

**WIND DESIGN**

ASCE 7-10

Risk Category II

Directionality (Kd) 0.85

Mean Roof/Ht (H) 17.4

Parapet Above grd 24.5

Exposure Category C

Enclosure Classif Enclosed Building

Internal pressure a = 0.18

Minimum parapet height at building perimeter = 7.0 ft

Roof Angle 1.2 deg

Type of roof Monoslope

**COMPONENTS & CLADDING PRESSURES**

**ULTIMATE LOADS**

| Basic Wind speed                    | 115.0 mph (LRFD)              |           |           |           |           |
|-------------------------------------|-------------------------------|-----------|-----------|-----------|-----------|
|                                     | Base pressure (qh) = 25.2 psf |           |           |           |           |
| <b>Roof</b>                         |                               |           |           |           |           |
| Surface Pressure (psf) -LRFD Values |                               |           |           |           |           |
| Area                                | 10 sf                         | 20 sf     | 50 sf     | 100 sf    | 200 sf    |
| Negative Zone 1                     | -29.7 psf                     | -29.0 psf | -28.0 psf | -27.2 psf | -27.2 psf |
| Negative Zone 2                     | -49.9 psf                     | -44.6 psf | -37.6 psf | -32.3 psf | -32.3 psf |
| Negative Zone 3                     | -75.1 psf                     | -62.2 psf | -45.2 psf | -32.3 psf | -32.3 psf |
| Positive All Zones                  | 16.0 psf                      | 16.0 psf  | 16.0 psf  | 16.0 psf  | 16.0 psf  |
| Overhang Zone 1&2                   | -42.8 psf                     | -42.1 psf | -41.1 psf | -40.3 psf | -34.9 psf |
| Overhang Zone 3                     | -70.6 psf                     | -55.4 psf | -35.3 psf | -20.2 psf | -20.2 psf |

Note: GCP reduced by 10% due to roof angle <= 10 deg.

**Walls**

| Basic Wind speed                    | 115.0 mph (LRFD)              |           |           |           |           |
|-------------------------------------|-------------------------------|-----------|-----------|-----------|-----------|
|                                     | Base pressure (qh) = 25.2 psf |           |           |           |           |
| <b>Area</b>                         |                               |           |           |           |           |
| Surface Pressure (psf) -LRFD Values |                               |           |           |           |           |
| Area                                | 10 sf                         | 20 sf     | 50 sf     | 100 sf    | 500 sf    |
| Negative Zone 4                     | -29.5 psf                     | -28.3 psf | -26.7 psf | -25.5 psf | -22.7 psf |
| Negative Zone 5                     | -36.3 psf                     | -33.9 psf | -30.7 psf | -28.3 psf | -22.7 psf |
| Positive Zone 4 & 5                 | 27.2 psf                      | 26.0 psf  | 24.4 psf  | 23.2 psf  | 20.4 psf  |

**Parapets**

| Basic Wind speed                    | 115.0 mph (LRFD)              |           |           |           |           |
|-------------------------------------|-------------------------------|-----------|-----------|-----------|-----------|
|                                     | Base pressure (qh) = 25.2 psf |           |           |           |           |
| <b>Area</b>                         |                               |           |           |           |           |
| Surface Pressure (psf) -LRFD Values |                               |           |           |           |           |
| Area                                | 10 sf                         | 20 sf     | 50 sf     | 100 sf    | 500 sf    |
| Negative Interior (Zone 4)          | -73.1 psf                     | -58.9 psf | -49.9 psf | -46.9 psf | -46.9 psf |
| Positive Corner (Zone 5)            | 100.2 psf                     | 65.0 psf  | 49.9 psf  | 46.9 psf  | 46.9 psf  |
| Negative Interior (Zone 4)          | -51.2 psf                     | -45.2 psf | -42.6 psf | -36.6 psf | -36.6 psf |
| Negative Corner (Zone 5)            | -58.5 psf                     | -49.5 psf | -45.6 psf | -36.6 psf | -36.6 psf |

**SEISMIC DESIGN**

RISK CATEGORY II

SITE CLASS C

BASE SRS SYSTEM B (RESPONSE MOD)

Ca (RESPONSE COEF) 1.0

ANALYSIS PROCEDURE DESIGN BASE SHEAR

WIND DESIGN, REFERENCE GENERAL NOTES TABLES

**SEISMIC DESIGN**

RISK CATEGORY II

SITE CLASS C

BASE SRS SYSTEM B (RESPONSE MOD)

