

**GENERAL NOTES:**

1. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH OTHER CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS TO CHECK AND VERIFY ALL DIMENSIONS ON THE STRUCTURAL DRAWINGS WITH THE RELATED PROJECT DRAWINGS AND SITE CONDITIONS BEFORE CONSTRUCTION. ANY DISCREPANCIES OR ERRORS MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.
3. DO NOT SCALE DRAWINGS.
4. DESIGN LIVE LOADS FOR EACH PORTION OF THE STRUCTURE ARE SHOWN. DO NOT EXCEED THESE LOADS DURING CONSTRUCTION.
5. FEATURES OF CONSTRUCTION NOT FULLY SHOWN ARE OF THE SAME CHARACTER AS THOSE NOTED FOR SIMILAR CONDITIONS.
6. STRUCTURAL DESIGN IS BASED ON THE LATEST EDITION OF THE NATIONAL AND ONTARIO BUILDING CODES AND, SPECIFICALLY, DIV. B - PART 4 OF THE 2006 ONTARIO BUILDING CODE.
7. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING FOR THE TESTING OF CONCRETE, COMPACTION, INSPECTION OF STRUCTURAL REINFORCING AND STRUCTURAL STEEL FOR ALIGNMENT, BOLTS AND WELDED CONNECTIONS AND FOR THE PROMPT SUBMISSION OF ALL REPORTS TO THE PROJECT ENGINEER AND ARCHITECT.
8. ANY TEMPORARY SHORING REQUIRED TO CONSTRUCT THE WORKS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT THE START OF THE PROJECT AND ARRANGE FOR ALL INSPECTIONS IN ACCORDANCE WITH CLAUSE 10.2 OF THE BUILDING CODE ACT AND DIV. C, PART 1 OF THE ONTARIO BUILDING CODE. PROVIDE MINIMUM 48 HOURS NOTICE WHEN AN INSPECTION IS REQUIRED. GAMSBY AND MANNEROW MAY BE CONTACTED BY PHONE AT (519) 376-1805 TO ARRANGE INSPECTIONS.
10. ALL NECESSARY APPROVALS MUST BE OBTAINED BY OTHERS BEFORE CONSTRUCTION BEGINS.

**DESIGN INFORMATION**

1. ALL DESIGN LOADINGS SHOWN ARE SPECIFIED (UNFACTORED) LOADS.
2. IMPORTANCE FACTOR: NORMAL
3. BASIC SNOW LOAD FACTOR: 0.55
4. SNOW:
  - GROUND SNOW LOAD,  $S_g$ : 2.7 kPa (56.4 psf)
  - RAIN LOAD,  $S_r$ : 0.4 kPa (8.35 psf)
  - ROOF SNOW LOAD:  $(2.7 \times 0.55) + 0.4 = 1.9 \text{ kPa (39.7 psf)}$
5. HOURLY WIND PRESSURES:
  - 1/10 YEAR: 0.25 kPa (5.2 psf)
  - 1/50 YEAR: 0.39 kPa (8.1 psf)
6. DEAD:
  - ROOF DEAD LOAD: 0.5 kPa (10.4 psf)

**CONSTRUCTION JOINTS:**

1. CONSTRUCTION JOINTS SHALL BE DESIGNED AND LOCATED SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE. IF CONSTRUCTION JOINTS ARE NOT SPECIFICALLY LOCATED AND THERE IS ANY DOUBT CONCERNING THE LOCATION, THE CONTRACTOR MUST CONSULT WITH THE ENGINEER.
2. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF THE SET CONCRETE SHALL BE THOROUGHLY CLEANED OF FOREIGN MATTER AND LAITANCE, SATURATED WITH WATER AND LEFT IN A DAMP CONDITION WITH NO FREE WATER ON THE SURFACE IMMEDIATELY BEFORE PLACING ADJACENT CONCRETE.
3. A 38 mm X 89 mm ( $1\frac{1}{2}'' \times 3\frac{3}{4}''$ ) KEYWAY MUST BE PLACED IN THE WALL AT ALL CONSTRUCTION JOINTS IN CONCRETE WALLS.
4. REINFORCING STEEL PROJECTING THROUGH CONSTRUCTION JOINT SHALL BE THOROUGHLY CLEANED OF LOOSE FLAKY RUST, MUD, OIL DRIED CONCRETE OR OTHER COATINGS WHICH WOULD DESTROY OR REDUCE BOND.
5. THE MAXIMUM SPACING OF THE CONTROL JOINTS SHALL BE 4.8 m (16 ft).

