GENERAL

1. THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS.
2. THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2023 EDITION OF THE MANITOBA BUILDING CODE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL NECESSARY SHORING, BRACING AND FORMWORK. FORMWORK FOR NEW CONSTRUCTION SHALL BE BRIDGED OVER EXISTING SERVICES.
4. ERRORS IN DRAWINGS AND/OR SPECIFICATIONS AND/OR PREVIOUSLY UNKNOWN EXISTING CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE WORK. DURING THE BID OPPORTUNITY STAGE, CONTRACTOR SHALL REQUEST AN INTERPRETATION OF CONFLICTS PRIOR TO BID OPPORTUNITY. IF NO REQUEST IS MADE, BOTH PROVISIONS SHALL BE PRESUMED TO BE INCLUDED IN THE BID OPPORTUNITY AND THE CONTRACT ADMINISTRATOR SHALL DETERMINE WHICH PROVISION GOVERNS, AND THE CONTRACTOR SHALL PERFORM THE WORK AT NO ADDITIONAL COST TO THE CITY OF WINNIPEG.
5. ANY UNSOUND STRUCTURAL CONDITIONS OBSERVED OR CREATED DURING CONSTRUCTION ARE TO BE REPORTED TO CONTRACT ADMINISTRATOR IMMEDIATELY.
6. CONTRACTOR SHALL REVIEW, STAMP, SIGN AND DATE ALL SHOP DRAWINGS PRIOR TO FORWARDING TO ARCHITECT AND/OR CONTRACT ADMINISTRATOR. THE CONTRACT ADMINISTRATOR'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE CONTRACT ADMINISTRATOR'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW,
7. CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND EMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC..
8. COORDINATE SIZE AND LOCATION OF ALL OPENINGS IN STRUCTURAL MEMBERS WITH TRADES INVOLVED. ALL OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS TO BE APPROVED BY CONTRACT ADMINISTRATOR.
9. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR SMALL OPENINGS, SLEEVES, RECESSES, DEPRESSIONS, SUMPS, TRENCHES, CURBS, HOUSEKEEPING PADS, EQUIPMENT BASSES, AND SLOPES NOT INDICATED ON THE STRUCTURAL DRAWINGS.
10. COORDINATE PLACEMENT AND LOCATION OF ITEMS BY SUBSEQUENT TRADES. RELEVANT TRADES SHALL REVIEW PRIOR TO ERECTION AND/OR INSTALLATION.
11. CONFIRM THE LOCATION OF ALL SUB-GRADE SERVICES PRIOR TO COMMENCING SITE WORK.
12. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES TO BE REPORTED TO CONTRACT ADMINISTRATOR IMMEDIATELY. DO NOT SCALE DRAWINGS.
13. DO NOT BACKFILL AGAINST STRUCTURE UNTIL MAIN FLOOR IS IN PLACE.
14. DO NOT EXCEED, DURING CONSTRUCTION, DESIGN LIVE LOADS SHOWN ON PLANS. REDUCE AS NECESSARY UNTIL MATERIALS REACH DESIGN STRENGTH.
15. CONFIRM ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES OR CONFLICTS TO BE REPORTED TO CONTRACT ADMINISTRATOR IMMEDIATELY.
16. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE CONTRACT ADMINISTRATOR.

PRECAST PILES

1. SEE GEOTECHNICAL REPORT BY KGS DATED, JULY 21, 2023 DONE FOR SOUTHWEST RECREATION CENTRE DEVELOPMENT.
2. PILE DESIGN LOADS WITH A MINIMUM SAFETY FACTOR OF 2.5.
3. GEOTECHNICAL RESISTANCE FACTOR (Ø) = 0.4
4. DRIVEN PILES SHALL BE STANDARD HEXAGONAL PRECAST PRESTRESSED PILES DRIVEN TO REFUSAL TO DEVELOP
5. THE FOLLOWING ULTIMATE RESISTANCE CAPACITIES:
   300Ø HEX PILE = 1350 KN REFUSAL CRITERIA (BLOWS/25mm) - 5
   350Ø HEX PILE = 1650 KN REFUSAL CRITERIA (BLOWS/25mm) - 8
   400Ø HEX PILE = 2000 KN REFUSAL CRITERIA (BLOWS/25mm) - 12
6. CONCRETE DESIGN STRENGTH FOR PRECAST PILES IS 35MPA @ 28 DAYS WITH SULFATE RESISTING TYPE 50 CEMENT.
7. PRESTRESSING STRANDS SHALL BE LEFT PROTRUDING INTO PILECAPS A MINIMUM OF 600mm AFTER PILE CUT OFF UNLESS NOTED OTHERWISE.
8. PRECAST DRIVEN PILES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF CSA 135.
9. PILES SHALL BE NO MORE THAN 2% OUT OF PLUMB; AND NO MORE THAN 50mm OUT OF ALIGNMENT.

