GENERAL STRUCTURAL NOTES

APPLY UNLESS NOTED ON STRUCTURAL DRAWINGS IN CASE OF CONFLICT GREATER REQUIREMENTS GOVERN.

CODE:

COMPLY WITH 2018 INTERNATIONAL BUILDING CODE WITH CITY OF GOODYEAR AMENDMENTS.

SEISMIC:
SEISMIC IMPORTANCE FACTOR (I): 1.0
Ss=0.173g; S1=0.072g
SITE CLASS: D
SEISMIC DESIGN CATEGORY: B
Sds= 0.185g; Sd1= 0.116g
R= 3
Cs=0.062
V= 286 kips

BUILDING
SEISMIC FORCE RESISTING SYSTEM:
BEARING WALL SYSTEM WITH ORDINARY PRECAST CONCRETE SHEAR WALLS.

WIND:
BASIC WIND SPEED (3 SEC. GUST): 102 MPH
RISK CATEGORY: II
EXPOSURE: C

WIND PRESSURES (COMPONENTS AND CLADDING):
ZONE 1' (+16.0 PSF/-25.55 PSF)
ZONE 1 (+16.0 PSF/-44.47 PSF)
ZONE 2 (+25.55 PSF/-58.66 PSF)
ZONE 3 (+25.55 PSF/-58.66 PSF)
ZONE 4 (+25.55 PSF/-27.68 PSF)
ZONE 5 (+25.55 PSF/-34.06 PSF)

WIND PRESSURES NOTED ABOVE STRENGTH LEVEL FORCES AND ARE DETERMINED PER ASCE 7-16 ASSUMING TRIBUTARY AREA LESS THAN 10 SQ. FT. DESIGN PROFESSIONAL IN CHARGE OF DESIGN OF COMPONENTS AND CLADDING ELEMENTS SHALL APPLY APPROPRIATE ADJUSTMENT FACTORS TO WIND PRESSURES INDICATED ABOVE AS REQUIRED PER ASCE 7-16 AND IN CONFORMANCE WITH THE DESIGN STANDARDS FOR THE ELEMENTS BEING DESIGNED.

DEAD LOADS:
ROOF - 18 PSF

LIVE LOADS:
ROOF - 20 PSF (REDUCIBLE PER CODE)

MECHANICAL LOADS: SEE MECHANICAL DRAWINGS. VERIFY ANY LOADS SHOWN ON DRAWINGS BY 'THE STRUCTURES GROUP'.W/ MECHANICAL DRAWINGS.

FOUNDATIONS:

SOIL REPORT BY: ALPHA GEOTECHNICAL & MATERIALS INC.
ALPHA PROJECT NO: 21-G-12051
DATED: MARCH 4, 2021

FOOTINGS FOR BUILDING STRUCTURE SHALL BEAR ON PROPERLY COMPACTED ENGINEERED FILL AT 1'-6" MINIMUM BELOW LOWEST ADJACENT GRADE WITHIN 5'-0" OF EDGE OF FOOTING. FOR INTERIOR FOOTINGS, FINISH FLOOR IS CONSIDERED AS FINISH GRADE MAXIMUM ALLOWABLE BEARING = 2000 PSF. FOR EXTENT AND NATURE OF PROPERTY COMPACTED FILL, SEE SOIL REPORT AND SPECIFICATIONS.

ALL EARTHWORK, FOOTING DEPTHS, AND EXCAVATIONS FOR FOUNDATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER TO VERIFY ASSUMED ALLOWABLE SOIL BEARING AND LOW SETTLEMENT AND SWELL POTENTIAL, AND TO MAKE ANY ADDITIONAL RECOMMENDATIONS.

CONCRETE:

SHALL MEET ALL THE REQUIREMENTS OF THE CURRENT ISSUE OF THE ACI MANUAL OF CONCRETE PRACTICE, WITH TYPE II CEMENT. MINIMUM 28 DAY STRENGTH, 3000 PSI.

