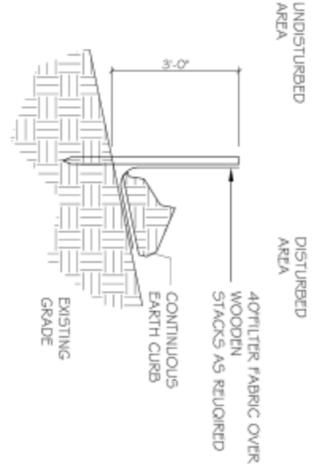


Written dimensions have precedence over scaled dimensions. Contractor shall verify and be responsible for all dimensions and conditions on the project. Paul Ferreras, PE must be notified immediately in writing of any variation from the dimensions and conditions shown on the plans. Field verify all conditions prior to laying out or fabricating work. Bring to the Engineer's attention any deviation from designed conditions and field conditions prior to proceeding with any work and cooperate with Engineer to modify such conditions at no additional cost to the owner, Engineer or consultants. Shop drawings must be submitted to the Engineer and reviewed by the Engineer prior to ordering materials, fabrication and delivery to the site, unless otherwise provided for under the specific contractual agreement between the Engineer and Client. Paul Ferreras, PE expressly reserves its common law copyright and other property rights in these documents. These documents are not to be reproduced, changed or copied in any form or manner whatsoever nor are they to be assigned to a third party without first obtaining the written permission and/or written consent of Paul Ferreras, PE, in the event of unauthorized use of these documents by a third party, the third party shall hold Paul Ferreras, PE harmless and agrees to remunerate Paul Ferreras, PE for such use in an amount equal to the original fee to the original documents, plus legal fees, court costs, collection fees and other costs.

- A. GENERAL NOTES:**
1. ALL CONSTRUCTION SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE UNLESS MORE STRINGENT REQUIREMENTS ARE REQUIRED IN THE PLANS AND SPECIFICATIONS.
  2. THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL CONDITIONS, ELEVATIONS AND DIMENSIONS BEFORE STARTING WORK. THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
  3. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS OR OF ANY VARIATIONS NEEDED IN ORDER TO CONFORM TO CODES, RULES AND REGULATIONS UPON RECEIPT OF SUCH INFORMATION. THE ENGINEER WILL SEND WRITTEN INSTRUCTIONS TO ALL CONTRACTORS. ANY WORK SHALL BE PERFORMED IN A MANNER AS NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VARIATION NOT REPORTED. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  4. THE CONTRACT DOCUMENTS REPRESENT THE FINISH STRUCTURE. THEY DO NOT INDICATE METHOD OF CONSTRUCTION.
  5. IF SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE NECESSARY SHORING, BRACING, STAYS AND GUARDRAILS NECESSARY TO SUPPORT ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECTED DURING CONSTRUCTION, INCLUDING ERECTION EQUIPMENT AND ITS OPERATION. THIS TEMPORARY SUPPORT SYSTEM SHALL HOLD ALL ELEMENTS AND MEMBERS IN THEIR FINAL POSITION UNTIL TOTALLY AND FINALLY CONNECTED TO THE PERMANENT BRACING ELEMENTS.
  6. THE TYPICAL NOTES AND DETAILS SHALL APPLY IN ALL CASES UNLESS SPECIFIC DETAILS OCCUR ELSEWHERE. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS FOR SIMILAR WORK.
  7. REQUIRED INSPECTIONS BY VIRGIN ISLANDS DEPARTMENT OF PLANNING AND NATURAL RESOURCES (BUILDING DEPARTMENT):
    - a. FOUNDATIONS
    - b. MASONRY
    - c. CONCRETE
    - d. STRUCTURAL STEEL
    - e. CONCRETE
  8. CONCRETE WORK SHALL BE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 308 - LATEST EDITION).
  9. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AFTER 28 DAYS EQUAL TO OR GREATER THAN 3000 PSI.
  10. CONTINUOUS INSPECTION REQUIRED FOR ALL CONCRETE. INSPECTION BY BUILDING INSPECTOR REQUIRED FOR PLACEMENT OF REINFORCING STEEL PRIOR TO PLACING CONCRETE. CONTRACTORS PROVIDING STEEL SHALL BE RESPONSIBLE FOR PLACING CONCRETE OF THE REINFORCING.
  11. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) UNLESS NOTED AS LIGHTWEIGHT CONCRETE.
