GENERAL STRUCTURAL NOTES

A. BUILDING CODE:

1. 2018 INTERNATIONAL BUILDING CODE WITH CITY OF SEDONA AMENDMENTS.

B. DESIGN LOADS:

1. IBC WIND DESIGN DATA
   a. BASIC DESIGN WIND SPEED V= 101 MPH
   b. RISK CATEGORY II
   c. EXPOSURE 'C'
2. IBC EARTHQUAKE DESIGN DATA
   a. SS= 0.295; S1= 0.093; SDS= 0.307; SD1=0.148
   b. IMPORTANCE FACTOR IE =1.0
   c. RISK CATEGORY II
   d. SEISMIC DESIGN CATEGORY 'C'
   e. SITE CLASS 'D'
3. IBC ROOF SNOW LOAD DATA
   a. GROUND SNOW LOAD PG = 30 PSF

C. FOUNDATIONS:

1. PER SOILS INVESTIGATION REPORT BY "WESTERN TECHNOLOGIES, INC", JOB NO. 25-223103-0, DATED OCTOBER 23, 2023.
2. MINIMUM BEARING CAPACITY OF 1500 PSF.
3. ALL FOOTINGS ARE TO BE FOUNDED AT NOT LESS THAN 1'-6" BELOW LOWEST ADJACENT FINISH FLOOR OR FINISH GRADE WITHIN 5'-0" OF THE PERIMETER OF THE BUILDING, ((LOWER DEPTH GOVERNS), ONTO PREPARED SUBGRADE PER THE ABOVE REFERENCED REPORT.
4. MAXIMUM TOLERANCE FOR CAISSON SHAFT TO BE 1/15 DIAMETER.

D. GENERAL:

1. STRUCTURAL NOTES SHALL BE USED ALONG WITH THE PROJECT/SPECIFICATION MANUAL. WHERE THE STRUCTURAL NOTES, DRAWINGS OR SPECIFICATIONS DISAGREE, THE CONTRACTOR MAY REQUEST A CLARIFICATION DURING THE BIDDING PERIOD. OTHERWISE THE MORE STRINGENT REQUIREMENTS SHALL CONTROL.
2. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN. VERIFY/COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO COMMENCING WORK. DO NOT USE SCALED DIMENSIONS.
4. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, FOUNDATIONS, SLABS, STEEL DECKS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER THROUGH ARCHITECT.
5. NOTES AND STRUCTURAL DETAILS ON THE DRAWINGS ARE APPLICABLE WHERE INDICATED BY SECTION CUT, BY NOTE OR BY DETAIL TITLE AND SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. PROVIDE SIMILAR DETAILS AT SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. THE CONTRACTOR MAY REQUEST A CLARIFICATION DURING THE BIDDING PERIOD OTHERWISE THE MORE STRINGENT REQUIREMENTS SHALL CONTROL.
6. OPTIONS ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND HE SHALL COORDINATE ALL DETAILS.
7. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
8. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS WITH THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.
9. EXISTING CONDITIONS: THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL DIMENSIONS AND CONDITIONS OF THE EXISTING STRUCTURE PRIOR TO BEGINNING ANY PERTINENT WORK. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS.
10. ANY CHANGES MADE DURING CONSTRUCTION THAT ARE NOT IN COMPLIANCE WITH THE PERMITTED DRAWINGS REQUIRES A DESIGN ANALYSIS AND DRAWING REVISION BY THE STRUCTURAL ENGINEER OF RECORD AND SHALL BE SUBMITTED TO THE BUILDING OFFICIAL FOR PERMIT REVISION APPROVAL.
11. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOADS LISTED ABOVE.
12. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION HAVING AUTHORITY THAT THE PROJECT IS LOCATED.

E. CONCRETE:

1. CONCRETE MATERIAL PROPERTIES:
   a. ALL CONCRETE TO BE A MINIMUM OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE.
   b. STRUCTURAL SLABS ON GRADE:
      (1) SLABS ON GRADE TO BE 4000 PSI AT 28 DAYS.
      (2) NO HIGH RANGE WATER REDUCERS ALLOWED. DO NOT USE TYPE "F" WATER REDUCING ADMIXTURE, OR 'ALL RANGE' WATER REDUCING ADMIXTURES AT TYPE F DOSAGE RATE. USE ONLY ONE WATER REDUCING ADMIXTURE IN ANY GIVEN MIX
      (3) WATER CONTENT SHALL PRODUCE A MINIMUM 3 INCH SLUMP WITHOUT ADMIXTURE.
      (4) MAX WATER/CEMENT RATIO SHALL BE 0.53.
      (5) AGGREGATE SIZE SHALL BE 3/4" PER ASTM C33. CEMENT TO BE ASTM C 150
      (6) TYPE I OR II CEMENT. MINIMUM REQUIRED CEMENT CONTENT IS 540 POUNDS PER CUBIC YARD.
      (7) NO FLY ASH ALLOWED. IF REQUIRED FOR REACTIVE OR CORROSIVE MITIGATION FROM ADEQUATE TEST DATA PROVIDED, THE WEIGHT OF THE SUPPLEMENTARY CEMENTITIOUS MATERIALS DIVIDED BY THE WEIGHT OF TOTAL CEMENT MATERIALS SHALL NOT EXCEED THE FOLLOWING: FLY ASH: 20%. SLAG: 30%.
      (8) IF SUPPLEMENTARY CEMENTITIOUS MATERIALS IS ALLOWED, MAINTAIN SPECIFIED MINIMUM PORTLAND CEMENT CONTENT.
      (9) PLACEMENT SEQUENCE SHALL BE THOUGHT OUT WITH ALL PARTIES INVOLVED.
      (10) A PRECONSTRUCTION MEETING BETWEEN THE ARCHITECT, OWNER, ENGINEER, CONTRACTOR, CONCRETE CONTRACTOR, CONCRETE SUPPLIER, FLOOR FINISHER SHALL BE HELD TO DISCUSS PROCEDURES AND OWNER EXPECTATIONS.
      (11) SEE ARCHITECTURAL SPECIFICATIONS.
      (12) MAXIMUM ALLOWED SHRINKAGE (28 DAY) TO BE 0.04% WHEN TESTED ACCORDING TO ASTM C157 OR MODIFIED.
      (13) SLUMP AT PLACEMENT: 5±1 INCH (USE MIDRANGE PLASTICIZERS AS NEEDED
   c. ALL CONCRETE CONSTRUCTION SHALL COMPLY WITH ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ACI-301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". USE LATEST ADOPTION OF ACI
   d. AGGREGATE SIZE: 1" MAXIMUM FOR FOOTINGS, CAISSONS, AND OTHER MASS CONCRETE; 3/4" MAXIMUM FOR OTHER CONCRETE.
2. MAXIMUM SLUMP TO BE 4 1/2" UNLESS NOTED OTHERWISE.
3. CONCRETE CONTAINING SUPERPLATICIZING ADMIXTURE SHALL HAVE A SLUMP NOT EXCEEDING 3", TO BE FIELD VERIFIED, PRIOR TO ADDING ADMIXTURE, AND NOT EXCEEDING 8" AT PLACEMENT.
4. ADMIXTURES ARE NOT PERMITTED IN THE CONCRETE MIX WITHOUT PRIOR WRITTEN APPROVAL.
5. ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS SPECIFICALLY WITHHELD WATER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND TRUCK TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTITIOUS MATERIAL RATIO BE EXCEEDED.
6. MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, SLAB EDGES, REINFORCING, KEYS, ETC.
7. CAST SLABS ON GROUND WITH CONSTRUCTION AND CONTROL JOINTS IN ACCORDANCE WITH STANDARD ENGINEERING AND CONSTRUCTION PRACTICES AND AS SHOWN ON THE PLANS. THE ENCLOSED AREA OF THE JOINTS SHALL NOT EXCEED 100 SQUARE FEET.
8. SUBMIT CONCRETE MIX DESIGNS FOR REVIEW.
9. MAXIMUM FREE DROP OF ANY CONCRETE 6'-0".
10. SPACING OF CONSTRUCTION JOINTS OR CONTROL JOINTS IN WALLS EXPOSED TO VIEW SHALL NOT EXCEED 40 FEET UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.
11. PROVIDE EXTRA REINFORCING AROUND ALL OPENINGS EXCEEDING 24 INCHES SQUARE OR ROUND IN ALL SLABS AND WALLS EQUAL TO TWO #5 BARS ON FOUR SIDES AND EXTEND TWO FEET BEYOND THE OPENING.
12. STEEL REINFORCEMENT IN CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH SHALL HAVE A CLEAR COVER OF 3 INCHES. STEEL REINFORCEMENT IN FORMED CONCRETE EXPOSED TO EARTH OR WEATHER SHALL HAVE A CLEAR COVER OF 2 INCHES FOR #6 AND LARGER BARS AND A CLEAR COVER OF 1 1/2 INCHES FOR #5 BARS AND SMALLER. ALL OTHER CLEAR COVER CASES PER THE LATEST EDITION OF ACI 318.
13. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE.
14. PROVIDE CLASS B LAP SPLICES FOR ALL REINFORCING UNLESS NOTED OTHERWISE.
15. PROVIDE BENT CORNER BARS TO MATCH LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS.
16. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP, MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET, IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2" OR A MINIMUM OF 6".
17. PROVIDE ISOLATION JOINTS AROUND ALL COLUMNS AT ALL EXPOSED SLAB ON GRADE AREAS.