DOCK SLABS/RAMPS.....SEE SOIL REPORT FOR PAVEMENT REQUIREMENTS.
TILT PANELS.....4000 PSI (U.N.O.)
SLAB-ON-GRADE.....4000 PSI

MIX DESIGN FOR SLAB-ON-GRADE SHALL HAVE A WATER:CEMENT OF 0.52 MIN/0.54 MAX AND CONTAIN 20-25% CLASS F FLYASH (CLASS C FLYASH NOT PERMITTED. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

NO ADMIXTURES WITHOUT APPROVAL. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED. CONCRETE SHALL NOT BE IN CONTACT WITH ALUMINUM. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS. SLUMP, 4" (±1"), TYP. U.N.O. DO NOT TAMP SLABS. USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT TO FINISH. SEE SPECIFICATIONS FOR CURING. CAST SLABS ON GRADE IN ALTERNATE SECTIONS UNLESS PERMANENT FORMS ARE USED. WAIT 48 HOURS BETWEEN ALL ADJACENT CONCRETE CASTINGS. REVIBRATE TOPS OF COLUMNS SOON AFTER PLACING CONCRETE, TO CLOSE PLASTIC SHRINKAGE CRACKS.

WELDING:

ALL CONSTRUCTION AND TESTING PER AMERICAN WELDING SOCIETY CODES AND RECOMMENDATIONS. ALL WELDING SHALL BE BY WELDERS HOLDING CURRENT VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD CALLED FOR. WELDING RODS TO BE LOW HYDROGEN TYPE, E70.

ALL BUTT WELDED SPLICES AND CONNECTIONS IN MATERIAL THICKER THAN 5/16" SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY, TO CERTIFY ALL SPLICES AS MEETING OR EXCEEDING STRENGTH OF MATERIALS SPLICED. TWO COPIES OF ALL TEST REPORTS AND A LETTER OF SUCH CERTIFICATION SHALL BE SUBMITTED TO THE ARCHITECT.

ALL WELDING OF REINFORCING SHALL CONFORM TO THE "STRUCTURAL WELDING CODES-REINFORCING STEEL," AWS D1.4, CURRENT EDITION.

WELDS INDICATED MAY BE MADE IN SHOP OR FIELD WITH APPROVAL.

STRUCTURAL STEEL:

ASTM A-572 GRADE 50, EXCEPT AS FOLLOWS: ANGLES, PLATES AND BARS: ASTM A-36. PIPE STEEL; ASTM A-53 GRADE B, OR A-501. TUBE STEEL; ASTM A-500 GRADE B. BOLTS AND PLAIN ANCHORS; ASTM A-307. HIGH STRENGTH BOLTS; ASTM A-325-N. OPEN WEB JOISTS PER STEEL JOIST INSTITUTE SPECIFICATIONS. LATEST AISC HANDBOOKS AND CODES APPLY.

MINIMUM EMBEDMENT OF ALL BOLTS IN GROUT OR CONCRETE SHALL BE 8" INCLUDING BOLTING HEAD, OR 5" WITH A 3" HOOK, AND SHALL HAVE SHANK AND THREAD DIAMETER AS SPECIFIED.

SEE MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT SUPPORT FRAMING.

WELDED ANCHORS AND SHEAR CONNECTIONS SHALL BE ICBO APPROVED: NELSON, KSM OR EQUAL.

SEE ADDITIONAL REQUIREMENTS LISTED UNDER "INSPECTION OF FABRICATORS" SECTION OF SPECIAL INSPECTION PROGRAM.

REINFORCING:

ASTM A-615 GRADE 60 EXCEPT AS FOLLOWS.

#2 AND #3 BARS.....GRADE 40
WIRE MESH.....A-185
WELDED ANCHORS.....A-706 (GR60)

ALL REINFORCING BARS DEFORMED EXCEPT #2 BARS AND WIRE MESH. LATEST ACI CODE AND DETAILING MANUAL APPLY. CLEAR CONCRETE COVERAGES TO ANY REINFORCING INCLUDING TIES ARE AS FOLLOWS, UNLESS NOTED OTHERWISE.

