

033000 • CAST-IN-PLACE CONCRETE (REINFORCED)

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| 1. | <p>THE SCOPE OF THE STRUCTURAL WORK INCLUDES DESIGN OF FOUNDATIONS AND ASSOCIATE SITE IMPROVEMENTS FOR THE RELOCATION OF TWO MODULAR BUILDINGS WHICH CURRENTLY EXIST ON THE VA-OMAHA CAMPUS. THE NEW BUILDINGS HAVE BEEN ORDERED BY THE ARMY CORP OF ENGINEERS. THE EXISTING MODULAR BUILDINGS ARE "ANGULAR MODULAR BUILDINGS" BY AMTEC CORP. DATED 06/24/69 AND "TEMPORARY MODULAR BUILDINGS PHASE THREE" BY CLH ARCHITECTS, DATED 02/20/2009. THE DESIGN OF THE STRUCTURE OF THE TWO MODULAR BUILDINGS (WHICH CURRENTLY EXIST ON SITE) IS NOT PART OF THIS SCOPE OF WORK.</p> |
| 2. | <p>BUILDING CODE AND SELECT REFERENCED STANDARDS</p> <p>INTERNATIONAL BUILDING CODE 2006, WITH ALL AMENDMENTS</p> <p>ASCE 318-11 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE</p> <p>ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES INCLUDING SUPPLEMENT NO. 1 AND 2, EXCLUDING CHAPTER 14 AND APPENDIX 1A</p> <p>U.S. ARMY CORP OF ENGINEERS ARCHITECTS AND ENGINEERS - STRUCTURAL DESIGN MANUAL FOR ANCLLARY FACILITIES PROJECTS, FEBRUARY, 1, 2014</p> |

TYPICAL MINIMUM LIVE LOAD USED FOR DESIGN = 50 PSF, 2,000 LB CONCENTRATED LOAD		
TABLE 010000-1 - CODE-SPECIFIED MINIMUM FLOOR LIVE LOADS		
OCCUPANCY	UNIFORMLY DISTRIBUTED LOAD (PSF)	CONCENTRATED LOAD * (LBS)
OFFICES	50	2000

- B. ROOF LIVE LOADS
20 PSF MINIMUM ROOF LIVE LOAD
- C. ROOF SNOW LOADS, APPLIED IN ACCORDANCE WITH THE BUILDING CODE INDICATED HEREIN.
GROUND SNOW LOAD, $P_g = 25$ PSF
FLAT ROOF SNOW LOAD, $P_f = 16$ PSF
SNOW EXPOSURE FACTOR, $C_e = 1.0$
SNOW IMPORTANCE FACTOR, $I = 1.0$
THERMAL FACTOR, $C_t = 1.0$
- D. WIND LOADS, APPLIED IN ACCORDANCE WITH THE BUILDING CODE INDICATED HEREIN.
BASIC WIND SPEED, $V = 90$ MPH (3-SECOND GUST)
WIND IMPORTANCE FACTOR, $I = 1.0$
OCCUPANCY CATEGORY = II
WIND EXPOSURE = B
- E. SEISMIC LOADS, APPLIED IN ACCORDANCE WITH THE BUILDING CODE INDICATED HEREIN.
SEISMIC IMPORTANCE FACTOR, $I_e = 1.0$
OCCUPANCY CATEGORY = II
SITE CLASS: D
MAPPED SPECTRAL RESPONSE ACCELERATIONS
-SHORT PERIOD, $S_s = 0.125$
-ONE-SECOND PERIOD, $S_1 = 0.041$
SPECTRAL RESPONSE COEFFICIENTS
-SHORT PERIOD, $S_{ds} = 0.133$
-ONE-SECOND PERIOD, $S_{d1} = 0.066$
SEISMIC DESIGN CATEGORY = A
DESIGN BASE SHEAR = 2 KIPS
4. CONTRACTOR RESPONSIBILITIES
- A. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS (INCLUDING FIELD VERIFICATIONS OF EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING WORK OR FABRICATING ANY REINFORCING STEEL, COLD-FORMED STEEL ELEMENTS,
- B. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING OF THE STRUCTURE (NEW AND/OR EXISTING) FOR ALL LOADS THAT MAY BE IMPOSED DURING CONSTRUCTION.

$F_{c\parallel} = 1350 \text{ PSI}$
 $F_{c\perp} = 406 \text{ PSI}$

1. SPECIAL INSPECTION FOR REINFORCED CONCRETE, REINFORCING STEEL, MASONRY, STRUCTURAL STEEL AND STRUCTURAL WELDING SHALL BE PERFORMED PER CHAPTER 17 OF THE IRC-2006.
2. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN INDEPENDENT INSPECTION AGENCY EMPLOYED BY THE OWNER (NOT THE CONTRACTOR) PER SECTION 1704.1 OF THE IRC-2012.
3. AGENCY OR INSPECTOR, DURING THE SPECIAL INSPECTION, MUST BE APPROVED BY THE CITY OF OMAHA BUILDING DEPARTMENT PER SECTION 1704.1 OF THE IRC-2012.
4. THE SPECIAL INSPECTOR(S) SHALL KEEP RECORDS OF INSPECTIONS AND SUBMIT THEM TO THE (BUILDING DEPARTMENT) AND THE ENGINEER OF RECORD. SUBMIT RECORDS OF PERIODIC AND CONTINUOUS INSPECTIONS TO THE ENGINEER OF RECORD IMMEDIATELY AND AS THEY OCCUR DURING THE CONSTRUCTION WORK.
5. REPORTS SHALL INDICATE THAT THE WORK INSPECTED WAS DONE IN CONFORMANCE WITH APPROVED CONSTRUCTION DOCUMENTS AND SHALL NOTE THE CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS.
6. THE REPORTS SHALL INCLUDE VERIFICATION OF INSTALLER'S QUALIFICATIONS.
7. BRING DISCREPANCIES IN THE WORK TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, SUBMIT THOSE SAME DISCREPANCIES TO THE ATTENTION OF THE BUILDING DEPARTMENT AND THE ENGINEER OF RECORD.

