GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON THE MANITOBA BUILDING CODE 2011 EDITION.
   A) IMPORTANCE CATEGORY: NORMAL
   B) WIND LOAD: q50 = 0.45 kPa
   C) GROUND SNOW LOAD: Ss = 1.9 kPa
   D) ASSOCIATED RAIN LOAD: Sr = 0.2 kPa
2. SEISMIC SITE CLASSIFICATION: NOT APPLICABLE
3. DO NOT SCALE DRAWINGS.
4. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. THESE STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE AND DO NOT INDICATE ALL COMPONENTS NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION INCLUDING BUT NOT LIMITED TO ALL TEMPORARY SHORING/BRACING.
6. THE EXISTING BUILDING SUPERSTRUCTURE AND FOUNDATIONS HAVE BEEN REVIEWED AND CAN SUPPORT ALL NEW LOADING CONDITIONS SHOWN ON THESE DRAWINGS IN ACCORDANCE WITH PART 4 OF THE 2011 MANITOBA BUILDING CODE, UNLESS NOTED.

FOUNDATIONS

1. NOTWITHSTANDING THE INFORMATION PROVIDED IN THE GEOTECHNICAL REPORT, THE FOUNDATION AND GENERAL CONTRACTORS SHALL SATISFY THEMSELVES AS TO THE PREVAILING CONDITIONS AT THE SITE AS NO EXTRAS SHALL BE GRANTED SHOULD CONDITIONS DIFFER FROM THOSE INDICATED.
2. ALL FRICTION PILES ARE DESIGNED BASED ON THE FOLLOWING:

A) COMPRESSIVE	DEPTH (M)	ULS (kPa)	SLS (kPa)
	0 - 3	0	0
	3 - 10	16	16

   ULS SKIN FRICTION VALUE HAVE BEEN MULTIPLIED BY A GEOTECHNICAL RESISTANCE FACTOR OF 0.4.

   B) EFFECTIVE LENGTH OF FRICTION PILES IS TOTAL LENGTH AS SHOWN ON PLAN MINUS 3000 mm FOR PERIMETER AND EXTERIOR PILES.
   C) FRICTION PILE REINFORCING TO BE 6000 mm LONG UNLESS NOTED IN PLANS; 10M RINGS AT 1200 mm ON-CENTRE AND 3-10M RINGS AT 150 mm ON-CENTRE AT TOP. EXTEND VERTICAL PILE REINFORCING 450 mm INTO BEAMS OR WALLS. PILE REINFORCING TO BE 5-10M FOR 400 mm DIAMETER PILES, 6-10M FOR 450 mm, 5-15M FOR 500 mm, 5-15M FOR 550 mm, 6-15M FOR 600 mm.
3. ALL FOUNDATION INSTALLATIONS SHALL BE REVIEWED BY QUALIFIED GEOTECHNICAL PERSONNEL REPORTING TO THE GEOTECHNICAL ENGINEER THAT ISSUED THE SITE-SPECIFIC GEOTECHNICAL REPORT IN ACCORDANCE WITH THE REQUIREMENTS OF PART 4 OF THE NATIONAL BUILDING CODE OF CANADA / THE MANITOBA BUILDING CODE.
4. REMOVAL OF UNSUITABLE MATERIALS, SUBGRADE PREPARATIONS & COMPACTED GRANULAR FILL FOR ALL SLABS SUPPORTED ON GRADE AS PER SITE-SPECIFIC GEOTECHNICAL REPORT.
5. PROVIDE 2 LAYERS 10 MIL POLYETHYLENE WRAPPED SONOTUBE, GREASED COMPLETELY ON INSIDE FOR TOP 1800 mm OF PILES INDICATED ON PLAN.