**COLD WEATHER REQUIREMENTS:**

THE FOLLOWING COLD WEATHER REQUIREMENTS SHALL APPLY WHENEVER THE AIR TEMPERATURE IS AT OR BELOW 5°C, OR WHEN THERE IS A PROBABILITY OF ITS FALLING BELOW 5°C WITHIN 24 HOURS OF PLACING. NO COLD WEATHER CONCRETE WORK SHOULD BE DONE WITHOUT APPROVAL BY THE STRUCTURAL ENGINEER.

1. ALL COLD WEATHER CONCRETING SHALL BE COMPLETED IN ACCORDANCE WITH CAN/CSA A23.1-04.
2. ALL MATERIALS AND HEATING EQUIPMENT NEEDED FOR ADEQUATE PROTECTION AND CURING SHALL BE ON HAND AND READY FOR USE BEFORE PLACEMENT IS STARTED. PROTECTION SHALL BE PROVIDED BY MEANS OF HEATED ENCLOSURES, COVERINGS, INSULATION, OR A SUITABLE COMBINATION OF THESE METHODS.
3. ALL AGGREGATES AND WATER SHALL BE PRE-HEATED. ALL FORMS, FILL AND GROUND WITH WHICH THE CONCRETE IS IN CONTACT OR IS CALCULATED TO COME IN CONTACT WITH SHALL BE DEFROSTED. STEEL REINFORCEMENT AND AGGREGATES SHALL BE PROTECTED BY ADEQUATE MEANS TO PREVENT FORMATION OF AN ICE FILM.
4. ALL CONCRETE SHALL HAVE A TEMPERATURE BETWEEN 10°C AND 25°C WHEN PLACED IN THE FORMS. REFER TO CAST-IN-PLACE CONCRETE NOTES FOR CURING TYPES. MAINTAIN THE FOLLOWING CONCRETE TEMPERATURES DURING CURING:
  - CURING TYPE 1 - 10°C FOR 3 DAYS (OR UNTIL 40% OF SPECIFIED STRENGTH IS OBTAINED)
  - CURING TYPE 2 - 10°C FOR 10 DAYS (OR UNTIL 70% OF SPECIFIED STRENGTH IS OBTAINED)
5. ALL CANVAS OR OTHER PROTECTIVE COVERING SHALL BE KEPT CLEAR OF ALL CONCRETE IN ORDER TO PERMIT FREE CIRCULATION OF AIR ALL AROUND ALL WALLS, COLUMNS, AND OVER THE TOPS OF ALL SLABS.
6. THE HEATING PROTECTION SHALL NOT BE COMPLETELY REMOVED UNTIL THE CONCRETE HAS COOLED TO A MAXIMUM TEMPERATURE DIFFERENTIAL BETWEEN THE CONCRETE AND AIR TEMPERATURE OF 12°C.
7. THE CONTRACTOR IS TO PROTECT ALL FOUNDING SOIL FROM FREEZING DURING THE CONSTRUCTION PERIOD. THIS INCLUDES FOOTINGS THAT HAVE BEEN CAST.

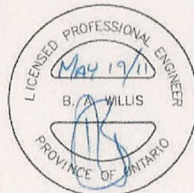
**SUBMITTALS:**

1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE SUBMITTAL OF ALL REQUIRED SHOP OR FABRICATION DRAWINGS IN A TIMELY MANNER.
2. ALL STRUCTURAL SUBMITTALS SUBMITTED FOR REVIEW MUST FIRST BE REVIEWED BY AND STAMPED BY THE GENERAL CONTRACTOR.
3. THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW:
 

DRAWING	P. ENG SEAL
a. TIMBER FRAME	YES
b. ROOF TRUSS	YES
4. ALL STRUCTURAL SUBMITTALS WILL BE REVIEWED BY THE ARCHITECT AND ENGINEER SOLELY FOR THEIR CONFORMANCE WITH THE DESIGN INTENT AND THE CONSTRUCTION DOCUMENTS.

