

GENERAL

- THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE AND ALL APPLICABLE PROVISIONS OF THE CITY OF ROCKWALL, TEXAS.
- LOADS THAT HAVE BEEN USED IN THE STRUCTURAL DESIGN INCLUDE THE FOLLOWING:
 - DEAD LOADS:
 - DEAD LOADS HAVE BEEN CALCULATED TO INCLUDE THE ACTUAL WEIGHT OF ALL WORK SHOWN ON THE STRUCTURAL AND LANDSCAPE ARCHITECTURAL DRAWINGS.
 - EARTH LOADS AND SOIL PARAMETERS:
 - EQUIVALENT FLUID PRESSURE 50 PCF
 - VERTICAL SURCHARGE 100 PSF
 - ALLOWABLE BEARING PRESSURE (BASE OF BELLS) 5000 PSF
- COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE OWNER FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION, IN ACCORDANCE WITH THE SPECIFICATIONS. A PERIOD OF AT LEAST 10 WORKING DAYS SHALL BE PROVIDED FOR THIS REVIEW. REVIEW OF SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK.
- ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE STRUCTURE OR ANY PART OF THE STRUCTURE SHOWN ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN-WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
- THE CONTRACTOR SHALL REFER TO THE LANDSCAPE DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS AND DIMENSIONS OF ALL LANDSCAPE DETAILS. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL PLANS AND SECTIONS WITH THE LANDSCAPE PLANS AND SECTIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMPLETION OF THE SHOP DRAWINGS.
- THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
- THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS, OR FIT OF MATERIALS.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKERS AND OTHER PERSONS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.
- IF ANY INCONSISTENCIES OR DISCREPANCIES OCCUR WITHIN OR BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE GREATER QUANTITY OF ITEMS SHOWN AND / OR THE MOST COSTLY PRODUCT OR INSTALLATION METHOD SHALL BE PROVIDED, UNLESS INSTRUCTED OTHERWISE BY THE ENGINEER. IT SHALL BE DEEMED THAT THE CONTRACTOR BID AND INTENDS TO EXECUTE THE MORE STRINGENT OR HIGHER QUALITY REQUIREMENT WITHOUT ANY INCREASE TO THE CONTRACT SUM OR CONTRACT TIME.

CONCRETE

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
- MILD STEEL REINFORCING BARS SHALL CONFORM TO ASTM A 615. NO. 3 BARS SHALL BE GRADE 40. NO. 4 AND LARGER BARS SHALL BE GRADE 60.
- MILD STEEL REINFORCEMENT AND ACCESSORIES SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI SP66.
- PORTLAND CEMENT SHALL BE A SINGLE BRAND CONFORMING TO ASTM C 150, TYPE I OR II, UNLESS OTHERWISE NOTED.
- NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 33. ALL CONCRETE SHALL USE NORMAL WEIGHT AGGREGATES, UNLESS NOTED OTHERWISE.
- ALL ADDITIVES FOR AIR ENTRAINMENT, WATER REDUCTION, AND SET CONTROL SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. THE USE OF CALCIUM CHLORIDE IS PROHIBITED.
- MIXES SHALL BE DESIGNED TO PROVIDE CONCRETE WITH A COMPRESSIVE STRENGTH AT 28 DAYS (f_c) OF 3000 PSI.
- THE MAXIMUM NOMINAL SIZE OF COARSE AGGREGATE SHALL BE AS FOLLOWS:

ALL CONCRETE	1"
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- CONCRETE SLUMPS SHALL BE AS FOLLOWS:

PIERS	6" (+/- 1")
ALL OTHER CONCRETE	4" (+/- 1")
- MILD STEEL REINFORCEMENT SHALL BE PLACED AND SECURED IN ACCORDANCE WITH CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS".
- CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 3" FOR CONCRETE CAST AGAINST EARTH AND 1 1/2" FOR OTHER CONCRETE (UNLESS NOTED OTHERWISE ON THE DRAWINGS).
- THE TESTING LABORATORY SHALL BE NOTIFIED AFTER THE MILD STEEL REINFORCEMENT AND EMBEDS ARE POSITIONED PRIOR TO EACH CONCRETE PLACEMENT. NO CONCRETE SHALL BE PLACED UNTIL THESE ITEMS ARE CHECKED AND APPROVED BY THE TESTING LABORATORY.
- EACH AREA OF CONCRETE WORK SHALL BE FINISHED AND CURED IN ACCORDANCE WITH THE SPECIFICATIONS. CHAMFERS (3/4") SHALL BE PROVIDED AT ALL EXPOSED EDGES AND IN ACCORDANCE WITH THE ARCHITECTURAL DRAWINGS.