CONCRETE PLACED AGAINST EARTH.....3"
SLABS.....1"
ALL OTHER.....1 1/2"

LAP SPLICES IN MASONRY: LAPS AND EXTENSIONS SHALL BE 72 BAR DIAMETERS, TYPICAL UNLESS NOTED OTHERWISE.

MESH SPLICES: TYPICAL SPACING PLUS 2" (MINIMUM 8") MEASURED BETWEEN CROSS WIRES.

LAP SPLICES IN CONCRETE: LAPS AND EXTENSIONS SHALL BE AS INDICATED IN DETAILS 12, 13 AND 14 ON SHEET S-0.2 UNLESS NOTED OTHERWISE. SPLICE BOTTOM BAR OVER SUPPORTS AND TOP BAR AT MIDSPAN ONLY.

WHERE BARS ARE SHOWN SPLICED, THEY MAY RUN CONTINUOUS AT CONTRACTOR'S OPTION.

PROVIDE SHOP DRAWINGS AND FABRICATE AFTER THE ARCHITECT'S REVIEW. ALL SPLICE LOCATIONS ARE SUBJECT TO APPROVAL. PLACE REBAR PER CRSI STANDARDS.

REBAR SPACING GIVEN IS MAXIMUM ON CENTER AND ALL REBAR IS CONTINUOUS UNLESS OTHERWISE NOTED. PROVIDE BENT CORNER REBAR TO MATCH AND LAP WITH HORIZONTAL REBARS AT CORNERS AND INTERSECTIONS OF WALLS, BEAMS AND FOOTINGS PER ACI MANUAL. DOWEL ALL VERTICAL REBAR TO FOUNDATIONS. SECURELY TIE ALL REBAR, INCLUDING DOWELS, IN LOCATION BEFORE PLACING CONCRETE OR GROUT.

ROOF FRAMING AND DIAPHRAGM DESIGN:

DESIGN OF ALL ROOF FRAMING MEMBERS, WALL STRAPS, PLYWOOD ROOF SHEATHING AND DIAPHRAGM NAILING IS BY "THE STRUCTURE'S GROUP". ROOF FRAMING DRAWINGS AND ASSOCIATED DETAILS PREPARED AND ENGINEERED BY "THE STRUCTURE'S GROUP" ARE INCLUDED IN THE CONTRACT DOCUMENTS AND SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF ARIZONA.

TILT-UP CONCRETE:

REINFORCING SHOWN IN DETAILS IS FOR IN PLACE CONDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR PICK UP POINT INSERTS AND LOCATIONS, SPECIAL PICK UP REINFORCING AND STRONG BACKS, AND ALL PICK UP AND PLACING OPERATIONS.

DO NOT TAMP FLAT PRECAST SLABS. USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT TO FINISH.

WOOD:

GENERAL: ALL STRESS GRADE LUMBER CONSTRUCTION SHALL COMPLY WITH AITC TIMBER CONSTRUCTION STANDARDS LATEST EDITION. ALL LUMBER (EACH PIECE) SHALL BEAR THE GRADE STAMP OF GRADING RULES AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE (ALSC). REGARDLESS OF REQUIRED GRADE STAMP AND CERTIFICATIONS, ALL LUMBER (EACH PIECE) IN PLACE IN THE STRUCTURE SHALL BE OF THE ORIGINAL GRADE SPECIFIED OR BETTER WHEN INSPECTED BY THE GRADING AGENCY APPROVED BY THE ALSC. GRADE LOSS RESULTING FROM EFFECTS OF WEATHERING, HANDLING, STORAGE, RESAWING OR DIVIDING LENGTHS WILL BE CAUSE FOR REJECTION.

DO NOT NOTCH OR DRILL STIFFENERS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT.

SAWN LUMBER: WEST COAST DOUGLAS FIR - LARCH, SURFACED DRY. NO. 2 OR BETTER.