CAST-IN-PLACE CONCRETE

I CONCRETE

1. ALL CONCRETE IS TO BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH CSA-A23.1-09 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" AND CSA-A23.2-09 "METHOD OF TEST FOR CONCRETE".
2. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF QUALITY, YIELD AND STRENGTH AS SPECIFIED IN CONCRETE MIXES, AND WILL COMPLY WITH CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
3. PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT, AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CSA-A23.1. CERTIFICATION LETTER TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
4. CONCRETE TESTING TO BE PERFORMED IN ACCORDANCE WITH CSA-A23.1-09. MINIMUM ONE SET OF TESTS PER POUR. COST OF TESTING TO BE CARRIED BY THE CONTRACTOR.
5. CONCRETE PROPERTIES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

PILES:	32 MPa MIN. AT 56 DAYS CLASS OF EXPOSURE: S-2 ENTRAINED AIR/CATEGORY: 2 (4% TO 7%) CEMENT TYPE: HS AGGREGATE: MAX. 20 mm CURING TYPE: TYPE 1 - BASIC SLUMP: MIN. 120 mm
PILE CAPS:	35 MPa MIN. AT 56 DAYS CLASS OF EXPOSURE: S-2 ENTRAINED AIR/CATEGORY: 2 (4% TO 7%) CEMENT TYPE: HS AGGREGATE: MAX. 20 mm CURING TYPE: TYPE 1 - BASIC
EXTERIOR WALLS AND GRADE BEAMS:	25 MPa MIN. AT 28 DAYS CLASS OF EXPOSURE: F-2 ENTRAINED AIR/CATEGORY: 2 (4% TO 7%) AGGREGATE MAX. 20 mm CURING TYPE: TYPE 2 - ADDITIONAL
EXTERIOR STRUCTURAL SLABS:	25 MPa MIN. AT 28 DAYS CLASS OF EXPOSURE: F-2 ENTRAINED AIR/CATEGORY: 2 (4% TO 7%) AGGREGATE MAX. 20 mm CURING TYPE: TYPE 2 - ADDITIONAL
EXTERIOR SLABS-ON-GRADE:	32 MPa MIN. AT 28 DAYS CLASS OF EXPOSURE: C-2 ENTRAINED AIR/CATEGORY: 1 (5% TO 8%) AGGREGATE MAX. 20 mm CURING TYPE: TYPE 2 - ADDITIONAL
INTERIOR WALLS AND BEAMS:	25 MPa MIN. AT 28 DAYS CLASS OF EXPOSURE: N ENTRAINED AIR/CATEGORY: NONE (LESS THAN 3%) AGGREGATE MAX. 20 mm CURING TYPE: TYPE 2 - ADDITIONAL
BONDED TOPPING SLABS: ON HOLLOWCORE	30 MPa MIN. AT 28 DAYS MAX. 0.45 WATER TO CEMENTITIOUS RATIO CLASS OF EXPOSURE: N ENTRAINED AIR/CATEGORY: NONE AGGREGATE MAX. 14 mm CURING TYPE: TYPE 3 - 7 DAY WET CURE
MASONRY FILL:	20 MPa MIN. AT 28 DAYS CLASS OF EXPOSURE: N ENTRAINED AIR/CATEGORY: NONE AIR CONTENT: LESS THAN 3% AGGREGATE MAX. 20 mm SLUMP: 200 mm ± 40 mm

UNLESS INDICATED OTHERWISE THE CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE CONTRACTOR SPECIFIED SLUMP MUST BE SHOWN ON THE CERTIFICATION LETTER AND CONCRETE DELIVERY TICKET.

6. UNLESS NOTED OTHERWISE CONCRETE CURING TO CONFORM TO CSA-A23.1-09 AS FOLLOWS:
   A) TYPE 1 - BASIC: 3 DAYS ≥ 10°C AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.
   B) TYPE 2 - ADDITIONAL: 7 DAYS ≥ 10°C AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.
   C) TYPE 3 - EXTENDED: 7 DAYS WET CURING ≥ 10°C.

II REINFORCING STEEL

1. ALL REINFORCING STEEL TO BE CSA-G30.18M-M92 GRADE 400R DEFORMED BARS EXCEPT COLUMN TIES AND BEAM STIRRUPS WHICH SHALL BE GRADE 400W STEEL.
2. ALL REINFORCING IS TO BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA - MANUAL OF STANDARD PRACTICE, EXCEPT OTHERWISE NOTED. ALL LAPPED SPLICES TO BE CLASS B SPLICES, UNLESS NOTED.
3. WELDED STEEL WIRE MESH SHALL BE TO ASTM A185/A185M-07, 400 MPa YIELD, FLAT SHEETS ONLY.
4. REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA A23.3-09 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:

