

D01- GENERAL

D01-1 GENERAL INFORMATION

- THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE 2012 ONTARIO BUILDING CODE & 2010 NATIONAL BUILDING CODE OF CANADA. CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THIS AND ALL OTHER APPLICABLE CODES.
  - 1.1 CONCRETE STRUCTURE DESIGNED IN ACCORDANCE WITH CSA A23.3-04
  - 1.2 STEEL STRUCTURE DESIGNED IN ACCORDANCE WITH CANCSA-S16.1-01 (09)
  - 1.3 WOOD STRUCTURE DESIGNED IN ACCORDANCE WITH CANCSA-S06.1-05
  - 1.4 MASONRY STRUCTURE DESIGNED IN ACCORDANCE WITH CANCSA-S304-10(8)
- GUARDRAILS/HANDRAILS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN 4.1.5.13, 3.4.4.4 AND 4.4.3.1 OF THE 2012 ONTARIO BUILDING CODE/2010 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED. IN ADDITION, GLASS IN GUARDS SHALL COMPLY WITH SUPPLEMENTARY STANDARD S8-17
- THE ROOF HAS BEEN DESIGNED FOR THE REQUIRED STORM WATER FLOW RESTRICTION IN ACCORDANCE WITH 2012 ONTARIO BUILDING CODE/2010 NATIONAL BUILDING CODE REQUIREMENTS.
- CONTRACTOR IS TO VERIFY/COORDINATE ALL DIMENSIONS/PENETRATIONS WITH ARCHITECTURAL/MECHANICAL/ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT INCONSISTENCIES BEFORE PROCEEDING WITH WORK. ANY OMISSIONS NOT INDICATED ON STRUCTURAL DRAWINGS ARE TO BE APPROVED BY DEPARTMENTAL REPRESENTATIVE IN WRITING PRIOR TO CONSTRUCTION.
- CADD VERSIONS OF THE STRUCTURAL DRAWINGS SHALL BE MADE AVAILABLE TO THE CONTRACTOR UPON THE COMPLETION OF A RELEASE FORM INDENIFYING THE DEPARTMENTAL REPRESENTATIVE FROM ANY ERRORS OR OMISSIONS ASSOCIATED WITH THE CADD FILES.
- LADDER SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN PART 4 AND PART 3 OF THE 2012 ONTARIO BUILDING CODE/2010 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
- STEEL STAIRS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN PART 4 AND PART 3 OF THE 2012 ONTARIO BUILDING CODE/2010 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
- DEMOLITION DETAILS THAT AFFECT THE STRUCTURAL ELEMENTS HAVE BEEN REVIEWED IN ACCORDANCE WITH PARTS 2.4.10 AND 11 OF THE 2012 ONTARIO BUILDING CODE. WHERE REQUIRED, SUPPLEMENTARY/TEMPORARY/REMEDIAL FRAMING HAS BEEN PROVIDED.
- SEISMIC RESTRAINT OF ARCH/MECH/ELECT ELEMENTS NOT NOTED ON THE DRAWINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR'S ENGINEER. RESTRAINT DETAILS ARE TO BE DEVELOPED IN ACCORDANCE WITH THE 2012 OBC/2010 NBC. CONTRACTOR'S ENGINEER IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF SEISMIC RESTRAINTS AND ISOLATIONS AS REQUIRED BY SPECIFICATIONS INCLUDING THE VERIFICATION THAT THE EXISTING NEW STRUCTURE IS CAPABLE OF SAFELY SUPPORTING THE IMPROVED STRUCTURE IN ACCORDANCE WITH THE 2012 OBC/2010 NBC. NO ELEMENTS MAY BE CONSTRUCTED WITHOUT WRITTEN CONFIRMATION OF THESE CONDITIONS BY CONTRACTOR'S ENGINEER.
- NO FOUNDATION ELEMENTS ARE TO BE CONSTRUCTED UNTIL WRITTEN APPROVAL OF THE BEARING SURFACES AND PRESSURES IS PROVIDED BY A GEOTECHNICAL ENGINEER THROUGH ON-SITE INVESTIGATION. FAILURE TO COMPLETE THIS WORK COULD RESULT IN THE REMOVAL/REINSTATEMENT OF ANY/ALL FOUNDATION ELEMENTS AT CONTRACTOR'S OWN COST.
- NEW OPENINGS IN EXISTING/ERECTED CONCRETE/MASONRY ELEMENTS:
  - REFER TO MECHANICAL/ELECTRICAL LISTS FOR LAYOUTS
  - SCAN TAB OF SLAB/WALL PRIOR TO REMOVALS. MARK OUT OPENING POSITION ON TAB OF SLAB/S OF WALL
  - CONTACT DEPARTMENTAL REPRESENTATIVE FOR REVIEW OF SCANS/MARKS PRIOR TO COMMENCEMENT OF ANY DEMOLITION
  - NO WORK TO COMMENCE UNTIL RECEIVE WRITTEN APPROVAL FROM DEPARTMENTAL REPRESENTATIVE
  - PROVIDE ADEQUATE PROTECTION OF SURROUNDING AREAS DURING REMOVALS
  - SAFELY CUT/CHOP CUT OPENINGS AS REQUIRED
  - DO NOT OVERCUT
  - ANY REQUIRED SUPPLEMENTAL STRENGTHENING/REINFORCING IS TO BE ERECTED PRIOR TO REMOVALS.
- CONTRACTOR TO PROVIDE PRE-ENGINEERED SHORING AS REQUIRED TO ACCOMMODATE THE CONTRACTOR'S CONSTRUCTION ACTIVITIES AND TO PREVENT DAMAGE TO ANY ADJACENT PROPERTY. ALL CONSTRUCTION ACTIVITIES TO BE LIMITED TO THE LIMITS OF THE CONSTRUCTION SITE AND ALL DAMAGE TO EXISTING PROPERTIES MUST BE REINSTATED.
- CONTRACTOR IS REQUIRED TO SUBMIT CONDUIT AND SLEEVE SHOP DRAWINGS FOR ALL FLOOR/ROOF/WALLS/COLUMNS PRIOR TO THE ERECTION/CONSTRUCTION/FABRICATION OF ANY OF THESE ELEMENTS. THE DRAWINGS ARE TO LOCATE/SHOW/NOT THE CLEAR SIZE/OF OPENINGS/SLEEVES/CONDUITS IN PLAN (FLOOR/ROOF/COLUMNS) AND ELEVATION (WALL/SLEEVES). THE COORDINATION OF THE LARGEST SIZES/IN/IN SUBSTRATES TO ENSURE ALL ITEMS ARE CLEARLY INDICATED IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. DRAWINGS ARE TO BE SUBMITTED A MINIMUM OF 4 WEEKS PRIOR TO THE CONSTRUCTION OF THE AFFECTED ELEMENT.