CONCRETE

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH CSA A23.1-09 FOR "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION" INCLUDING COLD WEATHER REQUIREMENTS WHEN THE TEMPERATURE FALLS BELOW 5°C.
2. PROVIDE ONE SET OF CONCRETE TEST CYLINDERS IN ACCORDANCE WITH CSA A23.1-09 FOR EVERY 50 M3 OF CONCRETE PLACED AND A MINIMUM OF ONE SET FOR EACH STRUCTURAL COMPONENT.
3. PERFORMANCE SPECIFICATION AS PER A23.1-09 TABLE 5:
   A. MIN. CONCRETE STRENGTH @ 28 DAYS:
      I. PRECAST CONC 35 MPA
      II. PILES & PILE CAPS 32 MPA
      III. ALL OTHER CONC. 30 MPA
   B. EXPOSURE CLASS:
      I. PRECAST CONC. S-2
      II. PILES & PILE CAPS S-2
      III. CURBS/SIDEWALKS/DRIVEWAYS C-2
      IV. ALL OTHER CONC. N
4. FOR FLOOR SLABS, DESIGN THE CONCRETE MIX WITH AGGREGATE GRADING AND WATER TO CEMENT MATERIALS RATIO TO MINIMIZE SHRINKAGE.
5. WALLS, PIERS AND COLUMNS SHALL BE POURED A MINIMUM OF 24 HOURS BEFORE SLABS AND BEAMS.
6. PROVIDE DOVETAIL ANCHOR SLOTS IN CONCRETE WALLS AND COLUMNS WHERE MASONRY ABUTS.
7. ALL STRUCTURAL SLABS FRAMING INTO CONCRETE WALLS OR BEAMS SHALL HAVE A MINIMUM 38mm CHASE INTO SUPPORTING MEMBER X THE HEIGHT OF THE SLAB.
8. WHERE CONCRETE BEAMS FRAME INTO CONCRETE WALLS OR OTHER CONCRETE BEAMS AND ARE POURED LATER, PROVIDE 38mm CHASE (HEIGHT AND WIDTH TO MATCH BEAM).
9. THE USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
10. CONSTRUCTION JOINT KEYS IN GRADE BEAMS SHALL BE FORMED AT PILE LOCATIONS ONLY.
11. CONSTRUCTION JOINT KEYS IN STRUCTURAL SLABS TO BE FORMED AT 1/3 SPAN. PROVIDE KEY WIDTH EQUAL TO HALF THE THICKNESS OF THE SLAB. PROVIDE 15M DOWELS @ 600mm O/C TOP & BOTTOM.
12. SAW CUTS FOR SLAB ON GRADE SHALL BE 25mm DEEP & 3mm WIDE. CUTTING TO BE DONE NOT SOONER THAN 12 HOURS, AND NOT LATER THAN 24 HOURS AFTER THE SLAB IS POURED. CUTS TO BE FILLED WITH APPROVED BITUMINOUS COMPOUND OR CAULKING.
13. SLIP JOINT ALL PAVING AGAINST STRUCTURAL MEMBERS WITH 13mm IMPREGNATED FIBERBOARD.
14. PROVIDE MINIMUM 6 MIL POLY VAPOR BARRIER BELOW ALL SLAB ON GRADE CONCRETE SLABS UNLESS NOTED OTHERWISE ON DRAWINGS.
15. COORDINATE THE LOCATION OF ALL ITEMS EMBEDDED IN CONCRETE WORK WITH ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS.
16. CONTRACT ADMINISTRATOR TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ALL MAJOR POURS.
17. REFER TO ARCHITECTURAL DRAWINGS FOR CONCRETE SURFACES REQUIRING ARCHITECTURAL FINISHES.
18. WHERE VOID FORM IS INDICATED ON DRAWINGS USE CARDBOARD SHEARMAT BELOW STRUCTURAL SLABS AND LOW-DENSITY POLYSTYRENE BELOW WALLS AND GRADEBEAMS.
19. FOR STRUCTURAL SLABS AT GRADE, PLYWOOD OVER BIODEGRADABLE WAX MAT CARDBOARD, COMPLETE WITH MOISTURE RESISTANT TREATED PAPER FACES, WITH SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF WET CONCRETE UNTIL INITIAL SET.
20. EXTERIOR SIDEWALKS TO BE 100mm THICK CONCRETE ON COMPACTED GRANULAR FILL REINFORCED WITH 10M @ 300mm O/C EACH WAY MID DEPTH. PROVIDE TOOLED CONTROL JOINTS @ MAXIMUM 5'-0" O/C AND CONSTRUCTION JOINTS @ MAXIMUM 6100mm O/C.
21. CONCRETE SLAB AT EXTERIOR REFUSE CONTAINER TO BE 6" THICK CONCRETE ON COMPACTED GRANULAR FILL REINFORCED WITH 15M @ 300mm O/C EACH WAY MID DEPTH.