F. POST-TENSIONED CONCRETE:

1. RECOMMENDATIONS FOR CONCRETE MEMBERS PRESTRESSED WITH UNBONDED TENDONS (ACI 423.3R).
2. TENTATIVE RECOMMENDATIONS FOR PRESTRESSED CONCRETE FLAT PLATES (ACI-423.2R)
3. SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS.
4. ALL FORCES SHOWN ARE EFFECTIVE AFTER ALL LOSSES CALCULATED AS THE AVERAGE FORCE IN THE SPAN FURTHEST FROM A JACKING END.
5. PROFILES OF TENDONS ARE TO BE PARABOLIC AND SHALL CONFORM TO THE CONTROL POINTS AS SHOWN ON THE PLANS. DIMENSIONS LOCATING THE PROFILE APPLY TO THE CENTER OF GRAVITY OF THE TENDON. LOW POINTS OF THE TENDON ARE AT THE MIDSPAN UNLESS NOTED OTHERWISE.
6. THE POST-TENSION SUPPLIER SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS, BLACKOUTS, SLEEVES, ETC. RELATING TO THE POST-TENSION WORK.
7. TENDONS SHALL BE STRESSED AND ANCHORED WHEN THE CONCRETE REACHES 3000 PSI AS VERIFIED BY CONCRETE TESTS. IF THE CONCRETE STRENGTHS ARE NOT REACHED WITHIN 96 HOURS TO PERMIT FULL STRESSING, NOTIFY THE ENGINEER.
8. STRESSING SEQUENCE SHALL BE DETERMINED BY THE POST-TENSION SUPPLIER SUBJECT TO CONSTRUCTION SEQUENCING AND THE APPROVAL OF THE ENGINEER.
9. EMBEDDED ITEMS:
   a. SLIGHT DEVIATION IN SPACING OF THE TENDONS IS PERMITTED WHERE REQUIRED TO AVOID EMBEDDED ITEMS AND INSERTS SPECIFICALLY LOCATED.
   b. CURVATURE FOR HORIZONTAL DEVIATION SHALL NOT BE LESS THAN A RADIUS OF 21 FEET. TENDONS TO CLEAR ALL EMBEDDED ITEMS OR SLEEVES A MINIMUM OF 3" AND ARE NOT TO BE TIED DIRECTLY TO EMBEDDED ITEMS.
   c. MAXIMUM SIZE OF CONDUIT SHALL BE 1 1/4" O.D. AND SPACED A MINIMUM OF 4" ON CENTER UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   d. ALL CONDUIT IS TO BE PLACED WITHIN THE MIDDLE ONE THIRD OF THE SLAB THICKNESS.
   e. CONDUIT IS NOT TO BE PLACED WITHIN A DISTANCE OF 5 FEET OF ANY COLUMN OR WITHIN 2 FEET OF ANY STRESSING ANCHOR UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   f. IN AREAS OF HIGH CONDUIT CONCENTRATION WHERE IT IS NOT POSSIBLE TO MEET THE ABOVE REQUIREMENTS, CONSULT THE STRUCTURAL ENGINEER PRIOR TO PLACING.

G. REINFORCING STEEL:

1. ALL BARS #4 AND LARGER TO BE ASTM A 615, GRADE 60. ALL #2 AND #3 BARS TO BE ASTM A 615, GRADE 40. DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH ACI-318, LATEST ADOPTION. ALL MASONRY BARS TO BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH ACI-530.
2. POST-TENSIONING TENDONS SHALL BE 1/2" DIAMETER SEVEN WIRE STRAND CONFORMING TO ASTM A 416, GRADE 270, LOW RELAXATION.
3. ALL REINFORCING SHALL BE CHAIRED TO ENSURE PROPER CLEARANCES. SUPPORT OF FOUNDATION REINFORCING MUST PROVIDE ISOLATION FROM MOISTURE/CORROSION BY USE OF A PLASTIC OR CONCRETE CHAIR. DUCT-TAPED COVERED REINFORCING IS NOT AN ACCEPTABLE CHAIR.
4. WELDING OF STIRRUPS, TIES, INSERTS OR OTHER SIMILAR ELEMENTS TO LONGITUDINAL REINFORCEMENT IS NOT PERMITTED.
5. REINFORCEMENT SHALL NOT BE TACK WELDED.
6. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO THE SCHEDULED CONCRETE PLACEMENT.

H. SHOP DRAWINGS:

1. SHOP DRAWINGS ARE TO BE SUBMITTED FOR ALL STRUCTURAL ITEMS AND AS REQUIRED BY THE SPECIFICATIONS. CONTRACT DRAWINGS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS.
2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE ENGINEER PRIOR TO FABRICATION.
3. CONTRACTOR SHALL REVIEW ALL AND STAMP ALL SHOP DRAWINGS AND PRODUCT DATA FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO SUBMITTAL. ALL ITEMS NOT IN ACCORDANCE WITH THE CONTRACT DRAWINGS SHALL BE SO NOTED UPON THE CONTRACTOR'S REVIEW. ANY SHOP DRAWINGS OR PRODUCT DATA NOT REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW.
4. ANY SHOP DRAWING NOT CHECKED AND INITIALED BY THE SUPPLIER/DETAILER PRIOR TO SUBMITTING FOR ARCHITECTURAL AND ENGINEERING REVIEW, WILL BE RETURNED WITHOUT REVIEW.
5. ANY CHANGE FROM THE ORIGINAL DRAWINGS SHALL BE NOTED BY THE SUBMITTING PARTY. ANY CHANGES NOT CALLED OUT SHALL BE CONSIDERED NOT APPROVED UNLESS SPECIFICALLY NOTED OTHERWISE. THE SHOP DRAWING STAMP SHALL NOT BE CONSIDERED IMPLIED APPROVAL OF ANY CHANGES.
6. SHOP DRAWINGS SHALL NOT REPLACE THE CONTRACT DRAWINGS. ITEMS OMITTED OR SHOWN INCORRECTLY AND NOT NOTED BY THE REVIEWER ARE NOT TO BE CONSIDERED CHANGES TO THE CONTRACT DRAWINGS. REVIEW IS INTENDED AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ITEMS ARE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
7. ANY ENGINEERING DESIGN PERFORMED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE APPROPRIATE JURISDICTION AND DISCIPLINE. COMPLETE DESIGN CALCULATIONS FOR EACH MEMBER SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE ENGINEER. THE ADEQUACY OF DESIGNS AND LAYOUTS PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING PARTY.

I. SPECIAL STRUCTURAL INSPECTION:

1. SPECIAL INSPECTION IS REQUIRED IN ACCORDANCE WITH IBC SECTION 1705 FOR THE FOLLOWING ITEMS BY A SPECIAL INSPECTOR:
2. STEEL (IBC 1705.2.1, 1705.2.2, 1705.2.3, 1705.12.1, 1705.13.1):
   a. SEE STEEL INSPECTION TABLE
3. CONCRETE: (IBC 1705.3)
   a. SEE TABLE 1705.3
4. SOILS/FOUNDATION (IBC 1705.6):
   a. PERIODIC INSPECTION DURING TASK LISTED;
      (1) VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.
      (2) VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.
      (3) PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.
      (4) PRIOR TO PLACEMENT OF CONTROLLED FILL, OBSERVE SUBGRADE AND VERIFY THAT THE SITE HAS BEEN PREPARED PROPERLY.
   b. CONTINUOUS INSPECTION DURING TASK LISTED;
      (1) DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.
   c. INSPECTIONS TO BE COMPLETED BY THE GEOTECHNICAL ENGINEER OF RECORD.
5. ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CIVIL OR STRUCTURAL ENGINEER.
6. THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
7. THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS:
   a. CONCRETE AND PRESTRESSED CONCRETE INSPECTION- ICC CERTIFICATION IN REINFORCED CONCRETE AND PRESTRESSED CONCRETE OR E.I.T. CERTIFICATION.
   b. STRUCTURAL WELDING INSPECTION
      (1) VISUAL TESTING- ICC CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR AWS CERTIFIED WELDING INSPECTOR (CWI)
      (2) NON-DESTRUCTIVE TESTING- AWS CWI
   c. HIGH STRENGTH BOLTING INSPECTION- ICC CERTIFICATION IN STRUCTURAL STEEL AND WELDING
   d. EXPANSION/ADHESIVE ANCHOR INSPECTION- ICC CERTIFICATION IN REINFORCED CONCRETE AND MASONRY OR EIT CERTIFICATION.
   e. STRUCTURAL MASONRY INSPECTION- ICC CERTIFICATION IN MASONRY OR EIT CERTIFICATION.
   f. SPECIAL CASES- EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.
8. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   a. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
   b. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR, THE STRUCTURAL ENGINEER OF RECORD, AND THE ARCHITECT OF RECORD. IF SPECIAL INSPECTION IS PROVIDED BY ANYONE OTHER THAN THE STRUCTURAL ENGINEER OF RECORD, INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.
   c. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
9. DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:
   a. NOTIFY THE RESPONSIBLE INSPECTOR THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
   b. ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.
10. REPORT REQUIREMENT:
    a. PER IBC 1704.2.4 SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL AND TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS OR WAS NOT COMPLETED IN CONFORMANCE TO APPROVED CONSTRUCTION DOCUMENTS. DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. A FINAL REPORT SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS BEING BUILT, DOCUMENTING THE REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS SHALL BE SUBMITTED AT A POINT IN TIME AGREED UPON PRIOR TO THE START OF WORK BY THE APPLICANT AND THE BUILDING OFFICIAL.

