tel: 386-719-9979; Fax: 386-719-6982; Email: info@everlastepoxy.com ; Web: www.everlastepoxy.com
   B. Substitutions: Not permitted.

6. MATERIALS
   A. Everlast Floor: A 100 percent solids epoxy, marble-chip and quartz aggregate that is a troweled in place, evenly textured, slip-resistant finish of between 1/8 inch (3 mm) and 3/16 inch (4.8 mm) thickness.
      1. System shall not require primer (unless needed due to the substrate), bond coat, grout or sealer components for application.
      2. System shall comply with the USDA guidelines for use in federally inspected facilities.
B. Everlast Glaze: The finish of Everlast Floor can range anywhere from glass smooth to a sandpaper-like finish. The texture can be adjusted during or long after by applying multiple coats of glaze (for a smoother finish) or by broadcasting anti-skid into the glaze (for a coarser finish).

The specified finish is:

*Anti-Skid finish – Everlast Floor with 1 coat of Everlast Glaze with medium anti-skid broadcast into the during application. This finish is easy to clean with a deck brush and squeegee or power scrubber, but is not moppable. It is slip-resistant even when wet. It is recommended for aquatic facilities, commercial kitchens and any other area that needs to be consistently cleaned and is always wet.

Acceptable Manufacturer and Product: Seamless flooring material shall be Everlast Epoxy Systems Inc's Everlast Floor, as manufactured by Everlast Epoxy Systems Inc of Lake City, FL. Substitutions are not permitted.

1. Material shall include select silica quartz and marble-chip aggregate fillers.
2. Floor system shall be a 100 percent solid, unpigmented epoxy resin system.
3. Base: A three-component, integral troweled base and cove consisting of Everlast Epoxy Systems Inc’s Everlast Floor resin and hardner, silica quartz and marble-chip aggregates as used in the floor, and finely graded silica aggregate, 6 inches (152 mm) height or as scheduled.
5. Color as selected by Architect from manufacturers standard color range.

1. EXECUTION

7. EXAMINATION

A. Do not begin installation until substrates have been properly prepared.
1. Verify that substrate is ready to receive work, and that sub-floor surface is clean, dry, and free of substances which could affect bond.
2. Concrete hydrostatic, capillary or moisture pressure must be no greater than 3.0 lbs./1000 sf/24 hours. Substrates in contact with the ground must have a properly installed, functioning and effective vapor barrier to help prevent potential problems resulting from hydrostatic, capillary or moisture vapor emission. Concrete must contain less than 3% moisture when tested per ASTM D1864.
3. Maintain minimum concrete surface temperature between 55F and 85F, and relative humidity below 80% for a minimum of 48 hours before, during, and after installation, or until cured. Surface temperature must be 5F. Above dew point.
4. Beginning work constitutes acceptance of substrate.

B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

8. PREPARATION

A. Substrate Requirements:
   1. Contractor to provide positive drainage at floor drains.
   2. Floor drains shall be set no higher than 1/8 inch (4 mm) above slab.
   3. Floor sinks shall be set in accordance with local codes and regulations.
   4. Gaps between wall sheathing and substrate shall be filled prior to flooring commencement per flooring manufacturer's requirements.
   5. FRP and any other wall finish should terminate with a J-mould or other trim at least 6 inches (152 mm) above finish floor.
   6. The substrate shall be clean, dry and sound. Remove dust, laitance, grease, curing compounds, waxes, foreign particles and any previously applied potentially incompatible coatings by scarifying, chipping, wire brushing, acid etching, or pressure washing. If pressure washing or any other liquid method is used for preparation, substrate should be fully rinsed, squeeze-dry mopped and allowed to completely dry.
   7. Concrete: New concrete must cure for at least 28 days at 70°F (21°C), and have been free from water for at least 7 days. Older floors should be scarified and thoroughly cleaned. If badly cracked, crumbling, punky or deeply contaminated with oil or fat, a new concrete topping of proper thickness and strength should be installed. Swollen areas should be chipped out and any cracks, spalls, joints or other depressions filled with our underlayment. The concrete should be at least 2500 psi. Concrete hydrostatic, capillary or moisture pressure must be no greater than 3.0 lbs./1000 sf/24 hours.