REINFORCING

1. ALL BARS TO CONFORM TO CSA G30.18-M92:
   15M BARS AND LARGER TO BE GRADE 400
   10M BARS AND SUPPORTING RODS TO BE GRADE 300 OR BETTER
2. ALL STEEL TO BE DETAILED IN ACCORDANCE WITH THE CURRENT ACI DETAILING MANUAL.
3. MINIMUM CLEAR COVER TO REINFORCING – REFER TO TABLE BELOW:

CLEAR CONCRETE COVER TO REINFORCEMENT			
EXPOSURE CONDITION	EXPOSURE CLASS		
	N	F-1, F-2 S-1, S-2, S-3	C-XL, C-1, C-2, C-3, A-1, A-2, A-3
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	-	75mm	75mm
BEAMS, GIRDERS, COLUMNS AND PILES TO TIES/STIRRUPS (EXCEPT AS NOTED BELOW)	32mm	38mm	60mm
SLABS AND WALLS (EXCEPT AS NOTED BELOW)	19mm	38mm	60mm
RATIO OF COVER TO NOMINAL BAR DIAMETER	-	-	38mm
RATIO OF COVER TO NOMINAL MAXIMUM AGGREGATE SIZE		38mm	50mm
NOTE:THE LARGEST COVER REQUIRED FOR ANY ONE ELEMENT SHALL GOVERN			

4. ALL REINFORCING SHALL BE HELD IN PLACE WITH PROPER ACCESSORIES.
5. STANDARD END HOOK LENGTHS FOR REINFORCEMENT:

BAR SIZE	10M	15M	20M	25M	30M	35M	45M	55M
90° HOOK LENGTH	180mm	250mm	300mm	400mm	510mm	660mm	810mm	1040mm
180° HOOK LENGTH	150mm	180mm	200mm	300mm	300mm	560mm	685mm	890mm

6. IN CONCRETE BEAMS, BEND HORIZONTAL REINFORCING 600mm AROUND CORNERS, OR USE EXTRA CORNER BARS 915mm X 915mm.
7. ALL OPENINGS IN CONCRETE WALLS AND/OR SLABS TO HAVE MINIMUM 2-15M EXTRA REINFORCING ALL AROUND, 1 EACH FACE, EXTEND MINIMUM 600mm PAST, PLUS ADDITIONAL 15M DIAGONAL BARS EACH FACE 1.5 TIMES LONGER THEN SHORTEST OPENING SIZE OR MIN. 500mm AND MAXIMUM 1525mm IN LENGTH AT EACH CORNER UNLESS NOTED OTHERWISE. MAXIMUM OPENING SIZE 915mm WIDE; TOP OF OPENING TO BE MINIMUM 600mm BELOW TOP OF WALL ELEVATION. FOR ALL OPENINGS GREATER THAN 915mm CONTACT THE CONTRACT ADMINISTRATOR FOR FURTHER INSTRUCTION. COORDINATE ALL OPENINGS WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS.
8. DO NOT CUT REINFORCING AT OPENINGS WHERE IT CAN BE SPREAD CONTINUOUSLY AROUND OPENING.
9. ALL OPENINGS IN GRADE BEAMS TO BE CONFIRMED BY THE CONTRACT ADMINISTRATOR.
10. TOP STEEL IN BEAMS SHALL BE LAPPED AT CENTRE SPAN, BOTTOM STEEL SHALL BE LAPPED AT SUPPORT.
11. ALL REINFORCING STEEL SHALL BE CLEANED OF ALL DIRT, GREASE AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING.
12. ALL REINFORCING SHALL BE NEW BILLET DEFORMED BARS.
13. MINIMUM REINFORCING FOR EQUIPMENT BASES 10M @ 300mm O/C EACH WAY.
14. ALL WELDED WIRE FABRIC SHALL BE TRANSPORTED AND DELIVERED IN FLAT SHEETS.
15. REINFORCING STEEL SUPPLIER TO CONFER WITH CONTRACTOR AS TO DESIRED CONSTRUCTION JOINT LOCATIONS AND SUPPLY DOWELS AND BAR LENGTHS TO ACCOMMODATE THESE JOINTS.
16. REINFORCING STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS FOR REVIEW OF FABRICATION, SIZES, DIMENSIONS, PLACEMENT AND SPLICE LOCATIONS.