SPRINKLER ALLOWANCE IS 2.0 LBS PER SQUARE FOOT. SUSPEND SPRINKLERS SO THAT THIS ALLOWANCE IS NOT EXCEEDED ON ANY MEMBER. ADD MEMBERS IF NECESSARY.

SHEATHING: SEE "THE STRUCTURE'S GROUP" DRAWINGS.

CONNECTIONS: SEE "THE STRUCTURE'S GROUP" DRAWINGS.

SUPPLEMENTARY NOTES:

PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

THE STRUCTURAL ENGINEER SHALL NOT HAVE CONTROL OR CHARGE OF, AND SHALL NOT BE RESPONSIBLE FOR, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FOR CONNECTIONS, SEE DETAILS.

EXPANSION ANCHORS IN NORMAL-WEIGHT HARDROCK CONCRETE SHALL BE BY HILTI, INC. (ICC-ES ESR 2302), SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES ESR 3037) OR ICC APPROVED EQUIVALENT WITH ALLOWABLE VALUES EQUAL TO OR EXCEEDING THOSE OF THE SPECIFIED ANCHOR AS STIPULATED IN THEIR RESPECTIVE ICC ENGINEERING REPORT. MINIMUM EMBEDMENT IN NORMAL-WEIGHT HARDROCK CONCRETE SHALL BE AS INDICATED FOR THE LOWEST ICC APPROVED SHEAR CONNECTION CAPACITY FOR THE DIAMETER OF ANCHOR SPECIFIED BUT NOT LESS THAN 3-1/2 INCHES OR DEPTH INDICATED ON PLANS OR IN DETAILS. USE OF EXPANSION ANCHORS IN GROUT-FILLED MASONRY UNITS IS NOT PERMITTED.

ADHESIVE ANCHORS IN NORMAL-WEIGHT HARDROCK CONCRETE SHALL BE BY HILTI, INC. (ICC-ES ESR 3187), SIMPSON STRONG-TIE COMPANY, INC. (ICC-ES ESR 2508) OR ICC APPROVED EQUIVALENT WITH ALLOWABLE VALUES EQUAL TO OR EXCEEDING THOSE OF SPECIFIED ANCHOR AS STIPULATED IN THEIR RESPECTIVE ICC ENGINEERING REPORT. MINIMUM EMBEDMENT SHALL BE AS INDICATED FOR THE LOWEST ICC APPROVED SHEAR CONNECTION CAPACITY FOR THE DIAMETER OF ANCHOR SPECIFIED BUT NOT LESS THAN AS INDICATED ON PLANS OR IN DETAILS.

COST OF ADDITIONAL FIELD AND OFFICE WORK NECESSITATED BY REQUEST BY THE CONTRACTOR FOR AN OPTION OR DUE TO ERRORS OR OMISSIONS IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.

SUPPLEMENTARY NOTES (CONT.):

ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN ARIZONA.

UNLESS OTHERWISE NOTED, DETAILS ON STRUCTURAL DRAWINGS ARE TYPICAL AS INDICATED BY CUTS, REFERENCES OR TITLES.

VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

DRYPACK SHALL BE ONE PART CEMENT AND 2 3/4 PARTS SAND WITH JUST ENOUGH WATER TO HYDRATE CEMENT AND FORM A BALL SHOWING MOISTURE ON THE SURFACE WHEN SQUEEZED. IT SHALL BE RAMMED IN TIGHT TO MAXIMUM DENSITY ATTAINABLE. MINIMUM 28 DAY STRENGTH TO BE 5000 PSI.

IN LIEU OF DRYPACK, GROUT SHALL BE NON-SHRINK, NON-METALLIC; U.S. GROUT CORP. FIVE STAR GROUT; ASTM C-827, C-191, AND C-109 OR PRIOR APPROVED EQUAL, MIXED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION. MINIMUM COMPRESSIVE STRENGTH 5000 PSI IN 7 DAYS.