1. INSTALLATION - FLOORING

A. Apply flooring in accordance with Everlast Epoxy's instructions. Apply to a minimum thickness of 1/8 inch (3 mm). Finish to smooth level surface sloped to drains.

B. Provide base and cove at vertical surfaces.

C. Apply Everlast Glaze (and anti-skid, if required).

Review more detailed Everlast Floor installation instructions at www.everlastepoxy.com/how-to

1. TOLERANCES

A. Maximum Variation from Flat Surface: 1/8 inch in 10 feet (3 mm in 3 m).
2. PROTECTION
   A. Protect finished installation during construction.
   B. Do not permit traffic over finished floor surfaces for 42 hours.

3. PROTECTION
   A. Protect installed products until completion of project.
   B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION
March 27, 2012
File: 378.74altr.doc

Marin County Parks
3501 Civic Center Drive, Room 260
San Rafael, CA  94903

Attn:  Ms. Steve Petterle
Re: Geotechnical Evaluation
   Homestead Valley Community Center
   Mill Valley, California

Introduction

We are pleased to present the results of our geotechnical evaluation regarding renovation and repair of the Homestead Valley Community Center in Mill Valley. The project site location is shown on Figure 1. The purpose of our geotechnical investigation is to evaluate subsurface conditions and provide geotechnical recommendations and criteria for the design and construction of the project.

The scope and authorization for our geotechnical services is outlined in our proposal dated February 7, 2012. Our scope included review of provided reference documents1,2 exploring subsurface conditions with one test boring, excavation of three foundation test pits, laboratory testing of select soil samples, evaluating field and laboratory data, consultation with the project Architect, and preparation of recommendations in a letter report.

Project Description

We understand the project includes renovation and repair of the building, possible construction of a small addition to the west side of the building, constructing a new ADA ramp from the parking lot to the patio area adjacent to the lower building entrance, and other associated improvements. Portions of the building foundation may be replaced or underpinned due to inadequate depth of embedment and moderate structural damage (cracking). A site plan showing the building and adjacent improvements is presented on Figure 2.

Regional Geology

The site is located within the Coast Range Geomorphic Province of California. The bedrock of this regional province consists predominantly of complexly folded, faulted, sheared, and altered sedimentary, igneous, and metamorphic rock of the Franciscan Complex (approximately 65 to 140 million years old). Bedrock of the Franciscan Complex is characterized by a diverse assemblage of greenstone, sandstone, shale, chert, and mélange units, with lesser amounts of conglomerate, calc-silicate rock, schist and other metamorphic rocks. Regional geologic maps3

1 Kappe+Du Architects, VHS Associates, Inc. “315 Montford Avenue, Mill Valley, CA, Homestead Valley Community Center Site Inspection and Recommendations”, January 28, 2009
3 California Division of Mines and Geology, “Geologic Map and Map Database of Parts of Marin, San Francisco, Alameda, Contra Costa and Sonoma Counties, California”, MF 2337, 2000
indicate the project site is located in Franciscan Melange, consisting of a mixture of resistant rock types, including sandstone, chert, greenstone, serpentinite, and exotic metamorphic rocks embedded in a sheared, shale matrix.

Active Faults

The project site is located within the seismically active San Francisco Bay Region and will likely experience the effects of future earthquakes. Such earthquakes could occur on any of several active faults within the region. The California Division of Mines and Geology (CDMG) has mapped various active and inactive faults in the region. Active faults in the region are defined as those that show evidence of exposed surface displacement in the past 11,000 years (Holocene) and have reported average slip rates greater than 0.1-mm per year. The San Andreas Fault, approximately 5 miles southwest of the site is the closest known active fault. The site’s location relative to known active faults is shown on Figure 3.

Site & Building Conditions

The site is located in Homestead Valley near Mill Valley. The existing building is a two-story wood-frame structure with a slab-on-grade floor and basement supported on a shallow spread footing foundation. The building was originally constructed about 60-years ago and has been modified several times with additions. The building was constructed on a gently sloping site located downhill from Montford Avenue. It appears the site was developed by placing a relatively thin fill beneath the southeast corner of the building in the area currently being used as an office. There is a swimming pool located south of the building that may also be in a fill area.