STRUCTURAL STEEL

1. ALL 'W' AND 'HSS' SECTIONS SHALL BE IN ACCORDANCE WITH CAN/CSA G40.21-04 M350W, ALL OTHER SECTIONS SHALL BE IN ACCORDANCE WITH CAN/CSA G40.21-04 M300W.
2. ALL WELDING SHALL CONFORM TO CSA W59-03 (R2008); FABRICATORS TO BE CERTIFIED IN ACCORDANCE WITH CSA W47.1-09.
3. FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH CAN/CSA S16-09, "LIMIT STATES DESIGN OF STEEL STRUCTURES".
4. UNLESS NOTED OTHERWISE, DESIGN CONNECTIONS FOR NON-COMPOSITE BEAMS FOR FACTORED MOMENT SHEAR FORCE EQUAL TO 67% OF THE TOTAL BEAM LOAD TABULATED IN THE CISC HANDBOOK OF STEEL CONSTRUCTION.
5. SUPPLY STEEL WITH PROPERTIES NOTED IN STEEL GRADES TABLE BELOW.

STEEL GRADES	
MEMBER TYPE	GRADE
ROLLED W-SHAPE, TEES	CSA G40.21 350W OR ASTM A 992 GRADE 50
WELDED WIDE FLANGE SECTIONS	CSA G40.21 350W
HOLLOW STRUCTURAL SHAPES AND PLATES	CSA G40.21 350W CLASS C
OTHER STRUCTURAL SHAPES AND PLATES	CSA G40.21 350W
BOLTS	ASTM A325
ANCHOR RODS	ASTM F1554 GRADE 36
HEAD STUD ANCHORS	ASTM A108
THREADED RODS	ASTM A36

6. STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY BRACING TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE, UNTIL ALL RELATED STRUCTURAL FRAMING IS ERECTED AND COMPLETELY INSTALLED.
7. FABRICATOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR OF ANY PROPOSED MEMBER SUBSTITUTIONS OR CHANGED CONNECTION DETAILS.
8. HOLES REQUIRED IN STEEL SECTIONS MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR.
9. PROVIDE 10mmØ WEEP HOLES AT TOP AND BOTTOM OF ALL HSS COLUMNS.
10. ALL BEAMS CONTINUOUS OVER COLUMNS SHALL HAVE 2 WEB STIFFENERS ON EACH SIDE, THE SAME THICKNESS AS COLUMN UNLESS NOTED, BUT NOT LESS THAN 10mm.
11. NO HOLES PERMITTED IN TOP OF BEAMS AT COLUMNS WHERE BEAMS ARE CONTINUOUS OVER COLUMNS, UNLESS LOSS OF SECTION BY HOLES IS COMPENSATED BY EQUAL MATERIAL AREA WELDED TO SIDE OF FLANGE.
12. ALL COLUMNS PASSING THRU CONCRETE SHALL HAVE COMPRESSIVE MATERIAL TO ISOLATE IT FROM SURROUNDING CONCRETE.
13. ALL STRUCTURAL STEEL SHALL RECEIVE AT LEAST ONE COAT PRIMER TO CISC/CPMA STANDARD 1-73A 1975.
14. USE ASPHALT BASE PAINT (FLINTKOTE 410-02 OR EQ.) AT COLUMNS BELOW SLAB.
15. ALL HIGH STRENGTH BOLTS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF ASTM A325M.
16. PROVIDE MINIMUM OF 2 BOLTS IN BOLTED CONNECTIONS.
17. ALL BOLTED CONNECTIONS TO USE SNUG-TIGHTENED HIGH-STRENGTH BOLTS UNLESS NOTED ON DRAWINGS.
18. THE SHEAR CAPACITY OF ALL SHEAR SPLICES SHALL BE AT LEAST EQUAL TO THE SHEAR CAPACITY OF THE SMALLER BEAM, UNLESS NOTED.
19. THE STEEL SUPPLIER SHALL SHOP WELD 38mm X 3mm MASONRY ANCHORS TO ALL STEEL MEMBERS IN CONTACT WITH MASONRY WALLS. MAXIMUM SPACING OF TIES SHALL BE 810mm O/C UNLESS NOTED.
20. STEEL SUPPLIER IS RESPONSIBLE FOR DESIGN AND DETAILING OF ALL STRUCTURAL STEEL CONNECTIONS NOT SHOWN ON DRAWINGS.
21. ALL MISCELLANEOUS STEEL NOT DETAILED ON DRAWINGS, SUCH AS; STAIRS, RAILINGS, AWNINGS AND NON-STRUCTURAL ARCHITECTURAL STEEL SHALL BE DETAILED BY THE STEEL SUPPLIER.
22. ANCHOR BOLTS SHALL BE SUPPLIED BY STRUCTURAL STEEL SUPPLIER & SET BY CONTRACTOR. CONTRACTOR TO SUPPLY AND INSTALL 25mm NON-SHRINK GROUT UNDER ALL BASE PLATES UNLESS NOTED.
23. ALL GROUT UNDER BEARING PLATES AND BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI, INSTALLED IN ACCORDANCE WITH THE SPECIFICATION AND MANUFACTURER'S RECOMMENDATIONS.
24. EXPANSION ANCHORS TO BE ZINC-PLATED STEEL WEDGE TYPE WITH THE FOLLOWING DESIGN VALUES IN 30 MPA CONCRETE:
    13mmØ - 3000 LBS SHEAR, 2000 LBS PULL-OUT
    19mmØ - 7000 LBS SHEAR, 4000 LBS PULL-OUT
25. ALL EXPOSED PORTIONS OF LEDGE ANGLES AND CONNECTIONS TO BE COATED WITH BITUMINOUS PAINT.
26. PROVIDE 75mm X 75mm X 6mm ANGLE FRAMING AROUND ALL DECK OPENINGS GREATER THAN 450mm X 450mm UNLESS NOTED.
27. ALL STEEL BEAMS SUPPORTING MASONRY WALLS TO HAVE MINIMUM 19mmØ X 300mm LONG NELSON STUDS WELDED TO BEAM AT 600mm O/C UNLESS NOTED OTHERWISE ON DRAWINGS.
28. STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS FOR REVIEW OF FABRICATION, SIZES, DIMENSIONS AND PLACEMENT. ALL CONNECTIONS NOT SHOWN ON DRAWINGS ARE TO BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.

MASONRY

1. CONCRETE BLOCKS TO CONFORM TO CSA A165.1-04.
2. MASONRY WALLS TO BE BUILT WITH TYPE "S" MORTAR HAVING A MINIMUM STRENGTH OF 13 MPA @ 28 DAYS. MORTAR TO BE IN ACCORDANCE CSA A179-04.
3. USE DUR-O-WALL (OR EQUAL) SPACED VERTICALLY AT 400mm O/C.
4. COLD WEATHER CONSTRUCTION OF MASONRY SHALL CONFORM TO THE 2020 NATIONAL BUILDING CODE OF CANADA, WITH ADEQUATE PREHEATING OF MATERIALS, HOARDING AND HEATING DURING CONSTRUCTION AND THEREAFTER AS SPECIFIED. THE "TORCHING TECHNIQUE" WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
5. MASONRY CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY BRACING OF ALL MASONRY COMPONENTS UNTIL ALL RELATED STRUCTURAL FRAMING HAS BEEN ERECTED AND COMPLETELY INSTALLED.
6. PROVIDE EXPANSION JOINTS AT MAXIMUM OF 6 METERS O/C UNLESS NOTES. SUBMIT DRAWING WITH LOCATIONS OF EXPANSION JOINTS FOR REVIEW PRIOR TO CONSTRUCTION.
7. PROVIDE CONTINUOUS BOND BEAMS WITH 2-15M BARS BOTTOM IN CONCRETE FILL AT TOP OF ALL EXTERIOR WALLS, BEARING WALLS OR AS INDICATED ON DRAWINGS.
8. INSPECTION HOLES SHALL BE LEFT AT THE BASE OF CONCRETE FILLED CORES.
9. MASONRY CORES SHALL BE FILLED IN LIFTS NOT EXCEEDING 3M.
10. CONCRETE BLOCKS TO BE MIN. H/15/A/M UNLESS NOTED.
11. ENSURE MASONRY CORES FILLED WITH CONCRETE AT EXPANSION ANCHOR LOCATIONS.
12. TYPICAL MASONRY LINTELS UNLESS NOTED ON DRAWINGS:
    SPANS UP TO 1200: 200 U-BLOCK, 2-15M CONT. BOTTOM
    SPANS UP TO 2400: 400 U-BLOCK, 2-15M CONT. BOTTOM
    PROVIDE MINIMUM 200 BEARING U/N AT EACH END.
13. ALL BONDING COURSING TO BE RUNNING BOND UNLESS NOTED OTHERWISE.