  12. PORTLAND CEMENT: ASTM C590, TYPE I OR TYPE II, LOW ALKALI.
  13. CONCRETE AGGREGATE SHALL CONFORM TO ASTM C33 WITH THE FOLLOWING NOMINAL LIMITATIONS:
    - a. FOOTINGS AND SLABS ON GRADE: 1 TO 1-1/4 INCH MAXIMUM
    - b. WALLS AND STRUCTURAL SLABS: 3/4 INCH MAXIMUM
    - c. CONCRETE STRENGTH MIX DESIGN SHALL BE DOCUMENTED BY NEM OR DASTING TEST REPORT FORMS APPROVED LICENSED TESTING LABORATORIES PRIOR TO BATCHING.
    - d. EXPOSED CONCRETE FORMING AND FINISH SHALL BE AS NOTED ON ARCHITECTURAL DRAWINGS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
    - e. PROTECTING CORNERS OF BEAMS, COLUMNS, ETC. SHALL BE FORMED WITH 3/4 INCH CHAMFER UNLESS OTHERWISE DETAILED.
    - f. JOISTS FOR CONCRETE SHALL BE LAID OUT AND CONSTRUCTED TO PROVIDE THE SPECIFIED CAMBERS SHOWN ON THE DRAWINGS.
    - g. SHORING OF STRUCTURAL SLABS:
      - i. ALL SHORING AND BRACING SHALL BE DONE IN ACCORDANCE WITH ACI STANDARD RECOMMENDED PRACTICE FOR CONCRETE.
      - ii. ONE HUNDRED PERCENT SHORING AND FORMS SHALL REMAIN IN PLACE FOR 14 DAYS MINIMUM. SHORING MAY BE REDUCED TO 50 PERCENT AFTER 14 DAYS, PROVIDED CONCRETE STRENGTH EQUALS AT LEAST 75 PERCENT OF DESIGN STRENGTH.
      - iii. RESOURCES SHALL NOT BE REMOVED IF CONCRETE STRENGTH DOES NOT MEET SPECIFIED STRENGTH AT 28 DAYS.
      - iv. ALL SHORING AND BRACING SHALL BE DESIGNED TO SUPPORT SLAB AND JOIST LOADS. ALL SHORING SHALL BE DESIGNED TO SUPPORT SLAB AND JOIST LOADS. ALL SHORING TO SUPPORT UPPER LEVEL SLAB MAY BE PLACED WITHIN THE 5 DAY CURING PERIOD.
- B. MASONRY:**
1. CONCRETE BLOCK MASONRY UNITS: ASTM C90, UNIT AREA STRENGTH  $f_m = 1900$  PSI, MEDIUM WEIGHT, MASONRY UNIT COLOR AND FACE TEXTURE AS NOTED ON ARCHITECTURAL DRAWINGS. DESIGN STRENGTH  $f_m = 1900$  PSI.
  2. MASONRY UNIT SHALL HAVE BEEN CURED FOR NOT LESS THAN 28 DAYS AND SHALL BE CLIMATIZED TO SITE BEFORE PLACED IN BUILDING.
  3. CONTINUOUS INSPECTION IS REQUIRED, UNLESS NOTED OTHERWISE.
    - a. PREPARATION AND FORMING OF WALL PROSIS;
    - b. SAMPLING AND PLACING OF MASONRY UNITS;
    - c. PLACEMENT OF REINFORCING;
    - d. PROTECTING MASONRY FROM DAMAGE TO CURING OF CLEANOUTS AND DURING ALL CURING OPERATIONS.
  4. ALL MORTAR AND GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH EQUAL TO 1900 PSI AND 2000 PSI, RESPECTIVELY. AMMIXTURES WHEN USED SHALL BE PER MANUFACTURER'S RECOMMENDATION AND WITH APPROVAL OF THE BUILDING OFFICIAL.
  5. PORTLAND CEMENT - ASTM C590, TYPE II, LOW ALKALI.
  6. MORTAR MIX - 1:3 WITH 1/4 PART LINE PUTTY, TYPE S.
  7. GROUT MIX - 1:3 WITH 2 PARTS PEA GRAVEL.
  8. GROUT REQUIREMENTS:
    - a. GROUT MIX SHALL BE IN ACCORDANCE WITH UBC STANDARDS.
    - b. GROUT ALL CELLS, UNLESS OTHERWISE NOTED.
    - c. USE BOND BEAM UNITS AT HORIZONTAL REINFORCING.
    - d. LOCATE REBARS ABOUT CENTERLINE OF MASONRY WALL UNLESS DETAILED OTHERWISE.
