

GENERAL

- G 1 SCOPE
THE GENERAL NOTES AND STANDARD DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
- G 2 PRECEDENCE
IF THERE IS A CONFLICT BETWEEN PROJECT SPECIFICATIONS AND STRUCTURAL DRAWINGS, INCLUDING STRUCTURAL NOTES, CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR CLARIFICATION. SPECIFIC NOTES AND DETAILS ON DRAWINGS TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- G 3 DIMENSIONS
STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO THE MECHANICAL OR ELECTRICAL EQUIPMENT AND DIMENSIONS RELATED TO EXISTING FACILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION DIMENSIONS AND NOTIFYING CONSTRUCTION MANAGER OF DISCREPANCIES IN A TIMELY FASHION.
- G 4 PROVISIONS FOR EQUIPMENT
MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND EMBEDMENTS NOT SPECIFIED ON THE STRUCTURAL DRAWINGS, BUT SPECIFIED ON OTHER CONTRACT DRAWINGS, SHALL BE PROVIDED PRIOR TO CASTING CONCRETE.
- G 5 MEANS, METHODS & CONSTRUCTION LOADS
CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS AND SEQUENCE OF CONSTRUCTION, AND SHALL MAKE ADEQUATE PROVISION TO MAINTAIN THE INTEGRITY OF ALL STRUCTURES AT ALL STAGES OF CONSTRUCTION. DETERMINATION OF AND PROVISIONS FOR CONSTRUCTION LOADING SHALL BE PROVIDED BY THE CONTRACTOR.
- G 6 SAFETY
CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO ENSURE THE SAFETY OF WORKERS AND VISITORS TO THE SITE, INCLUDING BUT NOT LIMITED TO SHORING, BRACING AND ACCESS RESTRICTION. COMPLY WITH ALL FEDERAL, STATE AND LOCAL SAFETY CODES AND STANDARDS.
- G 7 DRAINAGE SURFACES
SLOPE DRAINAGE SURFACES UNIFORMLY TO DRAIN. SLOPE SHALL BE 1/8" TO 1/4" PER FOOT EXCEPT WHERE NOTED OTHERWISE ON THE PLANS.
- G 8 OPENINGS
OPENINGS THROUGH NEW AND EXISTING WALLS AND SLABS FOR PIPES, DUCTS, CONDUITS, ETC., ARE NOT ALL SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COORDINATE WITH OTHER DISCIPLINES AND PROVIDE THESE OPENINGS IN ACCORDANCE WITH THE OTHER CONTRACT DOCUMENTS.

DESIGN CRITERIA

- D 1 GOVERNING BUILDING CODE
CONSTRUCTION AND DESIGN SHALL BE IN ACCORDANCE WITH 2012 INTERNATIONAL BUILDING CODE. THIS CODE SHALL GOVERN EXCEPT WHERE OTHER APPLICABLE CODES OR CONTRACT PROVISIONS ARE MORE RESTRICTIVE.
- D 2 LIVE LOADS
1. STAIRS, LANDINGS AND ENTRY AREAS 100 PSF
- D 3 SNOW LOADS
GROUND SNOW LOAD $P_g = 15$ PSF
SNOW EXPOSURE FACTOR $C_e = 0.9$
THERMAL FACTOR $C_t = 1.2$
SNOW LOAD IMPORTANCE FACTOR $I_s = 1.10$
FLAT ROOF SNOW LOAD $P_f = 15$ PSF
PLUS DRIFT LOADS IN ACCORDANCE WITH ASCE 7-10
- D 4 WIND
BASIC WIND SPEED (ULTIMATE) 120 MPH
RISK CATEGORY III
EXPOSURE CATEGORY C
TOPOGRAPHIC FACTOR $K_{zt} = 1.0$

DESIGN CRITERIA (continued)

- D 6 SEISMIC
MCE ACCELERATION, SHORT PERIOD $S_s = .109$ g
MCE ACCELERATION, 1-SEC PERIOD $S_1 = 0.054$ g
SITE CLASS D
DESIGN ACCEL, SHORT PERIOD $S_{DS} = .116$ g
DESIGN ACCEL, 1-SEC PERIOD $S_{D1} = 0.086$ g
RISK CATEGORY III
SEISMIC IMPORTANCE FACTOR $I_e = 1.25$
SEISMIC DESIGN CATEGORY B
BASINS AND VAULTS:
GROUND SUPPORTED REINFORCED CONCRETE TANKS WITH NON-SLIDING BASE (ASCE 7-10, TABLE 15.4-2)..... $R = 2$ $\rho_o = 2$

