**ABBREVIATIONS** 

ARCH'I ---

NOTE: ABBREVIATIONS MAY OR MAY NOT HAVE

A.B.C. — AGGREGATE BASE COURSE

— AIR CONDITIONER — ABOVE FINISHED FLOOR

CONSTRUCTION

CONSTRUCTION

- ALTERNATE

INSTITUTE

— ARCHITECTURAL

- AMERICAN CONCRETE INSTITUTE

- AMERICAN INSTITUTE OF STEEL

AMERICAN INSTITUTE OF TIMBER

- AMERICAN NATIONAL STANDARDS

- AMERICAN PLYWOOD ASSOCIATION

AMERICAN IRON AND STEEL

PERIODS, BUT SHALL BE READ AS SAME.

## GENERAL STRUCTURAL NOTES

BUILDING CODE:

WITH CITY OF SCOTTSDALE AMENDMENTS.

2015 EDITION OF THE INTERNATIONAL BUILDING CODE AND STANDARDS REFERENCED THEREIN,

LOADS:

GRAVITY:

LIVE LOAD = 600# POINT LOAD AT ANY LOCATION

LATERAL:

WND:

ULTIMATE DESIGN WND SPEED (3-SECOND GUST), V(ult) = 115 MPH. RISK CATEGORY, II. EXPOSURE C. WALL ZONE 4 = 31.3 PSF.

SEISMIC:

RISK CATEGORY, II.

SEISMIC IMPORTANCE FACTOR, I = 1.0.

MAPPED SHORT PERIOD SPECTRAL ACCELERATION, Ss = .184.

MAPPED ONE SECOND SPECTRAL ACCELERATION, S1 = .060.

SOIL SITE CLASS, D.

DESIGN SHORT PERIOD SPECTRAL ACCELERATION, Sds = .196. DESIGN ONE SECOND SPECTRAL ACCELERATION, Sd1 = .096. SEISMIC DESIGN CATEGORY, B.

POST— INSTALLED ANCHORS:
GENERAL:

ALL POST-INSTALLED ANCHORS SHALL UTILIZE THE EXACT ANCHORAGE SYSTEM SPECIFIED IN THE STRUCTURAL DETAILS. WHERE ANCHORAGE "PER GSN" IS SPECIFIED, SEE BELOW.

ANCHORAGE PRODUCTS MAY NOT BE SWAPPED BETWEEN MANUFACTURERS WITHOUT APPROVAL OF THE ENGINEER OF RECORD. ALL REQUESTS FOR EQUIVALENT ANCHORAGE PRODUCTS MUST BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO BEING INSTALLED IN THE

UNLESS NOTED OTHERWISE POST INSTALLED ANCHORS SHALL NOT BE INSTALLED UNTIL CONCRETE OR MASONRY MATERIAL HAVE REACHED DESIGN STRENGTH AND HAVE BEEN FULLY CURED FOR A MINIMUM OF 21 DAYS.

MANUFACTURER'S INSTALLATION TRAINING AND CERTIFICATE ARE REQUIRED FOR ALL INSTALLERS OF POST-INSTALLED ANCHORS. ALL ANCHORS SHALL BE INSTALLED WITH STEEL WASHERS AT SHORT SLOTTED HOLES IN ACCORDANCE WITH THE MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS (MPII). ALL ANCHORS SHALL TIGHTENED/TORQUED AS REQUIRED PER MANUFACTURERS INSTRUCTIONS AND EVALUATION REPORTS.

POST-INSTALLED ANCHORS IN CONCRETE:

ALL EXPANSION TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI
'KWIK BOLT-TZ2' EXPANSION ANCHOR PER ICC ESR-4266 OR APPROVED ICC EQUIVALENT. ALL
EPOXY ADHESIVE TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI
'HIT-RE 500 V3' ADHESIVE ANCHORS PER ICC ESR-3814 OR APPROVED ICC EQUIVALENT. ALL
SCREW TYPE ANCHORAGE FOR CONCRETE INSTALLATION ONLY SHALL BE PER HILTI 'KWIK HUS-

STRUCTURAL STEEL AND ALUMINUM:

GENERAL:

ALL STEEL CONSTRUCTION SHALL BE PER THE REFERENCED AISC STEEL CONSTRUCTION

EZ' SCREW ANCHOR PER ICC ESR-3027 OR APPROVED ICC EQUIVALENT.

