GENERAL STRUCTURAL NOTES:

1. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE IBC 2018 AND ALL APLLICABLE LOCAL CODES

2. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AS A COMPLETE UNIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, AND SEQUENCES OF ALL PHASES OF CONSTRUCTION AND DEMOLITION INCLUDING TEMPORARY SHORING, BRACING, COLD AND HOT-WEATHER PROTECTION, AND FOUNDATION UNDERPINNING. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND STANDARDS THAT PERTAIN TO MEANS, METHODS. AND SEQUENCES OF CONSTRUCTION.

3. THE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION AND COORDINATED WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. THE CONTRACTOR SHALL COORDINATE SUCH REQUIREMENTS INTO THEIR WORK.

4. DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR THE MOST NEARLY SIMILAR CONDITION AS DETERMINED BY THE ARCHITECT OR ENGINEER.

5. CONTRACTOR TO COORDINATE ALL OPENINGS, EQUIPMENT LOCATIONS, AND INSERTS SHOWN ON THE STRUCTURAL DRAWINGS WITH THE TRADES THAT REQUIRE THEM. PENETRATIONS THROUGH STRUCTURAL MEMBERS ARE NOT PERMITTED EXCEPT AS DETAILED.

6. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN THE FIELD AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED AND SIGNED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMI5SION TO THE ARCHITECT AND ENGINEER. REPRODUCTIONS OF THE STRUCTURAL DRAWINGS SHALL NOT BE USED FOR THE PREPARATION OF SHOP DRAWINGS. MANUFACTURED COMPONENTS SHALL BE SIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER PRIOR TO SUBMISSION.

DESIGN LOADS:

1. LIVE LOAD:
   - FLOORS = 125 PSF
   - CORRIDORS = 100 PSF
   - ROOFS = 20 PSF
2. SNOW LOADS:
   - NONE
3. WIND LOADS:
   - Vult = 103mph
   - Iw = 1.0
   - EXPOSURE = B

SEISMIC

SEISMIC USE GROUP "I" – SEISMIC DESIGN CATEGORY "B"
SDS = 0.213g
SD1 = 0.131g
SITE CLASS "D"

LIGHT FRAME WALLS WITH METAL PANELS R=6.5
SEISMIC BASE SHEAR = 25k
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE
Ie = 1.00

4. UNLESS SHOWN OTHERWISE, STAIRS, STAIR COMPONENTS AND CONNECTIONS, AND RAILINGS SHALL BE DESIGNED AND INCORPORATED INTO THE STEEL SHOP DRAWINGS AS FOLLOW. LOADS SHOWN ARE IN ADDITION TO THE DEAD LOAD:
   - A) MAIN STRINGERS AND LANDINGS: LIVE LOAD = 100psf
   - B) TREADS: LIVE LOAD IS THE LARGEST OF :100psf OR 300lbs ON $4in^2$
   - C) HANDRAIL ASSEMBLIES: LARGEST OF: 200LBS OR 50plf. APPLIED IN ANY DIRECTION AT ANY POINT ON THE ASSEMBLY
   - D) COORDINATE FINAL DESIGN WITH THE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS

CONCRETE:

1. CONCRETE DESIGN AND CONSTRUCTION SHALL CONFOR.M TO ACI 318 AND ACI 301.

2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE:
   - 2.1. FOOTINGS 3,000psi, MAX. W/C RATIO = 0.49
   - 2.2. PIERS, FND. WALLS 3,000psi, MAX. W/C RATIO = 049
   - 2.3. SLAB ON GRADE 3,500psi, MAX. W/C RATIO = 0.50
   - 2.4. ELEVATED SLABS 4,000psi, MAX. W/C RATIO = 0.50

3. LEVELING GROUT SHALL BE NON-SHRINK CONFORMING TO ASTM C1107 WITH A MINIMUM 2-DAY STRENGTH OF 5,000psi.

4. ALL CONCRETE EXPOSED TO EARTH OR WEATHER SHALL HAVE ENTRAINED AIR AS FOLLOWS:

MAXIMUM AGGREGATE SIZE	AIR CONTENT
2 in.	4% TO 6.5%
1.5 in.	4% TO 7%
1 in	4.5% TO 7%
0.75 in.	4.5% TO 7%

5. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO A5TM A185, AND SHALL BE SUPPLIED IN SHEETS ONLY. THE WELDING Of REINFORCING BARS SHALL CONFORM TO ASTM A706 AND AWS D1.4.