TABLE 1705.3
REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSTECTION	REFERENCED STANDARD a	IBC REFERENCE
1. INSPECT REINFORCEMENT, INCLUDING PRESTERSSING TENDONS, AND VERIFY PLACEMENT	--	X	ACI 318: CH.20, 25.2, 25.3, 26.6.1 - 26.6.3	1908.4
2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16", AND c. INSPECT ALL OTHER WELDS.	-- X	 X X	 AWS D1.4 ACI 318: 26.6.4	 --
3. INSPECT ANCHORS CAST IN CONCRETE	--	X	ACI 318: 17.8.2	--
4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. b a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X	 X	 ACI 318: 17.8.2.4 ACI 318: 17.8.2	 --
5. VERIFY USE OF REQUIRED DESIGN MIX	--	X	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	--	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	1908.10
7. INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	--	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPURATURE AND TECHNIQUES.	--	X	ACI 318: 26.5.3-26.5.5	1908.9
9. INSPECT PRESTRESSED CONCRETE FOR: a. APPLICATION OF PRESTRESSING FORCES; AND b. GROUTING OF BONDED PRESTRESSING TENDONS.	 X X	 -- --	 ACI 318: 26.10	 --
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	--	X	ACI 318: CH. 26.8	--
11. VERIFY OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENTIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM THE BEAMS AND STRUCTURAL SLABS.	--	X	ACI 318: 26.11.2	--
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	--	X	ACI 318: 26.11.1.2 (b)	--

For SI: 1 inch = 25.4 mm.

a. WHERE APPLICABLE, SEE ALSO SECTION 1705.12, SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

b. SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF THE WORK.

SHEET INDEX

CLIENT

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ARCHITECT OF RECORD

ISSUES AND REVISIONS

NUMBER	DATE	DESCRIPTION

CONSULTANT

Project No.: 9062

A. V. SCHWAN & ASSOC.
STRUCTURAL ENGINEERS
6000 E. Thomas Rd, Suite 1
Scottsdale, Arizona 85251

PROFESSIONAL SEAL

Registered Professional Engineer
54109
NATHAN L. KLINE
Date Signed 12-12-2023
ARIZONA, U.S.A.

Expires: 12/31/2024

STORE INFORMATION

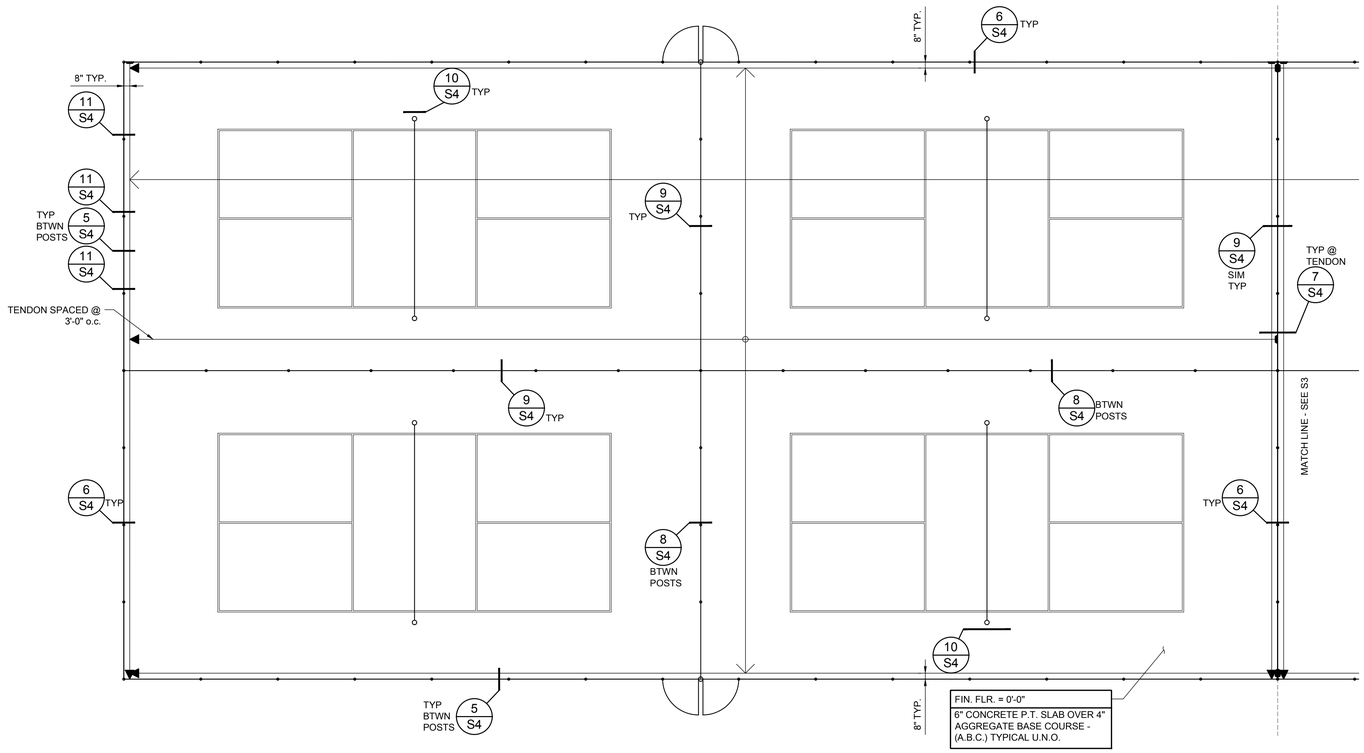
PICKLE BALL COURT AT
POSSE GROUNDS PARK
SEDONA, AZ 86336

SHEET NAME: GENERAL STRUCTURAL NOTES

DATE:	12/12/23
DRAWN BY:	AVS
CHECKED BY:	NK
BUILD TYPE:	ETI
STORE VERSION:	V6.2.6
PROJECT NUMBER:	

SHEET NUMBER

S1



FOUNDATION PLAN

SCALE = 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. SEE SHEET S1 FOR GENERAL STRUCTURAL NOTES.
2. CURVE TENDONS HORIZONTALLY AS REQUIRED AT NET POSTS AND GOAL POST FOUNDATIONS - SEE PLAN.
3. TENDONS SHALL BE STRESSED FROM ONE END
4. "◄——" - DENOTES STRESSING END.
5. "——►" - DENOTES DEAD END.
6. SEE CIVIL PLANS FOR SLOPE OF ALL SPORTS COURTS.
7. SEE GEOTECH REPORT FOR PAD PREPARATIONS AND SOIL REQUIREMENTS.

POST-TENSION GENERAL NOTES

1. DESIGN AND CONSTRUCTION OF THE POST-TENSIONED FOUNDATION AND SLABS SHALL CONFORM TO CHAPTERS 18 AND 19 OF THE INTERNATIONAL BUILDING CODE AND THE LATEST EDITION OF THE POST TENSIONING INSTITUTE'S "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS-ON-GROUND. DESIGN AND CONSTRUCTION SHALL ALSO CONFORM TO THE LATEST A.C.I. CODE.
2. TENDON SUPPLIER SHALL SUBMIT SHOP DRAWINGS SHOWING NUMBER OF TENDONS, LOCATIONS, FINAL MINIMUM ELONGATION REQUIRED FOR EACH TENDON TO PROVIDE SPECIFIED FORCES AND SHALL VERIFY THAT THIS ELONGATION IS OBTAINABLE CONSIDERING FRICTION AND HEAT LOSS CHARACTERISTICS OF THIS MATERIAL
3. ELONGATION AND GAUGE PRESSURE RECORDS SHALL BE KEPT BY THE STRESSING CONTRACTOR AND SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO BURNING OFF ENDS OF STRANDS. MARK THE TENDON WITH AN ADEQUATE METHOD THAT WILL PROVIDE FOR AN ACCURATE READING OF ELONGATIONS.