ALUMINUM ROPE SCULPTURE SHALL BE A356 ALLOY (Fy = 28 KSI). ALUMINUM MOUNTS AND ANCHORS SHALL BE 6061 T-6 ALLOY (Fy = 35 KSI). WELDS SHALL BE PERFORMED BY WELDERS CERTIFIED IN THIS TYPE OF WELD AND MATERIAL.

PER OSHA, STEEL MEMBERS AND DIAGONAL BRACING CANNOT BE RELEASED FROM HOISTING CABLES UNTIL ALL BOLTS OR WELDS AT MEMBER ENDS ARE COMPLETE.

UNLESS NOTED OTHERWISE, ALL SHOP AND FIELD WELDS PER REFERENCED EDITION OF THE AWS STANDARDS. ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING DOCUMENTED CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY. ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS UNLESS NOTED OTHERWISE. FOR GRADE 60 REINFORCING BARS, USE E90 SERIES. THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW.

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. CONTRACTOR SHALL PROVIDE A MINIMUM OF 2 HARD COPY SUBMITTAL SETS OF EACH ITEM TO CTS FOR REVIEW. UNLESS NOTED OTHERWISE IN

ARCHITECTURAL SPECIFICATIONS. ELECTRONIC SUBMITTALS ARE ALSO ACCEPTABLE.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON CONTRACTOR'S REVIEW.

VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS.

MANUFACTURER OR FABRICATOR SHALL CLOUD ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW,

THE ENGINEER HAS THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.

THE SHOP DRAWINGS DO NOT REPLACE THE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY AND ARE NOT FLAGGED BY THE STRUCTURAL ENGINEER OR ARCHITECT SHALL NOT BE CONSIDERED CHANGES TO CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.

THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.

REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR.

GENERAL NOTES:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. EXCEPT WHERE NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS).

WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE REFERENCED EDITION AND/OR ADDENDA. ANY ENGINEERING DESIGN, PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW, SHALL BEAR THE SEAL OF A REGISTERED ENGINEER RECOGNIZED BY THE BUILDING CODE JURISDICTION OF THIS PROJECT.

NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL DRAWINGS AND FIELD CONDITIONS. BUILDING DIMENSIONS AND ELEVATIONS, WHERE SHOWN, WERE PROVIDED BY THE ARCHITECT AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND COORDINATE ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK. ANY DISCREPANCIES SHALL BE RESOLVED THROUGH THE ARCHITECT. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, CIVIL, MECHANICAL, PLUMBING AND ELECTRICAL ITEMS WITH THE APPROPRIATE TRADE DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON FRAMED CONSTRUCTION. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT.

OPTIONS AND SUBSTITUTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION OR

SUBSTITUTION IS CHOSEN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES, APPROVALS AND THE COORDINATION OF THE WORK WITH ALL RELATED TRADES AND SUPPLIERS.

Applies unless noted otherwise on drawings

SPECIAL INSPECTION - STRUCTURAL ONLY:

FOR SPECIAL STRUCTURAL INSPECTIONS: CONTACT CARUSO TURLEY SCOTT, INC. AT 480-774-1700 PRIOR TO CONSTRUCTION:

SPECIAL INSPECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A STATE REGISTERED STRUCTURAL ENGINEER WHO IS FAMILIAR WITH THE STRUCTURAL DESIGN OF THIS PROJECT. THE SUPERVISING STRUCTURAL ENGINEER SHALL SEAL THE SPECIAL INSPECTION CERTIFICATE.

SPECIAL INSPECTION IS TO BE PROVIDED FOR THE ITEMS LISTED BELOW IN ADDITION TO THE INSPECTIONS CONDUCTED BY THE BUILDING JURISDICTION. "SPECIAL STRUCTURAL INSPECTION" SHALL NOT RELIEVE THE OWNER OR THEIR AGENT FROM REQUESTING THE BUILDING JURISDICTION INSPECTIONS REQUIRED BY SECTION 110 OF THE INTERNATIONAL BUILDING CODE. SPECIAL INSPECTION IS REQUIRED PER CHAPTER 17 FOR THE FOLLOWING:

STEEL (OR ALUMINUM) CONSTRUCTION:

WELDING:
. VERIFICATION OF VALID WELDER'S CERTIFICATES.