PILES: EXPOSURE CLASS: S-2	75 mm TO TIES.	
PILE CAPS: EXPOSURE CLASS: S-2	75 mm TO TIES AND BOTTOM REINFORCING.	
GRADE BEAMS: EXPOSURE CLASS: F-2	50 mm BOTTOM TO TIES	40mm SIDES AND TOP TO TIES.
EXTERIOR STRUCTURAL SLABS: EXPOSURE CLASS: F-2	40 mm TOP	40 mm BOTTOM
EXTERIOR SLABS-ON-GRADE: EXPOSURE CLASS: C-2	40 mm TOP	40 mm BOTTOM
INTERIOR WALLS: EXPOSURE CLASS: N	20 mm EACH FACE	

5. IN WALLS AND GRADE BEAMS, BEND ALL TOP, INTERMEDIATE, AND BOTTOM HORIZONTAL STEEL 600 mm AROUND CORNERS, OR USE EXTRA L BARS 1200 mm LONG. ALL OPENINGS IN WALLS TO HAVE 2-15M EACH SIDE AND 2-25M OVER, EXCEPT AS NOTED.
6. TOP STEEL IN BEAMS TO BE LAPPED AT CENTRE SPAN, WITH CLASS B SPLICES, BOTTOM STEEL CAN BE BUTTED AT SUPPORT.
7. IN WALLS, TOP STEEL TO BE LAPPED AT CENTRE SPAN WITH CLASS A TENSION SPLICES, BOTTOM STEEL TO BE BUTTED AT SUPPORT, HORIZONTAL STEEL TO BE LAPPED WITH CLASS A TENSION SPLICES, VERTICAL STEEL TO BE LAPPED WITH CLASS B TENSION SPLICES, EXCEPT AS NOTED.
8. IN SLABS ON GRADE, BARS TO BE LAPPED WITH CLASS A TENSION SPLICES, EXCEPT AS NOTED.
9. ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES, SUCH AS HI-CHAIRS, SPACERS, ETC. TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR. HI-CHAIRS TO HAVE 4 LEGS AND TO BE STAPLED OR NAILED TO THE FORMWORK.
10. ALL OPENINGS IN CAST-IN-PLACE CONCRETE FLATWORK TO BE TRIMMED WITH 2-15M ALL AROUND ON BOTH FACES, EXCEPT AS NOTED.
11. FOR ALL STRUCTURAL SLABS A MINIMUM OF 50% OF THE BOTTOM STEEL SHALL BE CONTINUED A MINIMUM DISTANCE OF 150 mm INTO ALL SUPPORTING WALLS AND BEAMS. IF KEYS ARE USED AT JOINTS BETWEEN SLABS AND WALLS OR BEAMS, BOTTOM DOWELS EQUAL TO BOTTOM REINFORCEMENT OR 10M AT 300 mm O/C SHALL BE PROVIDED WHICHEVER IS GREATER.
12. ALL MISCELLANEOUS CONCRETE PADS AND CURBS ARE TO BE REINFORCED WITH A MINIMUM OF 10M AT 400 mm O/C EACH WAY, UNLESS NOTED.

III FORMWORK

1. SHEARMAT OR APPROVED CARDBOARD VOID FORM WITH A MIN. DEPTH OF 150 mm SHALL BE USED AS THE BOTTOM FORM FOR STRUCTURAL SLABS AT GRADE, GRADE BEAMS, AND WALLS IN CONTACT WITH SOIL. SELECT AND INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, ETC. SHALL BE SUPPORTED BY PADS OF PLYWOOD OR TEMPERED HARDBOARD TO PREVENT PUNCTURING THE VOID FORM.
3. UNLESS NOTED OTHERWISE PROVIDE SLIP JOINT ALL PAVING OR CONCRETE SLABS ON GRADE AGAINST STRUCTURAL MEMBERS WITH 12 mm ASPHALT IMPREGNATED FIBREBOARD.
4. ALL CONSTRUCTION JOINT KEYS ARE TO BE A MINIMUM OF 40 mm DEEP.
5. ALL STRUCTURAL SLABS FRAMING INTO BEAMS AND WALLS ARE TO HAVE A MINIMUM KEY OF 40 mm
6. PLACE 10 MIL POLYETHYLENE UNDER ALL INTERIOR SLABS ON FILL AND OVER TOP OF VOID FORM.

