## **GENERAL NOTES:**

- 1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (IBC) 2003 EDITION.
- 2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING WORK. THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED OF ANY DISCREPANCY.
- 3. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- 4. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY CONDITIONS ENCOUNTERED DURING CONSTRUCTION CONTRADICTORY TO THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
- 5. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ADJACENT STRUCTURES, UTILITY LINES, FIXTURES, EQUIPMENT, PROCESSES, STREETS AND SIDEWALKS DURING EXCAVATION AND CONSTRUCTION.

## **DESIGN ASSUMPTIONS:**

- 1. DESIGN LOADS:
  - A. RUBB PRE-ENGINEERED BUILDING FOUNDATION LOADS AS PROVIDED BY RUBB BUILDING SYSTEMS.
- B. WAREHOUSE LIVE LOAD 200 PSF
- 2. GEOTECHNICAL PARAMETERS:
- GEOTECHNICAL DESIGN INFORMATION IS NOT AVAILABLE. THE FOLLOWING GEOTECHNICAL DESIGN PARAMETERS HAVE BEEN USED. THE DESIGN PARAMETERS WILL BE VERIFIED BY A GEOTECHNICAL ENGINEER AS CONSTRUCTION PROCEEDS.

120 PCF

- A. UNIT WEIGHT OF SOIL
- B. ACTIVE SOIL PRESSURE COEFFICIENT 0.33
- C. PASSIVE SOIL PRESSURE 150 PSF/FT BELOW (APPLIED TO SOIL SHEAR ORIGINAL GRADE KEY AND VERTICAL FACE OF FOOTING ONLY)
- D. ALLOWABLE SOIL BEARING PRESSURE 3000 PSF
- 3. EXISTING RETAINING WALL:
- EXISTING RETAINING WALL CONTAINS REINFORCING STEEL. THIS WILL BE VERIFIED AS CONSTRUCTION PROCEEDS.
- A. CONCRETE COMPRESSIVE STRENGTH 2500 PSI
- B. REINFORCING STEEL YIELD STRENGTH 40000 PSI

#### **EXCAVATION AND BACKFILL NOTES:**

- 1. THE BOTTOM OF EXCAVATION SHALL BE 6" DEEPER THAN THE BASE OF THE FOOTING AND SHALL BE BROUGHT TO PROPER DEPTH WITH COMPACTED STRUCTURAL BACKFILL.
- 2. EXCAVATED SURFACES SHALL BE PROTECTED FROM FREEZING. FROZEN MATERIAL SHALL BE REMOVED AND REPLACED WITH COMPACTED STRUCTURAL BACKFILL.
- 3. UNDER SLABS AND PAVEMENTS, THE TOP 12" OF BACKFILL SHALL BE STRUCTURAL BACKFILL AND SHALL HAVE 60 PERCENT PASSING A 3/4" SIEVE.
- 4. UNSATISFACTORY MATERIALS (PLASTIC SILTY AND CLAYEY MATERIAL, ORGANIC MATERIAL SOILS CLASSIFIED AS GC, SC, ML, MH, CL, CH, OL, OH, PT PER ASTM D2487) ENCOUNTERED AT THE BOTTOM OF THE EXCAVATION SHALL BE REMOVED AND REPLACED WITH STRUCTURAL BACKFILL.
- 5. STRUCTURAL BACKFILL SHALL BE COHESIONLESS COARSE AGGREGATE PLACED ON DRY, UNIFORM SURFACE. THE BACKFILL SHALL BE AS FOLLOWS:

SIEVE	SIZE	PERCENT BY V	PASSIN WEIGHT
2 INC 1/2 1/4 NO. NO.	INCH INCH 40	45 30	00 - 70 - 55 - 20 - 5

PROVIDE GRADATION REPORT TO ENGINEER FOR APPROVAL PRIOR TO PLACEMENT.

- 6. ALL BACKFILL SHALL BE STRUCTURAL BACKFILL AND BE PLACED IN 6" LIFTS AND COMPACTED TO 95 % OF MAXIMUM DENSITY PER MODIFIED PROCTOR (ASTM D1557).
- 7. EXISTING EXCAVATED MATERIAL SHALL NOT BE REUSED AS STRUCTURAL BACKFILL UNLESS APPROVED BY THE ENGINEER.
- 8. NOTIFY THE ENGINEER IF UNEXPECTED SOIL CONDITIONS ARE FOUND.
- 9. DEWATER FORMED AREAS AS NECESSARY PRIOR TO PLACING CONCRETE.
- 10. BACKFILLING OF WALLS AND PIERS SHALL BE MADE SUCH THAT SYMMETRICAL LOADING IS MAINTAINED ON BOTH SIDES.
- 11. EXISTING UNDERGROUND UTILITIES:
  THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE DRAWINGS IS APPROXIMATE. UTILITIES SHOWN MAY NOT COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE CONTRACTOR SHALL MAKE, AT HIS EXPENSE, SUCH ADDITIONAL INVESTIGATIONS AS REQUIRED TO MORE PRECISELY DETERMINE EXISTENCE AND/OR LOCATION OF EXISTING UTILITIES.
- 12. EROSION CONTROL:
  EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO
  BEGINNING ANY EARTH DISTURBING WORK. THE EROSION CONTROL
  FEATURES SHALL BE INSPECTED AND REPAIRED AS NECESSARY
  AFTER EACH RAINFALL. THEY SHALL BE MAINTAINED THROUGHOUT THE
  DURATION OF THE WORK UNTIL THE OWNER DETERMINES THEY ARE
  NO LONGER NEEDED.