A. VERIFICATION OF VALID WELDER'S CERTIFICATES.

B. PERIODIC VISUAL INSPECTION OF ALL SHOP AND FIELD WELDS.

C. ALL STRUCTURAL STEEL FABRICATORS SHALL EMPLOY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY TO PROVIDE SHOP WELD INSPECTIONS PER CODE. INSPECTION REPORTS AND REQUIRED DOCUMENTATION SHALL BE SUBMITTED TO ENGINEER OF RECORD PRIOR TO STEEL INSTALLATION.

D. CONTINUOUS INSPECTION OF ALL MULTIPASS FILLET WELDS, SINGLE PASS FILLET WELDS LARGER THAN 5/16", COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS, PLUG AND SLOT WELDS.

E. NON-DESTRUCTIVE TESTING OF ALL COMPLETE PENETRATION WELDS BY AN AWS CERTIFIED INDEPENDENT TESTING AGENCY AT THE CONTRACTORS EXPENSE.

2. STEEL FRAMES: VERIFICATION OF BRACING, STIFFENING, MEMBER LOCATIONS, AND PROPER JOINT DETAIL APPLICATION AT ALL STEEL FRAME CONNECTIONS.

SPECIAL CASES:

1. EXPANSION, EPOXY, ADHESIVE, AND SCREW ANCHORS: DURING THE PLACEMENT OF ALL ANCHORS SHOWN ON STRUCTURAL DRAWINGS. ADDITIONAL INSPECTIONS REQUIRED FOR REPAIR DETAILS SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
A. INSPECTION OF HOLE DIAMETER, HOLE DEPTH AND DRILL BIT CONFORMANCE.
B. INSPECTION OF HOLE CLEANING WITH WIRE BRUSH AND COMPRESSED AIR.
C. INSPECTION OF ANCHOR INSTALLATION USING SPECIFIED PRODUCT AND MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES.
D. INSPECTION OF EXPANSION ANCHORS SHALL INCLUDE THE VERIFICATION OF THE TIGHTENING TORQUE THAT IS SPECIFIED BY THE ANCHOR MANUFACTURER.

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO

A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED TO BE CERTAIN IT CONFORMS TO THE APPROVED DESIGN DRAWINGS AND SPECIFICATION. . THE SPECIAL INSPECTOR IS NOT AUTHORIZED TO APPROVE DEVIATIONS FROM THE DESIGN DRAWINGS OR SPECIFICATIONS, AND ALL DEVIATIONS MUST BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO PROCEEDING WITH THE WORK. ALL REQUESTS FOR DEVIATIONS SHALL BE INITIATED BY THE CONTRACTOR VIA WRITTEN REQUEST FOR INFORMATION (RFI). THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, AND TO THE ENGINEER OR ARCHITECT OF RECORD. 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. THE CONTRACTOR SHALL PROVIDE THE SPECIAL INSPECTOR ACCESS TO ALL ITEMS REQUIRING SPECIAL INSPECTION. ACCESS SHALL BE PROVIDED BY IN-PLACE LADDERS, SCAFFOLDS, LIFTS AND/OR OTHER EQUIPMENT OPERATED BY THE CONTRACTOR'S PERSONNEL AS REQUIRED FOR SAFE OBSERVATION. THE SPECIAL INSPECTOR IS NOT RESPONSIBLE OR AUTHORIZED TO OPERATE CONTRACTOR'S EQUIPMENT. UPON COMPLETION OF THE ASSIGNED WORK THE ENGINEER OR ARCHITECT SHALL COMPLETE AND SIGN THE APPROPRIATE FORMS CERTIFYING THAT TO THE BEST OF THEIR KNOWLEDGE THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.



## REPRESENTATIVE ISOMETRIC VIEW

SCALE: NONE

REVISIONS

1963 - 2022

EXCELLENCE

YEARS OF

RLEY SCOTT INC iructural engineers (480) 774-1700 (774-1701 FAX)

CARUSO • IL
consulting s
1215 West Rio S
Tempe, Arizona 85287



GRYGUTIS ROPE SCULPTURE DRINKWATER RD UNDERPASS SCOTTSDALE, AZ

JOB NO.	22-0165
DRAWN	JJR
ENGINEER	DJV
CHECKED	PGS
DATE 02-	-11-2022
TITLE	
GENERAL STRUCTURAL NOTES	
SCALE	AS NOTED
SHEET	
S1.0	

REVISIONS 1963 - 2022 YEARS OF **EXCELLENCE** 

CARUSO •TURLEY• SCOTT

JOB NO. 22-0165 DRAWN ENGINEER CHECKED 02-11-2022 **DETAILS** AS NOTED **S1.1**