A. ELECTRONIC VERSIONS OF STRUCTURAL DRAWINGS ARE THE SOLE, COPYRIGHTED PROPERTY OF TRC WORLDWIDE ENGINEERING INC. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF TRC WORLDWIDE ENGINEERING INC.

- 1010 GENERAL:

 A. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR DEPRESSIONS, DIMENSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
- B. DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- C. WHERE DRAWINGS AND SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT RESTRICTIONS AND REQUIREMENTS SHALL GOVERN.
- D. PLAN NOTES, DETAILS AND SECTIONS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES. TYPICAL DETAILS AND SECTIONS NOT CUT ON PLANS SHALL APPLY UNLESS NOTED OTHERWISE.
- E. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND IT'S COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIE DOWNS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION COMPLIES WITH OSHA REGULATION INCLUDING DESIGN OF CONNECTIONS OF MEMBERS THAT WILL NOT BE FULLY COMPLETED AT THE TIME OF INSTALLATION.

1011 CONTRACTOR PROPOSED CHANGES AND SUBSTITUTIONS PROPOSED CHANGES OR SUBSTITUTIONS TO STRUCTURAL DETAILS OR PLANS

SHALL BE SUBMITTED TO THE ENGINEER OF RECORD (EOR) FOR REVIEW AND APPROVAL. SUBMITTALS SHALL CONTAIN FULL DOCUMENTATION OF CHANGES OR SUBSTITUTIONS WITH SUPPORTING, SEALED CALCULATIONS (WHERE APPLICABLE) THE REVIEW OF CHANGES AND SUBSTITUTIONS, RE-ANALYSIS AND/OR RE-DRAFTING TO INCORPORATE CHANGES OR SUBSTITUTIONS INTO CONTRACT DOCUMENTS ARE ADDITIONAL SERVICES FOR EOR. EOR IS NOT RESPONSIBLE FOR DETERMINING THE COST EFFECTIVENESS OF PROPOSED CHANGES.

1060 DESIGN AND CONSTRUCTION STANDARDS

A. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES AND REFERENCED STANDARDS:

- FLORIDA BUILDING CODE 7th EDITION BY THE INTERNATIONAL CODE COUNCIL. INC
- 2015 EDITION OF THE ALUMINUM DESIGN MANUAL
- 2014 EDITION OF AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
- (AISI) AMERICAN IRON AND STEEL INSTITUTE SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 2012 EDITION
- MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES BY
- THE AMERICAN SOCIETY OF CIVIL ENGINEERS
- (PCI) PCI DESIGN HANDBOOK PRECAST AND PRESTRESSED CONCRETE 7TH
- B. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ABOVE REFERENCED CODES AND STANDARDS AND THE FOLLOWING:
- SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION
- (ACI 301-16) SPECIFICATIONS FOR TOLERANCES FOR STRUCTURAL CONCRETE CONSTRUCTION MATERIALS
- (ACI 304R-00) RECOMMENDED PRACTICES FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
- (ACI 305R-10) HOT WEATHER CONCRETING
- (ACI 306R-16) COLD WEATHER CONCRETING
- (ACI 309R-05) GUIDE FOR CONSOLIDATION OF CONCRETE
- (ACI 315-18) DETAILS AND DETAILING OF CONCRETE REINFORCING
- (MNL-15 (16)) FIELD REFERENCE MANUAL: SPECIFICATIONS FOR STRUCTURAL
- CONCRETE (ACI 301-16) WITH SELECTED ACI AND ASTM REFERENCES

- A. THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE, 7TH EDITION.
- B. LIVE LOADS ARE REDUCED FROM THE BASE LIVE LOADS SHOWN AS ALLOWED BY THE REFERENCED BUILDING CODE. THE FOLLOWING SUPERIMPOSED DEAD LOADS AND LIVE

GRAVITY LOADS						
LOCATION	UNIFORM LIVE LOAD	SUPERIMPOSED DEAD LOAD				
STORAGE / EQUIP. ROOM / LAUNDRY / MEP ROOMS	150	20				
ROOF LIVE LOAD	20	20				
LIVE LOAD DEDUCTION ON OURDONTING ELEMENTO CUALL DE IN						

WIND LOADS
ROOF LOADING IS PERMITTED. UNIFORMED DEAD LOAD IS ADDITIVE TO ACTUAL STRUCTURAL WEIGHTS.
ACCORDANCE WITH THE BUILDING CODE. NO LIVE LOAD REDUCTION OF
LIVE LOAD REDUCTION ON SUPPORTING ELEMENTS SHALL BE IN

WIND LOADS				
Vult	160 MPH			
RISK CATEGORY	II			
WIND EXPOSURE C				
CANOPIES SHALL BE DESIGNED AS OPEN STURCTURES PER ASCE 7-16				

A. ALL CONTRACTOR REQUEST FOR INFORMATION (RFI's) SHALL STATE CONTRACTOR'S SUGGESTION(S) FOR RESOLUTION AND COST IMPLICATIONS FOR SUGGESTION(S). EOR IS NOT RESPONSIBLE FOR DETERMINING COST OR COST EFFECTIVENESS OF RFI

2010 FOUNDATIONS: (NO GEOTECH REPORT)

A. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 3,000 PSF ON COMPACTED FILL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHO'S REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE PREPARED AND SEALED BY A GEOTECHNICAL ENGINEER, LICENSED WITHIN THE JURISDICTION OF THE PROJECT AND SHALL BE SUBMITTED TO ENGINEER FOR REVIEW.

A. SEE THE FOLLOWING REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES:

REPORT NO. 21-33-4542 ARDAMAN & ASSOCIATES, INC

TITLED: LAKES PARK WATER QUALITY IMPROVEMENTS DATED:

B. NO APPROVAL OR VERIFICATION OF RECOMMENDATIONS MADE WITHIN THE ABOVE NOTED GEOTECHNICAL REPORT IS IMPLIED THROUGH REFERENCE OR USE BY TRC

THIS REPORT SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS

- C. A GEOTECHNICAL ENGINEER, LICENSED WITHIN THE JURISDICTION OF THE PROJECT, SHALL VERIFY IN THE FIELD THAT ALL SITE PREPARATION FILL OPERATIONS, BEARING CONDITIONS, FOUNDATION TESTING AND INSTALLATION COMPLY WITH THE SOILS
- D. FOUNDATION DESIGN FOR SHALLOW FOUNDATIONS SYSTEMS ARE BASED UPON AN ALLOWABLE NET SOIL BEARING PRESSURE *,*** psf AS PROVIDED BY ABOVE
- E. FOUNDATION WALLS ARE DESIGNED FOR THE FOLLOWING DESIGN LOADS:
- a. SOIL WEIGHT:.. 120 PCF

GEOTECHNICAL REPORT.

- b. AT-REST PRESSURE: (BRACED AT TOP).......... 60 PCF c. ACTIVE PRESSURE: .40 PCF
- d. PASSIVE PRESSURE: . 240 PCF
- e. FRICTION COEFFICIENT:. ...0.35
- F. SUBGRADE PREPARATION AND VAPOR BARRIER INSTALLATION FOR SLAB-ON-GRADE SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT.
- G. CONCRETE FOR FOOTINGS SHALL BE PLACED IMMEDIATELY AFTER FINAL INSPECTION AND ACCEPTANCE BY THE GEOTECHNICAL ENGINEER. IN NO CASE SHALL FOOTING EXCAVATIONS BE ALLOWED TO STAND OPEN OVERNIGHT OR
- H. FOUNDATION WALLS WITHOUT CANTILEVERED FOOTINGS SHALL NOT BE BACKFILLED UNTIL SHORED OR PERMANENTLY SUPPORTED AT THE TOP OF WALL.
- I. BACKFILLING OF WALLS AND PIERS SHALL BE PLACED SUCH THAT SYMMETRICAL LOADING SHALL BE MAINTAINED ON BOTH SIDES. WHERE DESIGN CONDITIONS REQUIRE BACKFILLING EACH SIDE TO UNEQUAL HEIGHTS, WALLS OR PIERS SHALL BE FIRMLY SHORED ON POSITION, AND SHORES SHALL REMAIN UNTIL FLOORS OR OTHER PERMANENT BRACING ELEMENTS ARE PLACED AND PROPERLY SET TO PROVIDE FULL SUPPORT.
- J. GRADE SHALL BE SUCH THAT THICKNESS OF FOUNDATION, SLAB ON GRADE, ETC. IS NOT REDUCED BY MORE THAN 5% OF THAT SHOWN ON DRAWINGS.