LAP/LENGTH/HOOK LENGTHS			
BAR SIZE	Ld	LAP	90 DEG HOOK
#3	1'-1"	1'-5"	6"
#4	1'-5"	1'-11"	8"
#5	1'-9"	2'-4"	10"
#6	2'-1"	2'-9"	1'-0"
#7	2'-5"	3'-2"	1'-2"
#8	2'-9"	3'-7"	1'-4"

EARTHWORK AND FOUNDATIONS

- THE FOUNDATION DESIGN IS IN ACCORDANCE WITH A GEOTECHNICAL INVESTIGATION AND REPORT BY TERRACON (PROJECT NUMBER 94125176.1), DATED JUNE 21, 2013. EXCERPTS FROM THE AFOREMENTIONED REPORT ARE PROVIDED BELOW FOR INFORMATION ONLY. ALL EARTHWORK SHALL BE BASED UPON THE GEOTECHNICAL REPORT.
- THE PROJECT PLANS AND SPECIFICATIONS SHALL BE REVIEWED BY A GEOTECHNICAL ENGINEER TO VERIFY COMPATIBILITY BETWEEN THE GEOTECHNICAL RECOMMENDATIONS AND THE DRAWINGS AND SPECIFICATIONS.
- A QUALIFIED GEOTECHNICAL ENGINEER SHALL BE RETAINED BY THE OWNER TO OBSERVE ALL EARTHWORKING OPERATIONS AND THE REQUIRED TESTING FOR IMPLEMENTING THE RECOMMENDATIONS OF THE AFOREMENTIONED GEOTECHNICAL REPORT. THESE TESTS AND OBSERVATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
 - OBSERVATION AND TESTING DURING SITE PREPARATION AND GRADING
 - OBSERVATION OF THE PIER DRILLING OPERATION
 - CONSULTATION AS REQUIRED DURING CONSTRUCTION
- ALTERNATES RELATED TO LIME STABILIZED LAYERS AND REWORKING EXISTING ON SITE MATERIALS SHALL NOT BE CONSIDERED.
- BOTH THE AREAS TO RECEIVE FILL AND FILL MATERIALS SHALL BE FREE OF ANY VEGETATION OR DEBRIS. PRIOR TO PLACING THE FILL, THE EXPOSED SUBGRADE IN AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A DEPTH OF 6 INCHES AND RECOMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY AT OR ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698.
- SELECT FILL SHALL CONSIST OF NON-EXPANSIVE MATERIAL WITH A LIQUID LIMIT OF LESS THAN 35 AND A PLASTICITY INDEX OF LESS THAN 15. COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. COMPACTION WITHIN 3 FEET OF THE BACK FACES OF WALLS SHALL BE PERFORMED WITH LIGHT COMPACTION EQUIPMENT.
- LOCATE ALL UTILITIES AND UNDERGROUND SERVICES PRIOR TO PERFORMING EXCAVATION OF ANY KIND.
- THE CONTRACTOR SHALL ENGAGE A REGISTERED SURVEYOR TO PERFORM SURVEYS, LAYOUTS, AND MEASUREMENTS FOR PIER WORK. THIS INCLUDES LAYOUT WORK FOR EACH PIER TO LINES AND LEVELS REQUIRED BEFORE EXCAVATION, AND MEASUREMENTS OF EACH PIER'S ACTUAL FINAL LOCATION. PIERS SHALL BE CONSTRUCTED WITHIN THE FOLLOWING CENTERLINE TOLERANCES:
 - MAXIMUM PERMISSIBLE VARIATION OF LOCATION: NOT MORE THAN 1".
 - SHAFTS OUT OF PLUMB: NOT MORE THAN 1% OR 2".
 - CONCRETE CUT-OFF ELEVATION: PLUS 1" TO MINUS 2"
- DRILLED PIERS ARE DESIGNED FOR AN ALLOWABLE END BEARING PRESSURE OF 5,000 PSF THESE VALUES ARE APPLICABLE FOR BELLS BEARING AT 13 FEET DEPTH (IN TAN LEAN CLAY).
- EXCAVATIONS FOR THE SHAFTS SHALL CONTAIN NO MORE THAN 2 INCHES OF STANDING WATER. BELLS MAY BE RAISED NO MORE THAN 2 FEET TO AVOID WATER INFILTRATION ISSUES. NOTIFY ENGINEER OF EXCESSIVE WATER SEEPAGE ISSUES.
- THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER 24 HOURS PRIOR TO COMMENCEMENT OF DRILLING. EACH PIER EXCAVATION SHALL BE INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO CONCRETING TO ASSURE COMPLIANCE WITH DESIGN ASSUMPTIONS AND TO VERIFY:
 - THE BEARING STRATUM;
 - THE MINIMUM PENETRATION;
 - THE REMOVAL OF ALL SMEAR ZONES AND CUTTINGS;
 - THAT GROUNDWATER SEEPAGE IS CORRECTLY HANDLED;
 - THE COMPETENCE OF THE TAN LEAN CLAY FOR THE FULL SECTION OF THE DESIGN PENETRATION.
- PROVIDE PIER BOLSTERS AND CENTERING DEVICES FOR PIER REINFORCEMENT BY PIERSEARCH OR APPROVED EQUAL.
- "MUSHROOMING" AT THE TOP OF THE PIERS IS PROHIBITED.