STRUCTURAL CONSTRUCTION OBSERVATION:

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT ALL STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY STRUCTURAL CONSTRUCTION OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE HIM FROM THIS RESPONSIBILITY. ANY STRUCTURAL DEVIATIONS FROM THE CONTRACT DOCUMENTS THAT ARE FOUND AT A LATER DATE AND ARE DECLARED TO BE SIGNIFICANT BY THE STRUCTURAL ENGINEER SHALL BE CORRECTED BY THE CONTRACTOR WITH ALL DISPATCH.

THE STRUCTURAL CONSTRUCTION OBSERVER IS NOT AUTHORIZED TO DIRECT OR APPROVE ANY CHANGES FROM THE CONTRACT DOCUMENTS. IF THE CONTRACTOR WISHES TO QUESTION THE STRUCTURAL CONSTRUCTION OBSERVER'S INTERPRETATION OF THE CONTRACT DOCUMENTS, HE MAY DO SO DIRECTLY WITH THE ARCHITECT OR THE STRUCTURAL ENGINEER.

THE STRUCTURAL CONSTRUCTION OBSERVER IS NOT AUTHORIZED TO STOP OR DELAY WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN WORK AFTER BEING NOTIFIED BY THE STRUCTURAL CONSTRUCTION OBSERVER THAT SUCH WORK IS UNACCEPTABLE, HE DOES SO AT HIS OWN RESPONSIBILITY AND RISKS CORRECTING THE WORK AT A LESS OPPORTUNE TIME.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE FACILITIES FOR THE STRUCTURAL CONSTRUCTION OBSERVER TO ALLOW HIM TO PERFORM HIS WORK SAFELY AND EFFICIENTLY.

STRUCTURAL OBSERVATION TO BE PERFORMED BY ARIZONA REGISTED STRUCTURAL ENGINEER REQUIRED FOR CONNECTIONS OF PREFABRICATED STRUCTURAL ELEMENTS (i.e. JOISTS/ JOIST GIRDERS) THAT ARE PART OF THE MAIN LATERAL FORCE RESISTING SYSTEM. CONTRACTOR TO NOTIFY ENGINEER-OF-RECORD WHEN ERECTION OF ROOF SYSTEM IS COMPLETE.

DEFERRED SUBMITTALS:

DEFERRED SUBMITTALS MUST BE REVIEWED BY THE ENGINEER OF RECORD FOR CONFORMANCE TO THE CONTRACT DOCUMENTS. A SET OF DEFERRED SUBMITTAL DOCUMENTS WITH A NOTIFICATION INDICATING IT HAS BEEN REVIEWED BY THE ENGINEER OF RECORD AND FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING SHALL BE FORWARDED BY THE CONTRACTOR TO THE CITY OF PHOENIX BUILDING INSPECTOR ON SITE PRIOR TO INSTALLATION OF DEFERRED ITEMS.

DEFERRED SUBMITTALS FOR STRUCTURAL ITEMS INCLUDE:

A) STEEL JOISTS AND JOIST GIRDERS

PLANS AND SPECIFICATIONS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE PLANNING AND DEVELOPMENT DEPARTMENT AFTER BEING REVIEWED FOR CONFORMANCE WITH THE BUILDING OR STRUCTURE DESIGN BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND SHALL HAVE PDD APPROVAL PRIOR TO ERECTION, CONSTRUCTION OR INSTALLATION IN THE FIELD. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL PROVIDE A NOTATION ON ALL DEFERRED DOCUMENTS THAT ACKNOWLEDGES REVIEW OF SUCH DOCUMENTS. A SEPARATE PERMIT FOR THE INSTALLATION OF DEFERRED ITEM SHALL NOT BE REQUIRED UNLESS SPECIFIED IN THIS CODE. IN ALL CASES, DEFERRED SUBMITTAL DOCUMENTS SHALL BEAR A STAMP OR NOTE FROM THE ENGINEER AND ARCHITECT OF RECORD INDICATING THAT THEY HAVE REVIEWED THE DOCUMENTS FOR GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING PRIOR TO SUBMITTING THEM TO THE BUILDING INSPECTOR OR PLAN REVIEWER.

