STRUCTURAL NOTES

I. DESIGN BASIS

A. APPLICABLE CODE: 2006 INTERNATIONAL BUILDING CODE (IBC)

B. OCCUPANCY CATEGORY = III

C. SEISMIC DESIGN DATA:

I = 1.5
Sds = 1.0
Sd1 = 0.4
SITE CLASS = C

II. MATERIALS

A. STEEL

1. STEEL MATERIALS:

SHAPE	MATERIAL
PLATES	ASTM A36
ANGLES & CHANNELS	ASTM A36
BOLTS (MB)	ASTM A307
WELDING ELECTRODES	E70, SEE SPECIFICATIONS FOR CVN REQUIREMENTS

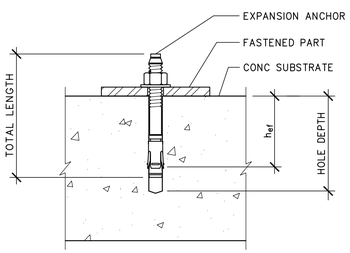
2. STRUT: AS MANUFACTURED BY UNISTRUT OR APPROVED EQUAL. UNISTRUT DESIGNATION USED

B. POST-INSTALLED ANCHORS IN CONCRETE OR MASONRY

1. POST-INSTALLED ANCHORS INCLUDE EXPANSION ANCHORS.
2. INSTALL POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE APPLICABLE ICC-ES REPORT AND THE MANUFACTURER'S RECOMMENDATIONS.
3. USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS.
4. SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHOR INSTALLATIONS, UON.
5. FIELD TESTING OF POST-INSTALLED ANCHORS IS REQUIRED, UON. TESTINSTALLED ANCHORS IN ACCORDANCE WITH THE FOLLOWING:
   a. TEST 50% OF ANCHORS AT ALL NON-STRUCTURAL APPLICATIONS (SUCH AS EQUIPMENT ANCHORAGE), UON.
   b. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.
   c. FIELD TESTS SHALL BE EITHER TENSION TESTS OR TORQUE TESTS, AS REQUIRED FOR THE SPECIFIC ANCHOR TYPE.
   d. TORQUE TESTS: TO BE ACCEPTABLE, THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF TURN OF THE NUT.
   e. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
   f. FIELD TESTING SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR.
6. EXPANSION ANCHORS
   a. EXPANSION ANCHORS SHALL BE ONE OF THE FOLLOWING, UON:

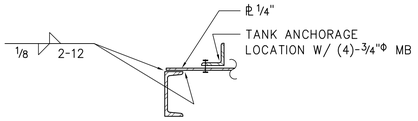
      CARBON STEEL HILTI KWIK BOLT TZ (ICC-ES REPORT ESR-1917).

   b. ANCHOR EMBEDMENT AND FIELD TEST VALUES ARE AS FOLLOWS, UON:

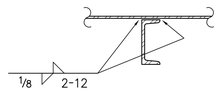


HILTI KWIK BOLT TZ IN NORMAL-WEIGHT CONCRETE			
ANCHOR DIAMETER	h_{ef}	MINIMUM HOLE DEPTH	TORQUE TEST VALUE (FT-LBS)
3/8"	2"	2 5/8"	25
1/2"	2"	2 5/8"	40
5/8"	4"	4 3/4"	60
3/4"	4 3/4"	5 3/4"	110

   c. h_{ef} IS MEASURED FROM FACE OF CONCRETE SUBSTRATE TO THE TEETH ON THE EXPANSION ELEMENT.
   d. CONTRACTOR SHALL PROVIDE ANCHORS WITH SUFFICIENT TOTAL LENGTH FOR THE SPECIFIED EMBEDMENT LENGTH, THICKNESS OF FASTENED PART, WASHER AND NUT.

