

GENERAL NOTES

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- FOUNDATION DESIGN AND SUBSURFACE INFORMATION IS BASED ON SOIL INVESTIGATION REPORT NOS. G03908 & G03908-2 PROVIDED BY ALPHA TESTING, INC. DATED DECEMBER 17, 2003 AND MARCH 11, 2004 RESPECTIVELY. THE FOUNDATIONS FOR SITE RETAINING WALLS SHALL CONSIST OF CONTINUOUS FOOTINGS FOUND ON IN-SITU CLAY SOILS OR NEW FILL SOILS AND ARE DESIGNED FOR 2000 PSF NET ALLOWABLE BEARING PRESSURE AND BASE COEFFICIENT OF FRICTION EQUAL TO 0.35 TO RESIST SLIDING.

THE FOUNDATIONS FOR ROTUNDA RETAINING WALLS SHALL CONSIST OF CONTINUOUS FOOTINGS AND PIERS IN EQUILIBRIUM. THE CONTINUOUS FOOTINGS FOUND ON IN-SITU CLAY SOILS ARE DESIGNED FOR 2000 PSF NET ALLOWABLE BEARING PRESSURE. THE DRILLED STRAIGHT-SHAFT PIERS FOUND IN GRAY MARL ARE DESIGNED FOR AN ALLOWABLE END BEARING PRESSURE OF 15,000 PSF AND ALLOWABLE SOIL FRICTION OF 1800 PSF FOR COMPRESSION AND 1500 PSF FOR UPLIFT.

THE FOUNDATIONS FOR THE FOUNTAIN BOWL, "BOAT PROWS", AND VARIOUS SITE WALLS LOCATED PER PLAN SHALL CONSIST OF DRILLED STRAIGHT-SHAFT PIERS FOUND IN GRAY MARL. THE DRILLED STRAIGHT-SHAFT PIERS ARE DESIGNED FOR A NET ALLOWABLE BEARING PRESSURE OF 15000 PSF, ALLOWABLE SOIL FRICTION OF 1800 PSF FOR COMPRESSION AND 1500 PSF FOR UPLIFT.

FOR LATERAL RESISTANCE, THE PIERS ARE DESIGNED FOR THE FOLLOWING ULTIMATE PRESSURES:

MATERIAL	PASSIVE PRESSURE (KSF)
OVERBURDEN SOILS	2.0
GRAY MARL	10.0

REINFORCED CONCRETE & MECHANICALLY STABILIZED LAKE WALL TO BE DESIGNED AND DETAILD BY THE WALL MANUFACTURER. REFERENCE STRUCTURAL SPECIFICATION SECTION 03480.

ALL EARTH RETAINING STRUCTURES ARE DESIGNED TO RESIST LATERAL EARTH PRESSURES EQUIVALENT TO 70 PSF FLUID PRESSURE IN ADDITION TO THE LIVE LOAD SURCHARGES LISTED BELOW.

- THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, 2000 EDITION.
- DESIGN LOADS ARE AS LISTED BELOW:

- LIVE LOADS**
PEDESTRIAN SURFACES 100 PSF
FIRELANE 260 PSF*

* REFERENCE ARTICLE 3.20.3 OF AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, LATEST EDITION.

- WIND LOADS**
PER 2000 INTERNATIONAL BUILDING CODE
80 MPH BASIC WIND SPEED
EXPOSURE "D"

- SEISMIC LOADS**
USE GROUP = 1, $I_e = 1.0$
 $S_{DS} = 0.115$
 $S_{D1} = 0.061$
SEISMIC CATEGORY A
SITE CLASS = D

- SEE LANDSCAPE DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS OF ALL SLAB DEPRESSIONS. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL SECTIONS WITH THE LANDSCAPE SECTIONS AND REPORT ANY DISCREPANCY TO THE LANDSCAPE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS.
- THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION MATERIALS WARE WEIGHT EXCEEDS THE DESIGN LIVE LOADS INDICATED ON THE STRUCTURAL DRAWINGS ARE NOT STORED ON STRUCTURALLY SUPPORTED BACKFILL.
- THE CONTRACTOR SHALL ENSURE THAT PERSONAL AND CONSTRUCTION VEHICLES ARE NOT PARKED OR DRIVEN ON STRUCTURALLY SUPPORTED BACKFILL.
- VERIFY ELEVATIONS WITH CIVIL DRAWINGS AND LANDSCAPE DRAWINGS PRIOR TO CONSTRUCTION. REFER TO CIVIL DRAWINGS FOR LOCATION OF STRUCTURES ON SITE.
- REFER TO LANDSCAPE DRAWINGS FOR ALL EXPANSION JOINT DETAILS, BLOCK OUTS, AND LOCATIONS.
- REFER TO LANDSCAPE DRAWINGS FOR DIMENSIONS NOT SHOWN.
- REFER TO LANDSCAPE DRAWINGS FOR ALL WATER PROOFING LOCATIONS, MATERIALS AND SPECIFICATIONS.