# CONCRETE DEMOLITION NOTES:

- 1. BEFORE ANY DEMOLITION MAY BEGIN THE CONTRACTOR SHALL SUBMIT A LOGICAL DEMOLITION AND CONSTRUCTION SEQUENCE TO THE OWNER AND ENGINEER FOR REVIEW. THIS SEQUENCE SHALL TAKE INTO CONSIDERATION ONGOING OPERATIONS AND STRUCTURAL INTEGRITY OF THE BUILDING.
- 2. DIMENSIONS AND DETAILS OF ALL EXISTING STRUCTURES HAVE BEEN EXTRACTED FROM RECORD DRAWINGS AND/OR FIELD DETERMINED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS TO HIS SATISFACTION PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DEVIATIONS FOUND IN THE FIELD FROM WHAT IS SHOWN ON THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER.
- 3. THESE CONCRETE DRAWINGS ONLY DEPICT THE AREAS OF WORK UNDER THIS CONTRACT AND SURROUNDING CONDITIONS.
- 4. EXISTING CONCRETE IS TO BE REMOVED AS NOTED (SEE LEGEND).
- 5. ADDITIONAL CONCRETE SHALL NOT BE REMOVED EXCEPT WITH PRIOR APPROVAL FROM THE OWNER AND THE ENGINEER.
- 6. CARE SHALL BE TAKEN IN REMOVAL OF CONCRETE TO AVOID DAMAGE TO ANY OTHER CONCRETE, STRUCTURAL STEEL OR EQUIPMENT.
- 7. ANY DAMAGE TO REMAINING CONCRETE, STRUCTURAL STEEL OR EQUIPMENT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, REPLACE AND REPAINT TO ORIGINAL CONDITION.
- 8. EXISTING REINFORCING SHALL BE LEFT IN PLACE TO A LENGTH OF 1'-0" MIN. BEYOND CUT LINE, UNLESS A LONGER LENGTH IS NOTED ON DRAWING.

# CONCRETE NOTES:

- 1. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF ACI 318 AND ACI 301.
- 2. ALL WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITIONS OF ACI 306.1 "STANDARD SPECIFICATIONS FOR COLD WEATHER CONCRETING" AND ACI 306R "COLD WEATHER CONCRETING".
- 3. ALL CONCRETE SHALL BE AS FOLLOWS:
  - A. 4,000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS.
    B. MAXIMUM SIZE AGGREGATE 3/4" UNLESS OTHERWISE NOTED.
  - C. CEMENT SHALL BE ASTM C150, TYPE II UNLESS NOTED OTHERWISE.
- D. AIR ENTRAINING ADMIXTURES SHALL BE USED FOR ALL CONCRETE EXPOSED TO WEATHER.
- E. DO NOT USE ADMIXTURES WITH CHLORIDE SALTS IN THE CONCRETE.
- 4. ALL CONCRETE, EXCEPT FLOOR SLABS, SHALL HAVE 6±1 PERCENT AIR ENTRAINMENT. THE CONTRACTOR SHALL SUBMIT MIX DESIGNS FOR REVIEW PRIOR TO CONSTRUCTION.
- 5. ALL CONCRETE SHALL CONTAIN AN APPROVED WATER REDUCING, PLASTICIZING ADMIXTURE.
- 6. ALL EMBEDDED METALS TO CONFORM TO ASTM A36, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 7. UNLESS OTHERWISE NOTED, THE TOP SURFACE OF ALL EXPOSED CONCRETE TO BE STEEL TROWELLED.
- 8. PROVIDE 3/4" CHAMFER AT ALL EXPOSED CORNERS, EXCEPT FOR TOP INTERIOR EDGE OF THE NEW WALL.
- 9. ALL REINFORCING SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM SPECIFICATION A615.
- 10. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
- 11. CONCRETE PROTECTION TO REINFORCING BARS SHALL BE AT LEAST EQUAL TO THE DIAMETER OF THE BARS. COVER SHALL BE AS FOLLOWS, UNLESS SHOWN OTHERWISE ON PLANS AND DETAILS:
  - A. POURED AGAINST EARTH
    B. POURED AGAINST FORM BELOW GRADE
    C. FORMED SLABS
    D. SLABS ON GRADE (FROM TOP OF SLAB)
    E. COLUMNS AND BEAMS TO TIES, STIRRUPS
    F. WALLS EXPOSED TO WEATHER
    G. WALLS NOT EXPOSED TO WEATHER
    1"
- 12. UNLESS OTHERWISE NOTED, REINFORCING LAP SPLICES SHALL BE ACI CLASS B SPLICES USING THE FOLLOWING LENGTHS:

BAR SIZE 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

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- NOTE 1: FOR BARS BEING SPLICED NOT HAVING A CLEAR SPACING OF 2 BAR DIAMETERS AND HAVING A CLEAR COVER LESS THAN 1 BAR DIAMETER MULTIPLY THE LAP LENGTHS BY 1.5.
- NOTE 2: FOR SPLICES IN TOP BARS, MULTIPLY THE LAP LENGTHS BY 1.30.
- NOTE 3: FOR CASES WHERE NOTES 1 AND 2 APPLY BOTH MULTIPLIERS SHALL BE USED.
- 13. STAGGER ADJACENT LAP SPACES WHERE PRACTICAL UNLESS OTHERWISE NOTED.
- 14. MECHANICAL AND WELDED SPLICES, IF USED, SHALL DEVELOP 125% OF BAR YIELD STRENGTH AND SHALL BE QUALIFIED PER AWS D1.4. MECHANICAL SPLICES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- 15. HOOKS NOT DIMENSIONED SHALL BE STANDARD ACI HOOKS.

# CONCRETE NOTES CONTINUED:

- 16. UNLESS NOTED OTHERWISE, PROVIDE CORNER BARS TO SPLICE HORIZONTAL REINFORCEMENT AT ALL WALL AND GRADE BEAM CORNERS. USE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCEMENT. SPLICE TOGETHER INTERSECTION WALLS OR GRADE BEAMS IN THE SAME MANNER. WHERE GRADE BEAMS OR STRIP FOOTINGS INTERSECT COLUMN FOUNDATIONS. EXTEND GRADE BEAM OR STRIP FOOTING REINFORCEMENT CONTINUOUSLY THROUGH THE COLUMN FOUNDATION.
- 17. SPREAD REINFORCEMENT AS REQUIRED TO CLEAR EMBEDDED PARTS AND ANCHOR BOLTS.
- 18. DOWELS SHALL BE DRILLED AND SET USING FIVE STAR FLUID GROUT 100 (A NON-METALLIC, NON-SHRINK FLUID GROUT) AND SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- 19. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT II ANCHORS INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- 20. ALL ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 ROD AND SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695 CLASS 50 OR HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. MATCHING GALVANIZED ASTM A563 HEX NUTS GRADE A AND STANDARD ASTM F436 FLAT WASHERS SHALL BE USED.
- 21. CONCRETE CURING:
  CONCRETE SHALL BE CURED PER ACI 318 AND ACI 308. AT A
  MINIMUM, CURING MATERIALS AND PROCEDURES SHALL BE
  FURNISHED AS FOLLOWS:
  - A. INITIAL MOISTURE CURING AND/OR MOISTURE—RETAINING COVER CURING OF UNFORMED SURFACES SHALL COMMENCE AFTER PLACING AND FINISHING AND AS SOON AS FREE WATER HAS DISAPPEARED FROM THE CONCRETE SURFACE. THE CONCRETE SURFACE SHALL BE KEPT CONTINUOUSLY MOIST FOR A PERIOD NOT LESS THAN 72 HOURS.
  - B. MOISTURE CURING SHALL CONSIST OF METHODS THAT KEEP THE CONCRETE SURFACE WET BY COVERING WITH WATER. MOISTURE—RETAINING COVER CURING SHALL CONSIST OF METHODS THAT UTILIZE AN ABSORPTIVE COVER THAT IS COVERED WITH WATER. THE ABSORPTIVE COVER SHALL CONSIST OF HEAVY WEIGHT BURLAP OR COTTON MAT MATERIAL.
  - C. FINAL CURING SHALL COMMENCE IMMEDIATELY FOLLOWING INITIAL CURING. FINAL CURING SHALL CONTINUE FOR AT LEAST 96 CUMULATIVE HOURS (NOT NECESSARILY CONSECUTIVE). CURING METHODS SHALL BE SIMILAR TO THOSE USED DURING THE INITIAL CURING PROCESS.
  - D. FORMED CONCRETE SHALL BE CURED SURFACES WITH FORMS IN PLACE FOR THE FULL CURING PERIOD. IF FORMS ARE REMOVED PRIOR TO THE COMPLETION OF THE FULL CURING PERIOD, THE CONSTRUCTOR SHALL APPLY A CURING AGENT TO THE FORMED SURFACES.

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AT LOCATIONS WHERE NEW CONCRETE IS BEING PLACED NEXT TO PREVIOUSLY PLACED CONCRETE, THE EXISTING CONCRETE SHALL BE SCARIFIED TO 1/4" AMPLITUDE. SCARIFIED SURFACE SHALL BE SATURATED WITH WATER 6 HOURS PRIOR TO CONCRETE PLACEMENT.

■ PRELIMINARY - NOT FOR CONSTRUCTION

☐ APPROVED FOR CONSTRUCTION

SUPERSEDES ALL PREVIOUS ISSUES

DATE FEB 24/03

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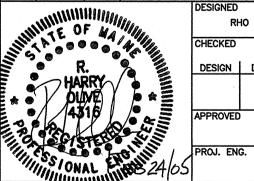
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