    - e. ALL WALLS SHALL BE CONSTRUCTED USING 1/2 RIVNING BOND BETWEEN MASONRY, UNLESS OTHERWISE NOTED.
    - f. ALL WOOD PLATES TO BE BOLTED TO THE TOP OF MASONRY WALLS SHALL BE SET ON A MORTAR BED TO PROVIDE UNIFORM BEARING.
  9. REINFORCING STEEL FOR CONCRETE AND MASONRY:
    - a. REINFORCING BARS: ASTM A615, GRADE 60, ALL REINFORCING STEEL THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706, UNLESS OTHERWISE NOTED ON PLANS.
    - b. WELDED WIRE FABRIC: ASTM A685.
    - c. WELDING ELECTRODES: AWS D1.4, CLASS E90, LOW HYDROGEN.
    - d. MINIMUM SPICE LENGTHS, UNLESS DETAILED OTHERWISE.
    - e. CONCRETE SEE SCHEDULE ON DRAWING.
    - f. MASONRY SEE SCHEDULE ON DRAWING.
    - g. WELDED WIRE FABRIC SHALL BE SPACED WITH A MINIMUM LAP OF 12 INCHES.
    - h. MINIMUM CLEARANCE BETWEEN REINFORCING AND FACE OF CONCRETE SHALL BE AS FOLLOWS: (UNLESS SHOWN OTHERWISE):
      - i. CONCRETE BELOW GRADE (CAST AGAINST SOIL) = 3"
      - ii. CONCRETE BELOW GRADE (FORMED) = 2"
      - iii. CONCRETE WALLS EXPOSED TO WEATHER = 1-1/2"
      - iv. CONCRETE WALLS, INTERIOR WALLS = 3/4"
      - v. CONCRETE BEAMS AND COLUMNS = 1-1/2"
    - i. SPICES IN COLUMNS AND BEAMS SHALL OCCUR ONLY WHERE DETAILED. SPICES IN CONTINUOUS GRADE BEAMS SHALL OCCUR AT 1/3 SPAN. CONTACT STRUCTURAL ENGINEER IF CLARIFICATION IS NEEDED.
    - j. SPICES IN HORIZONTAL WALL REINFORCING SHALL BE STAGGERED 3'-0" MINIMUM FROM SPICE CENTERLINE, WHERE WALLS HAVE TWO LAYERS OF REINFORCING, SPICES SHALL NOT OCCUR IN THE SAME LOCATION.
    - k. ALL REINFORCING SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED AND SHALL BE SECURED TO FORMS AND REINFORCING. REINFORCING SHALL BE PLACED WITH TOLERANCE SHALL BE AS PER ACI 308.
    - l. PROVIDE SLEEVES FOR PUMPING AND ELECTRICAL OPENINGS IN THE CONCRETE MEMBERS BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WITH A CHISEL. COUPLING IN CONCRETE IS NOT ALLOWED. REINFORCING DETAILS SHALL BE SHOWN IN DETAIL OR CALLED IN NOTES.
- C. MASONRY:**
1. CONCRETE BLOCK MASONRY UNITS: ASTM C90, UNIT AREA STRENGTH  $f_m = 1900$  PSI, MEDIUM WEIGHT, MASONRY UNIT COLOR AND FACE TEXTURE AS NOTED ON ARCHITECTURAL DRAWINGS. DESIGN STRENGTH  $f_m = 1900$  PSI.
  2. MASONRY UNIT SHALL HAVE BEEN CURED FOR NOT LESS THAN 28 DAYS AND SHALL BE CLIMATIZED TO SITE BEFORE PLACED IN BUILDING.
  3. CONTINUOUS INSPECTION IS REQUIRED, UNLESS NOTED OTHERWISE.
    - a. PREPARATION AND FORMING OF WALL PROSIS;
    - b. SAMPLING AND PLACING OF MASONRY UNITS;
    - c. PLACEMENT OF REINFORCING;
    - d. PROTECTING MASONRY FROM DAMAGE TO CURING OF CLEANOUTS AND DURING ALL CURING OPERATIONS.
  4. ALL MORTAR AND GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH EQUAL TO 1900 PSI AND 2000 PSI, RESPECTIVELY. AMMIXTURES WHEN USED SHALL BE PER MANUFACTURER'S RECOMMENDATION AND WITH APPROVAL OF THE BUILDING OFFICIAL.
  5. PORTLAND CEMENT - ASTM C590, TYPE II, LOW ALKALI.
  6. MORTAR MIX - 1:3 WITH 1/4 PART LINE PUTTY, TYPE S.
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    - b. GROUT ALL CELLS, UNLESS OTHERWISE NOTED.