POST-TENSIONING:

FIELD FOREMAN: THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST-TENSIONING SHALL HAVE A MINIMUM OF THREE (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

PT STEEL QUALITY: ONE SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS OR MILL CERTIFICATES SHALL BE SUBMITTED TO THE ENGINEER BEFORE STRESSING OF TENDONS. POST-TENSIONING TENDONS SHALL BE OF LOW-RELAXATION QUALITY, AND SHALL CONFORM TO THE FOLLOWING:

SEVEN WIRE STRAND ASTM DESIGNATION	A-416
1/2" DIAMETER TENDON AREA	0.153 in^
ULTIMATE STRENGTH	270 ksi

TENDON STRESSES SHALL CONFORM TO THE FOLLOWING:

MINIMUM JACKING STRESS	216 ksi
MINIMUM STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER	200 ksi
MINIMUM ANCHORAGE STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER	189 ksi

EFFECTIVE FORCE: EFFECTIVE FORCE SHALL BE 26.6 kips PER LOW-RELAXATION TENDON, WHEN TENDON LENGTH IS LESS THAN 100 FEET. FOR VARIANCE FROM THIS VALUE, CONTRACTOR SHALL PROVIDE FRICTION AND LONG-TERM LOSS CALCULATIONS FOR ENGINEER'S APPROVAL.

PT HARDWARE QUALITY: ALL ANCHORAGES, COUPLERS, AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY GOVERNING AGENCIES AND THE ENGINEER.

TENDONS: UNBONDED STRANDS SHALL BE ENCASED IN SLIPPAGE SHEATHING WHICH SHALL CONSIST OF A SEALED DURABLE WATERPROOF PLASTIC TUBING CAPABLE OF PREVENTING THE PENETRATION OF MOISTURE AND CEMENT PASTE, AND WHICH WILL CONTAIN A RUST-INHIBITING GREASE COATING. TEARS IN THE SHEATHING SHALL BE REPAIRED TO RESTORE THE WATERTIGHTNESS OF THE SHEATHING.

SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING TENDON LAYOUT, DEAD-END AND STRESSING-END LOCATIONS, AND TENDON SUPPORT LAYOUTS WITH DETAILS NECESSARY FOR INSTALLATION FOR THE ENGINEER'S APPROVAL. A SET OF APPROVED SHOP DRAWINGS MUST BE FILED WITH THE CITY ENGINEER BY THE CONTRACTOR.

TENDON PLACEMENT: CARE SHALL BE TAKEN THAT TENDONS ARE LOCATED AND HELD IN THEIR DESIGNATED POSITIONS. TOLERANCES FOR THE LOCATION OF THE PRESTRESSING STEEL SHALL NOT BE MORE THAN ±3/4" VERTICALLY EXCEPT AS NOTED OR APPROVED BY THE ENGINEER. ACCESS TO STRESSING ENDS SHALL BE MAINTAINED WHERE SHOWN.

TENDON ADJUSTMENTS: SMALL DEVIATIONS IN THE HORIZONTAL SPACING OF THE SLAB TENDONS WILL BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS, AND DOWELS WHICH ARE SPECIFICALLY LOCATED. WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.

TWISTING: TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.

PRESTRESS COVER: ALL DIMENSIONS SHOWING THE LOCATION OF PRESTRESSING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDON (CGS) UNLESS NOTED OTHERWISE.

MINIMUM CHAIRING: TENDONS SHALL BE SECURED BY A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF CONCRETE, AND SHALL BE SUPPORTED AT A MAXIMUM OF 3'–6" ON CENTER. CHAIRS GREATER THAN 2.5" IN SIZE SHALL BE STAPLED TO THE FORMWORK.

ANCHORS: ANCHORAGE SHALL BE RECESSED A MINIMUM OF ONE AND A HALF (1-1/2") INCHES. PLACE (1) #4 BAR CONTINUOUS BEHIND ALL ANCHORAGE UNLESS OTHERWISE NOTED SPLICES SHALL BE 24" MINIMUM AND STAGGERED. SPECIAL ANCHORAGE ZONE FOR 1/2" DIAMETER STRAND TENDONS SPACED AT 12" OR LESS ON CENTERS.

BLOCKOUTS: ALL POCKETS OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOFED TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.

CONCRETE CONSOLIDATION: THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGE.

CONCRETE STRENGTH AT STRESSING: AT TRANSFER OF PRESTRESS, CONCRETE SHALL HAVE OBTAINED 70% OF IT'S SPECIFIED 28 DAY STRENGTH.

TENDON STRESSING: TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED BY THE STRESSING CONTRACTOR DURING ALL STRESSING OPERATIONS.

CALIBRATION: THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE.

STRESSING SEQUENCE: IN GENERAL, UNIFORMLY, DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS. ADDITIONAL STRESSING SEQUENCE REQUIREMENTS SHALL BE AS SPECIFIED ON THE DESIGN DRAWINGS.

ELONGATIONS: INDIVIDUAL TENDON FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN +7% FROM CALCULATED REQUIRED VALUES SHOWN ON THE SHOP DRAWINGS. IF THE MEASURED ELONGATIONS VARY FROM CALCULATED VALUES BY MORE THAN +7%, THE CONTRACTOR SHALL PROVIDE FRICTION CALCULATIONS AND/OR OTHER JUSTIFICATION TO THE SATISFACTION OF THE ENGINEER.

MEMBER FORCES: THE POST-TENSIONED FORCE PROVIDE IN THE FIELD FOR EACH STRUCTURAL MEMBER SHALL NOT BE LESS THAN THE VALUES NOTED ON THE STRUCTURAL DRAWINGS. IN THIS CONTEXT, STRUCTURAL MEMBERS ARE BEAMS OR SLABS, WHETHER WITH BANDED OR DISTURBED TENDONS, EACH SERVING THEIR RESPECTIVE TRIBUTARY.

TENDON ENDS: DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE FLOOR SYSTEM HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED. THE STRESSING END ANCHORS AND WEDGES SHALL BE SPRAY PAINTED WITH RUSTOLEUM OR A SIMILAR COATING FOR CORROSION PROTECTION.

GROUTING OF STRESSING POCKETS: STRESSING POCKETS SHALL BE FILLED WITH NON-SHRINK GROUT AS SOON AS PRACTICAL AFTER STRESSING, TO STOP MOISTURE PENETRATION.

PIPES: PLASTIC OR METAL CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDING THAT THE FOLLOWING CRITERIA ARE MET:

A. DIAMETER DOES NOT EXCEED ONE-QUARTER OF THE SLAB THICKNESS.
B. CONDUITS GREATER THAN OR EQUAL TO 1" DIAMETER SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB.
C. CONDUITS SMALLER THAN 1" DIAMETER MAY BE LOCATED ANYWHERE WITHIN THE SLAB AS LONG AS THE MINIMUM COVER REQUIREMENTS ARE OBSERVED.
D. CENTER-TO-CENTER SPACING OF THE CONDUITS IS NOT LESS THAN THREE (3) TIMES THE DIAMETER OF THE LARGEST CONDUIT.
E. CONDUITS MUST NOT INTERRUPT THE POST-TENSIONED CABLES.
F. COLUMN AREAS SHALL BE AVOIDED.
G. IT IS UNDESIRABLE TO HAVE EXCESS AMOUNT OF CONDUIT ENTERING THE SLAB FROM ONE LOCATION. IF THIS CONDITION EXISTS, THE CONDUITS MUST BE FANNED OUT IMMEDIATELY.

INSERTS: ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE WHENEVER POSSIBLE. DRILLED AND POWER-DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED TO AVOID THE TENDONS AND ANCHORAGES. THE CONTRACTOR MUST LOCATE TENDONS ON THE SURFACE SLAB.

CHLORIDES: GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED

PUMPED CONCRETE: IF CONCRETE IS PLACED BY THE PUMP METHOD, MEANS FOR SUPPORTING THE HOSE SHALL BE PROVIDED. THE HOSE SHALL NOT RIDE ON THE TENDONS. CONCRETE SHALL NOT DROP MORE THAN 4 FEET.

CONCRETE: ALL CONCRETE CONSTRUCTION SHALL CONFORM TO CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE AS AMENDED. CONCRETE HAS BEEN DESIGNED ACCORDING TO ACI 318-11 WITH THE STRENGTH DESIGN METHOD, INSTALLED CONCRETE SHALL CONFORM TO THE FOLLOWING:

CONCRETE SLABS ON GRADE: 28 DAY F'c = 4000 psi MAX SLUMP = 5 IN

CONCRETE SHALL BE PROPORTIONED ACCORDING TO THESE REQUIREMENTS AND THOSE OF A.C.I. 318-11 WITH TYPE II CEMENT FOR THE STRENGTH DESIGN METHOD. MAXIMUM WATER/CEMENT RATIOS SHALL NOT EXCEED 0.53. CONCRETE SHALL HAVE MAXIMUM AGGREGATE SIZE OF 3/4 INCH. CEMENT SHALL CONFORM TO ASTM C150, AGGREGATE ACCORDING TO ASTM C33 AND WATER TO BE POTABLE.

ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN PLACE BY EXPERIENCED WORKMEN IN ORDER TO CONDENSE THE IN-PLACE CONCRETE, BUT NOT TO SEGREGATE INGREDIENTS.

CONCRETE MIX DESIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING ANY CONCRETE.

NO ADMIXTURES SHALL BE USED WITHOUT SPECIFIC PRIOR WRITTEN APPROVAL FROM THE BUILDING OFFICIAL. ADMIXTURES USING ANY FORM OF CHLORIDES SHALL NOT BE USED.

REINFORCED STEEL AND PRESTRESSING STEEL:

ALL BAR REINFORCEMENT SHALL BE ASTM A-615 (DEFORMED), #5 BARS AND LARGER SHALL BE GRADE 60. #4 BARS AND SMALLER MAY BE GRADE 40.

CLEAR CONCRETE COVERAGE TO ANY REINFORCEMENT, INCLUDING TIES, SHALL BE AS FOLLOWS

CONCRETE PLACED AGAINST EARTH	3"
CONCRETE FORMED AGAINST SOIL	2"
ALL OTHER	1 ½"

LAP SPLICES AND EXTENSIONS IN CONCRETE SHALL BE 40 BAR DIAMETERS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.

PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

A. DURING ALL STRESSING AND GROUTING OF PRESTRESSED AND POST-TENSIONED CONCRETE, THE SPECIAL INSPECTION SHALL INCLUDE RECORDING OF FIELD-MEASURED ELONGATION AND JACKING FORCE FOR EACH TENDON.
B. DURING THE PLACING OF REINFORCING STEEL, TENDONS AND PRESTRESSING STEEL FOR ALL STRUCTURAL CONCRETE. TENDON PLACEMENT AND INTEGRITY OF THE PROTECTIVE WRAPPING FOR POST-TENSIONED TENDONS SHALL BE INSPECTED PRIOR TO PLACEMENT OF CONCRETE.

ALL SPECIAL INSPECTION REPORTS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER.

SPECIAL NOTES TO OWNER

UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AS WELL AS POST-TENSIONED CONCRETE WILL DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF WALLS AND OTHER STRUCTURAL ELEMENTS TO WHICH THE SLABS ARE TIED.

THE CRACKS FORMED ARE USUALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. DUE TO SPECIAL FEATURE OF UNBOUNDED POST-TENSIONING, IT IS POSSIBLE THAT A NUMBER OF HAIR CRACKS, WHICH WOULD NORMALLY SPREAD OVER A WIDE AREA WILL INTEGRATE INTO A SINGLE CRACK WITH A WIDTH EXCEEDING 0.01 INCH.

POST-TENSIONED FOUNDATION DESIGN PARAMETERS

DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS AND FOUNDATIONS SHALL CONFORM TO CHAPTERS 18 AND 19 OF THE INTERNATIONAL BUILDING CODE AND THE THIRD EDITION OF THE POST-TENSIONING INSTITUTE'S (PTI) "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS-ON-GROUND".

POST-TENSIONING TENDONS SHALL BE LOW-RELAXATION AND ANCHORAGES SHALL CONFORM TO ACI REPORT NO. 423 3R 83. TENDONS SHALL BE FABRICATED FROM 1/2" DIAMETER 270 ksi STRAND CONFORMING TO ASTM A-416. TENDONS SHALL BE ANCHORED AT 31.0 kips. THE EFFECTIVE FORCE (ASSUMING 15 ksi PRESTRESS LOSSES EXCLUDING DEAD LOAD FRICTION AGAINST THE GROUND) SHALL BE 26.6 kips PER TENDON. THE MINIMUM RESIDUAL STRESS (AFTER DEAD LOAD FRICTION AGAINST THE GROUND) SHALL BE Fps> 50.0 psi.

CLIENT

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ARCHITECT OF RECORD

ISSUES AND REVISIONS

NUMBER	DATE	DESCRIPTION

CONSULTANT

Project No.: 9062

A. V. SCHWAN & ASSOC.
STRUCTURAL ENGINEERS
6000 E. Thomas Rd. Suite 1
Scottsdale, Arizona 85251

PROFESSIONAL SEAL

Registered Professional Engineer
54109
NATHAN L. KLINE
Date Signed 12-12-2023
ARIZONA, U.S.A.

Expires: 12/31/2024

PICKLE BALL COURT AT
POSSE GROUNDS PARK
SEDONA, AZ 86336

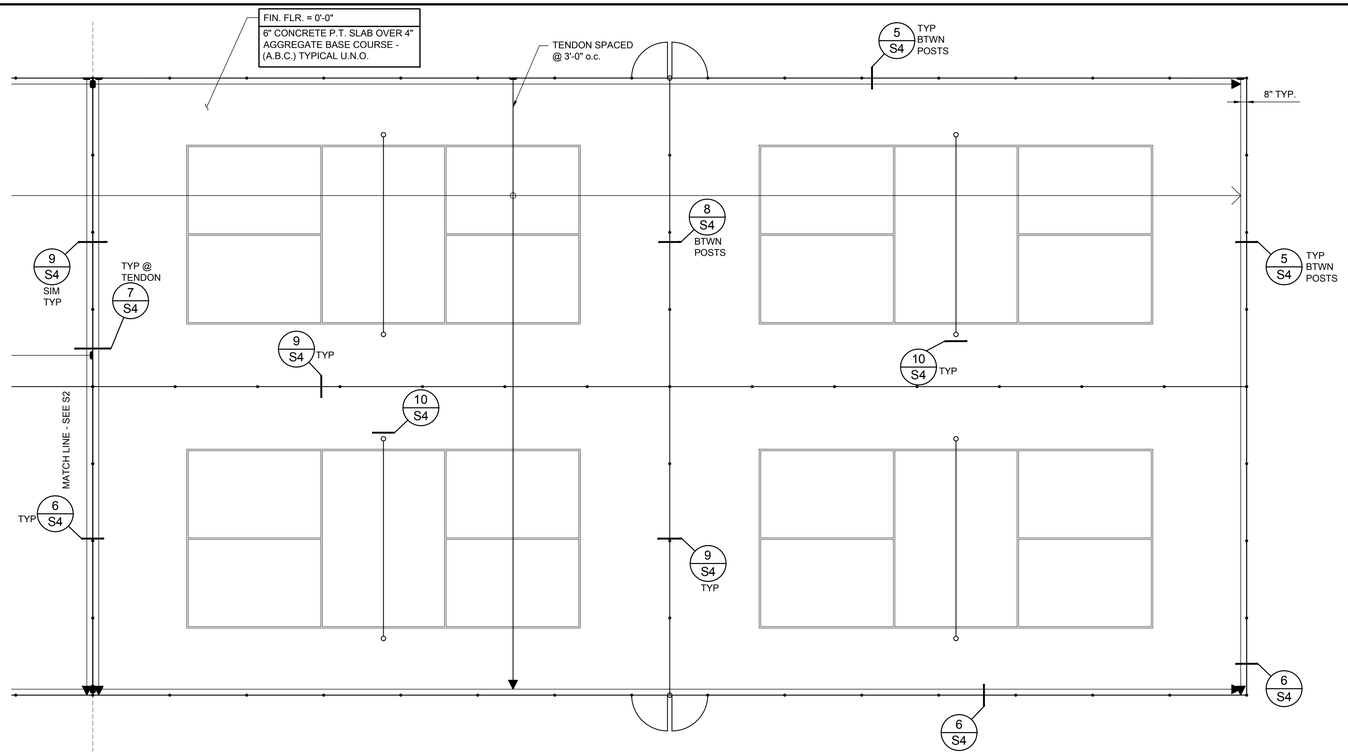
STORE INFORMATION

SHEET NAME: FOUNDATION PLAN

DATE:	12/12/23
DRAWN BY:	AVS
CHECKED BY:	NK
BUILD TYPE:	ETI
STORE VERSION:	V6.2.6
PROJECT NUMBER:	

SHEET NUMBER

S2



FOUNDATION PLAN

SCALE = 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. SEE SHEET S1 FOR GENERAL STRUCTURAL NOTES.
2. CURVE TENDONS HORIZONTALLY AS REQUIRED AT NET POSTS AND GOAL POST FOUNDATIONS - SEE PLAN.
3. TENDONS SHALL BE STRESSED FROM ONE END
4. "◀——" - DENOTES STRESSING END.
5. "——▮" - DENOTES DEAD END.
6. SEE CIVIL PLANS FOR SLOPE OF ALL SPORTS COURTS.
7. SEE GEOTECH REPORT FOR PAD PREPARATIONS AND SOIL REQUIREMENTS.