During our inspection of the building interior we observed several cracks in the walls and noted door openings that are not level/square. The downstairs basement slab-on-grade floor towards the back of the building has several large cracks, some of which have vertical offset. There is a shallow sump and a pump behind the low retaining wall located along the rear of the basement. This area was dry at the time of our site visit in February 2012; however, we observed efflorescence (mineral) deposits on the crawl area ground surface which suggests standing water had previously occurred in this area. The perimeter footing, near the office entrance and along the east side of the building, has several small cracks. Cracks were also observed in the perimeter foundation elsewhere around the building.

Subsurface Exploration and Laboratory Testing

We explored subsurface conditions with one shallow test boring and three foundation test pits on March 8, 2012 at the approximate locations shown on the Site Plan, Figure 2. The soils encountered were logged in the field and select samples were obtained for laboratory testing. A Soil Classification Chart is presented along with the Boring Log on Figures 4 and 5. Laboratory testing included determining the moisture content, dry density, Atterberg Limits and unconfined compression strength. The results of the tests are presented on the Boring Log and on Figure 6. The test boring encountered medium stiff sandy clay to a depth of about three feet. The sandy clay is underlain by medium stiff to stiff clayey material which is stiffer with increasing depth. The footing exposed at Test Pit 1 is only 3-inches deep and is bearing on relatively weak near surface soils whereas the footings exposed at Test Pits 2 and 3 are both 10-inches deep and bear on medium stiff sandy clay. Footing depths and dimensions observed in the test pits are summarized below in Table A.
TABLE A
RESULTS OF FOUNDATION TEST PITS
Homestead Valley Community Center
Mill Valley, California

<table>
<thead>
<tr>
<th>Test Pit</th>
<th>Footing Height</th>
<th>Embedment Depth</th>
<th>Footing Width (at base)</th>
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*Footing width dimension should be considered approximate.

Discussion and Recommendations

Based on our investigation and experience with similar projects and site conditions, we judge the site is suitable for the proposed improvements. The primary hazards identified at the site are seismic shaking, and weak near-surface soils. Other geologic hazards such as fault surface rupture, liquefaction, and landslide are not significant at this site.

New foundations for the addition can consist of shallow spread footings. Shallow or distressed (cracked) foundations can be replaced or underpinned with new shallow spread footings bearing on stiff soils. Footings along the downslope perimeter of the building and along the east side of the building are likely very shallow, have several cracks and therefore could be replaced or underpinned. If the basement area is lowered it is likely that the bottoms of some of the shallow foundations will be exposed and therefore some foundations would have to be deepened or replaced. The final decision regarding foundation replacement or underpinning should be based on the severity of distress, the cost of the mitigation, and the desired performance of the building.

Seismic Design

Minimum mitigation of ground shaking includes seismic design of the structure in conformance with the provisions of the most recent version (2010) of the California Building Code. The magnitude and character of these ground motions will depend on the particular earthquake and the site response characteristics. Based on the interpreted subsurface conditions and proximity to the San Andreas Fault, we recommend the CBC coefficients and site values shown in Table B below for use in equations 16-37(1) and 16-38 to calculate the design base shear of the new construction. To determine site seismic coefficients, we used the USGS Seismic Hazard Curves and Uniform Hazard Response Spectra, Version 5.0.8, using the latitude and longitude shown on Figure 3.
TABLE B
2010 CBC SEISMIC DESIGN FACTORS
Homestead Valley Community Center
Mill Valley, California

<table>
<thead>
<tr>
<th>Factor Name</th>
<th>Coefficient</th>
<th>CBC Table</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Class(^1)</td>
<td>S(_{A,B,C,D,E, or F})</td>
<td>1613.5.2</td>
<td>S(_D)</td>
</tr>
<tr>
<td>Spectral Acc. (short)</td>
<td>S(_s)</td>
<td>1613.5.1</td>
<td>1.5 g</td>
</tr>
<tr>
<td>Spectral Acc. (1-sec)</td>
<td>S(_1)</td>
<td>1613.5.1</td>
<td>0.735 g</td>
</tr>
<tr>
<td>Site Coefficient(^2)</td>
<td>F(_a)</td>
<td>1613.5.3 (1)</td>
<td>1.0</td>
</tr>
<tr>
<td>Site Coefficient</td>
<td>F(_v)</td>
<td>1613.5.3 (2)</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Note:
1. Soil Profile/Site Class Type S\(_D\) Description: Stiff soil profile with shear wave velocity between 600 and 1200 feet per second, Standard Penetration Test N between 15 and 50, and undrained shear strength between 1,000 and 2000 psf.

