

PRECAST CONCRETE PILE SCHEDULE

MARK	DIA.	CUT-OFF	REMARKS
P-1	300	SEE PLAN	EXPOSE, CLEAN & EXTEND STRANDS 450 INTO DROP PANELS, SLAB AND PILE CAP
P-2	400	SEE PLAN	EXPOSE, CLEAN & EXTEND STRANDS 450 INTO DROP PANELS, SLAB AND PILE CAP

PILE CAP SCHEDULE

MARK	SIZE	DEPTH	REINFORCING	REMARKS
PC-1	600#	VARIES	6-15M VERT'S. 3-10M TIES	4-20M DOWELS TO GRADE BEAM ABOVE, 200 VOID FORM.
PC-2	800 WIDE	1000	8-25M TOP & BOT., HOOK BOT. BARS, 10M TIES @ 300	8-20M DOWELS TO CONCRETE BEAM ABOVE. ADD'L 2-20M EACH FACE
PC-3	1700x2000	1000	8-25M E.W. BOT. 8-20M E.W. TOP	4-20M DOWELS TO SLAB ABOVE, 4-20M DOWELS TO CONCRETE WALL
PC-4	800x2300	1000	8-25M E.W. TOP & BOT.	4-20M DOWELS TO GRADE BEAM ABOVE, 200 VOID FORM.

CONCRETE GRADE BEAM SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING				ADD'L	REMARKS
			TOP	MID.	BOT.	STIRRUPS		
GB-1	350	1000	4-20M	2-15M EA. SIDE	4-20M	10M @ 300 O/C	SEE PLAN	ON 200 MIN. VOID FORM

CONCRETE BEAM SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING				ADD'L	REMARKS
			TOP	MID.	BOT.	STIRRUPS		
CB-1	900	500	6-25M		6-25M	10M @ 150 O/C		
CB-2	1000	500	6-25M		6-25M	10M @ 150 O/C		
CB-3	220	600	3-20M		3-20M	10M @ 200 O/C		
CB-4	1000	600	8-25M	1-15M E.F.	8-25M	10M @ 300 O/C		KEY INTO WALL/BEAM 50mm AT ENDS WITH DOWELS TO MATCH TOP AND BOTTOM STEEL
CB-5	300	600	4-25M	1-15M E.F.	4-25M	10M @ 300 O/C		
CB-6	300	1470	4-25M	3-15M E.F.	4-25M	10M @ 300 O/C		
CB-7	350	700	4-15M	1-15M E.F.	4-25M	10M @ 300 O/C		KEY INTO WALL/BEAM 50mm AT ENDS WITH DOWELS TO MATCH TOP AND BOTTOM STEEL
CB-8	350	1900	4-15M	4-15M	4-25M	10M @ 300 O/C		UPSTAND BEAM, EXTEND BOT. REINF. 1200 MIN. INTO BEAM OR WALL WHERE APPLICABLE
CB-9	350	1400	4-15M	3-15M	4-25M	10M @ 300 O/C		UPSTAND BEAM, EXTEND BOT. REINF. 1200 MIN. INTO BEAM OR WALL WHERE APPLICABLE

CONCRETE SLAB SCHEDULE

MARK	DEPTH 'D'	REINFORCING				ADD'L	REMARKS
		TOP		BOT.			
S-1	300	15M @ 200 E.W.		15M @ 200 E.W.		SEE PLAN	ON 200 VOID FORM
S-2	300	15M @ 150 U.T.L. N/S DIR. 20M @ 150 L.T.L. E/W DIR.		20M @ 150 L.B.L. E/W DIR. 15M @ 150 U.B.L. N/S DIR.			ON 200 VOID FORM
S-3	200	15M @ 150 E.W.		15M @ 150 E.W.			
S-4	150	15M @ 300 E.W.					SEE TYPICAL DETAIL
S-5	400	20M @ 200 E.W.		20M @ 200 E.W.		SEE SECTION	ON 200 VOID FORM
S-6	200	15M @ 200 E.W.		15M @ 200 E.W.		SEE SECTION	

