STRUCTURAL NOTES

GENERAL NOTES:
1. THE DESIGN AND CONSTRUCTION OF ALL WORK ON THIS PROJECT SHALL CONFORM TO THE LATEST EDITIONS OF PART 9 OF THE NATIONAL BUILDING CODE, THE ONTARIO BUILDING CODE, LOCAL REGULATIONS AND BYLAWS AND THE OCCUPATIONAL HEALTH AND SAFETY ACT. THIS DESIGN APPLIES TO RESIDENTIAL BUILDINGS ONLY.
2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MEASUREMENTS AT THE SITE AND REPORT TO THE ENGINEER ANY DISCREPANCIES OR UNSATISFACTORY CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE PROJECT BEFORE PROCEEDING WITH THE WORK.
3. AN AUTHORIZED FOX BLOCKS WALL TRAINED INSTALLER SHALL BE CONTACTED BY THE CONTRACTOR FOR INSPECTIONS OF THE FOUNDATION, REINFORCING STEEL PLACEMENT, ONLY IF REQUIRED BY THE BUILDING OFFICIAL.

DESIGN PARAMETERS:
1. DESIGN LOADS ARE UNFACTORED UNLESS NOTED OTHERWISE:
   • SOIL PRESSURE (LIVE) = 480 kPa/m² EQUIVALENT FLUID DENSITY
   • DRAINED EARTH IN ACCORDANCE WITH OBC
   • AREA SURCHARGE (LIVE) = 2.4 kPa (50 psf) Ka = 0.33
2. FOUNDATIONS TO BEAR DIRECTLY ON MATERIAL SUITABLE FOR 75 kPa (1,566 psf) BEARING PRESSURE, UNLESS NOTED, REFER TO SOIL ENGINEERS REPORT FOR FOUNDATION DEPTHS, BEARING PREPARATION, ETC. AS MAY BE REQUIRED BY LOCAL BUILDING OFFICIAL.
3. SOIL BEARING CAPACITY SPECIFIED MAY NEED TO BE VERIFIED BY A GEOTECHNICAL ENGINEER PRIOR TO THE PLACING OF FOUNDATIONS AND SLABS, ANY NON-COMFORMANCE WITH THE SPECIFIED MINIMUM CATEGORIES MUST BE IMMEDIATELY REPORTED TO THE STRUCTURAL ENGINEER.

CONCRETE AND REINFORCING STEEL:
1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF CSA. A23.1,2 & 3 FOR MATERIALS AND WORKMANSHIP.
2. USE MIN. GRADE 400/60 kN YIELD STRENGTH REBAR PLACED IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE.
3. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE:
   • 20 MPA (2,900 psi) FOR FOOTINGS
   • 20 MPA (2,900 psi) FOR WALLS.
4. ALL CONCRETE SHALL BE TESTED BY A CSA CERTIFIED CONCRETE TESTING LABORATORY.
5. USE HIGH FREQUENCY VIBRATION TO PLACE ALL CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOIST DURING THE FIRST THREE DAYS OF CURING.
7. TAKE ADEQUATE MEASURES TO PROTECT CONCRETE FROM EXPOSURE TO FREEZING TEMPERATURES AT LEAST 7 DAYS AFTER CONCRETE PLACEMENT. COLD WEATHER PROTECTION IS REQUIRED FOR ALL CONCRETE PLACED WHERE IT IS FORECASTED THAT THE TEMPERATURE WILL DROP BELOW 5°C WITHIN 24 HOURS OF PLACEMENT. PROTECTION PROVIDED, INCLUDING INSULATED TARP, POLY COVERED STRAW, SUPPLEMENTAL HEAT AND/OR CHEMICAL ADDITIVES, IS TO BE SUFFICIENT TO MAINTAIN A MINIMUM CURING TEMPERATURE OF 10°C FOR 3 DAYS.
8. MAINTAIN THE FOLLOWING CLEAR CONCRETE COVER TO REINFORCEMENT:
   • 75 mm (3 inches) FOR CONCRETE PLACED AGAINST THE EARTH (BOTTOM OF FOOTINGS).
9. MINIMUM BAR LAP LENGTH SHALL BE:
   • 350 mm (14 inches) FOR 10M (No. 4) BARS

