

SPECIFICATIONS

GENERAL NOTES

- 1) ALL WORK SHALL COMPLY WITH THE MASSACHUSETTS STATE BLDG. CODE.
- 2) ALL CONCRETE WORK TO BE IN ACCORDANCE WITH ACI 318-89. NO COLD WEATHER CONCRETE WORK SHALL BE PERMITTED.
- 3) ALL BRACING, TEMPORARY SUPPORTS, SHORING, ETC. DURING CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE CODES AND SAFETY REQUIREMENTS OF ALL GOVERNING AGENCIES.
- 4) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION PROCEDURES AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, UTILITIES, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL ORDINANCES.

SUBSURFACE CONDITIONS

- 1) UNUSUAL SUBSURFACE CONDITIONS ARE NOT THE RESPONSIBILITY OF THE ENGINEER AND INCLUDE THE DISCOVERY OF CONTAMINATED SOILS, VESSELS, ABANDONED FOUNDATIONS, BOULDERS, OR LEDGE.
- 2) SOIL BEARING CAPACITIES ARE ESTIMATED TO BE 3,000 PSF.
- 3) CONTRACTOR SHALL CONTACT "DIG SAFE" AND HAVE ALL UNDERGROUND UTILITIES LOCATED PRIOR TO ANY SUBSURFACE WORK. (TEL. 800-332-4844)
- 4) WATER TABLE ELEVATION TO BE DETERMINED BY THE BORING CONTRACTOR AND INDICATED ON THE BORING LOGS. IF BORINGS ARE NOT AVAILABLE, TEST PITS ARE TO BE DUG UNDER THE DIRECTION OF THE ENGINEER.
- 5) THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE VALIDITY OF THE SUBSURFACE CONDITIONS DESCRIBED ON THE DRAWINGS, SPECIFICATIONS, BORING LOGS, OR TEST PITS. THIS DATA IS INCLUDED ONLY TO ASSIST THE CONTRACTOR DURING BIDDING AND REPRESENT CONDITIONS ONLY OF THOSE SPECIFIED LOCATIONS AT THE PARTICULAR TIME THEY WERE MADE.

SITE

- 1) BENCH MARK ELEVATION = 100'-0" (ASSUMED) EXISTING FINISH FLOOR ELEVATION
- 2) THE GENERAL CONTRACTOR SHALL FIELD VERIFY THE DEPTH AND LOCATION OF EXISTING SUBSURFACE POWER, WATER AND UTILITY LINES AND SHALL PROTECT THEM FROM DAMAGE DURING EXCAVATION AND BACK FILL OPERATIONS.
- 3) DISCREPANCIES BETWEEN THE SITE AND THE PLANS SHALL BE REPORTED TO THE ENGINEER BY THE CONTRACTOR PRIOR TO COMMENCING WITH THE WORK.
- 4) THE GENERAL CONTRACTOR IS TO CONFINE ALL WORK WITHIN THE LIMITS OF WORK AS SPECIFIED BY THE OWNER WITHOUT IMPEDING THE NORMAL OPERATIONS OF THE PROJECT.
- 5) CONTRACTOR RESPONSIBLE FOR PROVIDING A WORK SITE FREE OF DEBRIS. THE CLEANLINESS OF THE SITE SHALL BE INCLUDED AS PART OF THE SCOPE OF WORK.

EXISTING UTILITIES

- 1) CONTRACTOR RESPONSIBLE FOR LOCATING EXISTING UTILITIES BEFORE CONSTRUCTION BEGINS. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES.
- 2) SPECIFIED UTILITIES TO BE RELOCATED AS SPECIFIED BY THE CONTRACT DOCUMENTS.

DEMOLITION

- 1) ALL DEMOLITION SHALL BE EXECUTED IN A FASHION THAT SHALL NOT HINDER NORMAL OPERATIONS. GROUND WATER SHALL BE DIVERTED DURING ALL DEMOLITION AND CONSTRUCTION PHASES.
- 2) ALL DEMOLITION DEBRIS MUST BE LEGALLY REMOVED FROM THE SITE. DEBRIS TEMPORARILY STORED AT THE SITE SHALL NOT IMPEDE NORMAL PROJECT OPERATIONS.