LEGEND

U.T.L. - UPPER TOP LAYER
 L.T.L. - LOWER TOP LAYER
 U.B.L. - UPPER BOTTOM LAYER
 L.B.L. - LOWER BOTTOM LAYER
 N/S - NORTH, SOUTH
 E/W - EAST, WEST
 DIR. - DIRECTION

CONCRETE CURB SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING		REMARKS
			HORIZ.	TIES	
CRB-1	190	200	2-10M CONT.	10M @ 300	

CONCRETE WALL SCHEDULE

MARK	WIDTH	DEPTH	REINFORCING				ADD'L	REMARKS
			VERT.		HORIZ.			
			I.F.	O.F.	I.F.	O.F.		
CW-1	300	VARIES	20M @ 200	20M @ 200	15M @ 150	15M @ 150	SEE PLAN	
CW-2	600	3300	20M @ 200	20M @ 200	20M @ 200	20M @ 200		
CW-3	300	2900	20M @ 150	20M @ 150	15M @ 200	15M @ 200		
CW-4	300	1300	15M @ 200	15M @ 200	15M @ 200	15M @ 200		
CW-5	300	1200	15M @ 200	15M @ 200	15M @ 200	15M @ 200		BOND BARS INTO SLAB
CW-6	400	4470	20M @ 150	20M @ 150	15M @ 150	15M @ 150	SEE PLAN	
CW-7	200	VARIES	15M @ 200	15M @ 200	15M @ 200	15M @ 200		DWL'S TO CW6 TO MATCH

MASONRY WALL SCHEDULE

MARK	SIZE	REINFORCING	REMARKS
MW-1	200	15M VERT. EVERY THIRD CORE	SEE ARCHITECTURAL, SHEAR CONNECTORS TO BE INSTALLED BETWEEN 200 BLOCK AND MASONRY VENEER, MAX. SPACING 800 o/c

- DOWELS FROM GRADE BEAM/WALL TO MASONRY WALLS 15Mx1400 LONG @ 600 O/C EXTEND 800 INTO CONCRETE FILLED MASONRY CORES.
- FILL ALL PARAPET BLOCK WALLS WITH GROUT.

LINTEL SCHEDULE

MARK	TYPE	SIZE	REINFORCING	MIN. BEARING OR SUPPORT	LOOSE LINTEL	REMARKS
L-1	MASONRY	200 DEEP	2-15M BOT.	200	L90x90x8 MIN BRG 200	FILL TWO CORES & REINFORCE EACH WITH 1-15M VERTICAL UNDER ALL LINTEL BEARINGS
L-2	MASONRY	400 DEEP	1-15M TOP AND BOTTOM	200	L90x90x8 MIN BRG 200	FILL TWO CORES & REINFORCE EACH WITH 1-15M VERTICAL UNDER ALL LINTEL BEARINGS

STEEL JOIST SCHEDULE

MARK	DEPTH	SPACING	FINISH	REMARKS
J-1	600	2000 U/N	PAINTED - SEE SPEC.	SEE PLAN FOR U/S JOIST BEARING ELEVATION

- PROVIDE BRIDGING IN ACCORDANCE WITH CSA S16.1-M94

STEEL DECK SCHEDULE

MARK	DEPTH	THICKNESS	FINISH	REMARKS
SD-1	38mm	.076mm	PAINTED SEE SPEC.	DIAPHRAGM

GENERAL NOTES

- READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATION. IN THE EVENT OF A CONFLICT, THE SPECIFICATION SHALL GOVERN.
- THE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA 1995, THE SUPPLEMENT, AND REFERENCED STANDARDS THEREIN. WATER RETAINING STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH ACI 308R-89.
- CONTRACTOR TO CONFIRM WITH EQUIPMENT SUPPLIERS DIMENSIONS, WEIGHTS, AND ALL OTHER CRITICAL DETAILS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER AND OBTAIN INSTRUCTIONS IN WRITING BEFORE PROCEEDING WITH CONSTRUCTION.
- NOTIFY THE CONTRACT ADMINISTRATOR 48 HOURS IN ADVANCE FOR REVIEWS.
- DRAWINGS SHOW COMPLETED STRUCTURES ONLY. CONTRACTOR TO PROVIDE TEMPORARY BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
- VERIFY LOCATION OF ALL UNDERGROUND SERVICES PRIOR TO COMMENCING CONSTRUCTION AND BE RESPONSIBLE FOR DISRUPTIONS.
- ALL INFORMATION CONCERNING EXISTING CONSTRUCTION HAS BEEN TAKEN FROM ORIGINAL DRAWINGS, AND SITE MEASUREMENTS. CONTRACTOR TO CONFIRM ON SITE ALL EXISTING DIMENSIONS, ELEVATIONS, AND DETAILS PRIOR TO COMMENCING WORK.
- DO NOT SCALE THE DRAWINGS.