3101 FORMWORK AND SHORING (CONCRETE SLABS AND BEAMS):

- A. NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH (& ALL TENDONS STRESSED FOR PT SLABS). A MINIMUM OF 3 STORIES OF SHORING AND (/OR) RESHORING SHALL BE USED WHICH SHALL CONSIST OF ONE COMPLETE SET OF VERTICAL SHORES AND TWO SETS OF VERTICAL SHORES THAT COMPRISE AT LEAST 50% OF A COMPLETE
- B. DRAWINGS FOR SHORING AND RESHORING SHALL BE PREPARED BY AN ENGINEER LICENSED WITHIN THE JURISDICTION OF THE PROJECT.
- C. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES
- D. SUBMIT SIGNED & SEALED SHORING DRAWINGS INCLUDING POUR SEQUENCE AND CALCULATIONS, WHERE NECESSARY, TO DEMONSTRATE THAT THE POUR SEQUENCE AND SHORING/RE-SHORING METHODS DO NOT OVERSTRESS THE STRUCTURE. THIS ANALYSIS SHALL INCLUDE STRESSES CAUSED BY SHRINKAGE OF STRUCTURAL SLAB. PROVIDE LOCATION AND DETAILS OF POUR STRIPS IF REQUIRED TO REDUCE SHRINKAGE AND RESTRAINT CRACKS.
- E. SHORING INSPECTIONS SHALL BE PERFORMED BY THE SHORING ENGINEER.
- F. UNLESS ARCHITECT SPECIFIES OTHERWISE, CONSTRUCT FORMWORK SO CONCRETE SURFACES CONFORM TO THE TOLERANCE LIMITS OF ACI 117 [STANDARD SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION MATERIALS THE CLASS OF SERVICE FOR OFFSET BETWEEN ADJACENT PIECES OF FORMWORK FACING MATERIAL SHALL BE CLASS B FOR SURFACES PERMANENTLY EXPOSED TO PUBLIC VIEW AND CLASS D FOR SURFACES THAT WILL BE PERMANENTLY

3103 PLUMBING SLEEVES AND EMBEDDED CONDUITS:

- A. LOCATION DRAWINGS FOR ALL SLEEVES AND BLOCKOUTS IN THE CONCRETE SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO
- B. All CONDUIT, SLEEVES, AND PIPES EMBEDDED IN OR PASSING THRU CONCRETE SHALL CONFORM TO SECTION 6.3 OF ACI 318 AND THE FOLLOWING:
- a. SLEEVES AND PIPES SHALL BE PLACED SO THAT REINFORCING STEEL CAN BE PLACED WITH THE SPECIFIED COVER AND CLEAR DISTANCE BETWEEN BARS.
- b. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF

THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER.

- c. SLEEVES OR GROUPS OF SLEEVES 16 INCH IN DIAMETER AND LARGER SHALL BE TREATED AS A SLAB OPENING AND REINFORCED PER TYPICAL OPENING REINFORCING DETAILS.
- d. CONDUIT AND PIPES PLACED WITHIN SLABS, BEAMS, WALLS AND TOPPING OVER SLABS SHALL OCCUPY ONLY THE MIDDLE ONE THIRD OF THE MEMBER DEPTH OR THICKNESS. MAXIMUM CONDUIT O.D. FOR SINGLE CONDUITS OR SUM OF O.D.'S FOR MULTIPLE CONDUITS THAT CROSS SHALL BE NO LARGER THAN ONE THIRD THE MEMBER DEPTH. PARALLEL CONDUITS SHALL BE SPACED WITH A MINIMUM OF 3 DIAMETERS CLEAR. CONDUITS SHALL BE A MINIMUM OF ONE DIAMETER AWAY FROM AND SHALL NOT INTERFERE WITH OR DISPLACE ANY TENDONS OR REINFORCING. CONDUIT SHALL NOT BE TIED TO REINFORCING OR TENDONS. CONDUITS SHALL NOT OCCUR WITHIN TRANSFER GIRDERS OR COLUMN ZONES OF
- e. CONDUITS AND PIPES PLACED IN COLUMNS SHALL NOT DISPLACE MORE THAN 4% OF THE CROSS SECTIONAL AREA OF COLUMN AND SHALL BE LOCATED ON THE CENTER LINE OF COLUMN. OUTLET BOXES IN COLUMNS SHALL BE APPROVED BY THE ENGINEER, SHALL NOT DISPLACE REINFORCING AND SHALL NOT BE DEEPER THAN REQUIRED CLEARANCE FOR REINF.

- A. CONTRACTOR SHALL CARRY AN ALLOWANCE IN THEIR BID FOR SUPPLYING AND ERECTING (1) TON OF REINFORCING STEEL IN ADDITION TO THAT SHOWN ON PLANS AND WITHIN SECTIONS, DETAIL AND SCHEDULES TO BE SEED AT THE DISCRETION OF THE STRUCTURAL ENGINEER.
- B. REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 DEFORMED BARS (WELDABLE REINFORCING "DBA" SHALL CONFORM TO ASTM A-706 GRADE 60), FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION. REINFORCING BAR DETAILING SHALL COMPLY WITH ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" AND CRSI MANUAL
- C. CLEAR COVER TO REINFORCING SHALL BE AS INDICATED BELOW. WHERE A SPECIFIC CONDITION IS NOT NOTED, REFER TO ACI REQUIREMENTS FOR COVER:

FRAMED SLABS ON GRADE	TOP .1"	BOTTOM 3"	SIDES/EDGES NA
FOUNDATION WALL/PILASTER.	.NA	NA	2" EXTERIOR 1 1/2" INTERIOR
SPREAD FOOTING	2"	3"	3"
COLUMNS & WALLS	NA	NA	2" AGAINST SOIL 1 1/2" TYPICAL
ELEVATED FRAMED SLAB, INTERIOR PTINTERIOR NON-PT		3/4" 3/4"	1" 1"
EXTERIOR PT	1"	3/4"	1"
EXTERIOR NON-PT - #5 AND SMALLER - #6 AND LARGER		1 1/2" 2"	2" 2"
BEAMS (INTERIOR)(EXTERIOR EXPOSURE)	1 1/2" 2"	1 1/2" 1 1/2"	1 1/2" 1 1/2"

NOTE: MAXIMUM DEVIATION IN BAR PLACEMENT SHALL BE AS DICTATED BY ACI.