Ca (RESPONSE COEF) 1.0

ANALYSIS PROCEDURE DESIGN BASE SHEAR

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Pressures listed above are in both values Ultimate (LRFD) & Service or Nominal (ASD) which have been obtained by multiplying Ultimate values by 0.9. Use service values (ASD) for Wind Resistance Testing Compliance per ASCE 1609.1.5

**Net Uplift Pressures**

| Basic Wind speed                   | 89.1 mph (ASD)                      |           |           |           |           |
|------------------------------------|-------------------------------------|-----------|-----------|-----------|-----------|
|                                    | Base pressure (qh) = 15.1 psf (ASD) |           |           |           |           |
| <b>Roof</b>                        |                                     |           |           |           |           |
| Surface Pressure (psf) -ASD Values |                                     |           |           |           |           |
| Area                               | 10 sf                               | 20 sf     | 50 sf     | 100 sf    | 200 sf    |
| Negative Zone 1                    | -17.8 psf                           | -17.4 psf | -16.8 psf | -16.3 psf | -16.3 psf |
| Negative Zone 2                    | -29.9 psf                           | -26.9 psf | -22.5 psf | -19.4 psf | -19.4 psf |
| Negative Zone 3                    | -45.1 psf                           | -37.9 psf | -27.1 psf | -19.4 psf | -19.4 psf |
| Positive All Zones                 | 9.6 psf                             | 9.6 psf   | 9.6 psf   | 9.6 psf   | 9.6 psf   |
| Overhang Zone 1&2                  | -25.7 psf                           | -25.3 psf | -24.7 psf | -24.2 psf | -20.9 psf |
| Overhang Zone 3                    | -42.3 psf                           | -33.2 psf | -21.2 psf | -12.1 psf | -12.1 psf |

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| Area                               | 10 sf                               | 20 sf     | 50 sf     | 100 sf    | 200 sf    |
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| Positive All Zones                 | 9.6 psf                             | 9.6 psf   | 9.6 psf   | 9.6 psf   | 9.6 psf   |
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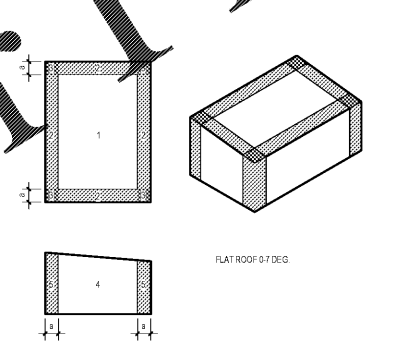
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| Surface Pressure (psf) -ASD Values |                                     |           |           |           |           |
| Area                               | 10 sf                               | 20 sf     | 50 sf     | 100 sf    | 200 sf    |
| Negative Zone 1                    | -17.8 psf                           | -17.4 psf | -16.8 psf | -16.3 psf | -16.3 psf |
| Negative Zone 2                    | -29.9 psf                           | -26.9 psf | -22.5 psf | -19.4 psf | -19.4 psf |
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| Positive All Zones                 | 9.6 psf                             | 9.6 psf   | 9.6 psf   | 9.6 psf   | 9.6 psf   |
| Overhang Zone 1&2                  | -25.7 psf                           | -25.3 psf | -24.7 psf | -24.2 psf | -20.9 psf |
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| <b>Roof</b>                        |                                     |           |           |           |           |
| Surface Pressure (psf) -ASD Values |                                     |           |           |           |           |
| Area                               | 10 sf                               | 20 sf     | 50 sf     | 100 sf    | 200 sf    |
| Negative Zone 1                    | -17.8 psf                           | -17.4 psf | -16.8 psf | -16.3 psf | -16.3 psf |
| Negative Zone 2                    | -29.9 psf                           | -26.9 psf | -22.5 psf | -19.4 psf | -19.4 psf |
| Negative Zone 3                    | -45.1 psf                           | -37.9 psf | -27.1 psf | -19.4 psf | -19.4 psf |
| Positive All Zones                 | 9.6 psf                             | 9.6 psf   | 9.6 psf   | 9.6 psf   | 9.6 psf   |
| Overhang Zone 1&2                  | -25.7 psf                           | -25.3 psf | -24.7 psf | -24.2 psf | -20.9 psf |
| Overhang Zone 3                    | -42.3 psf                           | -33.2 psf | -21.2 psf | -12.1 psf | -12.1 psf |

**Components & Claddings Pressures**



**Components & Cladding Zones**

**GENERAL**

A THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH WORK.

B THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE COMPLETE DESIGN OF THE STRUCTURE. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED.

C OBSERVATION VISITS TO THE SITE BY OR ON BEHALF OF THE OWNER MAY BE MADE DURING CONSTRUCTION. ANY SUPPORT SERVICES PERFORMED HEREIN SHALL BE DISTINGUISHED FROM INSPECTION AND/OR TESTING SERVICES PERFORMED BY OTHERS, AND ARE NOT TO BE CONSIDERED AS SUPERVISION AND/OR MANAGEMENT OF CONSTRUCTION.

D THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL MEMBERS AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS WITHIN THE STRUCTURE.

E CONSTRUCTION MATERIALS SHALL NOT BE STACKED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LOADS. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON FLOORS OR ROOFS.

F DRAWINGS ARE NOT TO BE SCALED.

G DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO THE DETAILS PRESENTED, SIMILAR DETAILS SHALL BE USED SUBJECT TO THE REVIEW OF ENGINEER OF RECORD.

H SUBMIT WRITTEN REQUEST TO THE ARCHITECT FOR APPROVAL OF ANY PROPOSED CHANGE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, INCLUDING OBTAINING NOTATION OR OTHER ALTERATIONS TO STRUCTURAL MEMBERS ARE NOT PERMITTED WITHOUT WRITTEN AUTHORIZATION OF THE ENGINEER. ANY UNAUTHORIZED DEVIATION FROM THE CONTRACT DOCUMENTS, AND CORRECTION THEREOF, IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBMIT DOCUMENTATION REQUESTS TO BUILDING ENGINEERING OF RECORD FROM GCP SHALL INCLUDE EVALUATION OF DEVIATIONS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THE PROJECT.

J DESIGN DATA REFER TO SPECIFICATION FOR FURTHER INFORMATION.

K THE MOST STRINGENT REQUIREMENTS APPLY IN CASE OF CONFLICT BETWEEN SPECIFICATIONS, STANDARDS, CODES AND DRAWINGS.

**CONCRETE MASONRY UNITS (CMU)**

A GROUT COMPRESSION STRENGTH SHALL BE 3000 PSI AT 28 DAYS. ALL GROUTING SHALL BE LOW LIFT. MAXIMUM GROUT POUR HEIGHT = 4'-0"

B ALL MASONRY LOCATED BELOW GRADE SHALL BE GROUTED SOLID.

C PROVIDE 4" DEEP PRECAST REINFORCED CONCRETE LINTELS OVER ALL MASONRY OPENINGS NOT SHOWN TO HAVE A STRUCTURAL BEAM. MINIMUM END BEARING SHALL BE 8" LINTEL WIDTH TO MATCH MASONRY WIDTH.

D REINFORCING, UNLESS OTHERWISE NOTED IN PLANS

- LAP SPLICES SHALL BE 4X BAR DIAMETERS
- HORIZONTAL WALL REINFORCING SHALL BE 9 GA. GALVANIZED LADDER TYPE @ 18" O.C. VERT.
- ALL DOWELS SHALL MATCH REINFORCING SIZE AND QTY.

E POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT MASONRY.

**REINFORCED CONCRETE**

A CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED (U.O.N.)

**SLABS**

3000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

**FOOTINGS / PILES / FORMED WALLS**

3000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

**COLUMNS/BEAMS**

4000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.45 MAX. W/C

CONCRETE EXPOSED TO FREEZING/THAW CONDITIONS SHALL BE AIR ENTRAINED.

B CONCRETE COVER OVER REINFORCEMENT:

**FOOTINGS**

2" (TOP & SIDES), 2" (TOP) FORMED PILES & WALLS

2" (TOP & SIDES)

**SLABS, COLUMNS AND BEAMS EXPOSED TO EARTH OR WEATHER**

2" (6 TO #10 BARS), 1 1/2" (8 TO #4 BARS)

SLABS NOT EXPOSED TO EARTH OR WEATHER

3/4" (6 TO #10 BARS)

**BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER**

1 1/2" (10 TO #10 BARS)

C REINFORCING, UNLESS OTHERWISE NOTED (U.O.N.)

- WELDED WIRE FABRIC SHALL BE CONTINUOUS, LAPPED ONE CROSS WIRE SPACING PLUS 2" MINIMUM.
- WHERE CONTINUOUS REINFORCING IS SPECIFIED, SUCH REINFORCING MAY BE SPLICED WHERE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- AT CHANGES IN DIRECTION OF CONCRETE WALLS, BEAMS, AND FOOTINGS, PROVIDE CORNER BARS OF SAME SIZE, QUANTITY AND SPACING AS HORIZONTAL STEEL.
- LAP SPLICES SHALL BE PER LAP SPLICE TABLE BELOW, WIRED TOGETHER.