DESIGN LOADS

- DEAD LOADS: STRUCTURE SELF WEIGHTS PLUS:
 - 1) ROOFING DEAD LOAD: 1.0 kPa
 - 2) MECHANICAL LOAD (SUSPENDED FROM JOIST): 1.2 kPa
 - MAX. CONCENTRATED LOAD @ ANY PANEL POINTS: 1.3 kN
 - 3) BELOW GRADE ROOFS: SOIL DEPTH x 22 kN/m³
- LIVE LOADS:
 - 1) GROUND SNOW LOAD - S_s: 1.7 kPa
 - S_r: 0.2 kPa
 - MODIFY FOR EXPOSURE AND DRIFT AS PER NBC 1995. INCLUDING DRIFT FROM ANTICIPATED FUTURE STRUCTURES. LOADING INDICATED ON DRAWINGS.
 - 2) RAIN LOAD: 0.0 kPa AT PARAPETS VARYING UNIFORMLY TO 0.5 kPa AT DRAINS.
 - 3) WIND LOAD: q(1.30) 0.42 kPa
 - MODIFY AS PER NBC 1995.
 - 4) SEISMIC: N/A
 - 5) FLOOR LOADS: MAIN FLOOR: 9.6 kPa
 - 6) BELOW GRADE WALLS: LATERAL EARTH PRESSURE COEFFICIENT (K_a) = 0.5
 - 7) RETAINED LIQUID SPECIFIC GRAVITY: 1.0

FOUNDATION NOTES

- ALL FOUNDATION CONSTRUCTION TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN DYREGROV CONSULTANTS FEBRUARY 1998 GEOTECHNICAL REPORT (PROJECT NO. 981754).
- DESIGN BEARING CAPACITY: RAFT SLAB: 240 kPa
- CAPACITIES FOR DRIVEN PRECAST PILES: 300 DIAMETER 445 kN
400 DIAMETER 800 kN

CONCRETE NOTES

- PROVIDE CONCRETE AND PERFORM WORK TO CSA A23.1-M94. TEST CONCRETE TO CSA A23.2-M94. THE CONTRACTOR SHALL HAVE COPIES OF THESE STANDARDS ON SITE AT ALL TIMES.
- ALL STRUCTURAL CONCRETE TO BE MINIMUM 30 MPa UNLESS NOTED OTHERWISE.
- CONCRETE BEDDING FOR THE EXISTING 1800mm OUTFALL PIPE WEST OF THE END OF THE EXISTING SUPPORT BEAM SHALL BE TYPE 50 SULFATE RESISTANT WITH A MINIMUM STRENGTH OF 20MPa.

REINFORCING STEEL NOTES

- DEFORMED BARS CONFORMING TO CSA G30.18-M92, GRADE 400. TIES & STIRRUPS CAN BE GRADE 300.

STRUCTURAL STEEL NOTES

- PROVIDE STRUCTURAL STEEL SHAPES AND PLATES TO CSA C40.21-M92, GRADE 350W.

SUGGESTED CONSTRUCTION SEQUENCE

FOLLOWING IS A SUGGESTED CONSTRUCTION SEQUENCE. THE ACTUAL CONSTRUCTION SEQUENCE SHALL BE PLANNED BY THE CONTRACTOR AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE SELECTED CONSTRUCTION APPROACH MUST OBSERVE THE AVAILABLE SHUT DOWN TIME CONSTRAINTS AND BE CARRIED OUT DURING THE LOW FLOW PERIODS.