**Surface Preparation and Site Grading**

We anticipate site grading will include removal of the existing concrete ADA ramp and downstairs slab-on-grade floor, minor excavation for construction of a new ADA ramp and downstairs slab-on-grade floor. Site grading recommendations are presented below.

**Site Preparation** - Clear all concrete flatwork, oversized debris (larger than 6-inches), and organic matter where new construction is planned. Any vegetation or organic materials within the project area should be scraped from the surface, and stockpiled for reuse in landscaping or removed from the site. Any construction debris or abandoned utilities encountered during site grading should be removed from the site. Backfill excavations with compacted fill compacted to at least 90% relative compaction\(^4\). The surface of the construction area should be scarified, moisture conditioned near the optimum moisture content and compacted to at least 90% relative compaction.

**Fill Materials** - Non-expansive soil mixtures generated from on-site excavations may be suitable for reuse as fill provided the maximum particle sizes are less than 4 inches and a have maximum Plasticity Index of 20. If imported fill is required, the material shall consist of soil and rock mixtures that are free of organic material, have a maximum particle size of 4 inches, Liquid Limit less than 40 and a Plasticity Index less than 20, and a minimum R-Value of 20. Any imported fill material needs to be tested by the geotechnical engineer to determine its suitability for use as fill material.

---

\(^4\) Relative compaction refers to the ratio in percent of the in-situ dry density to the maximum laboratory density. The maximum dry density, and optimum moisture content of fill materials should be determined in accordance with ASTM Test Method D 1557, “Moisture-Density Relations of soils and Soil-Aggregate Mixtures Using a 10-lb. Rammer and 18-in. drop.”
Compacted Fill - On-site fill, backfill, and scarified subgrades should be moisture conditioned to within 3% of the optimum moisture content. Properly moisture conditioned and cured on-site materials should be placed in loose horizontal lifts of 8 inches thick or less, and uniformly compacted to at least 90% relative compaction.

Foundation Design

Foundation loads can be supported on spread footings bearing on stiff soils. We recommend that foundations for the addition and any replacement or underpinning foundations also be supported by shallow spread footings. Other types of underpinning foundations such as helical anchors or pipe piles could also be used but are likely not as cost effective as shallow footings. Design criteria for the new foundations are presented in Table C.

| TABLE C |
|------------------|------------------|
| FOUNDATION DESIGN CRITERIA |
| Homestead Valley Community Center |
| Mill Valley, California |

**Shallow Spread Footings:**

- Minimum width: 15 inches
- Minimum embedment depth: 24 inches
- Allowable bearing capacity:
  - Dead load plus Live load: 2000 psf
  - Total Design loads, including wind or seismic: 2500 psf
- Lateral passive resistance1,2: 350 pcf
- Base friction coefficient: 0.35

Notes:

1. Equivalent fluid pressure.
2. Ignore upper 6 inches of passive resistance unless soil adjacent to foundations are confined by concrete slabs or asphalt pavements.

Concrete Slabs-on-Grade

Where concrete slabs are needed, we recommend they be at least 5 inches thick and reinforced with steel bars (not wire mesh). Additionally contraction joints should be incorporated in the concrete slab in both directions, no greater than 10 feet on center. Additionally, the reinforcing bars shall extend through the control joints. The Structural Engineer should design the concrete slab floors.

To improve interior moisture conditions, a 4-inch layer of clean, free draining, 3/4-inch angular gravel or crushed base rock should be placed beneath the interior concrete slabs to form a capillary moisture break. The base rock must be placed on a properly moisture conditioned and compacted subgrade that has been approved by the Geotechnical Engineer. A plastic membrane vapor barrier, 10 mils or thicker, should be placed over the compacted base rock. The vapor barrier shall meet the ASTM E 1745 Class A requirements and be installed per ASTM 1643.
Eliminating the capillary moisture break and/or plastic vapor barrier may result in excess moisture intrusion through the floor slabs resulting in poor performance of floor coverings, mold growth or other adverse conditions.

