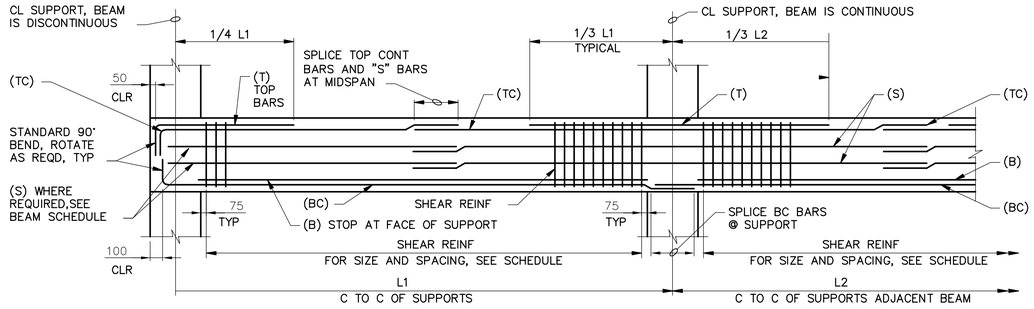
SHEET: COW-A1 (05/2005)



BEAM CAMBER

UNLESS SHOWN OTHERWISE IN SCHEDULE MIDSPAN BEAM CAMBER SHALL BE AS FOLLOWS:

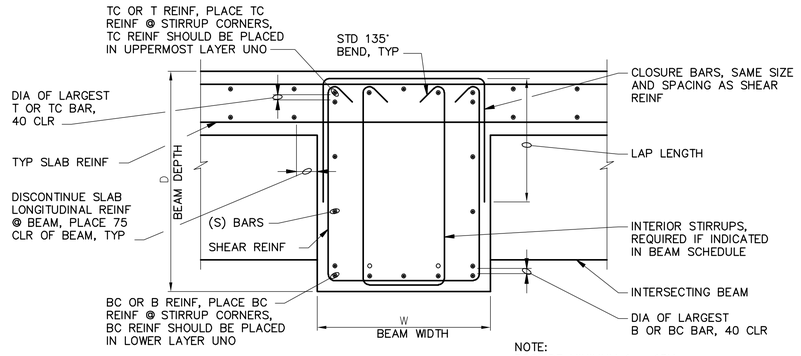
BM SPAN	CAMBER
4500mm OR LESS	NONE
4500mm TO 7500mm	13mm
7500mm TO 10500mm	25mm
10500mm TO 13500mm	40mm

NOTES:

1. PLACE TOP (T & TC) AND BOTTOM (B & BC) BARS IN MULTIPLE ROWS ONLY WHERE INDICATED IN SCHEDULE.
2. WHEN INDICATED IN BEAM SCHEDULE, SUBSTITUTE CLOSED TIES ( ) FOR STIRRUPS AND CLOSURE BARS SHOWN ( ).

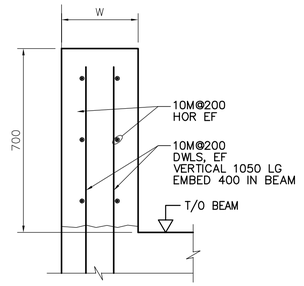
BEAM REINFORCING

1 – DETAIL N.T.S.



TYPICAL SECTION

NOTE:
PROVIDE MINIMUM 1 – 15M CONTINUOUS AT EACH CORNER OF STIRRUPS.



TYPICAL UPSTAND REINFORCING

BEAM REINFORCING

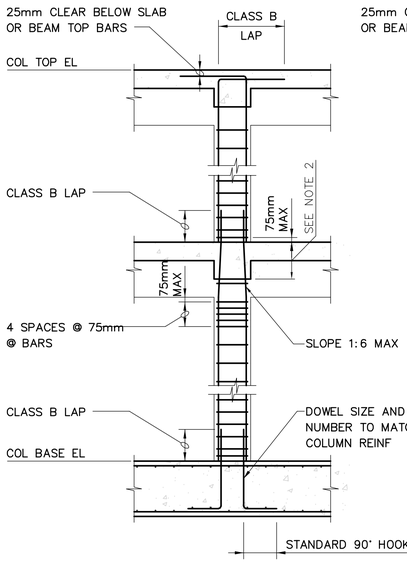
BEAM NO. (SEE PLANS)	SIZE		TOP REINF AT LEFT SUPPORT		BOTTOM REINF		* TOP REINF AT RIGHT SUPPORT		S BARS	SHEAR REINF (MM)		REMARKS
	W	D	T	TC	B	BC	T	TC		NO. SIZE	SPACING FROM LEFT SUPPORT	
B1	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B2	500	750	–	4–30M	–	4–30M	–	4–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B3	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B4	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B5	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B6	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B7	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B8	500	750	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	W/UPSTAND 300W x 700H
B9	650	1000	–	4–30M	–	4–30M	–	4–30M	2–20M	10M	200	
B10	650	1000	–	4–30M	–	4–30M	–	4–30M	2–20M	10M	200	
B11	650	1000	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	
B12	650	1000	–	6–30M	–	6–30M	–	6–30M	2–20M	10M	200	
B13	650	1000	6–30M	2–30M	–	4–30M	6–30M	2–30M	2–20M	10M	200	
B14	650	1000	–	4–30M	–	8–30M	–	4–30M	2–20M	10M	200	
B15	650	750	–	6–25M	–	6–25M	–	6–25M	2–20M	10M	200	
B16	650	750	–	6–25M	–	6–25M	–	6–25M	2–20M	10M	200	
B17	650	750	–	6–25M	–	6–25M	–	6–25M	2–20M	10M	200	
B18	650	1000	–	6–30M	–	6–30M	–	6–30M	2–20M	2–10M	200	2 SET OF STIRRUPS
B19	650	1000	–	6–30M	–	6–30M	–	6–30M	2–20M	2–10M	200	2 SET OF STIRRUPS
B20	650	1000	–	6–30M	–	6–30M	–	6–30M	2–20M	2–10M	200	2 SET OF STIRRUPS
B21	600	600	–	2–25M	–	4–25M	–	2–25M	–	10M	200	