- EXCAVATE TO EXPOSE THE EXISTING CONCRETE OUTFALL PIPE. PROVIDE TEMPORARY SUPPORT FOR THE EXISTING CONCRETE OUTFALL PIPE. THE TEMPORARY SUPPORT IS TO REMAIN IN PLACE UNTIL THE PERMANENT SUPPORT STRUCTURE IS COMPLETE.
- CONSTRUCT THE COMPLETE CONCRETE PORTION OF THE EFFLUENT DISINFECTION STRUCTURE, INCLUDING PILING, CONCRETE BEAMS, WALLS AND SLABS, AS SHOWN ON DRAWING S02, EXCEPT THE CONCRETE WEIR WALL IN THE OUTFALL CHAMBER.
- INSTALL THE SLUICE GATES (SG-Z100, SG-Z101, SG-Z-130, SG-131) AS SHOWN ON THE DRAWINGS. THESE SLUICE GATES CAN THEN BE USED TO ISOLATE THE EFFLUENT DISINFECTION FACILITY OR TO DIVERT THE WATER THROUGH THE FACILITY. THE UV DISINFECTION EQUIPMENT SHOULD BE INSTALLED ACCORDING TO THE MANUFACTURERS INSTALLATION INSTRUCTIONS. IF THE UV DISINFECTION EQUIPMENT IS IN PLACE WHILE THE FACILITY IS BEING USED TO DIVERT THE FLOW, THE UV DISINFECTION EQUIPMENT SHOULD BE PROTECTED ACCORDING TO THE MANUFACTURERS INSTRUCTIONS.
- SAWCUT AND REMOVE THE EXISTING CONCRETE OUTFALL PIPE AND SUPPORT IN THE FINAL EFFLUENT CHAMBER AND IN THE OUTFALL CHAMBER. REPAIR THE PIPE AND THE CONCRETE WALL INTERFACE AS SHOWN ON DRAWING S07.
- SUPPLY AND INSTALL TEMPORARY FINAL EFFLUENT CHAMBER BULKHEAD, AS PER DETAIL ON ON DRAWING S07.
- INSTALL A TEMPORARY COFFERDAM SYSTEM IN THE OUTFALL CHAMBER.
- INSTALL A CONCRETE WEIR WALL SECTION AT THE REMOVED PIPE LOCATION IN THE OUTFALL CHAMBER, AS PER THE DETAIL ON DRAWING S07. REPAIR THE PIPE AND CONCRETE WALL INTERFACE AS SHOWN ON DRAWING S07.
- REMOVE THE BULKHEAD AND COFFERDAM.

NOTES

- PRIOR TO ANY REQUIRED TIE-INS, COORDINATE PLANT SHUTDOWNS WITH THE CONTRACT ADMINISTRATOR.
- PROVIDE DEWATERING, AS REQUIRED, TO PERFORM WORK IN THE FINAL EFFLUENT CHAMBER AND OUTFALL CHAMBER.
- PLANT SHUTDOWNS WILL LIKELY BE REQUIRED AT NIGHT FOR THE FOLLOWING ACTIVITIES: REMOVAL OF THE OUTFALL PIPE IN THE FINAL EFFLUENT AND OUTFALL CHAMBERS, INSTALLATION OF THE BULKHEAD AND COFFERDAM, REMOVAL OF THE BULKHEAD AND COFFERDAM.

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY OTHERS. AS A RESULT, THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THIS DOCUMENT.

REID CROWTHER & PARTNERS LIMITED
 WINNIPEG
RECORD DRAWING
 DATE: 98/09/24

B.M. ELEV.			ENGINEER'S SEAL		THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT
			ORIGINAL SIGNED: BY D.G. NICHOLLS 7/22/1998		
DESIGNED BY	MEB/NHK	CHECKED BY	DGN/DLH	SOUTH END WATER POLLUTION CONTROL CENTRE	
DRAWN BY	C.T.	APPROVED BY	AL	EFFLUENT DISINFECTION FACILITY	
HOR. SCALE:	AS NOTED	RELEASED FOR CONSTRUCTION BY:		GENERAL NOTES AND SCHEDULES	
VERTICAL:				REV-1	
1 RECORD DRAWING	99/09/24 R.D.			CONSULTANT DRAWING NO. 61786.01 S05	
0 ISSUED FOR TENDER	98/07/27 C.T.				
NO. REVISIONS	DATE BY	DATE	98/04/13	DATE	