POST-TENSION GENERAL NOTES

1. DESIGN AND CONSTRUCTION OF THE POST-TENSIONED FOUNDATION AND SLABS SHALL CONFORM TO CHAPTERS 18 AND 19 OF THE INTERNATIONAL BUILDING CODE AND THE LATEST EDITION OF THE POST TENSIONING INSTITUTE'S "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS-ON-GROUND. DESIGN AND CONSTRUCTION SHALL ALSO CONFORM TO THE LATEST A.C.I. CODE.
2. TENDON SUPPLIER SHALL SUBMIT SHOP DRAWINGS SHOWING NUMBER OF TENDONS, LOCATIONS, FINAL MINIMUM ELONGATION REQUIRED FOR EACH TENDON TO PROVIDE SPECIFIED FORCES AND SHALL VERIFY THAT THIS ELONGATION IS OBTAINABLE CONSIDERING FRICTION AND HEAT LOSS CHARACTERISTICS OF THIS MATERIAL
3. ELONGATION AND GAUGE PRESSURE RECORDS SHALL BE KEPT BY THE STRESSING CONTRACTOR AND SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO BURNING OFF ENDS OF STRANDS. MARK THE TENDON WITH AN ADEQUATE METHOD THAT WILL PROVIDE FOR AN ACCURATE READING OF ELONGATIONS.

POST-TENSIONING:

FIELD FOREMAN: THE FIELD FOREMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST-TENSIONING SHALL HAVE A MINIMUM OF THREE (3) YEARS EXPERIENCE IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

PT STEEL QUALITY: ONE SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS OR MILL CERTIFICATES SHALL BE SUBMITTED TO THE ENGINEER BEFORE STRESSING OF TENDONS. POST-TENSIONING TENDONS SHALL BE OF LOW-RELAXATION QUALITY, AND SHALL CONFORM TO THE FOLLOWING:

SEVEN WIRE STRAND ASTM DESIGNATION	A-416
1/2" DIAMETER TENDON AREA	0.153 in^
ULTIMATE STRENGTH	270 ksi

TENDON STRESSES SHALL CONFORM TO THE FOLLOWING:

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MINIMUM STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER	200 ksi
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EFFECTIVE FORCE: EFFECTIVE FORCE SHALL BE 26.6 kips PER LOW-RELAXATION TENDON, WHEN TENDON LENGTH IS LESS THAN 100 FEET. FOR VARIANCE FROM THIS VALUE, CONTRACTOR SHALL PROVIDE FRICTION AND LONG-TERM LOSS CALCULATIONS FOR ENGINEER'S APPROVAL.

PT HARDWARE QUALITY: ALL ANCHORAGES, COUPLERS, AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY GOVERNING AGENCIES AND THE ENGINEER.

TENDONS: UNBONDED STRANDS SHALL BE ENCASED IN SLIPPAGE SHEATHING WHICH SHALL CONSIST OF A SEALED DURABLE WATERPROOF PLASTIC TUBING CAPABLE OF PREVENTING THE PENETRATION OF MOISTURE AND CEMENT PASTE, AND WHICH WILL CONTAIN A RUST-INHIBITING GREASE COATING. TEARS IN THE SHEATHING SHALL BE REPAIRED TO RESTORE THE WATERTIGHTNESS OF THE SHEATHING.

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TENDON PLACEMENT: CARE SHALL BE TAKEN THAT TENDONS ARE LOCATED AND HELD IN THEIR DESIGNATED POSITIONS. TOLERANCES FOR THE LOCATION OF THE PRESTRESSING STEEL SHALL NOT BE MORE THAN ±3/4" VERTICALLY EXCEPT AS NOTED OR APPROVED BY THE ENGINEER. ACCESS TO STRESSING ENDS SHALL BE MAINTAINED WHERE SHOWN.

TENDON ADJUSTMENTS: SMALL DEVIATIONS IN THE HORIZONTAL SPACING OF THE SLAB TENDONS WILL BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS, AND DOWELS WHICH ARE SPECIFICALLY LOCATED. WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.

TWISTING: TWISTING OR ENTWINING OF INDIVIDUAL WIRES OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.

PRESTRESS COVER: ALL DIMENSIONS SHOWING THE LOCATION OF PRESTRESSING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDON (CGS) UNLESS NOTED OTHERWISE.

MINIMUM CHAIRING: TENDONS SHALL BE SECURED BY A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF CONCRETE, AND SHALL BE SUPPORTED AT A MAXIMUM OF 3'–6" ON CENTER. CHAIRS GREATER THAN 2.5" IN SIZE SHALL BE STAPLED TO THE FORMWORK.

ANCHORS: ANCHORAGE SHALL BE RECESSED A MINIMUM OF ONE AND A HALF (1-1/2") INCHES. PLACE (1) #4 BAR CONTINUOUS BEHIND ALL ANCHORAGE UNLESS OTHERWISE NOTED SPLICES SHALL BE 24" MINIMUM AND STAGGERED. SPECIAL ANCHORAGE ZONE FOR 1/2" DIAMETER STRAND TENDONS SPACED AT 12" OR LESS ON CENTERS.

BLOCKOUTS: ALL POCKETS OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOFED TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.

CONCRETE CONSOLIDATION: THE CONTRACTOR SHALL TAKE PRECAUTIONS TO ASSURE COMPLETE CONSOLIDATION AND DENSIFICATION OF CONCRETE BEHIND ALL POST-TENSIONING ANCHORAGE.

CONCRETE STRENGTH AT STRESSING: AT TRANSFER OF PRESTRESS, CONCRETE SHALL HAVE OBTAINED 70% OF IT'S SPECIFIED 28 DAY STRENGTH.

TENDON STRESSING: TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED BY THE STRESSING CONTRACTOR DURING ALL STRESSING OPERATIONS.

CALIBRATION: THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE.

STRESSING SEQUENCE: IN GENERAL, UNIFORMLY, DISTRIBUTED TENDONS SHALL BE STRESSED BEFORE CONCENTRATED BEAM STRIP (BANDED) TENDONS, AND SLAB TENDONS SHALL BE STRESSED BEFORE BEAM TENDONS. ADDITIONAL STRESSING SEQUENCE REQUIREMENTS SHALL BE AS SPECIFIED ON THE DESIGN DRAWINGS.

ELONGATIONS: INDIVIDUAL TENDON FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN +7% FROM CALCULATED REQUIRED VALUES SHOWN ON THE SHOP DRAWINGS. IF THE MEASURED ELONGATIONS VARY FROM CALCULATED VALUES BY MORE THAN +7%, THE CONTRACTOR SHALL PROVIDE FRICTION CALCULATIONS AND/OR OTHER JUSTIFICATION TO THE SATISFACTION OF THE ENGINEER.

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TENDON ENDS: DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE FLOOR SYSTEM HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEER'S APPROVAL IS OBTAINED. THE STRESSING END ANCHORS AND WEDGES SHALL BE SPRAY PAINTED WITH RUSTOLEUM OR A SIMILAR COATING FOR CORROSION PROTECTION.

GROUTING OF STRESSING POCKETS: STRESSING POCKETS SHALL BE FILLED WITH NON-SHRINK GROUT AS SOON AS PRACTICAL AFTER STRESSING, TO STOP MOISTURE PENETRATION.

PIPES: PLASTIC OR METAL CONDUITS MAY BE EMBEDDED IN THE SLAB PROVIDING THAT THE FOLLOWING CRITERIA ARE MET:

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B. CONDUITS GREATER THAN OR EQUAL TO 1" DIAMETER SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SLAB.
C. CONDUITS SMALLER THAN 1" DIAMETER MAY BE LOCATED ANYWHERE WITHIN THE SLAB AS LONG AS THE MINIMUM COVER REQUIREMENTS ARE OBSERVED.
D. CENTER-TO-CENTER SPACING OF THE CONDUITS IS NOT LESS THAN THREE (3) TIMES THE DIAMETER OF THE LARGEST CONDUIT.
E. CONDUITS MUST NOT INTERRUPT THE POST-TENSIONED CABLES.
F. COLUMN AREAS SHALL BE AVOIDED.
G. IT IS UNDESIRABLE TO HAVE EXCESS AMOUNT OF CONDUIT ENTERING THE SLAB FROM ONE LOCATION. IF THIS CONDITION EXISTS, THE CONDUITS MUST BE FANNED OUT IMMEDIATELY.

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CHLORIDES: GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED

PUMPED CONCRETE: IF CONCRETE IS PLACED BY THE PUMP METHOD, MEANS FOR SUPPORTING THE HOSE SHALL BE PROVIDED. THE HOSE SHALL NOT RIDE ON THE TENDONS. CONCRETE SHALL NOT DROP MORE THAN 4 FEET.