- D. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. SEE NOTES ON EMBEDDED ITEMS FOR ADDITIONAL LIMITATIONS.
- E. PROVIDE CONTINUOUS REINFORCING WHERE POSSIBLE, SPLICE ONLY AS SHOWN ON DRAWINGS OR AS APPROVED BY STRUCTURAL ENGINEER. PROVIDE CORNER BARS AT ALL WALL, GRADE BEAM AND STRIP FOOTING CORNERS. BARS SHALL BE THE SAME SIZE AND SPACING AS THE HORIZONTAL REINFORCING. INTERSECTING WALLS, GRADE BEAMS AND STRIP FOOTINGS SHALL BE DOWELED TOGETHER IN THE SAME MANNER. PROVIDE 2 NO. 4 TOP DIAGONAL BARS 4'-0" LONG AT ALL REENTRANT CORNERS IN ALL SLABS ON GRADE AND ELEVATED SLABS.
- F. SHOP DRAWINGS SHALL ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. SHOP DRAWINGS SHALL INCLUDE ADEQUATE SECTIONS, ELEVATIONS AND DETAILS. WRITTEN DESCRIPTIONS ARE NOT ACCEPTABLE. ALL CONCRETE WALLS SHALL BE DETAILED IN ELEVATION.
- G. SPLICING OF REINFORCING SHALL BE AS SHOWN OR AS INDICATED IN SCHEDULE MECHANICAL SPLICING DEVICES SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH (FY) OF THE BAR. STAGGER MECHANICAL SPLICES WHERE POSSIBLE. ALL STEEL NOTED AS CONTINUOUS SHALL BE A CLASS "B" SPLICE PER SCHEDULE.
- H. DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED OR DIRECTED BY THE STRUCTURAL ENGINEER.
- I. TIE ALL REINFORCING AND EMBEDS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT AND EMBEDS WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.
- J. THE SHOP DRAWINGS FOR REINFORCING STEEL SHALL INCLUDE SCALE ELEVATIONS OF ALL CONCRETE WALLS.
- K. OPENINGS THROUGH CONCRETE WALLS, SLABS OR OTHER STRUCTURAL ELEMENTS NOT DETAILED ON THE STRUCTURAL DRAWINGS MUST BE LOCATED AND SHOWN ON THE APPLICABLE REINFORCING STEEL SHOP DRAWINGS. THE FINAL LOCATION OF ALL OPENINGS MUST BE REVIEWED BY THE A/E BEFORE THE CONCRETE IS POURED.

3202 WELDED WIRE REINFORCING:

- A. WELDED WIRE REINFORCING (WWR) SHALL CONFORM TO ASTM A-185, FREE FROM OIL, SCALE, AND RUST, AND PLACED IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES. USE OF FLAT MANUFACTURED SHEETS IS REQUIRED.
- B. THE WELDED WIRE REINFORCING IN THE COMPOSITE ELEVATED SLAB SHALL BE SUPPORTED BY PLACING CONTINOUS HEAVY BOLSTERS @ 2'-6" OC MAXIMUM OVER THE COMPOSITE METAL DECK.
- C. THE WELDED WIRE REINFORCING IN THE CONCRETE SLAB-ON-GRADE SHALL BE SUPPORTED BY CONTINUOUS #4 SUPPORT BARS @ 2'-6" OC MAXIMUM. THE #4 BARS SHALL BE TIED AND SUPPORTED BY CONCRETE BRICK SPACERS (2 1/4" HIGH) @ 2'-6" OC MAXIMUM.

3301 CAST-IN-PLACE CONCRETE:

PLASTIC AND WORKARI F MIX

CHAPTER 5 OF ACI 318.

A. ALL CAST-IN-PLACE CONCRETE SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A

FLAGTIC AND WORKABLE IVIIA.							
CONCRETE DESIGN CRITERIA							
MINIMUM 28-DAY MAXIMUM USED FOR: COMPRESSIVE STRENGTH SLUMP							
4000 PSI 4(±1)* FOUNDATIONS, SLAB-ON-GRADE							
* HIGHER SLUMPS ARE PERMITTED WHEN HIGH RANGE WATER REDUCER (HRWR) ADMIXTURES (SUPER PLASTICIZER) ARE USED PENDING ENGINEER OF RECORD APPROVAL OF MIX DESIGN.							

- B. CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI 301(-05) STANDARDS AND SPECIFICATIONS.
- C. PRIOR TO CONCRETE PLACEMENT, MIX DESIGN SHALL BE SUBMITTED AND ACCEPTED BY ENGINEER FOR USE. MIX DESIGN SHALL INCLUDE THE FOLLOWING:
- a. MIX DESIGN WHICH SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER
- b. ONLY TYPE II CEMENT SHALL BE USED FOR SLAB-ON GRADE CONCRETE c. CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. FAILURE TO COMPLY MAY RESULT IN REJECTION OF THE MIX. IF ACCEPTED, PEA ROCK PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM
- POURS LESS THAN 60 LINEAL FEET PER POUR d. MIX DESIGN SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE
- AGGREGATE. e. CALCIUM CHLORIDES SHALL NOT BE UTILIZED OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE
- g. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING STRUCTURAL DRAWINGS AND SPECIFYING THE USE OF WATER REDUCERS WHERE REINFORCING CONGESTION WARRANTS.
- D. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH
- E. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY.
- : WATER/CEMENTITIOUS MATERIAL RATIO FOR CONCRETE BELOW OR AT GRADE AND FOR CONCRETE SUBJECTED TO DEICERS AND/OR SPECIFIED TO BE WATERTIGHT SHALL NOT EXCEED 0.45 BY WEIGHT, MAXIMUM PERMISSIBLE W/C RATIO: 0.50 FOR ALL OTHER CONCRETE AND CONCRETE BELOW GRADE SUBJECTED TO FREEZE/THAW.
- G. ALL CONCRETE EXPOSED TO THE WEATHER SHALL BE AIR-ENTRAINED. FOR SURFACE FINISHES AND OTHER REQUIREMENTS, REFER TO THE CONCRETE SPECIFICATIONS.
- H. WHERE SPECIFIED COLUMN CONCRETE STRENGTH IS 1.4 TIMES THE SPECIFIED SLAB CONCRETE STRENGTH, SEE COLUMN SCHEDULE FOR PUDDLING REQUIREMENTS. IF REQUIRED, THE STRENGTH OF THE PUDDLED CONCRETE SHALL BE AT LEAST EQUA TO THE STRENGTH OF THE COLUMN CONCRETE. PUDDLING SHALL EXTEND 2'-0" MINIMUM FROM FACE OF COLUMN IN ALL DIRECTIONS.
- I. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR DRIPS, CHAMFERS, REGLETS, SLOTS, SLEEVES, ANCHORS, AND INSERTS. UNLESS SHOWN ON STRUCTURAL DRAWINGS NO OPENINGS LARGER THAN 12"x12" SHALL BE PLACED IN SLABS OR WALLS. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, APPROVALS MUST BE OBTAINED FROM THE ENGINEER PRIOR TO FABRICATION OF STEEL AND PLACEMENT OF CONCRETE. LOCATION DRAWINGS FOR ALL SLEEVES AND BLOCKOUTS IN THE CONCRETE SHALL BE SUBMITTED FOR APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO PLACEMENT.
- CONCRETE WALLS SHALL BE CAST MONOLITHIC WITH ADJOINING COLUMNS UNLESS SPECIFICALLY NOTED OTHERWISE. CONCRETE FOR SUCH WALLS SHALL BE THE SAME TYPE AND STRENGTH AS SPECIFIED COLUMNS.
- K. CONTRACTOR SHALL CONFORM TO ACI 306R FOR COLD WEATHER CONCRETING AND ACI 305R FOR HOT WEATHER CONCRETING WHEN ANY COMBINATION OF HIGH TEMPERATURE, LOW RELATIVE HUMIDITY AND WIND VELOCITY TEND TO IMPAIR THE QUALITY OF THE CONCRETE. CONCRETE IS TO BE REJECTED IF ITS TEMPERATURE AT TIME OF PLACEMENT IS 90°F OR ABOVE. PROTECT SURFACES OF EXPOSED CONCRETE FROM PRECIPITATION DAMAGE UNTIL ADEQUATE STRENGTH IS GAINED TO PREVENT DAMAGE.
- . CONCRETE SHALL BE VIBRATED BY MECHANICAL VIBRATORS.
- M. A PRE-CONCRETE CONFERENCE SHALL BE HELD BY THE CONTRACTOR WITH SUBCONTRACTORS, TESTING LAB PERSONNEL, ARCHITECT AND ENGINEERS. THESE CONFERENCES SHALL BE HELD WELL IN ADVANCE OF CONSTRUCTION TO ENSURE PROPER INTERPRETATION OF DESIGN INTENT. STEEL ERECTOR SHALL FIELD VERIFY CORRECTNESS OF FOUNDATION, ANCHOR RODS, OR OTHER EXISTING WORK AFFECTING THE STEEL BEFORE STARTING ERECTION.