OPEN WEB STEEL JOISTS

1. JOISTS WHICH ARE RESISTANCE WELDED SHALL CONFORM TO CAN/CSA W55.3-08.
2. STEEL JOISTS DESIGN SHALL ALLOW FOR ALL SNOW ACCUMULATION PRESCRIBED BY THE 2020 EDITION OF THE NATIONAL BUILDING CODE OF CANADA.
3. BRIDGING SHALL CONFORM TO THE LATEST CODE REQUIREMENTS.
4. BRIDGING TO BE CONNECTED TO ALL BEAMS AND WALLS.
5. JOIST SUPPLIER TO DESIGN JOISTS TO SUPPORT MECHANICAL EQUIPMENT ALL WEIGHTS & LOCATIONS TO BE CONFIRMED BY MECHANICAL SUBCONTRACTOR.
6. WHERE POINT LOADS ON JOISTS DO NOT OCCUR AT PANEL POINTS, STRENGTHEN CHORDS AS REQUIRED. INDICATE ALL POINT LOAD LOCATIONS ON SHOP DRAWINGS.
7. CAMBER ALL JOISTS FOR SPECIFIED DEAD LOAD PLUS HALF OF THE SPECIFIED LIVE LOAD (MIN. 12MM) ACCORDING TO CSA-S16 UNLESS NOTED OTHERWISE.
8. DESIGN AND SUPPLY JOIST SEATS AND BEARING PLATES TO SUIT ELEVATIONS AND SKEWS INDICATED ON DRAWINGS.
9. THE STEEL JOIST SUPPLIER SHALL SUBMIT DRAWINGS BEARING THE SEAL OF AN ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA FOR REVIEW OF:
   - FABRICATION DRAWINGS OF EACH JOIST TYPE C/W MEMBER SIZES, DIMENSIONS, AND DESIGN INFORMATION.
   - AN ERECTION DRAWING, SHOWING THE LOCATION OF ALL JOIST AND OTHER INFORMATION REQUIRED BY THE CONTRACTOR FOR THE PROPER INSTALLATION OF THE JOISTS.

STEEL DECK & LIGHT GAUGE METAL FRAMING

1. STEEL DECK AND LIGHT GAUGE METAL FRAMING TO BE DESIGNED IN ACCORDANCE WITH THE LATEST ISSUE OF CSA 136-07 AND CSA 136.1-07 TO SUPPORT THE LOADS INDICATED ON THE DRAWINGS.
2. STEEL DECK WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF CANADIAN SHEET STEEL BUILDING INSTITUTE STANDARDS FOR ROOF AND FLOOR DECKS.
3. STEEL DECK TO BE MANUFACTURED FROM ASTM A525 GRADE A STRUCTURAL QUALITY SHEET STEEL; HOT-DIP GALVANIZED TO ZF75 WIPED COAT DESIGNATION.
4. SUBMIT SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA, INDICATING DECKING PLAN, PROFILES, SUPPORTS AND DESIGN LOADS.
5. MECHANICALLY FASTEN SIDE LAPS AT 300mm O/C.
6. FASTEN DECK TO SUPPORT MEMBERS WITH 19mm FUSION WELDS AT 300mm O/C.
7. REINFORCE DECK OPENINGS UP TO 450mm SQUARE WITH L55 X 55 X 5 EACH SIDE. EXTEND REINFORCING ANGLES A MINIMUM OF TWO FLUTES BEYOND OPENING EACH SIDE.
8. ALL ROOFTOP EQUIPMENT SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMITMENT OF STEEL DECK SHOP DRAWING REVIEW. INDICATE EQUIPMENT WEIGHT, OVERALL DIMENSIONS, AND CONNECTION REQUIREMENTS ON SHOP DRAWINGS.