6. THE CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT PRIOR TO POURING CONCRETE.

7. CLEAR COVER TO REINFORCING SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE
   - 7.1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH – 3"
   - 7.2. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
     - #6 AND LARGER – 2"
     - #5 AND SMALLER – 1 1/2"
   - 7.3. CONCRETE NOT EXPOSED TO EARTH OR WEATHER;
     - SLABS, WALLS – 3/4"
     - ALL OTHER 1 – 1/2"

8. LAP SPLICES SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 FOR CLASS "B" TENSION LAP SPLICES, UNLESS NOTED OTHERWISE.

9. HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI 318 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

10. UNLESS SHOWN OTHERWISE, DOWELS INTO FOUNDATION ELEMENTS SHALL HAVE A STANDARD 90 DEGREE HOOK AND SHALL BE THE SAME SIZE AND QUANTITY PROVIDED IN PIERS AND WALLS ABOVE THE FOUNDATION.

11. PROVIDE A #4x4-0"Lg. REBAR IN CONCRETE SLABS ACROSS ALL REENTRANT CORNERS OF RECTANGULAR SLAB OPENINGS AND AROUND THE PERIMETER OF ROUND SLAB OPENINGS.

12. PROVIDE CORNER BARS TO MATCH HORIZONTAL REINFORCING IN ALL WALLS AND FOOTINGS.

13. CONCRETE TESTING SHALL BE AS FOLLOWS:
   - 13.1. OBTAIN ONE COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD. PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF (ASTM C172).
   - 13.2. OBTAIN: SLUMP (ASTM C143), AIR CONTENT (ASTM C231), TEMPERATURE (ASTM C1064), UNIT WEIGHT; (ASTM C567), COMPRESSION TEST SPECIMENS (ASTM C31) FOR EACH COMPOSITE SAMPLE,
   - 13.3. CAST AND FIELD CURE ONE SET OF FOUR STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE. TEST (1) AT 7 DAYS, (2) AT 28 DAYS AND (1) AT 56 DAYS.

14. SUBMIT SHOP DRAWINGS FOR REINFORCING STEEL AND CONCRETE MIX DESIGNS TO THE ARCHITECT FOR REVIEW BEFORE CONSTRUCTION.

COLD-FORMED STEEL:

1. ALL LIGHT GAGE FRAMING SHALL CONFORM TO THE 2007 NORTH AMERICAN SPECIFICATION (NAS-2007) FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.

2. MEMBERS TO HAVE MINIMUM YIELD STRESS OF 50ksi AND SHALL HAVE A MINIMUM FLANGE WIDTH OF 1 5/8" AND A RETURN LIP LENGTH Of I/2". WHERE FLANGE WIDTHS OF 2" ARE SPECIFIED, THE RETURN LIP LENGTH SHALL BE 5/8".

3. SIZES AND GAGE SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS ARE MINIMUM.

4. PROVIDE ALL ACCESSORIES, SUCH AS TRACKS, CLIPS, WEB STIFFENERS, AND CONNECTORS REQUIRED FOR A COMPLETE INSTALLATION AND AS RECOMMENDED BY THE MANUFACTURER.

5. SUBMIT SHOP DRAWINGS FOR LIGHT GAGE FRAMING INDICATED ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR REVIEW PRIOR TO CONSTRUCTION.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC CODE OF STANDARD PRACTICE.

2. STRUCTURAL STEEL GRADES (UNLESS NOTED OTHERWISE):
   - A) STRUCTURAL STEEL (W-): ASTM A992, Fy=50ksi
   - B) STRUCTURAL STEEL (L-, C- PLATES): ASTM A36, fy = 36ksi
   - C) STRUCTURAL TUBING: ASTM A500, fy=46ksi
   - D) STRUCTURAL STEEL PIPE: ASTM A53 GRADE B, Fy=35ksi
   - E) BOLTS: ASTM A325, PRETENSION (SC WHERE INDICATED)
   - F) ANCHOR RODS: F1554 GR. 55 WELDABLE S1
   - G) WELDS: E70xx
   - H) ADHESIVE ANCHORS (BASIS Of DESIGN):
     - i) HILTI HY150
     - ii)POWERS AC100 PLUS

3. WELDS NOT INDICATED FOR STEEL-TO-STEEL CONNECTIONS SHALL BE AN ALL AROUND FILLET WELD WITH A MINIMUM THROAT THICKNESS PER AISC AND AWS STANDARDS.