SPECIAL INSPECTION:

SPECIAL INSPECTION IS TO BE PROVIDED IN ADDITION TO INSPECTIONS CONDUCTED BY THE DEPARTMENT OF BUILDING AND SAFETY AND SHALL NOT BE CONSTRUED TO RELIEVE THE OWNER OR HIS AUTHORIZED AGENT FROM REQUESTING THE PERIODIC AND CALLED INSPECTIONS REQUIRED BY SECTION 1704 OF THE 2018 INTERNATIONAL CODE. SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING:

A. SOILS

B. CONCRETE

C. STEEL CONSTRUCTION

D. POST INSTALLED ANCHORS INSTALLED IN CONCRETE

SPECIAL INSPECTION	FREQ.	REFERENCED STANDARD
SOILS:		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	PERIODIC	GEOTECHNICAL ENGINEERING REPORT; IBC 1704.6
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	PERIODIC	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	PERIODIC	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	CONTINUOUS	
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	PERIODIC	
CONCRETE:		
1. INSPECTION OF REINFORCING STEEL, SIZE AND VERIFY PLACEMENT	PERIODIC	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1, 26.6.3
2. REINFORCING BAR WELDING:		
a. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A706	PERIODIC	AWS D1.4; ACI 318: 26.6.4
b. INSPECT SIGNAL PASS FILLET WELDS, MAXIMUM 5/16"; AND	PERIODIC	
c. INSPECT ALL OTHER WELDS.	CONTINUOUS	
3. INSPECT ANCHORS CAST IN CONCRETE.	PERIODIC	ACI 318: 17.8.2
4. INSPECT ANCHORS POST INSTALLED IN HARDENED CONCRETE.		
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	CONTINUOUS	ACI 318: 17.8.2.4
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	PERIODIC	ACI 318: 17.8.2
5. VERIFYING USE OF REQUIRED DESIGN MIX	PERIODIC	ACI 318: Ch. 19, 26.4.3-26.4.4
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	ASTM C172 ASTM C131 ACI 318: 26.5, 26.12
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	CONTINUOUS	ACI 318: 26.5
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 26.5.3-26.5.5
9. INSPECT PRESTRESSED CONCRETE FOR:		
a. APPLICATION OF PRESTRESSING FORCES; AND	CONTINUOUS	ACI 318: 26.10
b. GROUTING OF BONDED PRESTRESSING TENDONS.	CONTINUOUS	
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	PERIODIC	ACI 318: 26.9
11. VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	ACI 318: 26.11.2
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 26.11.1.2(b)
STEEL CONSTRUCTION:		
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS, HIGH-STRENGTH BOLTING:		APPLICABLE ASTM MATERIAL SPECIFICATIONS; AISC 335 Sec. A3.4;AISC LRFD SECTION A3.3
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS	PERIODIC	
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	PERIODIC	
2. INSPECTION OF BEARING-TYPE CONNECTIONS	PERIODIC	AISC LRFD Sec. M2.5
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:		
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	---	ASTM A-6 OR ASTM A-568
b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS REQUIRED	---	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS	---	AISC ASD Sec. A3.6
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED	---	
5. INSPECTION OF WELDING:		
a. STRUCTURAL STEEL:		AWS D1.1
1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	CONTINUOUS	
2) MULTI-PASS FILLET WELDS	CONTINUOUS	
3) SINGLE-PASS FILLET WELDS ≤ 5/16" (7.9mm)	CONTINUOUS	
4) SINGLE-PASS FILLET WELDS ≤ 5/16" (7.9mm)	PERIODIC	
5) FLOOR AND ROOF DECK WELDS	PERIODIC	AWS D1.3
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:		
a. DETAILS SUCH AS BRACING AND STIFFENING	PERIODIC	IBC 1704.3.2
b. MEMBER LOCATIONS		
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION		
OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:		
1. INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS		
a. END CONNECTIONS - WELDED OR BOLTED	PERIODIC	SJI SPECIFICATIONS LISTED IN SEC. 2207.1
b. BRIDGING - HORIZONTAL OR DIAGONAL	---	
1) STANDARD BRIDGING	PERIODIC	SJI SPECIFICATIONS LISTED IN SEC. 2207.1
2) BRIDGING THAT DIFFERS FROM SJI SPECIFICATIONS LISTED IN SECTION 2207.1	PERIODIC	---
INSPECTION OF FABRICATORS:		
1. APPLICABLE ELEMENT (FABRICATOR CERTIFICATION REQUIREMENTS):		
a. STRUCTURAL STEEL (AISC CERTIFIED FOR CONVENTIONAL STEEL BUILDING)		
b. STEEL JOISTS/JOIST GIRDERS (SJI MEMBER)		
c. STEEL ROOF DECK (SDI MEMBER)		
2. WHEN SPECIAL INSPECTIONS ARE REQUIRED BY BUILDING OFFICIAL:		
a.) FABRICATION AND IMPLEMENTATION PROCEDURES: THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION, CONTROL OF THE WORKMANSHIP, AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.		
3. WHEN SPECIAL INSPECTIONS ARE NOT REQUIRED BY THE BUILDING OFFICIAL:		
a.) UPON COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.		