    - c. USE BOND BEAM UNITS AT HORIZONTAL REINFORCING.
    - d. LOCATE REBARS ABOUT CENTERLINE OF MASONRY WALL UNLESS DETAILED OTHERWISE.
    - e. ALL WALLS SHALL BE CONSTRUCTED USING 1/2 RIVNING BOND BETWEEN MASONRY, UNLESS OTHERWISE NOTED.
    - f. ALL WOOD PLATES TO BE BOLTED TO THE TOP OF MASONRY WALLS SHALL BE SET ON A MORTAR BED TO PROVIDE UNIFORM BEARING.
  9. REINFORCING STEEL FOR CONCRETE AND MASONRY:
    - a. REINFORCING BARS: ASTM A615, GRADE 60, ALL REINFORCING STEEL THAT IS TO BE WELDED SHALL CONFORM TO ASTM A706, UNLESS OTHERWISE NOTED ON PLANS.
    - b. WELDED WIRE FABRIC: ASTM A685.
    - c. WELDING ELECTRODES: AWS D1.4, CLASS E90, LOW HYDROGEN.
    - d. MINIMUM SPICE LENGTHS, UNLESS DETAILED OTHERWISE.
    - e. CONCRETE SEE SCHEDULE ON DRAWING.
    - f. MASONRY SEE SCHEDULE ON DRAWING.
    - g. WELDED WIRE FABRIC SHALL BE SPACED WITH A MINIMUM LAP OF 12 INCHES.
    - h. MINIMUM CLEARANCE BETWEEN REINFORCING AND FACE OF CONCRETE SHALL BE AS FOLLOWS: (UNLESS SHOWN OTHERWISE):
      - i. CONCRETE BELOW GRADE (CAST AGAINST SOIL) = 3"
      - ii. CONCRETE BELOW GRADE (FORMED) = 2"
      - iii. CONCRETE WALLS EXPOSED TO WEATHER = 1-1/2"
      - iv. CONCRETE WALLS, INTERIOR WALLS = 3/4"
      - v. CONCRETE BEAMS AND COLUMNS = 1-1/2"
    - i. SPICES IN COLUMNS AND BEAMS SHALL OCCUR ONLY WHERE DETAILED. SPICES IN CONTINUOUS GRADE BEAMS SHALL OCCUR AT 1/3 SPAN. CONTACT STRUCTURAL ENGINEER IF CLARIFICATION IS NEEDED.
    - j. SPICES IN HORIZONTAL WALL REINFORCING SHALL BE STAGGERED 3'-0" MINIMUM FROM SPICE CENTERLINE, WHERE WALLS HAVE TWO LAYERS OF REINFORCING, SPICES SHALL NOT OCCUR IN THE SAME LOCATION.
    - k. ALL REINFORCING SHALL BE ACCURATELY PLACED AND ADEQUATELY SUPPORTED BEFORE CONCRETE IS PLACED AND SHALL BE SECURED TO FORMS AND REINFORCING. REINFORCING SHALL BE PLACED WITH TOLERANCE SHALL BE AS PER ACI 308.
    - l. PROVIDE SLEEVES FOR PUMPING AND ELECTRICAL OPENINGS IN THE CONCRETE MEMBERS BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WITH A CHISEL. COUPLING IN CONCRETE IS NOT ALLOWED. REINFORCING DETAILS SHALL BE SHOWN IN DETAIL OR CALLED IN NOTES.
- D. NON-SHRINK GROUT OR DRYPACK:**
1. NON-SHRINK GROUT OR DRYPACK SHALL CONSIST OF A PREMIXED NON-METALLIC FORMALIN.
  2. MINIMUM FORMALIN REQUIREMENTS:
    - a. NO SHRINKAGE AFTER PLACEMENT.
    - b. NO EXPANSION AFTER SET (ASTM C-897).
    - c. INITIAL SET UP TIME NOT LESS THAN 45 MINUTES (ASTM C-1091).
    - d. ONE DAY COMPRESSIVE STRENGTH = 3000 PSI (ASTM C-1091).
    - e.  $f_c$  AT 28 DAYS = 5000 PSI.
  3. LUBBER:
    - a. ALL LUBBER SHALL BE SOUTHERN YELLOW PINE, GRADE #1 - PRESSURE TREATED, UNLESS OTHERWISE NOTED.