CONCRETE NOTES

- ALL CONCRETE SHALL BE LABORATORY DESIGNED AND CONTROLLED AND SHALL MEET THE REQUIREMENTS OF "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (AC308-99). CONCRETE SHALL ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

COMPRESSIVE STRENGTH @ 28 DAYS	TYPE AGGREGATE	AIR ENTRAINMENT	USAGE	WATER/CEMENT RATIO (MAX.)
3500 PSI	CRUSHED LIMESTONE	YES	CURBS, TOPPING SLABS	0.46
3000 PSI	CRUSHED LIMESTONE	NO	PIERS	0.55
4000 PSI	CRUSHED LIMESTONE	YES	STRUCTURAL SLABS, RETAINING WALLS	0.44

- ALL CONCRETE WORK TO BE IN ACCORDANCE WITH ACI 318 AND ACI 301.

- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS NOTED BELOW. REFERENCE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED.

PLASTER	3" BACK FILLED SIDES	2" NON-BACKFILLED SIDES
ALL CONCRETE PLACED AGAINST SOIL	3"	3"
SLABS-ON-GRADE	1 1/2" TOP	

NON PRE STRESSED CONCRETE
CONCRETE EXPOSED TO SOIL OR WEATHER: 2" (#5 OR LARGER BARS)
CONCRETE NOT EXPOSED TO SOIL OR WEATHER: 1 1/2" (#5 BAR OR SMALLER)

BEAMS AND COLUMNS: 1 1/2" (REF. DETAILS)
ELEVATED STRUCTURAL SLABS: 1"

PRE STRESSED CONCRETE:
CONCRETE EXPOSED TO EARTH OR WEATHER: 1" (SLABS)
CONCRETE NOT EXPOSED TO EARTH OR WEATHER: 1 1/2" (BEAMS)

BEAMS, JOISTS: 1 1/2" (PRIMARY REINFORCEMENT)
1" (STIRRUPS)

- IN THE EVENT THAT CONCRETE CASTING IS INTERRUPTED HORIZONTAL OR NEARLY HORIZONTAL CONSTRUCTION JOINTS SHALL BE PREPARED BY ROCKENING THE SURFACE IN AN APPROVED MANNER SO THAT THE AGGREGATE IS EXPOSED UNIFORMLY, LEAVING NO LANTANCE, LOOSE PARTICLES OR DAMAGED CONCRETE. ALL HORIZONTAL JOINTS AND REMEDIAL ACTION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVED.
- ALL PUMPED CONCRETE SHALL CONTAIN HIGH RANGE WATER REDUCER. REFER TO SPECIFICATIONS FOR MORE INFORMATION.
- AIR ENTRAINED CONCRETE SHALL HAVE AN AIR CONTENT OF 5 TO 7 PERCENT, BY VOLUME.

REINFORCING STEEL NOTES

- ALL REINFORCING SHALL BE NEW BILLET STEEL, ASTM A615 - GRADE 60. REINFORCING SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH THE ACI 308-99 AND ACI 318.
- HEADED STUDS USED IN FABRICATION OF EMBEDDED ASSEMBLIES SHALL BE WELDED TO THOSE ASSEMBLIES USING A FULL FUSION PROCESS.
- HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90 DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON THE DRAWINGS.
- ALL LAPS IN WELDED WIRE FABRIC SHALL BE ONE MESH PLUS TWO INCHES AT SUCKS.
- REINFORCE ALL MECHANICAL PADS WITH WELDED WIRE MESH 6 X 6 - #02.8 X #02.8. ALL MESH SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185.
- REINFORCING FOR WATER RETAINING STRUCTURES INCLUDING THE LAKE WALL, FOUNTAIN BOWL, AND POOL WALLS SHALL BE EPDM COATED PER SPECIFICATIONS.