D THERE SHALL BE NO HORIZONTAL JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

E POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT CONCRETE.

**DESIGN LOADS**

| SLAB LIVE LOADS | 125 PSF |
|-----------------|---------|
| ROOF DEAD LOADS | 20 PSF  |
| ROOF LIVE LOADS | 20 PSF  |

**SNOW DESIGN**

| GROUND SNOW LOAD       | Pg 10 PSF |
|------------------------|-----------|
| FLAT SNOW LOAD         | Pf 12 PSF |
| SNOW EXPOSURE FACTOR   | Ce 1.0    |
| SNOW MPOR TANCE FACTOR | Cs 1.0    |
| SNOW THERMAL FACTOR    | Ct 1.0    |

**WIND DESIGN, REFERENCE GENERAL NOTES TABLES**

**SEISMIC DESIGN**

RISK CATEGORY II

SITE CLASS C

BASE SRS SYSTEM B (RESPONSE MOD)

Ca (RESPONSE COEF) 1.0

ANALYSIS PROCEDURE DESIGN BASE SHEAR

WIND DESIGN, REFERENCE GENERAL NOTES TABLES

**CODES / STANDARDS**

2015 INTERNATIONAL BUILDING CODE WITH APPLICABLE AMENDMENTS

ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

SEE SPECIFICATIONS FOR FURTHER INFORMATION

**FOUNDATION SITE WORK**

A FOUNDATION DESIGN IS BASED UPON THE FOLLOWING SOILS REPORT

COMPANY NAME: TERRACON CONSULTANT, INC

DATE: OCTOBER 2, 2018 (REV. 1)

PROJECT NUMBER: 73183083

B ALLOWABLE SOIL PRESSURE IS TO BE 2000 PSF

C ANY FILL REQUIRED TO BACKFILL EXCAVATED AREA OR TO FILL IN SHELTER STRUCTURAL AREAS SHALL BE AS INDICATED BY GEOTECHNICAL ENGINEER. ALL FILL SHALL BE PLACED IN LEVEL LIFTS NOT EXCEEDING 18" THICKNESS. COMPACTED TO A MINIMUM OF 95% OF THE SOILS MOISTURE DENSITY OR MAXIMUM DENSITY AS DETERMINED BY AS PER SPECIFICATION D-15.

D IN PLACE DENSITY TESTS SHALL BE PERFORMED BY AN EXPERIENCED GEOTECHNICAL TESTER SHALL BE PERFORMED FOR EACH 2000 SQUARE COLUMN FOOTING (2' DIA) AND EACH 50 FEET ALONG WALL FOOTINGS. TEST RESULTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER.

E REMOVE FREE WATER FROM EXCAVATIONS BEFORE PLACING CONCRETE.

F CONSTRUCTION SHALL BE IN OPENING VIBRATORY COMPACTING EQUIPMENT NEAR THE EXISTING STRUCTURE TO AVOID DAMAGE TO THE STRUCTURE.

G REFER TO ARCHITECTURE DRAWINGS FOR ANY NECESSARY WATERPROOFING REQUIREMENTS.

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**REINFORCING**

A ALL JOISTS AND ORDERS SHOWN IN THE PLANS ARE MINIMUM SIZES. DEPTH CANNOT BE DECREASED OR INCREASED WITHOUT WRITTEN APPROVAL BY ARCHITECT/ENGINEER.

B STEEL JOIST AND ORDER BEAT DEPTHS TO BE:

- ALL K SERIES JOISTS TO HAVE 2 1/2" SEATS
- ALL KCS SERIES JOISTS TO HAVE 2 1/2" SEATS
- ALL L4 SERIES JOISTS TO HAVE 2 SEATS
- ALL JOIST ORDERS TO HAVE 1 1/2" SEATS

C PROVIDE BRIDGING AND X BRACING AS PER THE REQUIREMENTS OF SJI AND AS FOLLOWS SHOULD PLANS OR NOTES INDICATE BRIDGING AND X BRACING IN EXCESS OF THAT REQUIRED BY SJI, PLANS & NOTES WILL GOVERN.

- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT INTERVALS NOT TO EXCEED 100 FEET IN LENGTH.
- PROVIDE X BRACING ON BOTH SIDES OF W BEAMS EITHER DIRECTLY ADJACENT TO W BEAMS OR NEXT BAY FROM W BEAMS, TYP. ALL HORIZONTAL BRIDGING LINES EXCEPT UPLIFT.
- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT OUTSIDE (END) BEAMS WHERE OCCURS.
- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED AT EXPANSION JOINT LOCATIONS.
- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED.
- PROVIDE X BRACING EACH SIDE AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING WHERE CONCENTRATED POINT LOAD GREATER THAN 300 POUNDS OCCURS.
- PROVIDE X BRACING EACH SIDE AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING WHERE DISCONTINUOUS.

D MINIMUM WELDS, U.O.N.

- BAR JOIST ENDS 3/16" FILLET, 3" LONG EACH SIDE OR 1/8" FILLET, 3" LONG EACH SIDE
- JOIST ORDER ENDS 1/4" FILLET, 4" LONG EACH SIDE

**STEEL JOISTS AND STEEL ORDERS**

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- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT OUTSIDE (END) BEAMS WHERE OCCURS.
- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED AT EXPANSION JOINT LOCATIONS.
- PROVIDE X BRACING AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING AT END BAYS WHERE BRIDGING TERMINATED.
- PROVIDE X BRACING EACH SIDE AT ALL HORIZONTAL BRIDGING INCLUDING UPLIFT BRIDGING WHERE CONCENTRATED POINT LOAD GREATER THAN 300 POUNDS OCCURS.
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**STEEL DECK NOTES**

A REFER TO PLAN FOR THICKNESS AND ATTACHMENT REQUIREMENTS.

B PROVIDE SUPPORTS FOR METAL DECK AS REQUIRED WHERE METAL DECK IS CUT OUT. WELD DECK TO SUPPORTS SAME AS PER CONSTRUCTION.

C PROVIDE STL SHIMS AND EMBEDS AS REQUIRED TO SUPPORT DECK ON "TYPICAL" BAY SPACING.

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B ALL MASONRY LOCATED BELOW GRADE SHALL BE GROUTED SOLID.

C PROVIDE 4" DEEP PRECAST REINFORCED CONCRETE LINTELS OVER ALL MASONRY OPENINGS NOT SHOWN TO HAVE A STRUCTURAL BEAM. MINIMUM END BEARING SHALL BE 8" LINTEL WIDTH TO MATCH MASONRY WIDTH.

D REINFORCING, UNLESS OTHERWISE NOTED IN PLANS

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**SLABS**

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**FOOTINGS / PILES / FORMED WALLS**

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**COLUMNS/BEAMS**

4000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.45 MAX. W/C

CONCRETE EXPOSED TO FREEZING/THAW CONDITIONS SHALL BE AIR ENTRAINED.

B CONCRETE COVER OVER REINFORCEMENT:

**FOOTINGS**

2" (TOP & SIDES), 2" (TOP) FORMED PILES & WALLS

2" (TOP & SIDES)

**SLABS, COLUMNS AND BEAMS EXPOSED TO EARTH OR WEATHER**

2" (6 TO #10 BARS), 1 1/2" (8 TO #4 BARS)

SLABS NOT EXPOSED TO EARTH OR WEATHER

3/4" (6 TO #10 BARS)

**BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER**

1 1/2" (10 TO #10 BARS)

C REINFORCING, UNLESS OTHERWISE NOTED (U.O.N.)

- WELDED WIRE FABRIC SHALL BE CONTINUOUS, LAPPED ONE CROSS WIRE SPACING PLUS 2" MINIMUM.
- WHERE CONTINUOUS REINFORCING IS SPECIFIED, SUCH REINFORCING MAY BE SPLICED WHERE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- AT CHANGES IN DIRECTION OF CONCRETE WALLS, BEAMS, AND FOOTINGS, PROVIDE CORNER BARS OF SAME SIZE, QUANTITY AND SPACING AS HORIZONTAL STEEL.
- LAP SPLICES SHALL BE PER LAP SPLICE TABLE BELOW, WIRED TOGETHER.

D THERE SHALL BE NO HORIZONTAL JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

E POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT CONCRETE.

**CONCRETE MASONRY UNITS (CMU)**

A GROUT COMPRESSION STRENGTH SHALL BE 3000 PSI AT 28 DAYS. ALL GROUTING SHALL BE LOW LIFT. MAXIMUM GROUT POUR HEIGHT = 4'-0"

B ALL MASONRY LOCATED BELOW GRADE SHALL BE GROUTED SOLID.