3304 CONCRETE TESTING: A. AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON

- CAST-IN-PLACE CONCRETE:
- a. ASTM C143 "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE XX INCHES. ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
- 1. EARLY CYLINDERS (AS NEEDED): 1, 2, AND 3 DAY BREAKS ARE A GOOD
- RANGE TO HAVE FOR STRESSING OR OTHER EARLY NEEDS. 2. (1) OR (2) 7 DAY CYLINDERS
- 3. (3) 28 DAY CONFORMANCE CYLINDERS
- 4. (1) OR (2) 56 DAY HOLD CYLINDERS (TO BE TESTED IF THE 28 DAY CYLINDERS DO NOT MEET SPEC AND CAN BE TESTED AT ANY TIME AT THE
- 5. REQUEST/DISCRETION OF THE ENGINEER/CONTRACTOR).
- 1. EARLY CYLINDERS (AS NEEDED): 1, 2 AND 3 DAY BREAKS AREA A GOOD RANGE TO HAVE FOR STRESSING OR OTHER EARLY NEEDS.

ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

- 2. (1) OR (2) 7 DAY CYLINDERS 3. (2) 28 DAY CYLINDERS
- 4. (3) 56 DAY CONFORMANCE CYLINDERS 5. (1) OR (2) 90 DAY HOLD CYLINDERS (TO BE TESTED IF THE 56 DAY CYLINDERS DO NOT MEET SPEC AND CAN BE TESTED AT ANY TIME AT THE REQUEST/DISCRETION OF THE ENGINEER/CONTRACTOR).
- B. ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY/56 DAY STRENGTH IS ACHIEVED, THEN THE

SHEET INDEX

This item has been electronically signed

and sealed by

using a Digital Signature.

Printed copies of this document are not

considered signed and sealed and the

signature must be verified on any

electronic copies.

Paul S. Moerschel, PE on 11/16/22

DESCRIPTION

S001 STRUCTURAL NOTES S002 STRUCTURAL NOTES & ABBREVIATIONS S101 FOUNDATION & ROOF PLANS

S201 SECTIONS AND DETAILS



RG ARCHITECTS P.A. 2070 McGregor Boulevard, Suite 3

> Fort Myers, FL 33901 P (239) 332-2040 F (239) 332-2049 www.rgarchitectspa.com

CERTIFICATE OF AUTHORIZATION NO. 35826

11926 Fairway Lakes Drive

FORT MYERS, FL 33913 PHONE: (239) 939-1414 FAX: (239) 278-4289 © 2022 - TRC Worldwide Engineering, Inc. All rights reserved. www.trcww.com

22FTM211 (R22)

OWNER

No 60487 STATE OF

PROJECT TITLE

LAKES PARK - CANOPY & CONTROL BLDG

PROJECT ADDRESS

REVISIONS DESCRIPTION DATE ISSUED: 10-13-2022 REVIEWED BY: PSM DRAWN BY RHE PSM DESIGNED BY: PROJECT NUMBER: SHEET TITLE

STRUCTURAL NOTES

SHEET ID

100% CONSTRUCTION DOCUMENTS

A. NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE SPECIFICALLY DESIGNATED ON THE STRUCTURAL DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER. CONTRACTOR SHALL SUBMIT A PENETRATION PLAN FOR APPROVAL INDICATING ANY PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE PLACEMENT.

- A. REFER TO THE ARCHITECT'S DRAWINGS AND SPECIFICATIONS FOR DIMENSIONAL, FINISH, AND OTHER REQUIREMENTS OF ARCHITECTURAL PRECAST.
- B. PRECAST MANUFACTURER IS TO BE RESPONSIBLE FOR THE DESIGN OF ALL PRECAST MEMBERS AND THEIR CONNECTION TO THE STRUCTURE. CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED BEARING THE SEAL OF AN PROFESSIONAL ENGINEER REGISTERED LICENSED WITHIN THE STATE IN WHICH THE JURISDICTION OF THE PROJECT IS LOCATED.
- C. ANY CONNECTIONS SHOWN ON CONTRACT DRAWINGS ARE SHOWN FOR GENERAL ARRANGEMENT ONLY. THE CONTRACTOR SHALL COORDINATE ALL PRECAST CONNECTIONS AND EMBEDDED ITEMS WITH THE PRECAST MANUFACTURER.
- D. THE ERECTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL TEMPORARY BRACING UNTIL ALL CONNECTIONS HAVE BEEN MADE AND TOPPING HAS BEEN CAST.
- E. PRECAST MANUFACTURER SHALL PROVIDE STABILIZING ANGLES, AS REQUIRED IN ALL PRECAST WORK.
- F. ALL EXPOSED STEEL CONNECTIONS AND SUPPORT ANGLES, PLATES, BARS, AND BOLTS (IN CONJUNCTION) USED WITH ALL PRECAST CONCRETE SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION AND FIELD TOUCHED UP WITH ZINC RICH PAINT.
- G. SUPPORTING BEAMS AND STRUCTURE WILL DEFLECT AND/OR ROTATE. PRECAST MANUFACTURER AND ERECTOR SHALL COORDINATE CONNECTION/ERECTION SEQUENCE TO ACCOUNT FOR THIS MOVEMENT AND MAKE FINAL ADJUSTMENTS TO ALIGN AND PLUMB PRECAST. THIS MAY REQUIRE ADJUSTING CONNECTIONS OR RECONNECTING.

3601 POST-INSTALLED ANCHORS:

- A. CONTRACTOR SHALL OBTAIN APPROVAL FROM ENGINEER OF RECORD PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED CAST-IN ANCHORS.
- B. CARE SHALL BE GIVEN TO AVOID DAMAGING EXISTING REBAR WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER MANUFACTURER'S INSTRUCTIONS.
- C. UNLESS SPECIFIED OTHERWISE, ANCHORS SHALL BE EMBEDDED IN THE APPROPRIATE SUBSTRATE WITH A MINIMUM EMBEDMENT OF 8 TIMES THE NOMINAL ANCHOR DIAMETER OR THE EMBEDMENT REQUIRED FOR SUPPORT OF THE INTENDED LOAD, ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCE AND/OR SPACING INDICATED IN THE MANUFACTURER'S LITERATURE.
- D. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE LISTED BELOW SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL WITH CALCULATIONS PREPARED. SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT SHOWING THAT THE SUBSTITUTED PRODUCT WILL ACHIEVE AN EQUIVALENT CAPACITY USING THE APPROPRIATE DESIGN
- E. ACCEPTABLE PRODUCTS FOR ANCHORS NOT EXPOSED TO WEATHER ARE AS
- a. EXPANSION ANCHORS FOR NON-CRACKED CONCRETE ONLY: WEDGE-ALL (WA) BY SIMPSON STRONG-TIE
- KWIK BOLT 3 BY HILTI
- b. CRACKED CONCRETE MECHANICAL ANCHORS: STRONG-BOLT (STB) BY SIMPSON STRONG-TIE
- KWIK BOLT (TZ) BY HILTI
- c. SCREW ANCHORS:
- TITEN HD (THD) BY SIMPSON STRONG-TIE HUS-H BY HILTI
- d. ADHESIVE ANCHORS INTO SOLID CONCRETE OR FULLY GROUTED CMU:
- SET EPOXY-TIÈ (SET) WITH RETROFIT BOLTS (RFB) BY SIMPSON
- HY 200 MAX BY HILTI
- e. FOR ANCHORING INTO HOLLOW BASE MATERIAL: CONTACT ENGINEER
- F. ACCEPTABLE PRODUCTS FOR ANCHORS EXPOSED TO WEATHER OR FOR **ENVIRONMENTAL STRUCTURES ARE AS FOLLOWS:**
- a. CONCRETE MECHANICAL ANCHORS:
- TRUBOLT BY ITW REDHEAD
 AISI 316 STAINLESS STEEL KWIK BOLT 3 BY HILTI - AISI 316 STAINLESS STEEL
- POWER STUD BY POWERS AISI 316 STAINLESS STEEL
- b. SCREW ANCHORS:
- TAPPER BY POWERS AISI 316 STAINLESS STEEL HUS-H BY HILTI
- c. CONCRETE OR SOLID GROUTED CMU ADHESIVE ANCHORS: HY 200 MAX BY HILTI – AISI 316 STAINLESS STEEL

PAINTED.

