GENERAL STRUCTURAL NOTES

A4400 OFNEDAL DEGUIDEMENTO

01100 GENERAL REQUIREMENTS

1. MATERIALS AND WORKMANSHIP TO CONFORM WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.

2. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.

3. DETAILS ON SHEETS TITLED "TYPICAL" OR DETAILS TITLED "TYPICAL" APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR CHECKING DIMENSIONS. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES AND RESOLVE BEFORE PROCEEDING WITH THE WORK.

5. DO NOT SCALE THE DRAWINGS.

6. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION AND FOR TEMPORARY SUPPORT OF THE BUILDING. RETAIN A REGISTERED CIVIL ENGINEER WHOM IS PROPERLY QUALIFIED TO DESIGN BRACING, SHORING, ETC. VISITS TO THE SITE BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEMS.

7. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.

8. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS FROM THE SITE AND DISPOSE OFF SITE.

9. VERIFY ALL DIMENSIONS IN THE FIELD. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.

10. ALL EXISTING HAZARDOUS MATERIALS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE CODES. NO NEW OR EXISTING CONSTRUCTION SHALL CONTAIN HAZARDOUS OR PROHIBITED MATERIALS.

11. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT AREAS ADJACENT TO NEW CONSTRUCTION FROM NOISE, DEBRIS AND DUST THROUGHOUT THE PERFORMANCE OF THE CONTRACT.

12. ANY DAMAGE TO EXISTING UTILITIES OR FACILITIES SHALL BE REPAIRED OR REPLACED AT CONTRACTO'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.

13. CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS.

14. CONTRACTOR SHALL MAINTAIN THE STREETS AND ANY OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ANY SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS MUST BE REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT.

15. THE ENGINEER-OF-RECORD SHALL PERFORM STRUCTURAL OBSERVATIONS PER CBC 1704. THE ENGINEER SHALL REPORT ANY OBSERVED DEFICIENCIES TO THE OWNER, CONTRACTOR AND BUILDING OFFICIAL, AND SUBMIT A FINAL SUMMARY REPORT STATING SITE VISITS HAVE BEEN MADE, NOTING ANY DEFICIENCIES, THAT CORRECTIVE WORK HAS BEEN COMPLETED, AND THAT CONSTRUCTION PROCEEDED IN GENERAL CONFORMANCE WITH THE APPROVED PLANS.

16. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO THE ENGINEER PRIOR TO ALL REQUIRED TESTING AND OBSERVATIONS U.O.N. CONTRACTOR SHALL CALL ENGINEER FOR OBSERVATION OF ALL FOUNDATION STEEL AND EXCAVATIONS PRIOR TO PLACING CONCRETE. CONTRACTOR SHALL CALL ENGINEER FOR HOLD DOWN OBSERVATION PRIOR TO SHEATHING, AND FRAMING, NAILING AND SHEAR WALL OBSERVATION PRIOR TO COVERING EITHER SIDE OF SHEATHING WITH FINISHED MATERIALS. THE CONTRACTOR SHALL CALL ENGINEER TO OBSERVE ALL STRUCTURAL MEMBERS AND CONNECTIONS FOR CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS PRIOR TO CONCEALMENT WITH FINISH MATERIALS.

01400 SPECIAL INSPECTIONS

1. AN INDEPENDENT TESTING AGENCY AND SPECIAL INSPECTOR SHALL BE RETAINED BY THE CONTRACTOR TO PERFORM TESTS AND INSPECTIONS.

2. THE FOLLOWING ITEMS REQUIRE TESTS AND INSPECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17 - "STRUCTURAL TESTS AND INSPECTIONS" OF THE 2022 CALIFORNIA BUILDING CODE:

A. ADHESIVE ANCHORS PER THE APPLICABLE ICBO REPORT
B. SINGLE PASS FILLET WELDS - PERIODIC VISUAL INSPECTION
C. CONCRETE REINFORCING AND CONCRETE PLACEMENT

3. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.

02200 FOUNDATION AND SITE WORK

1. LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER CONSTRUCTION.

2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.

3. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE.

4. FOUNDATION EXCAVATIONS TO BE CUT NEAT TO THE SIZE SHOWN ON DRAWINGS AND CONCRETE TO BE PLACED ON UNDISTURBED NATIVE SOILS. IF EXCAVATIONS ARE OVERCUT, BACKFILL WITH ENGINEERED FILL AND COMPACT TO 95% RELATIVE COMPACTION.

5. THE GEOTECHNICAL REPORT PREPARED BY THE SAN FRANCISCO PUBLIC WORKS BUREAU OF ENGINEERING DATED 16 JANUARY 2020 IS AVAILABLE IN THE OFFICE OF THE ARCHITECT FOR THE CONTRACTOR'S REVIEW. THE CONTRACTOR SHALL CONFORM TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. OBTAIN GEOTECHNICAL ENGINEER'S APPROVAL OF FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE. ALL DETERMINATIONS OF THE ACCEPTABILITY OF SOIL CONDITIONS SHALL BE BY GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL BE PRESENT AT THE SITE FOR DRILLING OF ALL PIERS AND OBSERVATION OF EXCAVATION BEFORE PLACING ANY FILL MATERIAL OR CONCRETE.