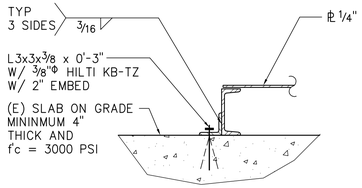


a COVER ℄ TO CHANNEL

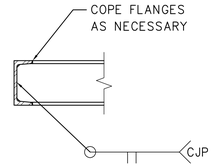


b COVER ℄ TO CHANNEL OR ANGLE

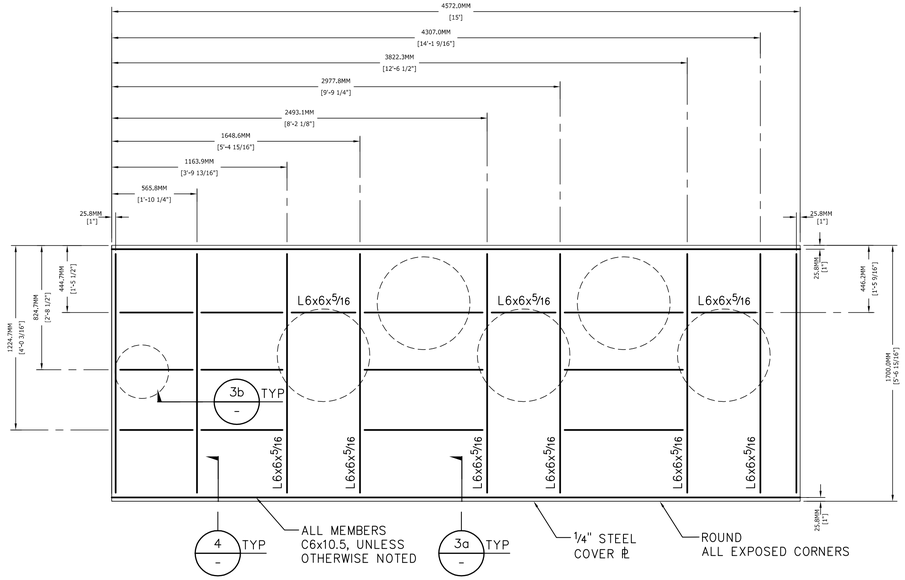
3 FRAME CONNECTION DETAILS



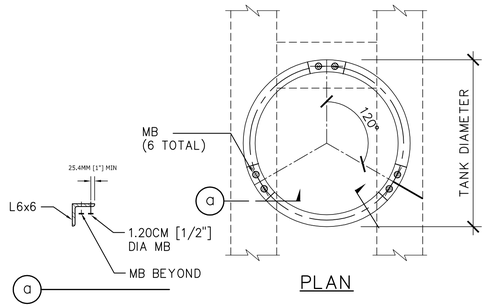
8 ANCHORAGE DETAIL



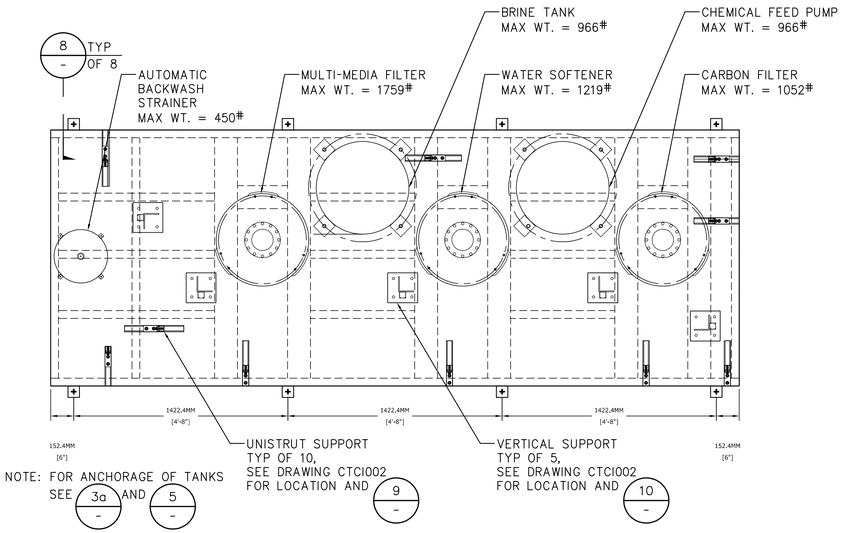
4 CHANNEL OR ANGLE TO CHANNEL CONNECTION



1 SKID DIMENSION

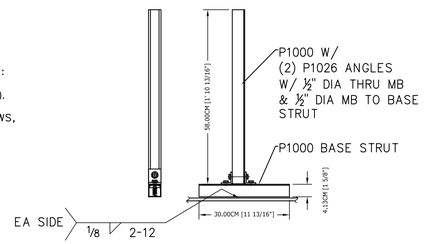


5 TANK ANCHORAGE DETAILS

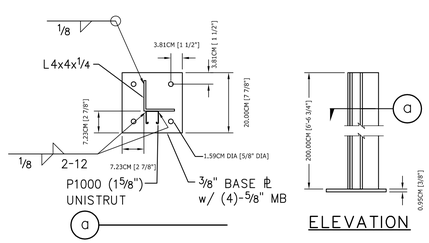


NOTE: FOR ANCHORAGE OF TANKS SEE 3a AND 5

2 ANCHORAGE DETAILS



9 UNISTRUT SUPPORT DETAIL



10 VERTICAL SUPPORT DETAIL

Thornton Tomasetti
Thornton Tomasetti, Inc.
555 12th Street, Suite 600
Oakland, CA 94607
T 510.285.1900 F 510.285.1901

REGISTERED PROFESSIONAL ENGINEER — WILLIAM P. DASHER — NO. 2363 — STRUCTURAL — STATE OF CALIFORNIA

REFERENCED DRAWINGS	REV	DATE	APPROVED BY:	DESCRIPTION	REV	DATE	APPROVED BY:	DESCRIPTION
	2	07/28/10		ISSUE FOR APPROVAL				
	1	07/30/10		DIMENSION AND WELD CORRECTIONS				

RSEA ENGINEERING CORPORATION

1011 PROJECT

GRAPHIC SCALES: 0

IF THIS DRAWING IS SCALED, THE GRAPHIC SCALE MUST BE USED.

PROJECT NAME: SURVEILLANCE RADAR PROGRAM
BUILDING/STRUCTURE: WATER TREATMENT BUILDING
DRAWING TITLE:

DESIGNED BY: | DRAWN BY:
CHECKED BY: | APPROVED BY:
SCALE: 1:200(A3) 1:100(A1) | DATE:

DISCIPLINE	SHEET TYPE	SEQUENCE	SUBCON
N	1	XX	CTCI

CONTRUCTION DWG NO.: CTCI001 WT-N-21XX

PRINT DATE: 2009/03/30