CONCRETE: ALL CONCRETE CONSTRUCTION SHALL CONFORM TO CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE AS AMENDED. CONCRETE HAS BEEN DESIGNED ACCORDING TO ACI 318-11 WITH THE STRENGTH DESIGN METHOD, INSTALLED CONCRETE SHALL CONFORM TO THE FOLLOWING:

CONCRETE SLABS ON GRADE: 28 DAY F'c = 4000 psi MAX SLUMP = 5 IN

CONCRETE SHALL BE PROPORTIONED ACCORDING TO THESE REQUIREMENTS AND THOSE OF A.C.I. 318-11 WITH TYPE II CEMENT FOR THE STRENGTH DESIGN METHOD. MAXIMUM WATER/CEMENT RATIOS SHALL NOT EXCEED 0.53. CONCRETE SHALL HAVE MAXIMUM AGGREGATE SIZE OF 3/4 INCH. CEMENT SHALL CONFORM TO ASTM C150, AGGREGATE ACCORDING TO ASTM C33 AND WATER TO BE POTABLE.

ALL CONCRETE SHALL BE MECHANICALLY VIBRATED IN PLACE BY EXPERIENCED WORKMEN IN ORDER TO CONDENSE THE IN-PLACE CONCRETE, BUT NOT TO SEGREGATE INGREDIENTS.

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REINFORCED STEEL AND PRESTRESSING STEEL:

ALL BAR REINFORCEMENT SHALL BE ASTM A-615 (DEFORMED), #5 BARS AND LARGER SHALL BE GRADE 60. #4 BARS AND SMALLER MAY BE GRADE 40.

CLEAR CONCRETE COVERAGE TO ANY REINFORCEMENT, INCLUDING TIES, SHALL BE AS FOLLOWS

CONCRETE PLACED AGAINST EARTH	3"
CONCRETE FORMED AGAINST SOIL	2"
ALL OTHER	1 ½"

LAP SPLICES AND EXTENSIONS IN CONCRETE SHALL BE 40 BAR DIAMETERS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.

PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

A. DURING ALL STRESSING AND GROUTING OF PRESTRESSED AND POST-TENSIONED CONCRETE, THE SPECIAL INSPECTION SHALL INCLUDE RECORDING OF FIELD-MEASURED ELONGATION AND JACKING FORCE FOR EACH TENDON.
B. DURING THE PLACING OF REINFORCING STEEL, TENDONS AND PRESTRESSING STEEL FOR ALL STRUCTURAL CONCRETE. TENDON PLACEMENT AND INTEGRITY OF THE PROTECTIVE WRAPPING FOR POST-TENSIONED TENDONS SHALL BE INSPECTED PRIOR TO PLACEMENT OF CONCRETE.

ALL SPECIAL INSPECTION REPORTS SHALL BE SIGNED AND SEALED BY A LICENSED ENGINEER.

SPECIAL NOTES TO OWNER

UNDER NORMAL CONDITIONS, AND FOR CONVENTIONAL BUILDINGS SUCH AS THE SUBJECT MATTER, REINFORCED CONCRETE AS WELL AS POST-TENSIONED CONCRETE WILL DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE OF CONCRETE, CREEP AND RESTRAINING EFFECTS OF WALLS AND OTHER STRUCTURAL ELEMENTS TO WHICH THE SLABS ARE TIED.

THE CRACKS FORMED ARE USUALLY COSMETIC. THE SLAB MAINTAINS ITS SERVICEABILITY AND STRENGTH REQUIREMENTS. DUE TO SPECIAL FEATURE OF UNBOUNDED POST-TENSIONING, IT IS POSSIBLE THAT A NUMBER OF HAIR CRACKS, WHICH WOULD NORMALLY SPREAD OVER A WIDE AREA WILL INTEGRATE INTO A SINGLE CRACK WITH A WIDTH EXCEEDING 0.01 INCH.

POST-TENSIONED FOUNDATION DESIGN PARAMETERS

DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS AND FOUNDATIONS SHALL CONFORM TO CHAPTERS 18 AND 19 OF THE INTERNATIONAL BUILDING CODE AND THE THIRD EDITION OF THE POST-TENSIONING INSTITUTE'S (PTI) "DESIGN AND CONSTRUCTION OF POST-TENSIONED SLABS-ON-GROUND".

POST-TENSIONING TENDONS SHALL BE LOW-RELAXATION AND ANCHORAGES SHALL CONFORM TO ACI REPORT NO. 423 3R 83. TENDONS SHALL BE FABRICATED FROM 1/2" DIAMETER 270 ksi STRAND CONFORMING TO ASTM A-416. TENDONS SHALL BE ANCHORED AT 31.0 kips. THE EFFECTIVE FORCE (ASSUMING 15 ksi PRESTRESS LOSSES EXCLUDING DEAD LOAD FRICTION AGAINST THE GROUND) SHALL BE 26.6 kips PER TENDON. THE MINIMUM RESIDUAL STRESS (AFTER DEAD LOAD FRICTION AGAINST THE GROUND) SHALL BE Fps> 50.0 psi.

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ARCHITECT OF RECORD

ISSUES AND REVISIONS

NUMBER	DATE	DESCRIPTION

CONSULTANT

Project No.: 9062

A. V. SCHWAN & ASSOC.
STRUCTURAL ENGINEERS
6000 E. Thomas Rd. Suite 1
Scottsdale, Arizona 85251

PROFESSIONAL SEAL

Registered Professional Engineer
54109
NATHAN L. KLINE
Date Signed 12-12-2023
ARIZONA, U.S.A.

Expires: 12/31/2024

PICKLE BALL COURT AT POSSE GROUNDS PARK
SEDONA, AZ 86336

STORE INFORMATION

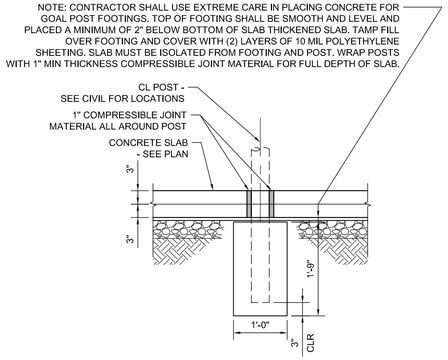
SHEET NAME: FOUNDATION PLAN

DATE:	12/12/23
DRAWN BY:	AVS
CHECKED BY:	NK
BUILD TYPE:	ETI
STORE VERSION:	V6.2.6
PROJECT NUMBER:	

SHEET NUMBER

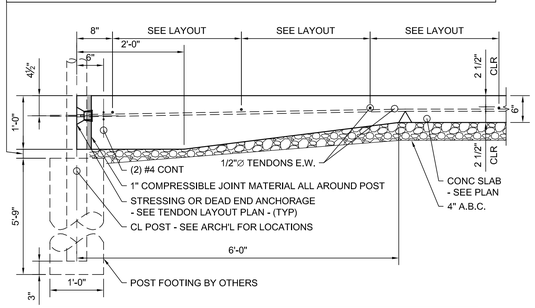
S3

NOTE: CONTRACTOR SHALL USE EXTREME CARE IN PLACING CONCRETE FOR GOAL POST FOOTINGS. TOP OF FOOTING SHALL BE SMOOTH AND LEVEL AND PLACED A MINIMUM OF 2" BELOW BOTTOM OF SLAB THICKENED SLAB. TAMP FILL OVER FOOTING AND COVER WITH (2) LAYERS OF 10 MIL POLYETHYLENE SHEETING. SLAB MUST BE ISOLATED FROM FOOTING AND POST. WRAP POSTS WITH 1" MIN THICKNESS COMPRESSIBLE JOINT MATERIAL FOR FULL DEPTH OF SLAB.



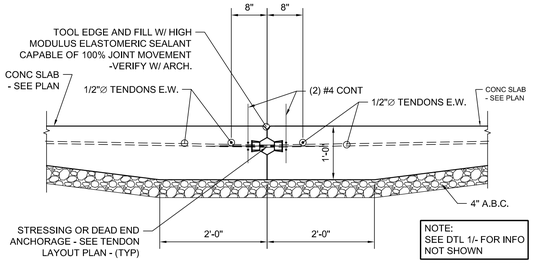
10 POST-TENSION SLAB AT INTERIOR (4'-0" FENCE)

NOTE A:
CONTRACTOR SHALL USE EXTREME CARE IN PLACING CONCRETE FOR GOAL POST FOOTINGS. TOP OF FOOTING SHALL BE SMOOTH AND LEVEL AND PLACED A MINIMUM OF 2" BELOW BOTTOM OF SLAB THICKENED SLAB. TAMP FILL OVER FOOTING AND COVER WITH (2) LAYERS OF 10 MIL POLYETHYLENE SHEETING. SLAB MUST BE ISOLATED FROM FOOTING AND POST. WRAP POSTS WITH 1" MIN THICKNESS COMPRESSIBLE JOINT MATERIAL FOR FULL DEPTH OF SLAB.