1. ALL STRUCTURAL CONCRETE SHALL BE DESIGNED FOR A 28-DAY COMPRESSIVE STRENGTH OF:
F_c EQUALS 4500 PSI (NORMAL WEIGHT) TYPICAL.
2. ALL REINFORCING STEEL SHALL BE DEFORMED, NED, AND CONFORM TO ASTM A615 GRADE 60 (DEFORMED BARS).
3. HEADED SHEAR STUDS SHALL CONFORM TO A.S. D1 - LATEST DEDITION REQUIREMENTS FOR STANDARD HEADED STUDS.
4. CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT AT SURFACES WHICH WILL BE EXPOSED TO THE WEATHER OR IN CONTACT WITH EARTH SHALL BE 2" FOR ALL REINFORCEMENT EXCEPT 1" FOR 10# REINFORCEMENT OR SMALLER PROVIDED 3" COVER FOR REINFORCEMENT CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH UNLESS OTHERWISE SPECIFIED.
5. PROVIDE LAP SPICES IN CONFORMANCE WITH TABLE 05300-1, UNLESS OTHERWISE INDICATED. FOLLOW RESTRICTIONS ON LOCATIONS OF SPICES AS INDICATED IN DETAILS, NOTES, OR SPECIFICATIONS.

TABLE 033000-1 - LAP SPLICE LENGTHS (GRADE 60 BARS, NORMAL WEIGHT CONCRETE)

BAR SIZE	fcr=4000 psi	
	TOP BARS	OTHER BARS
#3	2'-0"	1'-7"
#4	2'-8"	2'-1"
#5	3'-4"	2'-7"
#6	4'-0"	3'-1"
#7	5'-10"	4'-5"
#8	6'-0"	5'-2"
#9	7'-7"	5'-10"
#10	8'-6"	6'-7"
#11	9'-5"	7'-3"

1. ALL WOOD FRAMING SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 1997.

2. WOOD FRAMING SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE BASE VALUES FOR WESTERN DIMENSION LUMBER:

JOISTS AND BEAMS

$F_b = 975 \text{ PSI}$

$F_v = 150 \text{ PSI}$

$F_{c\parallel} = 1350 \text{ PSI}$

$F_{c\perp} = 405 \text{ PSI}$

$F_t = 625 \text{ PSI}$

$E = 1,500,000 \text{ PSI}$

STUDS

$F_b = 675 \text{ PSI}$

$F_v = 150 \text{ PSI}$

$F_{c\parallel} = 800 \text{ PSI}$

$F_{c\perp} = 405 \text{ PSI}$

$F_t = 400 \text{ PSI}$

$E = 1,200,000 \text{ PSI}$

POSTS

$F_b = 1100 \text{ PSI}$

$F_v = 150 \text{ PSI}$

$F_{c\parallel} = 1350 \text{ PSI}$

$F_{c\perp} = 405 \text{ PSI}$

$F_t = 725 \text{ PSI}$

$E = 1,500,000 \text{ PSI}$

1. SOILS INVESTIGATIONS HAVE NOT BEEN MADE. THEREFORE, THE FOOTINGS HAVE BEEN DESIGNED FOR THE ASSUMED BEARING PRESSURE(S) BELOW.
2. ALL FOOTINGS SHALL BEAR ON NATURAL MATERIAL. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE AT LEAST 42" BELOW FINISHED GRADE. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE SPECIAL INSPECTOR PRIOR TO CONSTRUCTION OF THE FOOTINGS.
3. ALLOWABLE SOIL BEARING PRESSURE:
SPREAD AND CONTINUOUS FOOTINGS ON NATURAL SOIL = 2000 PSF (DEAD LOAD PLUS FULL LIVE LOAD)

1. PILES SHALL BE UNCASED CAST-IN-PLACE PILES HAVING A MINIMUM DIAMETER OF 12 INCHES AND A MAXIMUM DIAMETER OF 36 INCHES. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. ESTIMATED TIP ELEVATIONS FOR PIERS SHALL BE 42" (MIN.) BELOW FINISHED GRADE
3. ALL PIER WORK MUST BE COMPLETED PRIOR TO INSTALLING ANY NEW UTILITIES.
4. DRILLED PIERS 2000 PSF END BEARING.

[illegible]

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Drawing Title

MODULAR BUILDING
FOUNDATION PLANS
AND NOTES

Approved: Project Director

Project Title

FISHER HOUSE
SITE PREP

Location
OMAHA, NE

Date
October 18, 2016

Project Number
636-C.SI-100

Building Number
A D O

Drawing Number

S001

S001

Office of
Construction and
Facilities
Management

VA U.S. Department
of Veterans Affairs

THESE GENERAL NOTES ARE ORGANIZED BY THE SPECIFICATION NUMBER MOST CLOSELY ASSOCIATED WITH THE INFORMATION, ALTHOUGH SOME UNIQUE NUMBERS HAD TO BE ASSIGNED TO SECTIONS NOT INCLUDED IN THE SPECIFICATIONS. THESE STRUCTURAL GENERAL NOTES APPLY TO ALL WORK, NOT JUST FOR WORK WITHIN THE SECTION NUMBER INDICATED. ALSO REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.