STRUCTURAL STEEL

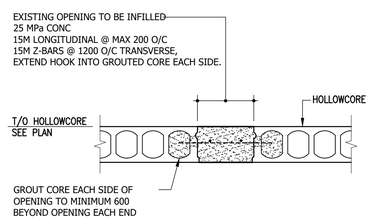
1. THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.
2. THE STRUCTURAL STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY GUYING AND BRACING OF THE STEEL FRAMING TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL ALL STEEL DECKING IS ERECTED, WELDED IN PLACE, ALL MASONRY/CONCRETE WALLS CONSTRUCTED, AND ALL HOLLOWCORE HAS BEEN ERECTED, JOINTS GROUTED, AND BEARING ENDS HAVE BEEN GROUTED AND CURED.
3. STRUCTURAL STEEL TO CONFORM TO CSA-G40.21-04, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL", ASTM A572/A572M "STANDARD SPECIFICATION FOR HIGH-STRENGTH LOW-ALLOY COLUMBIUM-VANADIUM STRUCTURAL STEEL" OR ASTM A992/A992M "STANDARD SPECIFICATION FOR STRUCTURAL STEEL SHAPES".
4. ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-350W, ASTM A992 OR ASTM A572 GRADE 50. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-350W CLASS C OR ASTM A500-C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-300W.
5. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CSA S16-09, "DESIGN OF STEEL STRUCTURES".
6. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN ACCORDANCE WITH CSA W47.1, "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES".
7. STRUCTURAL STEEL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA COVERING THE DESIGN OF CONNECTIONS, TO THE PROJECT DESIGN ENGINEER FOR REVIEW PRIOR TO FABRICATION. CONNECTION DESIGN TO INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUIT FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.
8. ALL BOLTED CONNECTIONS TO USE A325 HIGH STRENGTH BOLTS. MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS.
9. ALL STRUCTURAL STEEL IS TO RECEIVE ONE COAT OF CISC/CPMA 1-73a QUICK DRYING SHOP PRIMER. STEEL IN CRAWLSPACES SHALL RECEIVE 2 COATS. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP2. STEEL RECEIVING FINISH PAINTING TO HAVE ONE COAT OF CISC/CPMA 2-75 QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP7.
10. ALL STRUCTURAL STEEL INDICATED AS GALVANIZED IS TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH CAN/CSA-G164 "HOT DIP GALVANIZING OF IRREGULARLY SHAPED ARTICLES" WITH A MINIMUM GALVANIZED COATING OF 610 GRAMS PER SQUARE METRE OF SURFACE AREA. ALL FIELD WELDING TO BE TOUCHED UP WITH BRUSH APPLIED ZINC RICH PAINT CONTAINING MORE THAN 92% METALLIC ZINC BY WEIGHT.
11. NO HOLES PERMITTED IN TOP FLANGE OF BEAMS AT COLUMNS WHERE BEAMS ARE CONTINUOUS OVER COLUMNS.
12. ALL BEAMS CONTINUOUS OVER COLUMNS ARE TO HAVE WEB STIFFENERS THE SAME SIZE AND ORIENTATION AS THE COLUMN BELOW, UNLESS OTHERWISE NOTED.
13. ANCHOR BOLTS TO BE ASTM A307 GRADE C OR ASTM F1554 GRADE 36, WELDABLE, PROVIDED BY STEEL SUPPLIER AND SET BY THE GENERAL CONTRACTOR. WHERE ASTM F1554 GRADE 55 ANCHOR BOLTS ARE USED, BOLTS TO BE WELDABLE GRADE STEEL.
14. FABRICATOR TO NOTIFY ENGINEER OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
15. THE STRUCTURAL STEEL SUPPLIER SHALL PROVIDE AND BE RESPONSIBLE FOR ALL HOLES IN STEEL SECTIONS REQUIRED BY OTHER TRADES. SECTION SHALL BE STRENGTHENED WHERE REQUIRED TO GUARANTEE THE ORIGINAL STRENGTH OF THE BEAM. ANY CUTTING OF STEEL AT THE JOB SITE SHALL BE DONE ONLY AS DIRECTED AND APPROVED BY THE ENGINEER.
16. UNLESS NOTED OTHERWISE ON DRAWINGS PROVIDE L76 x 76 x 6.4 DIAPHRAGM CHORD ANGLE AROUND ENTIRE PERIMETER OF BUILDING.
17. ALL OPENINGS LARGER THAN 450 mm X 450 mm THROUGH STEEL DECK TO BE FRAMED WITH L76 x 76 x 6.4 ANGLES ALL AROUND, EXCEPT AS NOTED. SMALLER OPENINGS THROUGH STEEL DECK TO BE STIFFENED BY STEEL DECK SUPPLIER. WHEN STEEL DECK CHANGES ITS FRAMING DIRECTION, USE L65 x 65 x 6.4 ANGLE TO SUPPORT EDGE.
18. STRUCTURAL STEEL WHICH SUPPORTS ARCHITECTURAL FINISHES MUST BE DESIGNED TO BE SUFFICIENTLY ADJUSTABLE TO MEET REQUIRED INSTALLATION TOLERANCES. SEE ARCHITECTURAL FOR REQUIRED FINISH TOLERANCES.
19. FOR ALL STEEL CONNECTIONS, SUPPLIERS/DESIGNERS SHALL PROVIDE A FINAL INSPECTION AND A LETTER SEALED BY THE ENGINEERS RESPONSIBLE, CERTIFYING THAT STEEL CONNECTIONS ARE CONSTRUCTED AND INSTALLED AS PER DESIGN ASSUMPTIONS AND INSTALLATION REQUIREMENTS.