BACKFILL NOTE

WALLS ARE DESIGNED FOR AN EQUIVALENT BACKFILL FLUID PRESSURE OF SEVENTY (70) POUNDS PER SQUARE FOOT OF DEPTH. ALL WALLS SHALL BE DRAINED AND BACKFILLED WITH SELECT FILL. BACKFILL SHOULD BE COMPACTED LEAN CLAY OR CHERTY CLAY AS DEFINED IN THE GEOTECHNICAL REPORT. FILL SHALL BE PLACED AT A MAXIMUM CONTENT BETWEEN 0 TO +4 PERCENT ABOVE OPTIMUM, AND UNIFORM LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS. IT SHOULD BE COMPACTED TO A LEAST 95 PERCENT OF ITS ASTM D-698 MAXIMUM DENSITY.

THE WALL SHALL NOT BE BACKFILLED UNTIL:

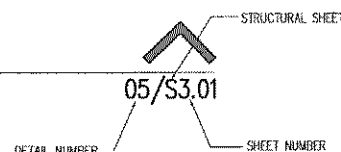
- THE WALL AND FLOOR CONCRETE STRENGTH HAS REACHED THE SPECIFIED 28 DAY COMPRESSIVE STRENGTH.

PRECAST CONCRETE NOTES

- CONNECTION DETAILS FOR PRECAST MEMBERS CONNECTED TO CAST IN PLACE CONCRETE SHALL BE FURNISHED BY THE PRECAST MANUFACTURER.
- PROVIDE 3/4" CHAMFER AT ALL EXPOSED CONCRETE EDGES.
- ALL PRECAST MEMBERS SHALL BE DESIGNED BY THE MANUFACTURER FOR ALL DEAD, LIVE, SNOW, WIND, AND SEISMIC LOADS. ALL PRECAST CONNECTIONS SHALL BE FURNISHED TO THE ENGINEER FOR REVIEW.
- THE CAST IN PLACE CONCRETE MEMBERS SUPPORTING PRECAST MEMBERS HAVE BEEN DESIGNED UTILIZING THE DEAD, LIVE, AND SEISMIC LOADS PROVIDED BY THE PRECAST MANUFACTURER.
- THE CAST IN PLACE CONCRETE CONTRACTOR SHALL PROVIDE AND COORDINATE LOCATION OF EMBEDS IN THE CAST IN PLACE CONCRETE REQUIRED FOR PRECAST CONNECTIONS WITH THE PRECAST MANUFACTURER.
- MANUFACTURER SHALL SUBMIT WRITTEN CERTIFICATION STATING THAT PRECAST MEMBERS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2000 INTERNATIONAL BUILDING CODE AND THE LOADS STATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. SUCH CERTIFICATION SHALL BE SUBMITTED WITH THE SHOP DRAWINGS AND SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS.
- PRECAST MANUFACTURER SHALL PROVIDE AN INDEPENDENT TESTING LAB TO INSPECT ALL PRECAST MEMBERS AND CERTIFY MINIMUM CLEARANCES TO REINFORCING PER ACI 308-99 ARE ACHIEVED.