Exterior concrete slabs should be at least 4 inches thick and reinforced as described above for interior slabs. Exterior concrete slabs shall be underlain with 4 inches or more of Caltrans Class 2 Aggregate Base compacted to at least 92 percent relative compaction. Some small movements should be expected for exterior concrete slabs as the underlying soils react to seasonal moisture changes. If superior performance is desired, the exterior slabs can be thickened and reinforced as described above for interior slabs and/or underlain with a thicker aggregate base layer.

**Utility Trench Excavation and Backfill**

On-site soil may be used as compacted trench backfill above the pipe and bedding material. Bedding material should be placed in accordance with the pipe manufacturer's recommendations. The backfill materials should be placed in uniform lifts (four to eight inches depending upon the size of compaction equipment), moisture conditioned to above optimum moisture content and compacted to a minimum of 90 percent relative compaction. The upper six inches within pavement areas should be additionally compacted to at least 95 percent relative compaction during subgrade preparation. Within landscape areas, the compaction can be reduced to 85 percent.

**Site Drainage**

There is a possibility that adverse drainage patterns could cause water to pond around the building. Careful consideration should be given to design of finished grades at the site. We recommend that the building areas be raised slightly and that the adjoining landscaped areas be sloped downward at least 0.25-feet for 5-feet (5 percent) from the perimeter foundations. Where hard surfaces, such as concrete or asphalt adjoin foundations, slope these surfaces at least 0.10-feet in the first 5-feet (2 percent). Roof gutter downspouts may discharge onto hardscape areas, but should not discharge onto any landscaped areas adjacent to the building.

**Supplemental Geotechnical Services**

We should review the construction plans and specifications when they are near completion to confirm that the intent of our geotechnical recommendations have been incorporated. During construction, we should provide intermittent geotechnical observation and testing to observe the foundation excavations and test structural fill compaction to confirm subsurface conditions are as expected and to modify the design if necessary. We will summarize the results of our construction observation and testing in a brief letter report upon satisfactory completion.
Please call if there are any questions or if we can be of further assistance.

Very truly yours,

MILLER PACIFIC ENGINEERING GROUP

Eric Dabanian
Geotechnical Engineer No. 2526
Expires 6/30/13

Attachments: Figures 1-6
3 copies submitted
SITE LOCATION

REFERENCE: Google Maps, 2012

Miller Pacific
ENGINEERING GROUP

504 Redwood Blvd.
Suite 220
Novato, CA 94947
T 415 / 382-3444
F 415 / 382-3450
www.millerpac.com

County of Marin - HVCA
315 Montford Avenue
Mill Valley, California
Project No. 378.74 Date: 3/7/12

SITE LOCATION MAP

1
FIGURE
<table>
<thead>
<tr>
<th>MAJOR DIVISIONS</th>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLEAN GRAVEL</td>
<td>GW</td>
<td>Well-graded gravels or gravel-sand mixtures, little or no fines</td>
</tr>
<tr>
<td></td>
<td>GP</td>
<td>Poorly-graded gravels or gravel-sand mixtures, little or no fines</td>
</tr>
<tr>
<td>GRAVEL with fines</td>
<td>GM</td>
<td>Silty gravels, gravel-sand-silt mixtures</td>
</tr>
<tr>
<td></td>
<td>GC</td>
<td>Clayey gravels, gravel-sand-clay mixtures</td>
</tr>
<tr>
<td>CLEAN SAND</td>
<td>SW</td>
<td>Well-graded sands or gravelly sands, little or no fines</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>Poorly-graded sands or gravelly sands, little or no fines</td>
</tr>
<tr>
<td>SAND with fines</td>
<td>SM</td>
<td>Silty sands, sand-silt mixtures</td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td>Clayey sands, sand-clay mixtures</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILT AND CLAY liquid limit &lt;50%</td>
<td>ML</td>
<td>Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity</td>
</tr>
<tr>
<td></td>
<td>CL</td>
<td>Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays</td>
</tr>
<tr>
<td></td>
<td>OL</td>
<td>Organic silts and organic silt-clays of low plasticity</td>
</tr>
<tr>
<td>SILT AND CLAY liquid limit &gt;50%</td>
<td>MH</td>
<td>Inorganic silts, micaeous or diatomaceous fine sands or silts, elastic silts</td>
</tr>
<tr>
<td></td>
<td>CH</td>
<td>Inorganic clays of high plasticity, fat clays</td>
</tr>
<tr>
<td></td>
<td>OH</td>
<td>Organic clays of medium to high plasticity</td>
</tr>
<tr>
<td>HIGHLY ORGANIC SOILS</td>
<td>PT</td>
<td>Peat, muck, and other highly organic soils</td>
</tr>
<tr>
<td>ROCK</td>
<td></td>
<td>Undifferentiated as to type or composition</td>
</tr>
</tbody>
</table>