- A. ALUMINUM FABRICATION SHALL BE IN ACCORDANCE WITH APPLICABLE PROVISIONS OF THE ALUMINUM ASSOCIATION "STANDARD FOR ALUMINUM STRUCTURES". ALL MEMBERS SHALL BE ALUMINUM ASSOCIATION STANDARD STRUCTURAL SHAPES. WELDING OF ALUMINUM SHALL BE IN ACCORDANCE WITH AWS D1.2, "STRUCTURAL WELDING CODE - ALUMINUM", LATEST EDITION. FABRICATION WORK SHALL BE IN ACCORDANCE WITH CURRENT INDUSTRY PRACTICE.
- B. IN ADDITION TO THE REQUIREMENTS OF CODES LISTED ABOVE, ALUMINUM DESIGN, FABRICATION AND ERECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING CODES:
- a. (ADM 2005) 2005 EDITION OF THE ALUMINUM DESIGN MANUAL
- b. (AAF 2010) ALUMINUM ASSOCIATION OF FLORIDA 2010 GUIDE TO ALUMINUM CONSTRUCTION IN HIGH WIND AREAS
- C. ALL MEMBERS NOTED AS ALUMINUM SHALL BE ALUMINUM ASSOCIATION STANDARD STRUCTURAL SHAPES OR EXTRUSIONS WHERE SPECIFIED WITH PROPERTIES AND SHAPES AS DEPICTED ON DRAWINGS.
- D. ROLLED SECTIONS SHALL CONFORM TO ASTM B308, ALLOY 6061-T6. PLATE MATERIAL SHALL CONFORM TO ASTM B209, ALLOY 6061-T6. EXTRUDED SECTIONS SHALL CONFORM TO ASTM B221 ALLOY 6063-T6. ALUMINUM FINISH ON EXPOSED MEMBERS SHALL MEET AAMA 2605 STANDARDS.
- E. WHERE ALUMINUM ALLOY PARTS ARE IN CONTACT WITH, OR ARE FASTENED TO STEEL MEMBERS OR OTHER DISSIMILAR MATERIALS, THE ALUMINUM SHALL BE KEPT FROM DIRECT CONTACT BY PAINTING WITH ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPECIFICATION TT-P-645, FOLLOWED BY (2) COATS OF PAINT CONSISTING OF 2 LBS. OF ALUMINUM PASTE PIGMENT (ASTM SPECIFICATION D962-66, TYPE Z, CLASS B) PER GALLON OF VARNISH MEETING FEDERAL SPECIFICATION TT-V-81d, TYPE II, OR EQUIVALENT. 300 SERIES STAINLESS STEEL OR HOT-DIP GALVANIZED STEEL PLATE IN CONTACT WITH ALUMINUM NEED NOT BE
- ALUMINUM SHOULD NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE, GROUT, MASONRY, WOOD, FIBERBOARD OR OTHER POROUS MATERIAL THAT MAY ABSORB WATER AND CAUSE CORROSION. WHEN SUCH CONTACTS CANNOT BE AVOIDED, AN INSULATING BARRIER BETWEEN THE ALUMINUM AND THE POROUS MATERIAL SHALL BE INSTALLED. ALUMINUM SURFACES SHALL BE GIVEN A HEAVY COAT OF ALKALI RESISTANT BITUMINOUS PAINT OR OTHER COATING PROVIDING EQUIVALENT PROTECTION BEFORE INSTALLATION.
- G. SHEET METAL FASTENERS (SMS) FOR ALUMINUM SHALL BE BI-FLEX 300 SERIES (18-8) STAINLESS STEEL BI-METAL SELF DRILLING FASTENERS BY ELCO.
- H. SEE ARCHITECTURAL DRAWINGS FOR FINISH REQUIREMENTS.

ABBREVIATIONS					
ADDL	- ADDITIONAL	FS	- FAR SIDE	PAF	- POWER ACTUATED FASTENERS
AR	- ANCHOR ROD	FT	- FOOT	PART	- PARTITION
ALT	- ALTERNATE	FTG	- FOOTING	PARTL	- PARTIAL
APPROX	- APPROXIMATELY	FV	- FIELD VERIFY	PCJ	- PRECAST CONCRETE JOIST
ARCH	- ARCHITECT	GA	- GAGE	PJP	- PARTIAL JOINT PENETRATION
ARCHL	- ARCHITECTURAL	GALV	- GALVANIZED	PL	- PLATE
B/	- BOTTOM OF	GC	- GENERAL CONTRACTOR	PLF	- POUNDS PER LINEAR FOOT
BC	- BOTTOM CHORD	GT	- GIRDER TRUSS	PSF	- POUNDS PER SQUARE FOOT
BLDG	- BUILDING	HC	- HOLLOW CORE	PSI	- POUNDS PER SQUARE INCH
BM	- BEAM	HCP	- HOLLOW CORE PLANK	PT	- POST TENSIONED
BOTT	- BOTTOM	HDG	- HOT DIPPED GALVANIZED	PrT	- PRESSURE TREATED
BRG	- BEARING	HG	- HIP GIRDER	PNL	- PANEL
C/C	- CENTER TO CENTER	HK	- HOOK	R	- RADIUS
CF	- CONTINUOUS FOOTING	HORIZ	- HORIZONTAL	REG	- REGULAR
CIP	- CAST IN PLACE	HP	- HIGH POINT	REINF	- REINFORCING
CJ	- CONTRACTION JOINT	HS	- HIGH STRENGTH	REM	- REMAINDER
CJP	- COMPLETE JOINT PENETRATION	IJ	- ISOLATION JOINT	REQD	- REQUIRED
CL,	- CENTERLINE	INFO	- INFORMATION	REV	- REVISED/REVISION
CLR Q	- CLEAR	INS	- INSULATION	RM	- ROOM
CMU	- CONCRETE MASONRY UNIT	INT	- INTERIOR	RO	- ROUGH OPENING
COL	- COLUMN	IRR	- IRREGULAR	RQMTS	- REQUIREMENTS
CONC	- CONCRETE	JB	- JOIST BEARING	SCHED	- SCHEDULE
CONFIG	- CONFIGURATION	JBE	- JOIST BEARING ELEVATION	SECT	- SECTION
CONT	- CONTINUOUS	JR	- JAMB REINFORCING	SIM	- SIMILAR
CONTR	- CONTRACTOR	JT	- JOINT	SL	- SLOPE
CTR	- CENTER	K	- KIP(s), 1000 POUNDS	SOG	- SLAB-ON-GRADE
DBL	- DOUBLE	KLF	- KIPS PER LINEAR FOOT	SP	- SEAB-ON-GRADE - SPIRAL
DTL	- DOOBLE - DETAIL	KJ	- CONSTRUCTION JOINT	SQ	- SQUARE
DIA	- DETAIL - DIAMETER	L	- ANGLE	SS	- SQUARE - STAINLESS STEEL
DIM	- DIMINETER - DIMENSION	L LG	- LONG	STD	- STANDARD
DN	- DOWN	LLH	- LONG - LONG LEG HORIZONTAL	STL	- STANDARD - STEEL
DR	- DOWN - DRAIN	LLV	- LONG LEG HORIZONTAL - LONG LEG VERTICAL	STRUCTL	- STEEL - STRUCTURAL
DWG	- DRAIN - DRAWING	LP	- LOW POINT	SW#	- SHEARWALL
EA	- BRAWING - EACH	LW	- LOW FOINT - LONG WAY	SW#	- SHORT WAY
EE	- EACH - EACH END	LWT	- LIGHTWEIGHT	T/	- TOP OF
EF	- EACH END - EACH FACE	MFR	- MANUFACTURER	TB	- TIE BEAM
EJ	- EXPANSION JOINT	MAS	- MASONRY	TC	- TIE COLUMN
EL	- ELEVATION	MO	- MASONRY OPENING	TEMP	- TEMPERATURE
ELEV	- ELEVATION - ELEVATOR	MATL	- MATERIAL	TG	- TRUSS GIRDER
ENGR	- ELEVATOR - ENGINEER	MAX	- MAXIMUM	TH	- TRUSS GIRDER - TRUSS HIP
EOR	- ENGINEER - ENGINEER OF RECORD	MECHL	- MECHANICAL	THK	- THICK
EOS	- EDGE OF SLAB	MTL	- MECHANICAL - METAL	TJ	- TRUSS JACK
EQ EQ	- EQUAL	MIN	- METAL - MINIMUM	TR	- TRUSS JACK - TRUSS
		MISC			- TYPICAL
EW EXIST	- EACH WAY - EXISTING		- MISCELLANEOUS - NEAR SIDE	TYP	
		NS NIC		UNO	- UNLESS NOTED OTHERWISE
EXP	- EXPANSION	NIC	- NOT IN CONTRACT	VERT	- VERTICAL
EXT	- EXTERIOR	NTS	- NOT TO SCALE	W/	- WITHOUT
FIN	- FINISH	NW	- NORMAL WEIGHT	W/O	- WITHOUT
FLR	- FLOOR	OC	- ON CENTER	WD	- WOOD
FND	- FOUNDATION	OH	- OPPOSITE HAND	WP	- WORK POINT
FOM	- FACE OF MASONRY	OPNG	- OPENING	WWR	 WELDED WIRE REINFORCING