ABBREVIATIONS

ACT. ACTUAL	CONVL. CONNECTION	H.R. HARD ROCK	PERP. PERPENDICULAR	TEMP. TEMPERATURE
ADD. ADDITIONAL	CONSTR. CONTINUOUS	HGT. HEIGHT	PL. PLATE	TERM. TERMINATE
ADJ. ADJACENT	CONTR. CONTRACTOR	HORIZ. HORIZONTAL	E. E	THK. THICK OR THICKNESS
AGGR. AGGREGATE	CONTR. CONTROL JOINT	IN. INCH	PT. POINT	T. & B. TOP & BOTTOM
ALT. ALTERNATE	CUBIC FEET	INFO. INFORMATION	P.C.F. POUNDS/CUBIC FOOT	T.O. TOP OF
AM. AMERICAN	CUBIC INCH	INSIDE DIAMETER	P.S.F. POUNDS/SQUARE FOOT	T.O.C. TOP OF CONCRETE
AMSC. AMERICAN SOCIETY OF STEEL CONSTRUCTION	CUBIC YARD	INT. INTERIOR	P.C. PRECAST	T.O.S. TOP OF SLAB
ASCE. AMERICAN SOCIETY OF CIVIL ENGINEERS	DET. DETAIL	JOINT JOINT	PROJ. PROJECTION	T.O. STL. TOP OF STEEL
ASTM. AMERICAN SOCIETY OF TESTING MATERIALS	DIA. DIAMETER	JST. JOIST	PROP. PROPERTY	T.O.W. TOP OF WALL
ANC. ANCHOR	DIAG. DIAGONAL	K. KIPS	PROPR. PROPERTY LINE	TYP. TYPICAL
ANCH. ANCHOR BOLT	DBL. DOUBLE	K.O. KNOCK OUT	QTY. QUANTITY	UNO. UNLESS NOTED OTHERWISE
AND AND	D.P.T.C. DOUBLE PITCH TOP CHORD	LVL. LEVEL	R. RADIUS	VAR. VARIES
ANGLE ANGLE	DOW. DOWEL	LT. WT. LIGHT WEIGHT	REF. REFER OR REFERENCE	VERT. VERTICAL
APPROX. APPROXIMATE	DRW. DRAWING	L.F. LINEAR FEET	REIN. REINFORCING	WT. WEIGHT
ARCH. ARCHITECT, OR ARCHITECTURAL	EA. EACH	LL. LONG LESS	REMA. REMAINDER	W.F. WELDED WIRE FABRIC
AREA AREA	EA. WAY EACH WAY	LLH. LONG LESS HORIZONTAL	REQD. REQUIRED	W/L. WIND LOAD
AVG. AVERAGE	EL. ELEVATION	LLV. LONG LESS VERTICAL	REV. REVISION	W/ WITH
BASE. BASEMENT	ELEV. ELEVATOR	MACH. MACHINE	R.D. ROOF DRAIN	W/O WITHOUT
BEAM BEAM	ELEV. ELEVATOR	MAN. MANUFACTURER	RTU ROOF TOP UNIT	WP. WORKING POINT
BENT BENT	ENG. ENGINEER	MARK MARK	RO. ROOF	YRD. YARD
BENT PL. BENT PLATE	EQ. EQUAL	MATCH MATCH LINE	SCHED. SCHEDULE	
BETW. BETWEEN	EXIST. EXISTING	MATL. MATERIAL	SECT. SECTION	
BOTT. BOTTOM	EXP. EXPANSION	MCH. MECHANICAL	SLH. SHORT LEG HORIZONTAL	
BR. L. BRICK LEDGE	EXP. EXPANSION JOINT	MID. MIDDLE	SLV. SHORT LEG VERTICAL	
BULD. BUILDING	EXT. EXTERIOR	MIN. MINIMUM	SHR. SHRINKAGE	
CANT. CANTILEVER	F.S. FAR SIDE	MISC. MISCELLANEOUS	SH. SHIM	
CAST IN PLACE CAST IN PLACE	F.F. FEET	N.S. NEAR SIDE	S.O.G. SLAB ON GRADE	
CEILING CEILING	FT. FEET	NOM. NOMINAL	SPA. SPACING	
CENTER CENTER	FIN. FINISH	NORTH NORTH	SPEC. SPECIFICATION	
CENTER TO CENTER CENTER TO CENTER	FIN. FINISH	NIC. NOT IN CONTRACT	SQ. SQUARE	
CHAM. CHAMFER	FLO. FLOOR	NIS. NOT TO SCALE	STD. STANDARD	
CHAM. CHAMFER	F.D. FLOOR DRAIN	NO. NO.	STL. STEEL	
CHAM. CHAMFER	FOOTING FOOTING	O.C. ON CENTER	STL. BM. STEEL BEAM	
CHAM. CHAMFER	GA. GAGE	O.D. OUTSIDE DIAMETER	ST. STIFFENER	
CHAM. CHAMFER	GAL. GALLON	OPNG. OPENING	STRUCT. STRUCTURAL	
CHAM. CHAMFER	GALV. GALVANIZED	OPP. OPPOSITE	STR. STRUT	
CHAM. CHAMFER	GR. GRADE	O.P. OPPOSITE	SY. SYMMETRICAL	
CHAM. CHAMFER		O.H. OPPOSITE HAND		



BAR SIZE	SPLICE LENGTH (INCHES)
3	16
4	21
5	27
6	32
7	37
8	45
9	50
10	101
11	124

PIER DIAMETER	VERT. REINF.	THE DIAMETER
24"	6 - #6	18"
30"	9 - #6	24"
36"	9 - #7	30"

APPROVED FOR
CONSTRUCTION

DEC 15 2005

City of Rockwall Engineering Dept.
City Engineer:



The seal appearing on this document was authorized by Gary George Taylor, P.E. 41009 on July 13, 2005. Alteration of a sealed document without proper notification to the responsible engineer is an offense under the Texas Engineering Act.

STRAIGHT-SHAFT PIER LEGEND

GENERAL NOTES & ABBREVIATIONS ROCKWALL WATERFRONT PARK ROCKWALL, TEXAS

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DESIGNED	DRAWN	DATE	SCALE	NOTES	FILE	NO.
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