

## GENERAL

1. These notes are to be read in conjunction with the specifications.
2. This building has been designed in accordance with the 2006 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. Procedure must be approved by the Contract Administrator.
4. Any unsound structural conditions observed or created during construction are to be reported to Contract Administrator immediately.
5. 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.
6. Confirm the location of all sub-grade services prior to commencing site work.
7. Verify all dimensions and elevations with architectural drawings prior to construction. Any discrepancies to be reported to Contract Administrator immediately. Do not scale drawings.
8. Do not backfill against structure until main floor is in place.
9. Confirm all existing conditions prior to construction. Any discrepancies or conflicts to be reported to Contract Administrator immediately.

## 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 and CSA 136.1 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 ZF025 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 @ 12" o.c.
6. Fasten deck to support members with 3/4" fusion welds @ 12" o.c.
7. Reinforce deck openings up to 18" square with L2X2x3/16" each side. Extend reinforcing angles a min. of two flutes beyond open'g. each side.

## MISCELLANEOUS METAL

1. Refer to architectural drawings for miscellaneous metal details.
2. All steel to CSA G40.21-M300W
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.

## CONCRETE

1. Concrete work shall be in accordance with the latest edition of CAN 3-A23.1 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 the latest edition of CAN 3-A23.1 for every 50 m<sup>3</sup> of concrete placed and a minimum of one set for each structural component.
3. Normal Portland Cement Type 10 for all concrete except use sulphate resisting cement Type 50 for all pile caps and piles
4. CONCRETE DESIGN STRENGTH @ 28 days  
35 MPa: precast concrete  
32 MPa: piles and pile caps  
30 MPa: all other concrete U/N
5. AGGREGATE SIZE:  
max 1 1/2" for pile caps & piles  
max 3/4" for all other concrete  
max 1/2" for masonry lintels and core fill
6. SLUMP:  
3 1/2" +/- 3/4" for all concrete  
except 6" +/- 3/4" for masonry fill.
7. AIR ENTRAINMENT:  
6% +/- 1% grade beams, exterior curbs and driveways, and parkade slabs
8. Walls, piers and columns shall be poured a minimum of 24 hours before slabs and beams.
9. Provide dovetail anchor slots in concrete walls and columns where masonry abuts.
10. All structural slabs framing into concrete walls or beams shall have a minimum 1 1/2" chase into supporting member x the height of the slab.
11. Where concrete beams frame into concrete walls or other concrete beams and are poured later, provide 1 1/2" chase (height and width to match beam).
12. The use of calcium chloride is not permitted.
13. Construction joint keys in grade beams shall be formed at pile locations only.
14. 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 @ 24" o/c top & bottom.
15. Saw cuts for slab on grade shall be 1" deep & 1/8" 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.
16. Slip joint all paving against structural members with 1/2" impregnated fibreboard.
17. Coordinate the location of all items embedded in concrete work with Architectural, Mechanical & Electrical drawings.
18. Contract Administrator to be notified at least 48 hours in advance of all major pours.
19. Refer to architectural drawings for concrete surfaces requiring architectural finishes.
20. Where voidform is indicated on drawings use cardboard shearmat below structural slabs and low density polystyrene below walls and gradebeams.
21. Exterior sidewalks to be 4" thk. concrete on compacted granular fill reinforced with 10m @ 12" o/c E.W. mid-depth. Provide toled control joints @ max. 5'-0" o/c and construction joints @ max. 20'-0" o/c.
22. Concrete slab at exterior refuse container to be 6" thk. concrete on compacted granular fill reinforced with 15M @ 12" o/c E.W. mid. depth.