CONCRETE MASONRY

- REINFORCED CONCRETE MASONRY WALL CONSTRUCTION SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (f_m) OF 1500 PSI.
- CONCRETE BLOCK SHALL BE NORMAL WEIGHT UNITS CONFORMING TO ASTM C 90, WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI.
- MORTAR SHALL CONFORM TO ASTM C 270, TYPE S. AGGREGATES FOR MORTAR SHALL CONFORM TO ASTM C 144.
- GROUT SHALL BE FINE GROUT CONFORMING TO ASTM C 476. AGGREGATES FOR GROUT SHALL CONFORM TO ASTM C 404. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
- MAXIMUM AGGREGATE SIZE IN BOND BEAMS SHALL BE 3/4". VERTICAL REINFORCEMENT SHALL BE CONTINUOUS THROUGH BOND BEAMS UNLESS NOTED OTHERWISE.
- REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60.
- PROVIDE ADDITIONAL VERTICAL REINFORCING BARS AT FIRST TWO CELLS ADJACENT TO ALL CMU WALL CORNERS AND AT WALL ENDS. PROVIDE DOWELS CONNECTING WALLS TO FOUNDATION AT ALL VERTICAL BARS (INCLUDING WHERE EXTRA BARS ARE REQUIRED).
- ALL CELLS CONTAINING REINFORCING BARS, BOLTS OR OTHER METAL ANCHORS SHALL BE GROUTED SOLID. ANY CELLS AT OR BELOW FINISHED GRADE SHALL BE GROUTED SOLID, WHETHER REINFORCED OR NOT.
- HORIZONTAL JOINT REINFORCEMENT SHALL BE FACTORY-FABRICATED, TRUSS TYPE 9 GA OR HEAVIER WIRE CONFORMING TO ASTM A 82. EXCEPT WHERE NOTED OTHERWISE, PLACE REINFORCEMENT CONTINUOUSLY AT A MAXIMUM VERTICAL SPACING OF 16" OC.
- EXTERIOR FACES OF WALLS SHALL BE WATERPROOFED. CRACKS IN MORTAR JOINTS SHALL BE RETOOLED.

ABBREVIATIONS

EF	EACH FACE
ES	EACH SIDE
EW	EACH WAY
FTG	FOOTING
GA	GAGE
GB	GRADE BEAM
OC	ON CENTER
STD	STANDARD
TW	TOP OF WALL
TYP	TYPICAL



Downtown Rockwall
 Project # 2024 ~ renovation ~
streetscape improvements
 rockwall, texas



submittals 7 revisions

no.	date	detail
1	7-22-14	RFI #109

REMOVED NOTE
7-22-14

la terra studio, inc.

12024
 Its project number
 4.15.2014
 date
 bgp
 drawn by
 bgp
 checked by

registration



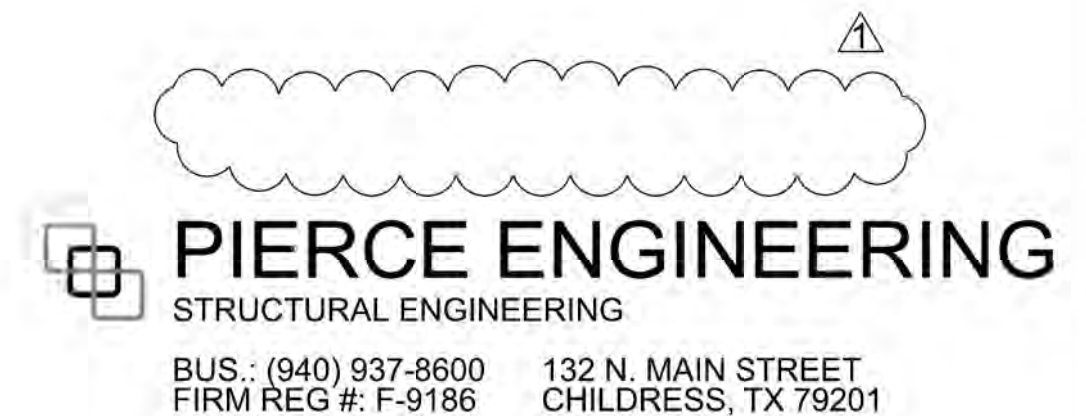
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STRUCTURAL NOTES

sheet number

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