### KEY TO BORING AND TEST PIT SYMBOLS

<table>
<thead>
<tr>
<th>CLASSIFICATION TESTS</th>
<th>STRENGTH TESTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>TV</td>
</tr>
<tr>
<td>LL</td>
<td>UC</td>
</tr>
<tr>
<td>SA</td>
<td>TXCU</td>
</tr>
<tr>
<td>HYD</td>
<td>TXUU</td>
</tr>
<tr>
<td>P200</td>
<td>UC, CU, UU = 1/2 Deviator Stress</td>
</tr>
<tr>
<td>P4</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAMPLER TYPE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MODIFIED CALIFORNIA</td>
<td>HAND SAMPLER</td>
</tr>
<tr>
<td>STANDARD PENETRATION</td>
<td>ROCK CORE</td>
</tr>
<tr>
<td>THIN-WALLED / FIXED PISTON</td>
<td>DISTURBED OR BULK SAMPLE</td>
</tr>
</tbody>
</table>

NOTE: Test boring and test pit logs are an interpretation of conditions encountered at the excavation location during the time of exploration. Subsurface rock, soil or water conditions may vary in different locations within the project site and with the passage of time. Boundaries between differing soil or rock descriptions are approximate and may indicate a gradual transition.

### SOIL CLASSIFICATION

County of Marin - HVCA
315 Montford Avenue
Mill Valley, California

Project No. 378.74   Date: 3/9/12

Miller Pacific Engineering Group
504 Redwood Blvd.
Suite 220
Novato, CA 94947

T. 415 / 382-3444  F. 415 / 382-3450
www.millerpac.com
## BORING 1

**EQUIPMENT:** 3.25 inch manual bucket auger

**DATE:** 3/8/12

**ELEVATION:** 128-Feet*

*REFERENCE: County of Marin Site Plan Elevation

<table>
<thead>
<tr>
<th>SAMPLE SYMBOL</th>
<th>DEPTH (feet)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0</td>
<td><strong>SILTY SAND (SM)</strong> Medium brown, moist, loose to medium dense. [Fill]</td>
</tr>
<tr>
<td>X</td>
<td>1</td>
<td><strong>SANDY CLAY (CL)</strong> Medium brown, moist, medium stiff, low plasticity. [Fill]</td>
</tr>
<tr>
<td>X</td>
<td>2.5</td>
<td><strong>CLAY WITH SAND (CL)</strong> Medium brown with light brown mottling, moist to wet, medium to high plasticity. [Fill/Coluvium]</td>
</tr>
<tr>
<td>X</td>
<td>3.5</td>
<td><strong>CLAY (CH)</strong> Light orange brown with gray mottling, moist to wet, medium stiff to stiff, low to medium plasticity. [Coluvium]</td>
</tr>
</tbody>
</table>

**NOTES:**
1. METRIC EQUIVALENT STRENGTH (kPa) = 0.0479 x STRENGTH (psf)
2. METRIC EQUIVALENT DRY UNIT WEIGHT kN/m² = 0.1571 x DRY UNIT WEIGHT (pcf)
3. GRAPHIC SYMBOLS ARE ILLUSTRATIVE ONLY

---

**BORING LOG**

County of Marin - HVCA
315 Montford Avenue
Mill Valley, California

**Project No. 378.74**

**Date:** 3/9/12

---

**PHILIP C. MILLER**

**SANDY CLAY (CL)**

Medium brown, moist, medium stiff, low plasticity. [Fill]
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>SAMPLE SOURCE</th>
<th>CLASSIFICATION</th>
<th>LIQUID LIMIT (%)</th>
<th>PLASTIC LIMIT (%)</th>
<th>PLASTICITY INDEX (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>BORING 1</td>
<td>CLAY WITH SAND (CL) dark brown</td>
<td>39</td>
<td>23</td>
<td>16</td>
</tr>
</tbody>
</table>