MISCELLANEOUS METAL

1. REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS METAL DETAILS.
2. ALL STEEL SHALL CONFORM TO CSA G40.21-04
3. WELDED REBAR ANCHORS TO BE GRADE 300 WELDABLE.
4. ALL EXPOSED MISCELLANEOUS METAL TO BE REVIEWED FOR ARCHITECTURAL APPEARANCE AS PER AISC.SPECIFICATION FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL.

PRECAST FLOOR PLANKS

1. THE PRECAST FLOOR PLANK SUPPLIER SHALL SUPPLY ALL ANCHORS, BRACKETS, HANGERS AND BEARING PADS NECESSARY FOR THE ERECTION OF THE PRECAST FLOOR PLANKS.
2. PRECAST FLOOR PLANKS SHALL BE FINISHED TO FACILITATE DIRECT APPLICATION OF FLOORING.
3. THE PRECAST FLOOR PLANKS SUPPLIER SHALL SUBMIT DRAWINGS BEARING THE SEAL OF AN ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA FOR REVIEW BY CONTRACT ADMINISTRATOR.

DESIGN LOADS:

MAIN FLOOR:
LIVE LOAD = 4.80 kPa
DEAD LOAD = 3.60 kPa 250mm PRECAST FLOOR PLANKS
1.20 kPa 50mm CONCRETE TOPPING
0.25 kPa MECHANICAL/ELECTRICAL
0.15 kPa CEILING
0.15 kPa MISCELLANEOUS
TOTAL LOAD = 10.15 kPa

MECHANICAL MEZZANINE FLOOR:
LIVE LOAD = 4.80 kPa
DEAD LOAD = 3.60 kPa 250mm PRECAST FLOOR PLANKS
1.20 kPa 50mm CONCRETE TOPPING
TOTAL LOAD = 9.60 kPa

ROOF:
SNOW LOAD = 2.15 kPa
DEAD LOAD = 0.70 kPa ROOF JOISTS, DECK, INSULATION & ROOFING
0.30 kPa MECHANICAL/ELECTRICAL/MISCELLANEOUS
TOTAL LOAD = 3.15 kPa

SNOW LOAD:
IMPORTANCE FACTOR = 1.25
1/50 YR GROUND SNOW LOAD = 1.90 kPa
1/50 YR GROUND RAIN LOAD = 0.20 kPa

WIND LOAD:
IMPORTANCE FACTOR = 1.25
1/50 YR HOURLY WIND PRESSURE = 0.45 kPa

SEISMIC LOAD:
IMPORTANCE FACTOR = 1.50
SA(0.2) = 0.112
SA(2.0) = 0.0214
SEISMIC SITE CLASSIFICATION = X_E

DRAWING LIST

No.	REVISION / DESCRIPTION	BY	DATE
0			
B	ISSUED FOR DESIGN BUILD RFP	DRM	MAR07 2025
A	ISSUED FOR CLASS 3 COST ESTIMATE	DRM	MAY24 2024

SEAL

2024.05.24 DATE	BDN DESIGNED	DRM, PAS DRAWN	PAS CHECKED	APPROVED

Winnipeg

THE CITY OF WINNIPEG
ASSETS & PROJECT MANAGEMENT DEPARTMENT
MUNICIPAL ACCOMMODATIONS DIVISION
3-65 GARRY STREET, R3C 4K4

PROJECT
WINNIPEG FIRE PARAMEDIC SERVICE STATION 15

RUTH CROSSING AT BISON DRIVE

SHEET TITLE
SPECIFICATIONS AND GENERAL NOTES

PRELIMINARY ONLY
NOT FOR CONSTRUCTION

SCALE	PROJECT No:	SHEET No:
AS SHOWN	2022-097	S1

DRAWING SHEET SIZE: A1 (594x841) PLOT 1:1