LEGEND:

GSN = GENERAL STRUCTURAL NOTES
U.N.O. = UNLESS NOTED OTHERWISE
B.O.D. = BOTTOM OF DECK
T.O.D. = TOP OF DECK

C1 ← INDICATES COLUMN SIZE. SEE SCHEDULE.
F1 ← INDICATES FOOTING SIZE. SEE SCHEDULE.
← INDICATES CONCRETE TILT PANEL WALL
500# ← INDICATES MECH'L EQUIPMENT ON ROOF. VERIFY SIZE & LOCATION w/ ARCH'L & MECH'L DRAWINGS
← INDICATES OPENING IN ROOF. VERIFY SIZE & LOCATION FLOOR w/ ARCH'L & MECH'L DWGS. ALL OPENINGS & OPENING FRAMING NOT NECESSARILY SHOWN ON PLAN

GENERAL DETAIL REFERENCES:

a. MAX SLOPE BETWEEN ADJ EXCAVATIONS — 1/S-002
b. CJ IN SLAB ON GRADE — 2A/S-002
c. CONTROL JOINT OPTION — 2B/S-002
d. BAR BENDS — 3/S-002
e. PIPE IN SLAB ON GRADE — 4/S-002
f. PIPE PASSING UNDER CONT. FOOTING — 5/S-002
g. PIPE PASSING BELOW CONT. FOOTING — 6/S-002
h. STEP IN FOOTING — 7/S-002
i. TYP ANCHOR & ANCHOR BOLT SCHED — 8/S-002
j. TYP. CLOSURE POUR AT SLAB-ON-GRADE — 9/S-002
k. LIGHT POLE FOOTING — 1/S-002
l. TENSION DEVELOPMENT FOR HOOKED BARS — 12/S-002
m. TENSION LAP SPLICE — 13/S-002
n. TENSION DEVELOPMENT LENGTH — 14/S-002
o. SLAB EDGE — 4/S-401
p. STEP IN TILT-UP WALL FOOTING — 5/S-401
q. DOCK RAMP SLAB EDGE — 11/S-401
r. TYP. TILT-UP PANEL — 1/S-501
s. TILT-UP PANEL REBAR PLACEMENT — 2/S-501
t. PC PANEL OPENING REINFORCING — 3/S-501

DRAWING INDEX:

Registered Professional Engineer — 30559 — MICHAEL B. GORDON — Date Signed 03/31/2021 — ARIZONA U.S.A.

SUN STATE BUILDERS

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VIP PRODUCTS
GOODYEAR, ARIZONA
GENERAL STRUCTURAL NOTES

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BALMER architectural group