C PROVIDE 4" DEEP PRECAST REINFORCED CONCRETE LINTELS OVER ALL MASONRY OPENINGS NOT SHOWN TO HAVE A STRUCTURAL BEAM. MINIMUM END BEARING SHALL BE 8" LINTEL WIDTH TO MATCH MASONRY WIDTH.

D REINFORCING, UNLESS OTHERWISE NOTED IN PLANS

- LAP SPLICES SHALL BE 4X BAR DIAMETERS
- HORIZONTAL WALL REINFORCING SHALL BE 9 GA. GALVANIZED LADDER TYPE @ 18" O.C. VERT.
- ALL DOWELS SHALL MATCH REINFORCING SIZE AND QTY.

E POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT MASONRY.

**REINFORCED CONCRETE**

A CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED (U.O.N.)

**SLABS**

3000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

**FOOTINGS / PILES / FORMED WALLS**

3000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.57 MAX. W/C

**COLUMNS/BEAMS**

4000 PSI 28 DAY COMPRESSIVE STRENGTH, NORMAL WEIGHT, 0.45 MAX. W/C

CONCRETE EXPOSED TO FREEZING/THAW CONDITIONS SHALL BE AIR ENTRAINED.

B CONCRETE COVER OVER REINFORCEMENT:

**FOOTINGS**

2" (TOP & SIDES), 2" (TOP) FORMED PILES & WALLS

2" (TOP & SIDES)

**SLABS, COLUMNS AND BEAMS EXPOSED TO EARTH OR WEATHER**

2" (6 TO #10 BARS), 1 1/2" (8 TO #4 BARS)

SLABS NOT EXPOSED TO EARTH OR WEATHER

3/4" (6 TO #10 BARS)

**BEAMS AND COLUMNS NOT EXPOSED TO EARTH OR WEATHER**

1 1/2" (10 TO #10 BARS)

C REINFORCING, UNLESS OTHERWISE NOTED (U.O.N.)

- WELDED WIRE FABRIC SHALL BE CONTINUOUS, LAPPED ONE CROSS WIRE SPACING PLUS 2" MINIMUM.
- WHERE CONTINUOUS REINFORCING IS SPECIFIED, SUCH REINFORCING MAY BE SPLICED WHERE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
- AT CHANGES IN DIRECTION OF CONCRETE WALLS, BEAMS, AND FOOTINGS, PROVIDE CORNER BARS OF SAME SIZE, QUANTITY AND SPACING AS HORIZONTAL STEEL.
- LAP SPLICES SHALL BE PER LAP SPLICE TABLE BELOW, WIRED TOGETHER.

D THERE SHALL BE NO HORIZONTAL JOINTS IN ANY CONCRETE POURS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.

E POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT CONCRETE.

**DESIGN LOADS**

| SLAB LIVE LOADS | 125 PSF |
|-----------------|---------|
| ROOF DEAD LOADS | 20 PSF  |
| ROOF LIVE LOADS | 20 PSF  |

**SNOW DESIGN**

| GROUND SNOW LOAD       | Pg 10 PSF |
|------------------------|-----------|
| FLAT SNOW LOAD         | Pf 12 PSF |
| SNOW EXPOSURE FACTOR   | Ce 1.0    |
| SNOW MPOR TANCE FACTOR | Cs 1.0    |
| SNOW THERMAL FACTOR    | Ct 1.0    |

**WIND DESIGN, REFERENCE GENERAL NOTES TABLES**

**SEISMIC DESIGN**

RISK CATEGORY II

SITE CLASS C

BASE SRS SYSTEM B (RESPONSE MOD)

Ca (RESPONSE COEF) 1.0

ANALYSIS PROCEDURE DESIGN BASE SHEAR

WIND DESIGN, REFERENCE GENERAL NOTES TABLES

**CODES / STANDARDS**

2015 INTERNATIONAL BUILDING CODE WITH APPLICABLE AMENDMENTS

ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

SEE SPECIFICATIONS FOR FURTHER INFORMATION

**FOUNDATION SITE WORK**

A FOUNDATION DESIGN IS BASED UPON THE FOLLOWING SOILS REPORT

COMPANY NAME: TERRACON CONSULTANT, INC

DATE: OCTOBER 2, 2018 (REV. 1)

PROJECT NUMBER: 73183083

B ALLOWABLE SOIL PRESSURE IS TO BE 2