    - b. ALL PRIMING LUBBER SHALL BE SPS LUBBER DESIGN BASED ON ANSI/APRA NDS - 1091 - NATIONAL DESIGN STANDARDS.
    - c. PLYWOOD SHEATHING - PRESSURE TREATED (U.S. PSY-83) WITH EXTERIOR GLUE AND APA RATED.
  4. ALL NAILING SHALL BE IN ACCORDANCE WITH UBC REQUIREMENTS UNLESS NOTED OTHERWISE ON THE DRAWINGS. USE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. ALL NAILING SHALL BE INSPECTED AND APPROVED BY THE BUILDING DEPARTMENT BEFORE COVERING.
  5. BOLTS SHALL COMPLY WITH ASTM A-307. BOLT HOLES IN WOOD SHALL BE 1/16 INCH MAXIMUM OVERSIZE. ALL BOLT HEAD AND NUTS BEARING ON WOOD SHALL HAVE STEEL WASHERS.
  6. NO LENGTH OF SPLIT IN MEMBER SHALL EXCEED THE WIDTH OF THE MEMBER FACE.
  7. CONNECTOR DESIGNATIONS REFER TO STRONG-TIE CONNECTORS BY SIMPSON COMPANY. ALL CONNECTORS TO BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
  8. ANY HOLE THROUGH STRUCTURAL MEMBERS FOR PIPES OR CONDUIT SHALL BE VENTURED WITH THE STRUCTURAL ENGINEER.
  9. NAIL ALL 2X DOUBLE JOIST WITH 16D NAILS AT 9 INCH ON CENTER STAGGERED.
  10. PROVIDE DOUBLE JOIST UNDER ALL PARALLEL PARTITIONS.
  11. FOR SIZE AND LOCATION OF ROOF FLOOR AND WALL OPENINGS, SEE ARCHITECTURAL DRAWINGS AND ELECTRICAL DRAWINGS. FRAME ALL FOUR SIDES OF OPENING WITH ADEQUATE MEMBERS AND CONNECTORS.
  12. PROVIDE DOUBLE STUDS UNDER ALL BEAM ENDS UNLESS NOTED OTHERWISE AND CARRY STUDS DOWN TO FOUNDATION.
- E. STRUCTURAL STEEL:**
1. ALL WORK IN CONFORMANCE WITH THE MANUAL OF STEEL CONSTRUCTION 9TH EDITION BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
  2. MATERIAL, ALL STEEL MEMBERS TO BE ASTM A992, MINIMUM YIELD STRESS OF 50 KSI UNLESS OTHERWISE NOTED.
  3. CONNECTIONS: BOLTS TO BE ASTM A325, ST CLASS "A" BOLTS UNLESS OTHERWISE NOTED. ALL PROVISIONS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE - STEEL (AWS D1) APPLY TO WORK USE EVOX ELECTRODES FOR WELDING.
  4. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW AND LIMITED ACCEPTANCE PRIOR TO ANY FABRICATION OR ERECTION.
  5. ALL BASE PLATES TO HAVE A MINIMUM OF 1-1/2 INCH OF NON-SHRINK GROUT COMPLETELY INSTALLED.
  6. CONTINUOUS INSPECTION REQUIRED FOR ALL STEEL WORK INSPECTION BY BUILDING INSPECTOR REQUIRED FOR PLACEMENT OF STEEL.
  7. Bar Joists & Metal Deck:
    - a. USE STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOISTS, A-SERIES ADOPTED BY THE STEEL JOIST INSTITUTE - CURRENT EDITION (NEED OVER).
    - b. STEEL DECK SHALL BE MANUFACTURED BY UNITED STEEL DECK, INC. OR APPROVED EQUAL WITH STEEL COVERING TO ASTM A618 USE HORIZONTAL BRACING WITH A MINIMUM OF TWO ROWS EACH SPAN WITH  $1 \frac{1}{2} \times 1 \frac{1}{2} \times 1 \frac{1}{4}$ .
    - c. ATTACH STEEL DECK TO BAR JOISTS WITH  $\frac{3}{8}$ " RIDGLE WELDS. FASTEN SIDE LAPS WITH #8 SCREWS AT 6".



# CONSTRUCTION NOTES SITE DETAIL

PROFESSIONAL  
RESPONSE FOR  
LAUREL H SANDRELL NISCHING  
PAGE: No. 04-4  
DATE: 10/11/2011  
ESTATE NUMBER:  
97 THOMAS J. V. VIRGIN  
ISLANDS

NO.	DESCRIPTION	DATE

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SCALE: **G2**  
2 OF 10