**CAST-IN-PLACE CONCRETE:**

1. ALL CONCRETE MATERIALS, FORMWORK, TOLERANCES AND CONSTRUCTION SHALL CONFORM TO CAN/CSA A23.1-04/A23.2-04.
2. REINFORCING STEEL BARS SHALL BE DEFORMED BILLET STEEL BARS, GRADE 400R CONFORMING TO CAN/CSA G30.18-M92 (R2007), UNLESS NOTED.
3. WELDED WIRE FABRIC SHALL CONFORM TO CAN/CSA G30.5-1983 FOR SMOOTH WIRE FABRIC AND CAN/CSA G30.15-1983 FOR DEFORMED WIRE FABRIC. WELDED WIRE FABRIC SHALL HAVE A MINIMUM YIELD STRENGTH OF 448 MPa.
4. THE FABRICATOR SHALL SUPPLY PLACING DRAWINGS AND BAR LISTS IN ACCORDANCE WITH THE REINFORCING STEEL INSTITUTE OF CANADA, MANUAL OF STANDARD PRACTISE, CHAPTER 5, "SUBMISSION OF PLACING DRAWINGS AND BAR LISTS."
5. ALL REINFORCING BARS SHALL BE SECURELY TIED, SUPPORTED IN THE FORMS AND SPACED WITH STANDARD ACCESSORIES SO THAT THERE IS NO MOVEMENT DURING CONCRETE PLACEMENT.
6. REINFORCING IS TO BE PLACED IN GENERAL ACCORDANCE WITH REINFORCING STEEL INSTITUTE OF CANADA, MANUAL OF STANDARD PRACTICE, CHAPTER 7. ALL SPLICES SHALL BE A CLASS "B" SPLICE, UNLESS OTHERWISE NOTED.
7. CONCRETE COVER TO REINFORCING:
  - a) ALL CONCRETE CAST IN FORMS, EXPOSED TO:
    - Not exposed to Earth or Weather ... 20 mm ( $\frac{3}{4}''$ )
    - freezing and thawing only ... 50 mm (2")
8. ALL REINFORCING STEEL IN PLACE TO BE MADE AVAILABLE FOR INSPECTION BY ENGINEER BEFORE POURING THE CONCRETE. ENGINEER TO BE NOTIFIED WELL IN ADVANCE OF POURING SCHEDULE. ENGINEER TO CARRY OUT INSPECTION AT HIS DISCRETION.
9. PROVIDE PORTLAND CEMENT OF CANADIAN MANUFACTURE CONFORMING WITH CSA/CAN 3-A5, TYPE 10.
10. PROVIDE CLEAN, UNCOATED SAND AND COARSE AGGREGATES FROM APPROVED SOURCES WHICH CONFORM WITH CSA/CAN 3-A2M. NOMINAL SIZE OF COARSE AGGREGATES TO BE 14mm - 20 mm ( $\frac{3}{4}''$ )
11. CONCRETE TO HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 32 MPa (4,600 psf) w/5%-8% AIR ENTRAINMENT AND MAX. WATER TO CEMENT RATIO OF 0.45. CURE AT 10°C FOR 3 DAYS (OR UNTIL 40% OF SPECIFIED STRENGTH).
12. CONCRETE SLUMPS SHALL BE CONSISTENT AT 80mm (3")  $\pm$  20mm ( $\frac{3}{4}''$ ). ADMIXTURES, WHERE APPROVED BY THE ENGINEER, SHALL CONFORM TO CSA STANDARD CAN 3-A256M, AND MAY BE USED TO INCREASE THE SLUMP ABOVE THIS VALUE.
13. CURE CONCRETE FOR A MINIMUM OF SEVEN DAYS (CONTINUOUS WET CURE).



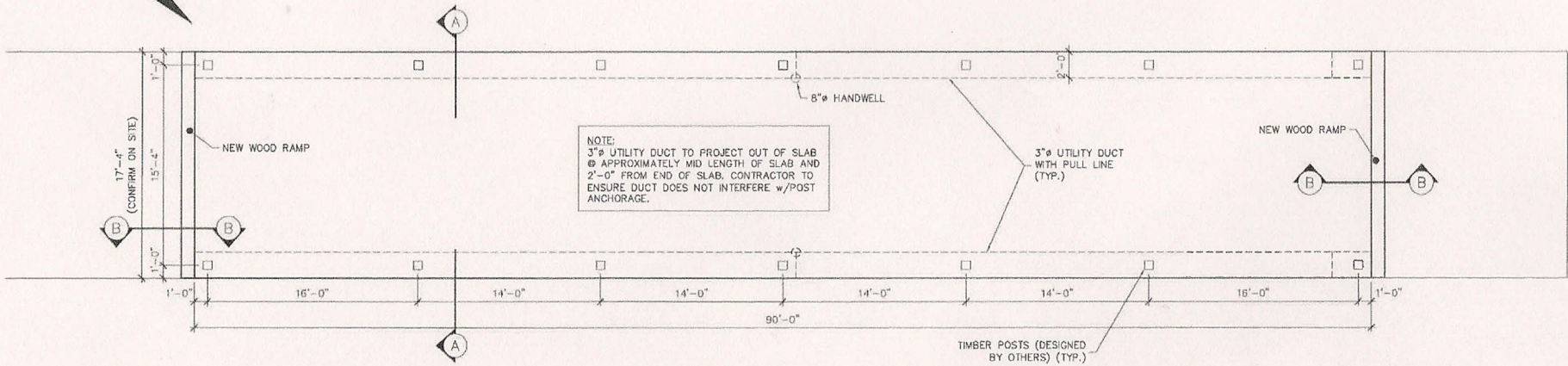
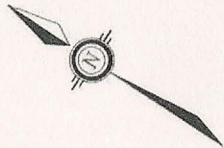
**THORNBURY YACHT CLUB**  
**HARBOUR PAVILLION**  
**THORNBURY, ONT.**  
**STRUCTURAL NOTES**