## STRUCTURAL WOOD

1. All wood framing shall be in accordance with CSA 086.
2. All lumber shall conform to 1978 N.L.G.A. grading rules for Canadian lumber.
3. Wall studs to be minimum #2 Spruce-Pine-Fir or better U/N on drawings, kiln-dried to a maximum moisture content of 19%.
4. Joists, lintels, and built-up beams to be minimum #2 Spruce-Pine-Fir or better U/N on drawings, properly seasoned to a maximum moisture content of 19%.
5. The carpentry contractor in conjunction with the general contractor shall be responsible for supplying and installing all temporary and permanent bracing required to provide the stability of the structure.
6. All plywood sheathing to be exterior grade.
7. All wall and roof sheathing to be nailed secure in a controlled pattern as follows:  
Panel edges - 3" nails @ 6" o/c  
Intermediate supports & blocking - 3" nails @ 10" o/c
8. The wood truss supplier shall be responsible for the design and supply of all roof trusses, gable end trusses, bridging and hardware required for the connections.
9. The wood truss supplier shall submit drawings bearing the seal of an engineer, registered in the Province of Manitoba for review of:  
- fabrication drawings of each truss type c/w member sizes, dimensions, and design information.  
- an erection drawing, showing the location of all truss and other information required by the contractor for the proper installation of the trusses.
10. Truss layout indicated on drawings is for diagrammatic purposes only. Actual truss layout to be determined by supplier.
11. No site modifications to be made to trusses without prior approval of supplier and Contract Administrator.
12. All repairs made to damaged trusses to be approved by supplier and Contract Administrator.
13. All built-up wood columns and post to be continuously blocked down to foundation.
14. Provide additional studs (cripples) below bearing points of built-up beams and lintels. Number of studs to equal number of plies of beam or lintel u/n.
15. Provide joist cross-bridging at intervals not exceeding 8 times the member depth.
16. Provide cont. horizontal solid blocking @ max. 4'-0" o/c vertically in all exterior stud walls.
17. Minimum lintels for stud bearing walls u/n on drawings:  
- openings up to 3'-4" use 2-2x8  
- openings up to 5'-0" use 2-2x10

## STRUCTURAL STEEL

1. All structural steel including HSS sections, to be in accordance with G40.21-M350W.
2. All welding shall conform to CSA W59-M1989; fabricators to be certified in accordance with the latest edition of CSA W47.1.
3. Fabrication and erection shall be in accordance with CAN/CSA S16.1, "Limit States Design of Steel Structures".
4. 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.
5. Fabricator shall notify the Contract Administrator of any proposed member substitutions or changed connection details.
6. Holes required in steel sections must be approved by the Contract Administrator.
7. All beams continuous over columns shall have 2 web stiffeners on each side, the same thickness as column unless noted, but not less than 3/8".
8. 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.
9. All structural steel shall receive at least one coat primer to CISC/CPMA standard 1-73a 1975.
10. Use asphalt base paint (flintkote 410-02 or eq.) at columns below slab.
11. All high strength bolts to be ASTM A325M.
12. The shear capacity of all shear splices shall be at least equal to the shear capacity of the smaller beam, unless noted.
13. The steel supplier shall shop weld 1 1/2" x 1/8" masonry anchors to all steel members in contact with masonry walls. Maximum spacing of ties shall be 32" o/c unless noted.
14. Steel supplier is responsible for design and detailing of all structural steel connections not shown on drawings.
15. Anchor bolts shall be supplied by structural steel supplier & set by general contractor. General contractor to supply and install 1" non-shrink grout under all base plates unless noted.
16. Expansion anchors to be zinc-plated steel wedge type with the following design values in 30 MPa concrete:  
1/2" ø - 2000 lbs shear, 2000 lbs pull-out  
3/4" ø - 4000 lbs shear, 4000 lbs pull-out
17. All exposed portions of ledge angles and connections to be coated with bituminous paint.
18. Provide 3" x 3" x 1/4" angle framing around all deck openings greater than 18" x 18" unless noted.
19. Structural steel supplier shall submit shop drawings for review of fabrication, sizes, dimensions and placement. All connections not shown on drawing are to be sealed by a Professional Engineer registered in the Province of Manitoba.



Project:  
ASIATIC LION PAVILION  
ASSINIBOINE PARK ZOO  
WINNIPEG MB

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GENERAL NOTES

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50

The drawings are property of the Architect and control shall remain with the Architect. The contractor is responsible for checking and verifying all dimensions and dimensions on all report of discrepancies to the Architect and/or contractor before proceeding with construction work.

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