4. ALL STRUCTURAL STEEL SHALL BE COATED AS INDICATED BELOW. APPLY COATINGS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, INCLUDING SURFACE PREPARATIONS AND COMPATIBILITY REQUIREMENTS BETWEEN ALL COATINGS. AFTER ERECTION TOUCH UP A.LL AREAS WHERE PAINT OR GALVANIZING IS MISSING OR DAMAGED INCLUDING FIELD WELDS. COLOR SHALL BE AS DETERMINED BY THE OWNER OR ARCHITECT.
   - (A) EXTERIOR EXPOSED STEEL. AND LINTELS WITHIN EXTERIOR WALLS TO BE HOT-DIPPED GALVANIZED.
   - (B) ALL OTHER STRUCTURAL STEEL SHALL BE SHOP PAINTED WITH A RUST INHIBITIVE PRIMER. STEEL TO RECEIVE FIREPROOFING TO BE UNPRIMED,

5. BEAM CONNECTIONS SHALL BE DESIGNED FOR THE LARGEST OF THE FOLLOWING: END REACTIONS COMPUTED FROM THE TABLE "UNIFORM LOAD CONSTANTS" IN THE AISC MANUAL. THE REACTIONS SHOWN ON THE PLANS. OR A SERVICE LOAD OF 10k.

6. ALL OTHER CONNECTIONS SHALL BE DESIGNED TO TRANSFER THE FULL DESIGN STRENGTH Of THE MEMBERS IN QUESTION, UNLESS SPECIFICALLY DETAILED OTHERWISE.

7. ALL CONNECTIONS AND DETAILS NOT SPECIFICALLY INDICATED ON THE DRAWINGS ARE SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND ENGINEER.

8. SUBMIT SHOP DRAWINGS FOR STRUCTURAL STEEL FOR REVIEW PRIOR TO CONSTRUCTION.

SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS SHALL CONFORM TO THE LATEST CODE

2. SPECIAL INSPECTIONS AND TESTING REQUIREMENTS INDICATED IN THIS SECTION ARE THE OWNER'S RESPONSIBILITY. OWNER WILL ENGAGE QUALIFIED SPECIAL INSPECTORS AND TESTING AGENCIES TO PERFORM THESE SERVICES.

FOUNDATIONS:

1. SOIL BEARING SURFACES SHALL BE DRY AND FREE FROM FROST OR LOOSE MATERIAL. EXISTING SOIL TO BE REMOVED AND REPLACED AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL SOIL BEARING SURFACES AND BACKFILL SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER APPROVED TESTING AGENT.

2. CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING BELOW GRADE UTILITIES PRIOR TO CONSTRUCTION.

3. CONTRACTOR TO PROVIDE TEMPORARY PROTECTION AS REQUIRED FOR FOUNDATIONS EXPOSED TO WATER OR FREEZING.

4. ALL FILL PLACED UNDER AND AROUND FOOTINGS, SLABS, AND FOUNDATION WALLS SHALL BE GRANULAR MATERIAL AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. EACH LIFT SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE DEPTH AND EXTENT OF FILL PLACEMENT SHALL BE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.

5. ALL PIPING SLEEVES THROUGH FOUNDATION WALLS AND FOOTING STEPS TO ACCOMMODATE PIPING SHALL BE COORDINATED WITH THE PLUMBING CONTRACTOR/DRAWINGS.

6. BOTTOM OF ALL FOOTINGS SHALL BE A MINIMUM OF 2-0" BELOW GRADE EXCEPT WHERE FIELD CONDITIONS REQUIRE AN ADJUSTMENT.

7. BACKFILLING OF FOUNDATION WALLS IS NOT BEGIN UNLESS WALLS ARE ADEQUATELY BRACED OR FILLING IS BALANCED.

8. JOINTS IN CONCRETE FOUNDATION WALLS SHALL BE LOCATED SO THAT NO SINGLE POUR IS LONGER THAN 40 FEET. A JOINT SHALL BE LOCATED WITHIN 3'-0" FROM ANY CORNER.

9. PROVIDE CONTROL JOINT FOR ALL SLABS-ON-GRADE AT COLUMN CENTERLINES AND AT A MAXIMUM OF 12' 0" O.C., UNLESS SHOWN OTHERWISE ON PLANS.

STEEL DECK:

1. STEEL DECK CONSTRUCTION SHALL CONFORM TO THE. LATEST MANUAL OF CONSTRUCTION AND CODE OF STANDARD PRACTICE FOR STEEL DECK, PUBLISHED BY THE STEEL DECK INSTITUTE.

2. STEEL DECK SHALL BE CONTINUOUS OVER 3 OR MORE SPANS UNLESS NOTED OTHERWISE.

3. PERMANENT STEEL FORM DECK FASTENING SHALL CONFORM TO THE SDI RECOMMENDATIONS FOR FASTENING TO SUPPORTING MEMBERS. PERMANENT STEEL FORM DECKSHALL HAVE A GALVANIZED FINISH.