BEAM SCHEDULE

2 – DETAIL N.T.S.

NOTES:

1. * TOP REINFORCING MAY BE CALLED–OUT TWICE IN SCHEDULE. (I.E. "TOP REINFORCING AT RIGHT SUPPORT" OF BEAM THAT IS CONTINUOUS OVER THE RIGHT SUPPORT IS CALLED–OUT AS "TOP REINFORCING AT LEFT SUPPORT" OF ADJACENT BEAM.)
2. LEFT SUPPORT IS DESIGNATED AS THE SUPPORT CLOSEST TO THE LEFT SIDE OR BOTTOM OF SHEET ON WHICH FRAMING PLAN IS DRAWN, UNLESS NOTED OTHERWISE ON PLAN.
3. FOR CONCRETE BEAM END DETAIL , SEE 3 / WB–S0451 TYP. UNO

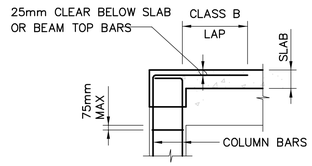


COLUMN REINFORCING
N.T.S.

NOTE:

1. FOR DIMENSIONS AND REINFORCEMENT SEE COLUMN SCHEDULE.
2. CONTINUE TIES AT SPACING NOTED THROUGH BEAM CONNECTION ZONE WHERE CONCRETE BEAMS DO NOT FRAME INTO COLUMN ON ALL FOUR SIDES

3 – DETAIL N.T.S.



NON–CONTINUOUS END

COLUMN TYPE		SIZE	VERTICAL REINF.	TIES	REMARKS
500 / 500	C1	500x500	8–30M	2–10M @ 200	
600 / 600	C2	600x600	8–30M	2–10M @ 200	
500 / 500	C3	500x500	8–25M	2–10M @ 200	
400 / 400	C4	400x400	8–25M	2–10M @ 200	
400 / 400	C5	400x400	8–25M	2–10M @ 200	
500 / 500	C6	500x500	8–30M	2–10M @ 200	
600 / 600	C7	600x600	8–30M	2–10M @ 200	
600 / 600	C8	600x600	8–30M	2–10M @ 200	
815 / 600	C9	600x815	8–30M	2–10M @ 200	
885 / 600	C10	600x885	8–30M	2–10M @ 200	

COLUMN SCHEDULE

APEGM
Certificate of Authorization
CH2M HILL Canada Ltd.
No. 1441 Expiry: April 30, 2006

B.M. ELEV.

NO.	REVISIONS	DATE	BY
00	ISSUED FOR TENDER	2006/02/03	KA

CH2MHILL / Fredericksen Cooper ARCHITECTS / EarthTech A Tyco International Ltd. Company

DESIGNED BY	KA	CHECKED BY	AP
DRAWN BY	MS	APPROVED BY	DJT
SCALE:	NTS	RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
DATE	2005/08/10	DATE	2006/02/08

ENGINEER'S SEAL
ORIGINAL SIGNED BY
D. KRUGER
2006/02/06

CONSULTANT DRAWING NO.
WF–S0515

Winnipeg
THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
FILTRATION
FOUNDATIONS AND CONCRETE STRUCTURES

STRUCTURAL
FILTRATION AREA
COLUMN AND BEAM SCHEDULES

CITY FILE NUMBER
SHEET OF
CITY DRAWING NUMBER
1-0601F-D-S0515-001-00D

Last Save: 2006–02–03 3:16 PM

C:\DOCUMENTS AND SETTINGS\SEVERITT\MY DOCUMENTS\NDMPROJ\321352 – WINNIPEGWTP\DN_WF–S0515_CH2M.DWG