FOUNDATION

- F 1 DESIGN BASIS
FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT, "CITY OF WICHITA WASTEWATER TREATMENT PLANT 2 METER VAULT, WICHITA, KANSAS", BY PEC CONSULTANTS, P.A., DATED JANUARY, 2017. CONTRACTOR SHALL FOLLOW THE PROJECT SPECIFICATIONS AND TAKE INTO CONSIDERATION RECOMMENDATIONS CONTAINED IN THE REPORT. NOTIFY THE CONSTRUCTION MANAGER OF CONFLICTS BETWEEN SPECIFICATIONS AND THE REPORT RECOMMENDATIONS FOR RESOLUTION.
- F 2 ALLOWABLE BEARING PRESSURE
SHALLOW FOUNDATIONS SHALL BEAR ON AT LEAST 2 FEET OF STRUCTURAL FILL AND HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF.
- F 3 MINIMUM FOUNDATION PREPARATION
ALL NEW FOUNDATIONS AND SLAB ON GRADE FLOORS SHALL BE SUPPORTED ON A MINIMUM OF 2 FEET OF PROPERLY PLACED AND COMPACTED STRUCTURAL FILL (SEE GEOTECHNICAL REPORT).
- F 4 DIFFERING CONDITIONS
FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION WHICH DIFFER FROM THOSE INDICATED IN THE REPORT SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR REPLACING WORK CONDUCTED AFTER SUCH NOTIFICATION BUT BEFORE ENGINEER PROVIDES ADDITIONAL DIRECTIONS.
- F 5 EXCAVATION, DE-WATERING & SAFETY
CONTRACTOR SHALL PROVIDE FOR ALL DE-WATERING OF EXCAVATIONS, AND DESIGN / PROVIDE ALL CRIBBING, SHORING AND BRACING REQUIRED FOR SAFETY AND TO ALLOW CONSTRUCTION OF THE WORK PRESENTED HEREIN.
- F 6 STRUCTURAL BACKFILL
UNLESS NOTED OTHERWISE, STRUCTURAL BACKFILL SHALL BE PLACED IN UNIFORM LAYERS AND SHALL BE BROUGHT UP UNIFORMLY AROUND THE STRUCTURE. ADDITIONALLY, BACKFILL SHALL BE BROUGHT UP UNIFORMLY ON BOTH SIDES OF FOUNDATION WALLS. SEE SPECIFICATION 31 23 00 FOR ADDITIONAL INFORMATION.

CONCRETE

- C 1 APPLICABLE CODES
CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 301-10 "SPECIFICATIONS FOR STRUCTURAL CONCRETE", AND THE FOLLOWING CODES: ACI 318-11 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" ACI 350-06 (FOR LIQUID CONTAINING STRUCTURES) - "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
- C 2 REINFORCING STEEL DETAILS
ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH ACI DETAILING MANUAL (ACI SP-66), LATEST EDITION.
- C 3 DESIGN STRENGTH
1. STRUCTURAL CAST-IN-PLACE CONCRETE $f'_c = 4,500$ PSI
2. REINFORCED STEEL ASTM A615, GRADE 60 DEFORMED BARS UNLESS OTHERWISE NOTED
- C 4 CONCRETE COVER
CONCRETE COVER FOR REINFORCING BARS SHALL CONFORM TO ACI 350 AND AS FOLLOWS WITH MINIMUM COVER OF ONE BAR DIAMETER:
1. CONCRETE CAST AGAINST EARTH 3"
2. CONCRETE EXPOSED TO EARTH, WASTEWATER, CHEMICALS OR WEATHER 3"
3. CONCRETE NOT EXPOSED TO EARTH, WASTEWATER, CHEMICALS OR WEATHER 1-1/2"
- C 5 BAR DEVELOPMENT AND LAP SPLICE LENGTH
SEE TABLE AT THE END OF THESE STRUCTURAL NOTES.
- C 6 WELDING REINFORCING BARS
ALL REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. REBAR WELDING SHALL BE IN ACCORDANCE WITH AWS D1.4.
- C 7 STANDARD HOOKS
BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-11. PROVIDE STANDARD HOOK IN BARS WHICH TERMINATE AT WALL OR SLAB EDGES / INTERSECTIONS THAT PROVIDE LESS THAN THE SPECIFIED DEVELOPMENT LENGTH.
- C 8 CHAMFERS
EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.
- C 9 ANCHOR BOLTS
ANCHOR BOLTS SHALL BE STAINLESS STEEL TYPE 316 MATERIAL UNLESS OTHERWISE NOTED (SEE SPECIFICATIONS).
- C 10 INSERTS
PROVIDE ANCHORAGE INSERTS ON CONCRETE WALLS AND CONCRETE CEILINGS IN GALLERIES, PIPE CHASES, TUNNELS AS REQUIRED BY MECHANICAL AND ELECTRICAL INSTALLATIONS. USE UNISTRUT P3200 SERIES HOT DIP GALVANIZED OR EQUAL UNLESS OTHERWISE SPECIFIED.
- C 11 COMPATIBLE FINISHES
CURING COMPOUNDS AND OTHER SURFACE TREATMENTS, CONCRETE ADMIXTURES AND SUB-SLAB DRAINAGE SHALL BE REVIEWED BY CONTRACTOR AND CERTIFIED COMPATIBLE WITH FINISHES TO BE APPLIED LATER IN THE CONSTRUCTION SEQUENCE.
- C 12 EXPOSED ENDS OF REINFORCING BARS AT SAWCUT OPENINGS IN EXISTING CONCRETE REMOVE REINFORCING BARS 1 1/2 INCHES BACK FROM FACE OF OPENING BY FLAME GOUGING. FILL HOLE AND REPAIR SURFACE WITH CONCRETE REPAIR MORTAR.