EXCAVATION

- 1) NO EXCAVATION SHALL BE STARTED UNTIL THE WORK HAS BEEN STAKED OUT BY THE GENERAL CONTRACTOR. ALL EXCAVATIONS SHALL BE PROTECTED FROM WATER, FREEZING AND DISTURBANCE TO THE STRUCTURAL VALUES OF THE EXPOSED SOILS. BITUMINOUS AND CONCRETE PAVEMENT EXCAVATIONS ARE TO BE REMOVED AND LEGALLY DISPOSED OF BY THE GENERAL CONTRACTOR.
- 2) DISTURBED SOILS SHALL BE COMPACTED AT THE DIRECTION OF THE ENGINEER.
- 3) THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION PROCEDURES AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, UTILITIES, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL ORDINANCES.
- 4) PROVIDE SHEETING, BRACING, AND UNDERPINNING AS REQUIRED TO PRESERVE ADJACENT STRUCTURES.
- 5) THE GENERAL CONTRACTOR SHALL VIBRATE ALL VIRGIN SOIL PRIOR TO PLACING CONCRETE.

BACKFILL

- 1) ALL BACKFILL UNDER STRUCTURAL SLABS, MATS, AND FOOTINGS WILL BE ENGINEERED BACKFILL COMPACTED IN SPECIFIED LISTS TO 95 PERCENT OF MAXIMUM DRY DENSITY, UNLESS OTHERWISE INDICATED OR SPECIFIED IN 8" LIFTS.
- 2) PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE ENGINEER PRIOR TO THE PLACEMENT OF REINFORCING STEEL.

REINFORCING STEEL

- 1) REINFORCING STEEL SHALL CONFORM TO ASTM A615. REINFORCING TO BE WELDED OR FIELD BENT SHALL BE ASTM A706, GRADE 60.
- 2) WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4, USING PROPER LOW HYDROGEN ELECTRODES. ALL BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
- 3) ALL BARS IN CONCRETE SHALL BE LAPPED A MINIMUM OF 36 BAR DIAMETERS (2'-0" MIN.) AT ALL SPLICES.
- 4) DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE PRINCIPLE REINFORCING, UNLESS NOTED OTHERWISE.
- 5) ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
- 6) LAP ALL HORIZONTAL BARS AT CORNERS, INTERSECTIONS AND SPLICES.
- 7) DETAIL BARS IN ACCORDANCE WITH THE LATEST EDITIONS OF THE ACI DETAILING MANUAL AND ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- 8) ALL STEEL REINFORCING MATS TO BE PRE-WIRED FOR FASTER PLACEMENT AND TO REDUCE DISTURBANCE TO SUBSOIL'S.
- 9) ALL STEEL REINFORCING MATS TO BE PLACED AND WIRED ON PLASTIC REINFORCING CHAIRS. NO SUBSTITUTE SUPPORTS ALLOWED W/O ENGINEER'S CONSENT.
- 10) CONTRACTOR RESPONSIBLE FOR COORDINATING SPLICE DETAILS AND TO PROVIDE PROPER REBAR SPLICE LENGTHS.
- 11) WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185; LAP TWO SQUARES AT ALL SPLICES AND TIE AT 3'-0" CENTERS.
- 12) PROVIDE BAR SUPPORTS, SPACES, AND ACCESSORIES RECOMMENDED IN THE LATEST ADDITION OF THE ACI DETAILING MANUAL, PUBLICATION SP-66. ALL REINFORCEMENT DETAILING, LAP SPLICES, AND EMBEDMENTS SHALL CONFORM TO THIS MANUAL.
- 13) ALL CONCRETE REINFORCING TO BE INSPECTED BY ENGINEER PRIOR TO PLACING CONCRETE. ENGINEER TO BE GIVEN 48 HOURS NOTICE OF ALL POURS.

CONCRETE

- 1) CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE UNIFORM BUILDING CODE AND ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, LATEST APPROVED EDITIONS.
- 2) DESIGN MIXES SHALL PROVIDE CONCRETE WITH THE FOLLOWING PROPERTIES, AS INDICATED ON DRAWINGS AND SCHEDULES:

INTENDED USE OF CONCRETE	COMPRESSIVE STRENGTH (7 DAYS)	MINIMUM CEMENT CONTENT	MAX. W/C RATIO	MAX. AGGR. SIZE	SLUMP LIMITS	CEMENT TYPE	AIR CONTENT
FOOTINGS, WALLS	3000 PSI	600#/CY	0.45	3/4"	4 1/2"	I OR II	4%-7%
SLAB ON GRADE	4000 PSI						

USE NORMAL WEIGHT AGGREGATE ONLY.