METAL DECK

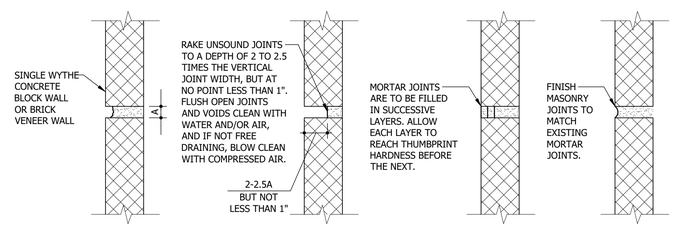
1. DECK SHALL BE MINIMUM GRADE A WITH A MINIMUM GALVANIZED ZINC COATING TO Z275.
2. DECK SHALL BE ARC SPOT WELDED TO BEARING SUPPORTS AT 300 mm O/C. WELDS SHALL BE 20 mm DIAMETER.
3. SIDE LAPS SHALL BE MECHANICALLY FASTENED (BUTTON-PUNCHED) AT 600 mm ON-CENTRE.
4. DECK FASTENING USING POWDER-ACTUATED DRIVE PINS AND SIDELAP SCREWS IS NOT AN ACCEPTABLE ALTERNATE TO PUDDLE WELDS AND BUTTON-PUNCHING.
5. DECK SUPPLIER SHALL REINFORCE OPENINGS OVER 150 mm TO 300 mm ACROSS THE FLUTES WITH MINIMUM L65 x 65 x 6.4 EACH SIDE OF OPENING PERPENDICULAR TO FLUTES. ANGLE SHALL BE WELDED TO AT LEAST TWO FLUTES ON EACH SIDE OF OPENING.
6. DECK SUPPLIER SHALL REINFORCE OPENINGS UP TO 450 mm ACROSS THE FLUTES WITH SUITABLE REINFORCEMENT BASED ON A STRUCTURAL ANALYSIS OF THE LOADS INVOLVED.
7. TOUCH UP DECK WITH ZINC RICH PAINT WHERE ZINC COATING HAS BEEN BURNED BY WELDING.