REFERENCE: Liquid Limit, Plastic Limit, and Plasticity Index of Soils, ASTM D 4318
A Minimum Efficiency Reporting Value (MERV) of 8. Specified filters shall be in place in the building with air filtration media for outside and return air that provides at least a rating of 50 or a composite OITC rating of no less than 40, with exterior Sound Transmission Class (STC) values determined in accordance with ASTM E90/90M.

1. Chapters 12-13 (Standards for Insulating Material) in Title 24, Part 12, the California Building Code, CCR, Title 24, Part 2, Section 1203 (Ventilation) and other related regulations.
2. Ventilation system performance as required by Title 24, Part 6, Sections 603.1-603.3.
3. Indoor environmental quality requirements.
4. Ventilation system capacity commencing with Section 94507.
5. Ventilation system capacity for 20% of on-site parking spaces to be EV Capable (147 kW).
6. Building occupant and O&M personnel expectations of the prohibitions and regulations or policies are not in place, post signage to inform building occupants of the prohibitions.
7. Ventilation system performance as required by Title 24, Part 6, Sections 603.1-603.3.
8. Outdoor air for conditions as defined in Title 24, Part 6, Sections 605.1-605.2.

5.504.3 Reporting Value (MERV) of 8, based on ASHRAE 52.2 1999, or an average of the MERVs of the supply and return filters.

5.504.4.1 HVAC, refrigeration and fire suppression equipment that do not contain Chlorofluorocarbons (CFCs.) and 5.508.1.2.

5.504.4.2.2 Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Table 5.504.4.3 shall apply.

5.504.4.3.1 Measure, and the corresponding Flat, Nonflat, or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating as defined in Table 5.504.4.3.1.

5.503.1.1 Exception: Buildings with few or no occupants or where occupants are not likely to be present at the same time, potentially requiring cooling, space heating, or ventilation equipment and systems that do not provide continuous cooling, heating, or ventilation for the building, shall be considered as equipment and systems that do not provide continuous cooling, heating, or ventilation for the building.

5.503.3.1 Field verification of on-site product containers shall be provided.

5.503.3.3.2 The reduction shall be based on the maximum allowable water use per plumbing fixture or appliance as specified in Table 5.503.3.3.2.
Room Finish Schedule

<table>
<thead>
<tr>
<th>Room Name</th>
<th>Floor</th>
<th>Base</th>
<th>Walls</th>
<th>Ceiling</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>POOL MECHANICAL ROOM</td>
<td></td>
<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>PTD. GYP.</td>
<td></td>
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<tr>
<td>ADA SHOWER 1</td>
<td></td>
<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>TILE, PTD. GYP.</td>
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<tr>
<td>SHOWER 2</td>
<td></td>
<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
<td>1</td>
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<tr>
<td>SHOWER 3</td>
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<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
<td>1</td>
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<tr>
<td>CHANGING ROOM 1</td>
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<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
<td>1</td>
</tr>
<tr>
<td>CHANGING ROOM 2</td>
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<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
<td>1</td>
</tr>
<tr>
<td>BATHROOM 1</td>
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<td>EPOXY</td>
<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
<td>1</td>
</tr>
<tr>
<td>BATHROOM 2</td>
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<td>EPOXY</td>
<td>EPOXY COVE</td>
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<tr>
<td>BATHROOM 3</td>
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<td>EPOXY COVE</td>
<td>FRP, PTD. GYP.</td>
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<td>STORAGE</td>
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<td>CONCRETE</td>
<td>VINYL</td>
<td>FRP, PTD. GYP.</td>
<td></td>
</tr>
<tr>
<td>OFFICE</td>
<td></td>
<td>CONCRETE</td>
<td>VINYL</td>
<td>FRP, PTD. GYP.</td>
<td></td>
</tr>
</tbody>
</table>

1. All Dimensions are typical at bathrooms and shall comply with 11B of C.B.C.