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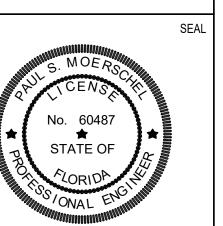
WORLDWIDE ENGINEERING CERTIFICATE OF AUTHORIZATION NO. 35826 11926 Fairway Lakes Drive

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FILE No. 22FTM211 (R22)

OWNER



PROJECT TITLE

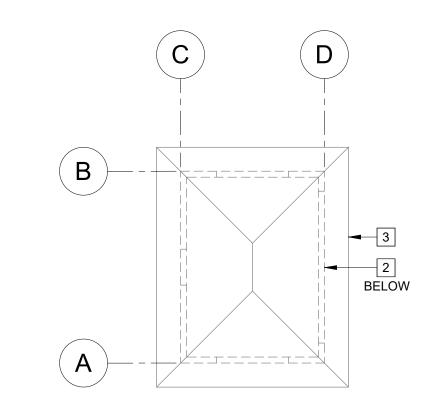
LAKES PARK - CANOPY & CONTROL BLDG

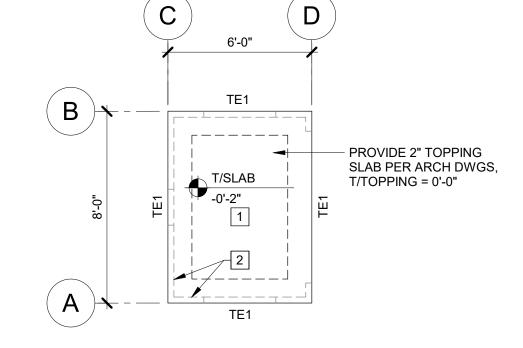
PROJECT ADDRESS

	REVISIONS		
NO.	DESCRIPTION	DATE	
DATE	ISSUED:	10-13-2022	
REVIE	WED BY:	PSM	
DRAWN BY:		RHE	
DESIGNED BY:		PSM	
PROJ	ECT NUMBER:		
	SH	IEET TITLE	

STRUCTURAL NOTES & **ABBREVIATIONS**

SHEET ID



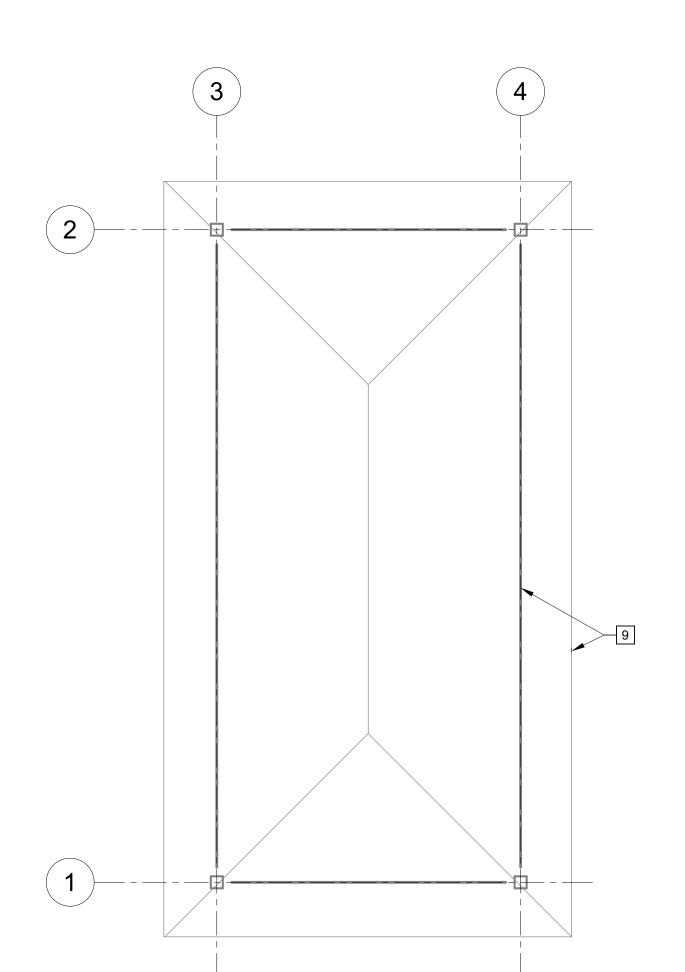


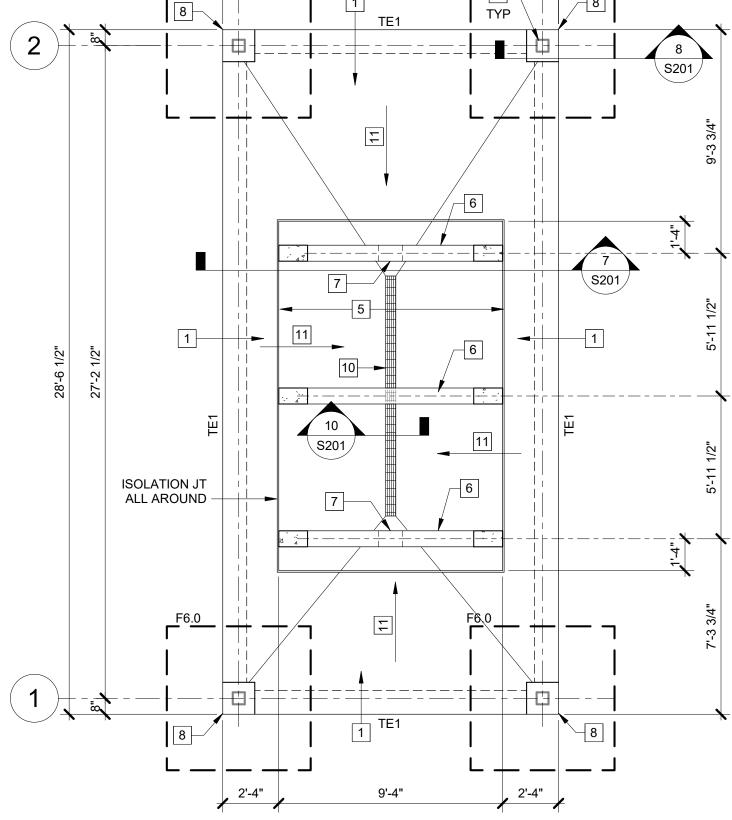
2 CONTROL BUILDING ROOF PLAN 1/4" = 1'-0"