6. THE GEOTECHNICAL ASPECTS OF THE CONSTRUCTION, INCLUDING SITE GRADING, FOOTING EXCAVATIONS AND PREPARATION OF SUBGRADE SHOULD BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. THE SAN FRANCISCO PUBLIC WORKS BUREAU OF ENGINEERING SHOULD BE PROVIDED AT LEAST 48 HOURS ADVANCE NOTIFICATION OF ANY EARTHWORK OPERATIONS AND SHOULD BE PRESENT TO OBSERVE AND TEST, AS NECESSARY, THE EARTHWORK, FOUNDATION, AND DRAINAGE INSTALLATION PHASES OF THE PROJECT.

03100 FORMWOR

1. PROVIDE POUR POCKETS IN FORMS AND UNDER EXISTING STRUCTURAL MEMBERS AS REQUIRED TO PREVENT AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE EXISTING MEMBERS. CONCRETE CAST WITH AIR POCKETS AND/OR "HONEYCOMB" UNDER OR AROUND THE MEMBERS IS NOT ACCEPTABLE.

2. PROVIDE CURING WHERE FORMS ARE REMOVED IN LESS THAN 7 DAYS, INCLUDING BUT NOT LIMITED TO WALLS, COLUMNS, AND UNDERSIDE OF ELEVATED SLABS.

03200 REINFORCING STEEL

1. REINFORCING TO CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED: REINFORCING STEEL #7 AND SMALLER ASTM A615, 60 KSI, REINFORCING STEEL #8 AND LARGER AND REINFORCING STEEL TO BE WELDED ASTM A706, 60 KSI

2. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3-FOOT SPACING.

03300 CAST-IN-PLACE CONCRETE

1. ROUGHEN CONCRETE SURFACES OF CONSTRUCTION JOINTS TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.

2. AT LOCATIONS WHERE CONCRETE IS CAST AGAINST EXISTING CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4 INCH AMPLITUDE AND CLEAN OF LAITANCE, FOREIGN MATTER, AND LOOSE PARTICLES.

3. ALL CONCRETE TO HAVE THE FOLLOWING PROPERTIES: NORMAL WEIGHT CONCRETE WITH A 28-DAY STRENGTH OF 4,000 PSI.

03350 ADHESIVE ANCHORS AND DOWELS

1. ANCHORS AND ADHESIVE DOWELS INSTALLED INTO CONCRETE: HILTI HIT-RE 500-V3 (ICC-ES #ESR-3814) OR SIMPSON SET XP. ANCHORS SHALL BE F1554 GRADE 55. EMBEDMENT DEPTH FOR ANCHORS AND DOWELS IS AS FOLLOWS, UNLESS OTHERWISE NOTED.

ROD DIA.	EMBEDMENT	BAR SIZE	EMBEDMENT
3/8"	4"	#3	5"

3/8"	4"	#3	5
1/2"	5"	#4	7"
5/8"	6"	#5	8"
3/4"	7"	#6	10"
7/8"	9"	#7	12"
1"	11"	#8	14"

2. INSTALL ADHESIVE ANCHORS AND ADHESIVE DOWELS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE CORRESPONDING ICBO REPORT.

3. CAST-IN-PLACE ANCHORS: REBAR SHALL BE ASTM A615, 60 KSI AND THREADED ANCHORS SHALL BE ASTM F1554, GRADE 55 KSI HEAVY HEX HEAD OR ASTM A193 GRADE B7. NUTS SHALL BE ASTM A 563 GRADE DH HEAVY HEX NUTS AND WASHERS SHALL BE ASTM F 436.

4. BASE PLATES: BEARING PLATES SHALL BE CLEAN AND FREE FROM BOND-REDUCING MATERAILS. TIGHTEN ANCHOR BOLTS AFTER THE SUPPORTED MEMBERS HAVE BEEN POSITIONED AND PLUMBED. PACK NON-SHRINK GROUT SOLIDLY BETWEEN BEARING SURFACES AND BASES OR PLATES TO ASSURE THAT NO VOIDS REMAIN. NON-SHRINK GROUT SHALL MEET ASTM C-1107 OR ASTM C-928-R3.

05000 STRUCTURAL STEEL

1. STRUCTURAL STEEL, FABRICATION AND ERECTION METHODS SHALL CONFORM TO THE CURRENT ADDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES."

2. ALL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

3. ALL STRUCTURAL STEEL SHALL BE PRIMED.

4. STEEL SHALL BE THE FOLLOWING:

ROLLED PLATES AND BARS - STAINLESS STEEL ASTM A36

5. ALL ANCHOR BOLTS SHALL BE ASTM F1554-20, GRADE 55 KSI UON.

6. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1. ELECTRODES SHALL

17000 DESIGN CRITERIA

DESIGN PER 2022 CALIFORNIA BUILDING CODE

1. DEAD LOADS: VARY BASED ON ACTUAL WEIGHTS OF STONE ARTWORK.

2. LIVE LOADS: 100 PSF

3. SEISMIC DESIGN: SITE CLASS D BASE SHEAR V = 0.67 W (ULTIMATE STRENGTH DESIGN), R = 1.5, $S_S = 1.5$, $S_1 = 0.6$,

 $S_{MS} = 1.5$, $S_{M1} = NULL$, $S_{DS} = 1.0$, $S_{D1} = NULL$

4. WIND DESIGN: RISK CATEGORY II,

 $V_{ULT} = 90 \text{ MPH } (3 \text{ SECOND GUST})$ $V_{ASD} = 80 \text{ MPH}$

EXPOSURE B

 $GC_{Pl} = +/- 0.18$