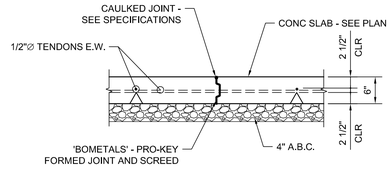
NOTE: CONTRACTORS OPTION TO USE 18" ⌀X5'-0" DEEP FOOTING IN LIEU OF DEPTH SHOWN

11 SLAB EDGE @ 10FT BACKSTOP



NOTE:
SEE DTL 1/- FOR INFO NOT SHOWN

7 TYPICAL CONSTRUCTION JOINT



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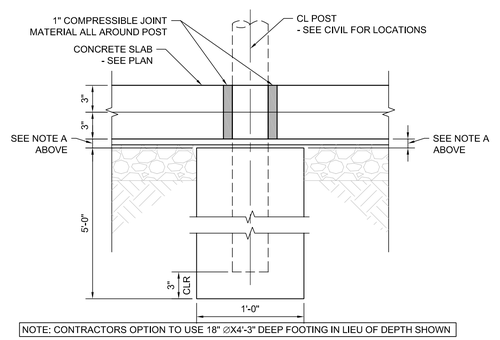
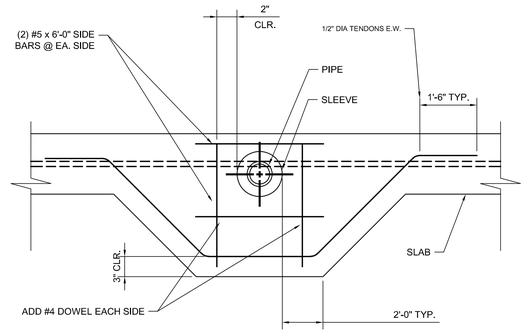


NOTE: CONTRACTORS OPTION TO USE 18" ⌀X4'-3" DEEP FOOTING IN LIEU OF DEPTH SHOWN

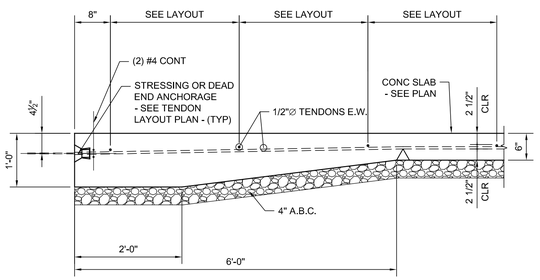
8 POST-TENSION SLAB AT INTERIOR (8'-0" FENCE)

9

NOTES:
1. SLEEVE INSIDE DIAMETER 2" LARGER THAN PIPE OUTSIDE DIAMETER.
2. SEAL VOID BETWEEN PIPE AND SLEVE WITH ELASTIC WATERPROOF MATERIAL, TYPICAL.

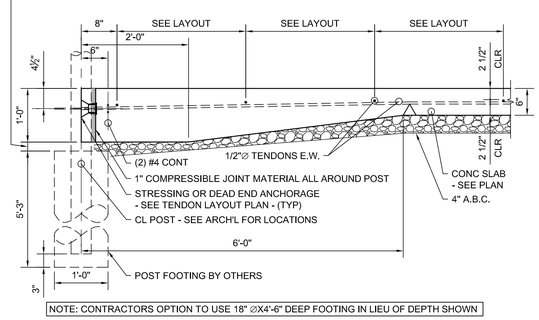


4 PIPE @ SLAB



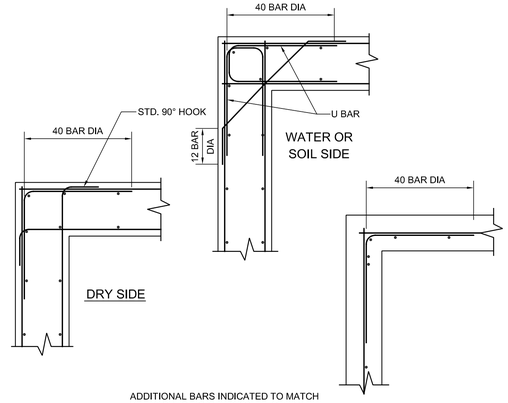
5 TYPICAL SLAB EDGE

NOTE A:
CONTRACTOR SHALL USE EXTREME CARE IN PLACING CONCRETE FOR GOAL POST FOOTINGS. TOP OF FOOTING SHALL BE SMOOTH AND LEVEL AND PLACED A MINIMUM OF 2" BELOW BOTTOM OF SLAB THICKENED SLAB. TAMP FILL OVER FOOTING AND COVER WITH (2) LAYERS OF 10 MIL POLYETHYLENE SHEETING. SLAB MUST BE ISOLATED FROM FOOTING AND POST. WRAP POSTS WITH 1" MIN THICKNESS COMPRESSIBLE JOINT MATERIAL FOR FULL DEPTH OF SLAB.



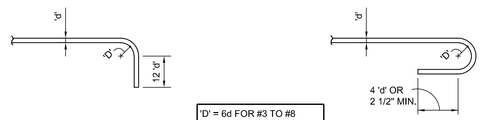
NOTE: CONTRACTORS OPTION TO USE 18" ⌀X4'-6" DEEP FOOTING IN LIEU OF DEPTH SHOWN

6 SLAB EDGE @ 8FT FENCE



ADDITIONAL BARS INDICATED TO MATCH SIZE & SPACING OF TYPICAL HORIZONTAL REINFORCING (U.N.O.)

1 TYPICAL CORNER REINFORCING CONCRETE



PRINCIPAL REINFORCING

MIN. 'D' = 1 1/2" FOR #3
MIN. 'D' = 2" FOR #4
MIN. 'D' = 2 1/2" FOR #5

TIE OR STIRRUP

NOTE:
ALL BENDS SHALL BE MADE COLD.

2 REINFORCING BAR BENDS

CONCRETE STRENGTH = 3000 PSI

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	28	42	22	32
#4	37	56	29	43
#5	47	70	36	54
#6	56	84	43	64
#7	81	122	63	94
#8	93	139	72	107
#9	105	157	81	121
#10	118	177	91	136
#11	131	196	101	151

CONCRETE STRENGTH = 4000 PSI

BAR SIZE	TOP BARS		OTHER BARS	
	CASE 1	CASE 2	CASE 1	CASE 2
#3	24	36	19	28
#4	32	48	25	37
#5	40	60	31	47
#6	48	72	37	56
#7	70	106	54	81
#8	80	121	62	93
#9	91	136	70	105
#10	102	153	79	118
#11	113	170	87	131

NOTES:
1. TABLE FOR USE WITH NORMAL WEIGHT CONCRETE AND GRADE 60 UNCOATED REINF. BARS. FOR LIGHTWEIGHT AGGREGATE USE 1.3. LENGTHS ARE IN INCHES.
2. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST IN THE MEMBER BELOW THE BAR.
3. FOR LAP SPLICES OF INDIVIDUAL BARS WITHIN A 3 BAR BUNDLE MULTIPLY TABULATED VALUE BY 1.2. FOR A 4 BAR BUNDLE MULTIPLY TABULATED VALUE BY 1.3 . ENTIRE BUNDLES SHALL NOT BE LAP SPLICED AT THE SAME LOCATION. SPLICES FOR INDIVIDUAL BARS WITHIN A BUNDLE SHALL BE STAGGERED SUCH THAT THEY DO NOT OVERLAP.
4. COMPRESSION LAP SPLICE (ONLY WHERE INDICATED ON DRAWINGS) FOR GRADE 60 BARS USE 30 BAR DIA.
5. CASES 1 AND 2 ARE DEFINED AS FOLLOWS:
   BEAMS OR COLUMNS
   CASE 1: COVER AT LEAST 1.0 BAR DIA. AND CENTER TO CENTER SPACING AT LEAST 2.0 BAR DIA.
   CASE 2: COVER LESS THAN 1.0 BAR DIA. OR CENTER TO CENTER SPACING LESS THAN 2.0 BAR DIA.
   ALL OTHER MEMBERS
   CASE 1: COVER AT LEAST 1.0 BAR DIA. AND CENTER TO CENTER SPACING AT LEAST 3.0 BAR DIA.
   CASE 2: COVER LESS THAN 1.0 BAR DIA. OR CENTER TO CENTER SPACING LESS THAN 3.0 BAR DIA.

3 CLASS 'B' LAP SPLICE IN CONCRETE

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ARCHITECT OF RECORD

ISSUES AND REVISIONS

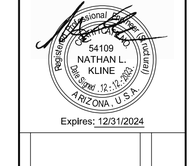
NUMBER	DATE	DESCRIPTION

CONSULTANT

Project No.: 9062

A. V. SCHWAN & ASSOC.
STRUCTURAL ENGINEERS
6000 E. Thomas Rd. Suite 1
Scottsdale, Arizona 85251

PROFESSIONAL SEAL



Expires: 12/31/2024

STORE INFORMATION

PICKLE BALL COURT AT POSSE GROUNDS PARK
SEDONA, AZ 86336

SHEET NAME
FOUNDATION DETAILS

DATE:	12/12/23
DRAWN BY:	AVS
CHECKED BY:	NK
BUILD TYPE:	ETI
STORE VERSION:	V6.2.6
PROJECT NUMBER:	

SHEET NUMBER

S4