14'-0"

12'-8"





STORAGE TANK SHADE 4 STRUCTURE ROOF PLAN

STORAGE TANK SHADE (3) STRUCTURE FOUNDATION PLAN

2'-9" 2'-6" 2'-4" 2'-2" 2'-1" 2'-0" 3'-3" 7'-6" 6'-6" 5'-10" 5'-4" 5'-0" 4'-7" 4'-4" 8'-4" 7'-3" 6'-6" 6'-0" 5'-6" 5'-1" 4'-10" **GRADE 75 STEEL** NORMAL WEIGHT CONCRETE STRENGTH PSI AND HIGHER 1'-3" 1'-8" 2'-0" 3'-3" 2'-10" 2'-7" 2'-5" 2'-3" 2'-2" 4'-5" 3'-10" 3'-5" 3'-2" 3'-0" 2'-9" 2'-7" 2'-5" 5'-0" 4'-7" 4'-3" 4'-0" 3'-9" 2'-9" 5'-9" 5'-3" 4'-10" 4'-7" 4'-3"

CLASS 'B' SPLICE SCHEDULE

DEVELOPMENT LENGTH SHALL BE PER FOLLOWING TABLE MODIFIED PER NOTES BELOW

GRADE 60 STEEL

NORMAL WEIGHT CONCRETE STRENGTH

PSI AND HIGHER

1'-0"

1'-8"

1'-1" 1'-0"

1'-5" 1'-4"

1'-10" 1'-9"

BAR | 3000 PSI | 4000 PSI | 5000 PSI | 6000 PSI | 7000 PSI | 8000 PSI | 9000 PSI |

3'-3" 2'-7" 2'-4" 2'-1" 2'-0"

NOTES:

1. FOR CLEAR SPACING BETWEEN BARS <db AND/OR CLEAR COVER <db, MULTIPLY BY 1.5. 2. FOR TOP BARS MULTIPLY BY 1.3.

#11 | 10'-5" | 9'-1" | 8'-1" | 7'-5" | 6'-10" | 6'-5" | 6'-0" | 5'-9"

- 3. FOR EPOXY COATED BARS, IF SPECIFIED OR APPROVED AS AN ALTERMNATE, MULTIPLY
- 4. FOR MMFX BARS, IF SPECIFIED OR USED, USE GRADE 75 KSI VALUES. 5. WHERE MORE THAN ONE FACTOR APPLIES, PRODUCT OF ALL APPLICABLE FACTORS
- SHALL BE APPLIED.

#10 9'-5" 8'-2" 7'-4" 6'-8" 6'-2" 5'-9" 5'-5"

6. IF DETAILER IS TO USE A DIFFERENT SCHEDULE, HE/SHE MUST SUBMIT A SEALED LETTER INDICATING THAT HIS/HER VALUES CORRESPOND TO CURRENT ACI 318 CODE.

5 CLASS 'B' SPLICE SCHEDULE

KEYNOTES

DESCRIPTION

SUBGRADE IN ACCORDANCE WITH GEOTECH REPORT

- 4" THICK 4,000 PSI (NW 145 PCF) CONCRETE SLAB ON GRADE WITH 4% DOSE OF EUCLID EÚCON ADMIXTURE. PROVIDE 6x6 W1.4xW1.4 WELDED WIRE REINFORCING (WWR) IN SHEETS NOT ROLLS CHAIRED TO TOP OF SLAB. PLACE CONCRETE ON 15 MIL VAPOR RETARDER, TAPE ALL SEAMS. PREPARE
- PRECAST CONCRETE STRUCTURE BY OTHERS, SEE ARCHITECTURAL DRAWINGS FOR DETAILS
- METAL ROOF SYSTEM BY OTHERS, SEE ARCHITECTURAL DRAWINGS FOR
- DETAILS PRE-ENGINEERED STEEL COLUMNS AND CONNECTIONS BY DELEGATE
- ENGINEER, SEE ARCHITECTURAL DRAWINGS FOR DETAILS 16" THICK MINIMUM CONCRETE SLAB WITH #4@10" OC TOP AND BOTTOM EACH
- 6 8" WIDE CONCRETE WALLS FOR TANK SUPPORT
- DRAIN OPENING BELOW IN WALL
- B 16" SQUARE CONCRETE PEDESTAL, SEE 8/S201
- PRE-ENGINEERED ALUMINUM CANOPY FRAMING AND CONNECTIONS BY DELEGATE ENGINEER, SEE ARCHITECTURAL DRAWINGS FOR DETAILS
- TRENCH DRAIN, SEE ARCHITECTURAL DRAWINGS FOR LENGTH, WIDTH AND
- ADDITIONAL INFORMATION. 1 SLOPE TO DRAIN, 1/4:12.

- <u>PLAN NOTES:</u>
 1. TOP OF GROUND FLOOR SLAB = REFERENCE ELEVATION 0'-0".
- 2. SEE SHEET S001 FOR STRUCTURAL NOTES AND DESIGN CRITERIA.
- 3. VERIFY ALL DIMENSIONS, ELEVATIONS AND FINISHES WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION OR FABRICATION.
- 4. TOP OF FOOTING ELEVATIONS SHALL BE -2'-0" UNLESS NOTED OTHERWISE. COORDINATE TOP OF FOOTING ELEVATIONS WITH SITE CIVIL. LOWER FOOTINGS AS REQUIRED TO AVOID FOUNDATION INFLUENCE, SEE 2/S201.
- 5. CENTERLINES OF COLUMNS SHALL COINCIDE WITH THE FOUNDATION CENTERLINES, UNLESS NOTED OTHERWISE.

	- FOOTING SCHEDULE -							
MARK	LENGTH	FTG WIDTH	THICKNESS	BOTTOM REINFORCING LW	BOTTOM REINFORCING SW	TOP REINFORCING LW	TOP REINFORCING SW	COMMENTS
F6.0	6'-0"	6'-0"	1'-4"	(7) #6	(7) #6	(7) #5	(7) #5	ALLOWABLE UPLIFT 10K ASD

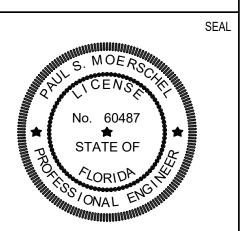


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OWNER



PROJECT TITLE

LAKES PARK - CANOPY & CONTROL BLDG

PROJECT ADDRESS

REVISIONS DESCRIPTION DATE ISSUED: 10-13-2022 PSM REVIEWED BY: DRAWN BY: RHE DESIGNED BY: PSM

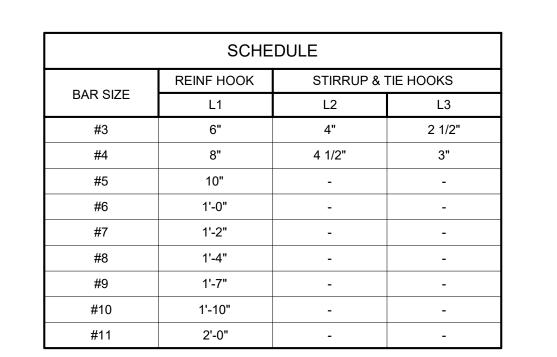
SHEET TITLE

FOUNDATION & ROOF PLANS

PROJECT NUMBER:

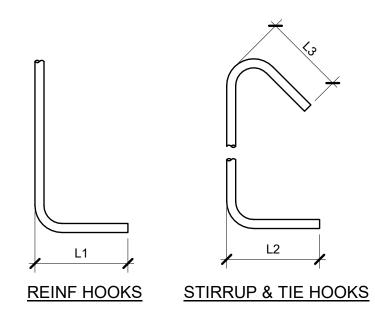
SHEET ID

S101



STD HOOK LENGTHS

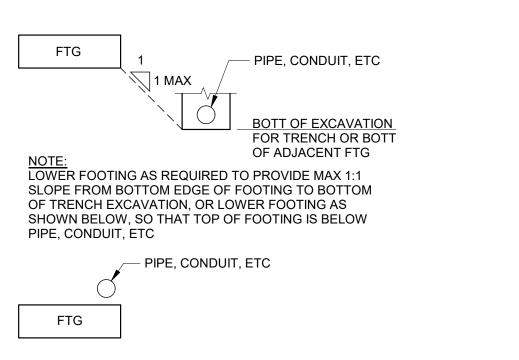
1" = 1'-0"