BONDED CONCRETE OVERLAY

1. ALL BONDED CONCRETE OVERLAYS TO HAVE A TENSILE BOND STRENGTH BETWEEN THE OVERLAY AND BASE COURSE CONCRETE OF NOT LESS THAN 0.9 MPa AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH CSA A23.2-6B AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 200 m2 PRIOR TO CONSTRUCTION SUBMIT DOCUMENTATION DEMONSTRATING MINIMUM PERFORMANCE REQUIREMENT WILL BE MET.
2. SURFACE OF PRECAST CONCRETE TO RECEIVE BONDED TOPPINGS SHALL BE INTENTIONALLY ROUGHENED AT THE TIME OF FABRICATION TO ACHIEVE A SURFACE PROFILE OF ICRI-CSP-6 OR GREATER.
3. BONDED CONCRETE OVERLAY SHALL BE WET CURED FOR A MINIMUM OF 7 DAYS.
4. CONTROL JOINTS SHALL BE LOCATED ALONG LINES OF HOLLOWCORE BEARING.JOINTS TO BE 'SOFF-CUT' 3 mm WIDE AND A MINIMUM 20 mm DEEP.
5. CONCRETE TOPPING SHALL NOT BE CONTINUOUS OVER SUPPORTS WHERE CONCRETE BLOCK WALLS ARE TO BE INSTALLED. IF CONCRETE BLOCK WALLS ARE IN PLACE WHEN TOPPING IS POURED, PROVIDE BOND BREAKER BETWEEN BLOCK WALL AND TOPPING.
6. PROVIDE BOND BREAKER AROUND COLUMNS, CROSS BRACING, AND ALL OTHER SIMILAR PENETRATIONS.



A TYPICAL HOLLOWCORE INFILL DETAIL
S1.1 S1.1 1:20



A) DETERIORATED MORTAR JOINT
B) MORTAR CUT BACK TO SOUND SURFACE
C) NEW MORTAR LAYERED INTO MORTAR JOINT
D) JOINT TOOLED TO ORIGINAL PROFILE

B MORTAR JOINT REPOINTING
S1.1 S1.1 NTS

A. TYPES OF DETERIORATION INCLUDE: OPEN JOINTS:
   1. OPEN JOINTS: THE MORTAR IS DEEPLY ERODED OR HAS FALLEN OUT.
   2. CRACKED JOINTS: CRACKS OF HAIRLINE WIDTH OR LARGER HAVE FORMED IN MORTAR.
   3. SEPARATED JOINTS: MORTAR AND MASONRY DO NOT ADHERE, RESULTING IN GAP
   4. BETWEEN TWO, OR MORTAR SITTING LOOSE ON JOINT.
   5. TEST FOR VOIDS AND WEAKNESS BY USING HAMMERS OR OTHER APPROVED MEANS.
   6. CAULKING HAS BEEN INSTALLED ON OR IN JOINT LINE.

B. REMOVE EXISTING CAULKING (IF REQUIRED) AND RAKE UNSOUND JOINTS FREE OF DETERIORATED AND LOOSE MORTAR, DIRT AND OTHER UNDESIRABLE MATERIAL. JOINTS SHOULD BE RAKED TO A DEPTH OF 4 TIMES THE VERTICAL JOINT WIDTH, BUT AT NO POINT LESS THAN 25.4mm. FLUSH OPEN JOINTS AND VOIDS CLEAN WITH WATER AND/OR AIR, AND IF NOT FREE DRAINING, BLOW CLEAN WITH COMPRESSED AIR.

C. MORTAR JOINTS ARE TO BE FILLED IN SUCCESSIVE LAYERS. DEEPER JOINTS SHALL BE FILLED FIRST COMPACTING NEW MORTAR IN SEVERAL LAYERS UNTIL BACK OF JOINT IS FLAT. SEVERAL 13mm LAYERS WILL BE NEEDED TO FILL THE JOINT FLUSH WITH THE SURFACE OF THE MASONRY. ALLOW EACH LAYER TO REACH THUMBPRINT HARDNESS BEFORE THE NEXT IS APPLIED. ALLOW FOR UP TO 50mm OF JOINT DEPTH (FIXED PRICE).

D. FINISH MASONRY JOINTS TO MATCH EXISTING MORTAR JOINTS. LEAVE EXISTING MASONRY WORK CLEAN AND FREE OF MORTAR DROPPINGS.

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PROVINCE OF MANITOBA
B. FLISAK
Member
22454
December 21, 2023
REGISTERED PROFESSIONAL ENGINEER

No.	Date	Issue / Revision	By
0	2023-12-21	ISSUED FOR CONSTRUCTION	BF

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GENERAL NOTES

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