**Gamsby and Mannerow**  
**ENGINEERS**

DRAWN BY : C.B.	APPROVED BY : B.A.W.	PROJECT NO. : 211059	DRAWING NO. : 1
DESIGNED BY : F.R.P.	DATE : 1/8/20, 2011	SCALE : 1/8"=1'-0"	

NO.	DATE	REVISION DESCRIPTION	CH'KD
1	05/16/11	ISSUED FOR REVIEW	B.A.W.



**PLAN VIEW**  
SCALE: 1/8" = 1'-0"

**Ontario Building Code Data Matrix**  
OBC Reference

1. Project Description:	<input type="checkbox"/> New <input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Addition <input type="checkbox"/> Change of Use	3.1.1.
2. Major Occupancy(s):	<b>A4</b>	<b>Assembly (Open Air)</b>	3.1.2.1.(1).
3. Building Area:	Existing 0 m <sup>2</sup> New 145.0 m <sup>2</sup> Total 145.0 m <sup>2</sup>	0 sq.ft. 1560 sq.ft. 1560 sq.ft.	1.1.3.2.
4. Gross Area:	Existing 0 m <sup>2</sup> New 145.0 m <sup>2</sup> Total 145.0 m <sup>2</sup>	0 sq.ft. 1560 sq.ft. 1560 sq.ft.	
5. Number of Storey(s):	Above Grade 1 Below Grade 0		3.2.1.1.
6. Number of Streets / Fire Fighting Access:	1		3.2.2.10. & 3.2.5.

**Ontario Building Code Data Matrix Continued**  
OBC Reference

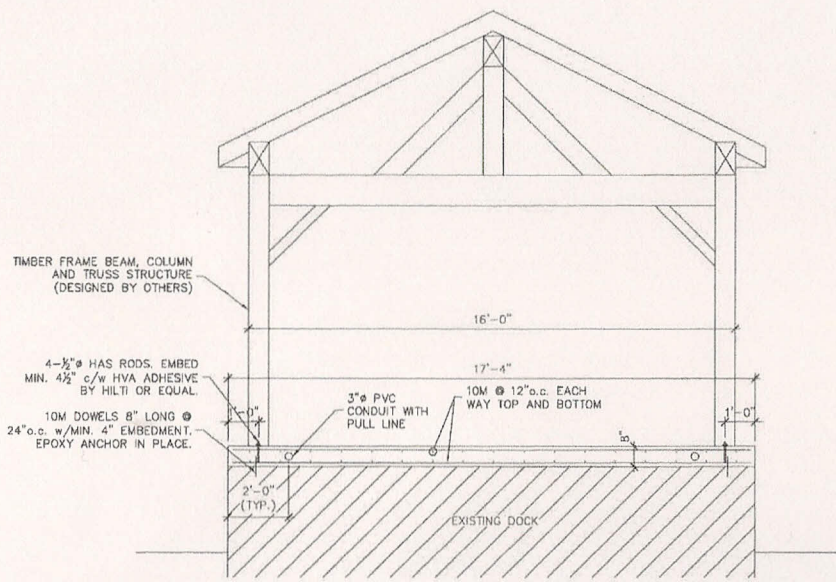
7. Building Classification:	3.2.2.35.	3.2.2.20 - 83.
8. Sprinkler Proposed:	<input type="checkbox"/> Entire Building (Addition & Renovation Only) <input type="checkbox"/> Basement Only <input type="checkbox"/> In Lieu of Roof Rating <input checked="" type="checkbox"/> Not Required	3.2.2.20 - 83. 3.2.1.5. 3.2.2.17.
9. Standpipe Required:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.9.
10. Fire Alarm Required:	<input checked="" type="checkbox"/> Not Req'd. <input type="checkbox"/> Single Stage	3.2.4.
11. Water Service/Supply Adequate:	<input type="checkbox"/> TBD By Others <input type="checkbox"/> On-Site Pond, River, Tanks, etc. <input type="checkbox"/> TBD by Local Fire Dept.	3.2.5.7.