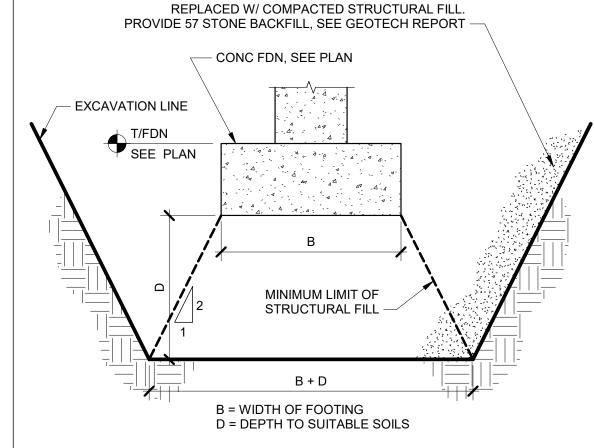


FACE OF ABUTTING STRUCTURE	
SOG (REINF NOT SHOWN) SEE PLAN	- 3/8" THK SONOBORN SONOLASTIC 150 SEALANT OR APPROVED EQUAL
	- 1"ø BACKER ROD COMPRESSED INTO JT
10 MIL VAPOR	- 3/4" PRE-MOLDED JT FILLER
RETARDER —	
NOTES: 1. PROVIDE SEALANT FOR EXTERN 2. CLEAN AND PREPARE SURFACE	

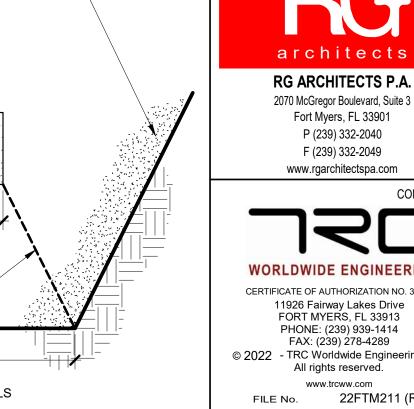
IN ACCORDANCE W/ MFR'S RECOMMENDATIONS.

3 ISOLATION JOINT AT SOG (IJ)
S201 3" = 1'-0"





SOFT OR UNSUITABLE SOILS EXCAVATED AND

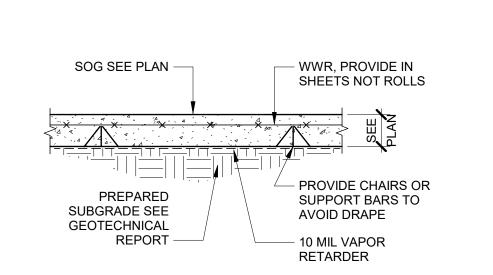


1 FOUNDATION UNDERCUTTING
| S201 3/4" = 1'-0"

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2" CLR 1'-8" MIN 2x8 KEY AT - 1" CLR, SEE CONSTRUCTION - SOG, SEE STRUCT **JOINTS** PLAN NOTES - 10 MIL VAPOR (2) #5 CONT TOP & BOTT, IF DIM 'A' EXCEEDS 2'-0" USE #4@10" OC HORIZ * AS REQUIRED NOT LESS THAN 6 UNLESS FORMED EDGE ** OR AS INDICATED ON ARCHL, COORDINATE W/ CIVIL 6 TURNED DOWN SLAB EDGE TE1

POUNDATION INFLUENCE
| S201 | 3/4" = 1'-0"



5 WWR AT SOG | 1" = 1'-0"

- STEEL COL, CONNECTIONS & CANOPY BY DELEGATE

GRAVEL PERIMETER,

16" SQ CONC PEDESTAL W/ (8) #7 VERT BARS (3 EA FACE) & #3 TIES AS SHOWN &

SEE ARCH

ENGINEER, SEE PLAN

@12" OC MIN

© COL, PEDESTAL & FTG

PROJECT TITLE

LAKES PARK - CANOPY & CONTROL BLDG

No. 60487

STATE OF

PROJECT ADDRESS

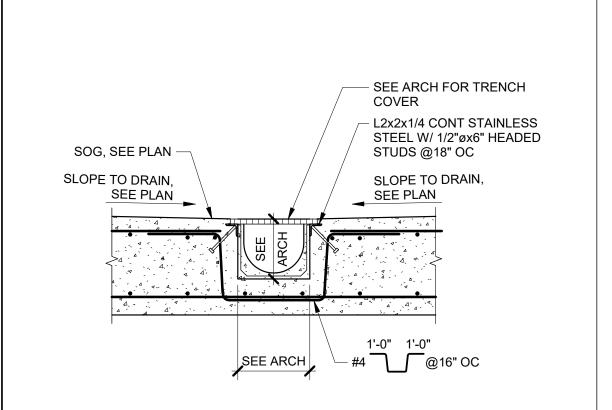
REVISIONS DESCRIPTION DATE ISSUED: 10-13-2022 REVIEWED BY: PSM DRAWN BY: RHE DESIGNED BY: PSM PROJECT NUMBER: SHEET TITLE

SECTIONS AND DETAILS

SHEET ID

- 3/16"x6" STAINLESS STEEL STRAP (AISI 316) 9'-4" - 3/4" CHAMFER, 1/2"ø STAINLESS STEEL ROD EA SIDE (AISI 316) – #4@8" OC VERT BARS CNTRD, PROVIDE DOWELS - (2) #5 VERT BARS CNTRD EA END OF W/ HOOK TO BOTT OF FTG -WALL, PROVIDE #5 DOWELS W/ HOOK TO BOTT OF FTG – #4@8" OC HORIZ BARS CNTRD W/ HOOKS EA END - GRAVEL PERIMETER, SEE ARCH SEE PLAN TURNED DOWN SLAB EDGE TE1, OMIT #4 BARS AT SHORT SIDES, SEE 6 / S201. —

7 STORAGE TANK SHADE STRUCTURE SLAB & WALL SECTION S201 3/4" = 1'-0"

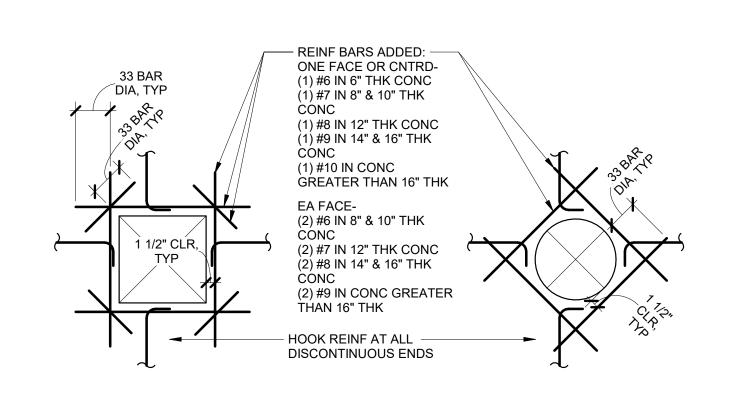


SECTION AT TRENCH DRAIN

S201 3/4" = 1'-0"

9 REINFORCING AT OPENINGS IN CONCRETE

9 3/4" = 1'-0"



STORAGE TANK SHADE STRUCTURE 8 CONCRETE PEDESTAL

(4) ANCHOR RODS MIN W/ 18"

(3) STIRRUPS @3" OC W/ REMAINDER @12" OC -

SOG, SEE PLAN -

CONC FTG

SEE PLAN -

MIN EMBED

ISOLATION JT

100% CONSTRUCTION DOCUMENTS