GROUT

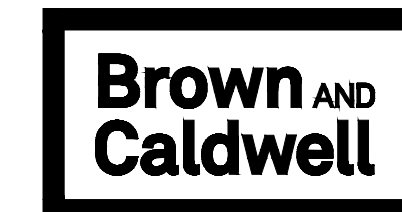
- GR 1 PRECISION NON-SHRINK CEMENT GROUT FOR STRUCTURAL STEEL COLUMNS AND TRUSS BEARING BASE PLATES: MASTERFLOW 928 GROUT OR EQUAL APPROVED BY OWNER.

DOWELS

- DL 1 LOCATE HOLES IN EXISTING CONCRETE TO MISS MAIN REINFORCING BARS, STIRRUPS AND EMBEDMENTS. THIS MAY INVOLVE RELOCATING DOWELS FROM POSITIONS SHOWN. NOTIFY THE OWNER OF ANY DOWEL RELOCATIONS. PRIOR TO DRILLING HOLES, FIELD VERIFY AND MARK THE LOCATION OF NEARBY EXISTING REINFORCING BARS, STIRRUPS AND EMBEDMENTS USING A PACHOMETER. IF THEY ARE HIT DURING DRILLING, NOTIFY THE OWNER.
- DL 2 CLEAN AND PREPARE HOLES IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S RECOMMENDATIONS. AS A MINIMUM, BLOW COMPRESSED OIL-FREE AIR FROM THE BOTTOM OF HOLE TOWARDS THE SURFACE. DRY AND CLEAN HOLE OF CONTAMINANTS.
- DL 3 PRESSURE GROUT ALL HOLES DEEPER THAN TWO FEET. SUBMIT PROCEDURE AND TECHNIQUE FOR PRESSURE GROUTING TO OWNER FOR APPROVAL PRIOR TO PLACING EPOXY.
- DL 4 FILL EACH HOLE WITH A SUFFICIENT AMOUNT OF EPOXY TO COMPLETELY SURROUND THE DOWEL. INSERT THE DOWEL AFTER THE EPOXY IS PLACED IN THE HOLE.

Sowed 07-07-2017 8:48:34 AM by EDESQUIZA
 Plot Scale 1:1 07-07-2017 10:41:00 AM by KURJIS,DEBAY
 P:\Data\GEN\Wichita\149376_66-inch Foreman Design\DAO\2-Sheets\3-Structural\PHASE 2-METER VAULT\149376S-0001

90 PERCENT CLIENT REVIEW SUBMITTAL NOT FOR CONSTRUCTION



No.	Revision	By	Date
WASTEWATER PLANT 2 INFLUENT FORCE MAIN - PHASE 2 STRUCTURAL GENERAL NOTES - 1 GARY JANZEN, P.E. - CITY ENGINEER CITY OF WICHITA PROJECT NO. 468-85118			
		PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com	
Designed by	J. SIMON	Job No.	35-15554-1-0042
Drawn by	R.BLUMENSHINE	Date	JULY 2017
			Sht.SA001 of 60