- 3) USE ACCELERATING ADMIXTURES IN COLD WEATHER ONLY WHEN APPROVED BY ENGINEER. USE OF ADMIXTURES WILL NOT RELAX COLD WEATHER PLACEMENT REQUIREMENTS. DO NOT USE CALCIUM CHLORIDE. USE SET RETARDING ADMIXTURES DURING HOT WEATHER ONLY WHEN APPROVED BY ENGINEER.
- 4) PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I OR TYPE I I. AGGREGATE FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C33. CONCRETE MIXING OPERATIONS, ETC., SHALL CONFORM TO ASTM C94 AND ACI 304.
- 5) CLEAR CONCRETE COVERAGE FOR REINFORCING BARS SHALL BE AS FOLLOWS:

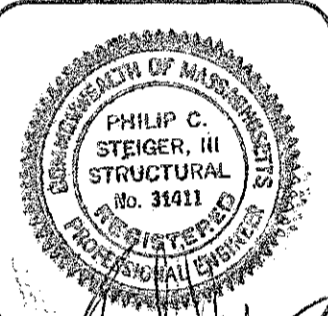
CONCRETE EXPOSED TO EARTH WITHOUT FORMS	3"
CONCRETE POURED IN FORMS BUT EXPOSED TO EARTH:	
#5 BARS OR SMALLER	1 1/2"
BARS LARGER THAN #5	2"
- 6) NON-SHRINK GROUT SHALL CONFORM TO ASTM C1107.
- 7) WATER-REDUCING ADMIXTURES SHALL CONFORM TO ASTM C494, AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. AN AIR-ENTRAINING AGENT CONFORMING TO THE ASTM C260 SHALL BE USED IN ALL CONCRETE MIXES FOR WORK WHICH IS EXPOSED TO WEATHER.
- 8) ALL CONCRETE SHALL BE CONSOLIDATED BY VIBRATION, SPADING, RODDING, OR FORKING SO THAT CONCRETE IS THOROUGHLY WORKED AROUND THE REINFORCEMENT AND EMBEDDED ITEMS AND INTO CORNERS OF FORMS WITHOUT SEGREGATION OF MATERIALS.
- 9) THE CONTRACTOR SHALL DESIGN ALL FORMS AND SUPPORTING SHORES IN CONFORMANCE WITH ACI 347. DESIGN SHALL INCLUDE RATE AND METHOD OF PLACING CONCRETE AND CONSTRUCTION LOADS, INCLUDING VERTICAL, HORIZONTAL, AND IMPACT LOADS. FORMS SHALL BE SUBSTANTIAL AND SUFFICIENTLY TIGHT TO PREVENT LEAKAGE OF MORTAR AND PROPERLY BRACED OR TIED TO MAINTAIN POSITION AND SHAPE.
- 10) FORMS SHALL BE REMOVED IN SUCH A MANNER AS NOT TO IMPAIR SAFETY AND SERVICEABILITY OF THE STRUCTURE. ALL CONCRETE TO BE EXPOSED BY FORM REMOVAL SHALL HAVE SUFFICIENT STRENGTH NOT TO BE DAMAGED THEREBY. RESTORE UNTIL 28 DAYS AFTER PLACEMENT, AND FOR FULL DURATION WHERE CONSTRUCTION LOADS EXCEED SPECIFIED SERVICE LOADS. RESTORING SHALL CONFORM TO ACI 347.
- 11) SLAB CONTROL JOINTS (C.J.) MAY BE SAW CUT (1/3 THICKNESS OF SLAB).
- 12) CURE ALL EXPOSED CONCRETE WITH ONE COAT KUR "N" SEAL (EQUAL OR BETTER).
- 13) NO EQUIPMENT LOADS ARE TO BE APPLIED TO GREEN CONCRETE.

CONTRACTOR'S NOTE:

ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. ERRORS OR DISCREPANCIES SHALL BE REPORTED TO STEIGER ENGINEERING INC. BEFORE COMMENCING WITH ANY WORK.

STEIGER ENGINEERING INC.

9 MOODY ROAD, ENFIELD, CT 06082
TEL. (860) 698-9626



SCALE :
AS NOTED

DATE :
4-6-09

DRAWN BY :
DAE/PCS

REVISION :

SPECIFICATIONS
McKEE ADDITION
103 SOUTH STREET
HINGHAM, MA.

DWG.
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