FOOTINGS:
1. FOOTINGS TO BEAR DIRECTLY ON UNDISTURBED NATIVE SOILS OR APPROVED ENGINEERED FILT SUITABLE FOR MINIMUM DESIGN BEARING PRESSURES. (REFER TO SOIL ENGINEERS REPORT FOR RECOMMENDATIONS).
2. SOFT AREAS UNCOVERED DURING EXCAVATION SHALL BE SUB-EXCAVATED TO SOUND MATERIAL AND FILLED WITH CLEAN, FREE DRAINING GRANULAR SOIL COMPACTED TO 100% STANDARD PROCTOR DRY DENSITY (SPDD).
3. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 (35 DEGREES) IN THE LINE OF SLOPE BETWEEN ADJACENT FOOTING EXCAVATIONS OR ALONG STEPPED FOOTINGS. USE STEPS NOT EXCEEDING 600 mm (24 INCHES) IN HEIGHT AND NOT LESS THAN 600 mm (24 INCHES) IN LENGTH, IN ACCORDANCE WITH OBC 9.15.3.9.
4. MAINTAIN UNSUPPORTED SIDES OF EXCAVATION ONLY IF SAFE INCLINATION OF THE SIDES OF THE EXCAVATION IS PROVIDED IN ACCORDANCE WITH THE SOILS ENGINEER’S RECOMMENDATIONS.
5. ERECT, MAINTAIN, AND IF REQUIRED, REMOVE A SUPPORTING SHORING SYSTEM ALONG THE SIDES OF THE EXCAVATION, DESIGNED BY A GEOENGINEER, IN ACCORDANCE WITH THE SOILS REPORT AND WPSHMS OR CHSA STANDARDS.
6. PROTECT SOIL FROM FREEZING ADJACENT TO AND BELOW ALL FOOTINGS.
7. BACKFILL AGAINST FOUNDATION WALL IN SUCH A MANNER THAT THE LEVEL OF BACKFILL MATERIAL ON ONE SIDE OF THE WALL IS NEVER MORE THAN 450 mm (18 INCHES) DIFFERENT FROM THE LEVEL ON THE LOWER SIDE OF THE WALL, EXCEPT WHERE TEMPORARY SUPPORT FOR THE WALL IS PROVIDED OR WALLS ARE DESIGNED FOR SUCH UNEVEN Pressures (AS IN ATTACHED DETAILS).
8. SHOULD UNDERGROUND WATER BE ENCOUNTERED, PROVIDE DE-WATERING FACILITIES TO KEEP WATER LEVEL FOOTINGS AND FLOOR AN ADDITIONAL 75 mm (3") LAYER OF LEAN CONCRETE UNDER ALL FOOTINGS.
9. LOCATE ALL FOOTINGS AND PIERS CENTRALLY UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE.

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Title: KNEE WALL STRUCTURAL NOTES
Date: APR. 2014
Drawing: KW-1
3½" BRICK VENEER
1" MAX. PROJECTION BEYOND CONCRETE SURFACE AS PER CODE
ANCHOR BOLTS, AS REQUIRED PER LOCAL CODE
LAP VAPOUR BARRIER FROM FRAME TO INTERIOR FACE OF FOX BLOCKS WALL FORM
FOX BLOCKS WALL 6" (152mm) OR 8" (203mm) TAPER-TOP FORM
THERMAL BARRIER PROTECTION AS REQUIRED BY LOCAL CODE
FOX BLOCKS WALL 6" (152mm) OR 8" (203mm) STANDARD FORM (3 COURSES)
10M (#4) VERTICAL BARS @ 16" O.C. (406mm O.C.) FOR 6" FORM ONLY (SEE NOTE 1.)
10M (#4) HORIZONTAL BARS @ 16" O.C. (406mm O.C.) FOR 6" FORM ONLY (SEE NOTE 1.)
10M (#4) x 16" (405mm) HORIZONTAL x 20" (508mm) VERTICAL BENT DOWELS @ 16" (406mm) O.C.
MIN. 4" (102mm) CONCRETE FLOOR SLAB

3/16" (5mm) ACRYLIC-PARGE COAT TO MINIMUM OF 6" (150mm) BELOW GRADE
THROUGH WALL FLASHING TO EXTEND OVER TAPER TOP FORM

2" (51mm) CONCRETE COVER TO VERTICAL STEEL
3 - 10M (#4) BARS, CONTINUOUS

TOP OF FOOTING

DRAINED EARTH IN ACCORDANCE W/ OBC CONT. CONCRETE FOOTING

10" (254mm) 6" (152mm) 1'-4" (406mm)
2'-0" (610mm)
3" (75mm) CONCRETE COVER TO REINFORCEMENT STEEL

* REFER TO STRUCTURAL NOTES KW-1

NOTE 1. WALL REINFORCING NOT REQUIRED WHEN USING 8" FORMS. FOOTING REINFORCEMENT AND DOWELS ARE REQUIRED WITH ALL WALL FORMS.
ANCHOR BOLTS, AS REQUIRED PER LOCAL CODE

TOP OF ICF FORM

AIR BARRIER & FINISH TO LAP PARGE COAT BY 1" (25mm) MINIMUM

3/16" (5mm) ACRYLIC PARGE COAT TO MINIMUM OF 6" (150mm) BELOW GRADE

DAMP PROOFING / WATER-PROOFING MEMBRANE

2" (51mm) CONCRETE COVER TO VERTICAL STEEL

3 - 10M (#4) BARS, CONTINUOUS

TOP OF FOOTING

5'-4" (1626mm)

4'-6" (1372mm) MAX.

8" (203mm)

DRAINED EARTH IN ACCORDANCE W/ OBC

CONT. CONCRETE FOOTING

LAP VAPOUR BARRIER FROM FRAME TO INTERIOR FACE OF FOX BLOCKS WALL FORM

FOX BLOCKS WALL 6" (152mm) OR 8" (203mm) TAPER-TOP FORM

THERMAL BARRIER PROTECTION AS REQUIRED BY LOCAL CODE

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10M (#4) x 16" (405mm) HORIZONTAL x 20" (508mm) VERTICAL BENT DOWELS AT 16" (406mm) O.C.

MIN. 4" (102mm) CONCRETE FLOOR SLAB

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