**Ontario Building Code Data Matrix Continued**  
OBC Reference

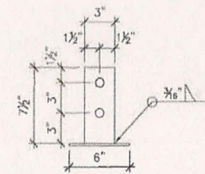
12. High Building:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6.
13. Permitted Construction:	<input type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible <input checked="" type="checkbox"/> Both	3.2.20-83
Actual Construction:	<input checked="" type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible <input type="checkbox"/> Both	
14. Mezzanine(s):	Exist. 0 m <sup>2</sup> New 0 m <sup>2</sup> Total 0 m <sup>2</sup>	3.2.1.1
15. Occupant load based on:	<input checked="" type="checkbox"/> 0.4m <sup>2</sup> /person <input type="checkbox"/> design of bldg. 363 persons	3.1.16.
16. Barrier Free Design:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)	3.8.
17. Hazardous Substance:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2. & 3.3.1.19.

	<p><b>THORNBURY YACHT CLUB</b> <b>HARBOUR PAVILLION</b> <b>THORNBURY, ONT.</b></p>	<p><b>Gamsby and Mannerow</b> <b>ENGINEERS</b></p>																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">DRAWN BY :</td> <td style="width: 25%;">APPROVED BY :</td> <td style="width: 25%;">PROJECT NO. :</td> <td style="width: 25%;">DRAWING NO. :</td> </tr> <tr> <td style="text-align: center;">C.B.</td> <td style="text-align: center;">B.A.W.</td> <td style="text-align: center;">211059</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="width: 25%;">DESIGNED BY :</td> <td style="width: 25%;">DATE :</td> <td style="width: 25%;">SCALE :</td> <td></td> </tr> <tr> <td style="text-align: center;">F.R.P.</td> <td style="text-align: center;">APRIL 20, 2011</td> <td style="text-align: center;">1/8"=1'-0"</td> <td></td> </tr> </table>	DRAWN BY :	APPROVED BY :	PROJECT NO. :	DRAWING NO. :	C.B.	B.A.W.	211059	2	DESIGNED BY :	DATE :	SCALE :		F.R.P.	APRIL 20, 2011	1/8"=1'-0"		<p><b>PLAN</b></p>		
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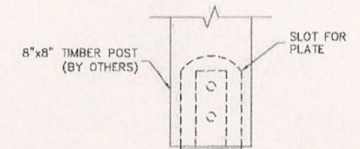
NOTE:  
 CONTRACTOR TO SET BASE PLATES ONCE  
 CONCRETE HAS CURED A MINIMUM OF 7 DAYS.  
 LOCATIONS TO BE COORDINATED WITH TIMBER  
 FRAME SHOP DRAWINGS.



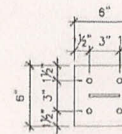
SECTION A-A  
 SCALE: 1/4"=1'-0"



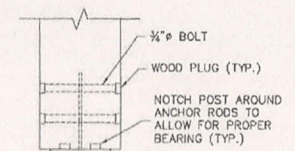
TYPICAL INSERT PLATE DETAIL  
 SCALE: 1"=1'-0"



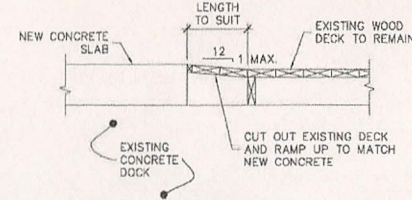
FRONT ELEVATION  
 SCALE: 1"=1'-0"



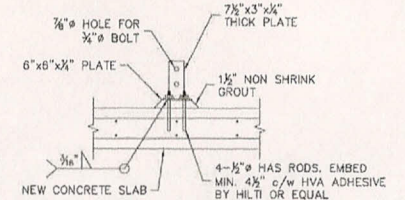
TYPICAL BASE PLATE DETAIL  
 SCALE: 1"=1'-0"



SIDE ELEVATION  
 SCALE: 1"=1'-0"



SECTION B-B  
 SCALE: 1/2"=1'-0"



BASE DETAIL  
 SCALE: 1/2"=1'-0"

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**THORNBURY YACHT CLUB**  
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**SECTIONS & DETAILS**



DRAWN BY : C.B.	APPROVED BY : B.A.W.	PROJECT NO. : 211059	DRAWING NO. : 3
DESIGNED BY : F.R.P.	DATE : APRIL 20, 2011	SCALE : AS SHOWN	