4. THE CONTRACTOR SHALL VERIFY THE SIZE AND LOCATION OF ALL DECK OPENINGS REQUIRED FOR PENETRATIONS AND SHALL PROVIDE SUMP PANS OR ADDITIONAL FRAMING AS REQUIRED. HOLES SHALL BE CUT NEATLY WITH A MAXIMUM SIZE Of PIPE OR DUCT DIMENSION PLUS 1". A STEEL FRAMING ASSEMBLY IS REQUIRED AT ALL OPENINGS EXCEEDING 6".

5. STEEL FLOOR DECK SHALL BE GALVANIZED (G60). ROOF DECK GALVANIZED (G90).

6. PROVIDE METAL CLOSURE STRIPS FOR CELL RACEWAYS AND OPENINGS BETWEEN DECKING AND OTHER CONSTRUCTION OF NOT LESS THAN 16GA. SHEET STEEL AT OPEN ENDS AND SIDES OF DECKING.

7. SUBMIT SHOP DRAWINGS FOR STEEL DECK FOR REVIEW PRIOR TO CONSTRUCTION.

MASONRY:

1. CONCRETE MASONRY DESIGN AND CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION Of ACI 530.

2. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C-90, TYPE I, GRADE N, MOISTURE CONTROLLED UNITS WITH Fm = 2,000psi.

3. PROVIDE (1) NO. 5 BAR ON EACH SIDE OF OPENINGS IN FULLY GROUTED CELLS

4. MORTAR SHALL BE TYPE M OR S AND SHALL CONFORM TO ASTM CC70.

5. HORIZONTAL JOINT REINFORCING: 9ga, ASTM A82, GALVANIZED LADDER-TYPE SHALL BE PROVIDED AT 16" O.C. UNLESS NOTED OTHERWISE.

6. CONCRETE MASONRY WALLS SHALL HAVE CONTROL JOINTS SPACED NO FURTHER THAN 25'-0" APART IN CONTINUOUS EXTERIOR AND INTERIOR WALLS.

7. GROUT FOR FILLING BLOCK CORES SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2,000psi AT 28 DAYS. GROUT SHALL BE PLACED IN LIFTS NOT EXCEEDING 7 COURSES IN HEIGHT UNLESS OTHERWISE APPROVED BY THE ENGINEER.

8. FULL HEAD AND BED JOINTS SHALL BE PROVIDED.

9. COORDINATE LOCATION OF ALL MASONRY WALLS, PARTITIONS AND OPENINGS WITH ARCHITECTURAL DRAWINGS.

10. LAP SPLICES IN VERTICAL REINFORCING FOR CONCRETE BLOCK MASONRY WALLS AND PILASTERS SHALL BE A MINIMUM Of 48 BAR DIAMETERS UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

11. ALL LINTELS AT MASONRY OPENINGS SHALL HAVE 4" MIN. OR 1" FOR EACH FOOT OF SPAN OF BEARING AT EACH END. ALL EXTERIOR LINTELS SHALL BE HOT DIPPED GALVANIZED.

12. REFERENCE ARCHITECTURAL DRAWINGS AND PROJECT SPECIFICATIONS FOR CONTROL JOINT LOCATION REQUIREMENTS. ALL BOND BEAM REINFORCEMENT TO BE CONTINUOUS AT CONTROL JOINT LOCATIONS. SCORE BOND BEAM SHELL 3/8" EACH SIDE AT CONTROL JOINTS.

13. MASONRY COURSING INDICATED ON THE STRUCTURAL DRAWINGS IS APPROXIMATE. REFER TO ARCHITECTURAL DRAWINGS FOR ACTUAL COURSING LAYOUT.

14. REINFORCING STEEL SHALL BE IN PLACE AND SECURE PRIOR TO PLACING GROUT.

15. ALL MASONRY CELLS BELOW GRADE SHALL BE GROUTED SOLID.

16. SUBMIT SHOP DRAWINGS FOR REINFORCING STEEL, GROUT AND MORTAR MIX DESIGNS, AND CMU PRODUCT DATA TO THE ARCHITECT FOR REVIEW BEFORE CONSTRUCTION.

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LIFE STORAGE, INC.
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ISSUE	DATE	REMARKS
2	11FEB2021	ISSUED FOR CLIENT REVIEW
3	18MAR2021	ISSUED FOR BID

GENERAL NOTES

DRAWN BY:
SCALE: AS NOTED
DATE: 14SEP2020
JOB NUMBER: 3771

SHEET NUMBER: **S1**

plotted: Thursday, March 18, 2021