D01-2 DEFINITIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED IN THESE NOTES AND DRAWINGS:

Ø	AT (SPACING x2)	mm	MILLIMETRES
ARCH.	ARCHITECTURAL	MAX.	MAXIMUM
B.B.L.	BOTTOM	MECH	MECHANICAL
BUL	BOTTOM LOWER LAYER	MIN.	MINIMUM
cc	BOTTOM UPPER LAYER	NF	NEAR FACE
C	CENTRE TO CENTRE	NTS	NOT TO SCALE
CONT	CENTRE LINE	OF	OUTSIDE FACE
CW	CONTINUOUS	PO	PILE CUT-OFF
E	CORE WALL	R. SMR	PLATE
EE EF	EACH		STANDARD GALVANIZED LADDER
EL	EACH END	SW	MASONRY REINFORCEMENTS
ES	EACH FACE	TTIL	SHEARWALL
EW	ELEVATION	TUL	TOP
FF	EACH SIDE	TOP	TOP LOWER LAYER
H	EACH WAY	TYP	TOP UPPER LAYER
HOMR	FAR FACE	UN	TOP OF PILE CAP
IF	HORIZONTAL	UL	TYPICAL
LL	HEAVY DUTY GALVANIZED TRUSS	UNLESS OTHERWISE NOTED	
IN	TYPE MASONRY REINFORCEMENT		UPPER LAYER
IN	INSIDE FACE		UNDERSIDE
IN	LOWER LAYER		VERTICAL
IN	METRES		

D01-3 SHOP DRAWINGS

- SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE DEPARTMENTAL REPRESENTATIVE. OBTAIN DEPARTMENTAL REPRESENTATIVE'S APPROVAL BEFORE PROCEEDING WITH THE FABRICATION.
- EACH OF THE FOLLOWING SHOP DRAWINGS MUST BEAR THE SIGNATURE AND STAMP OF A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE PLUS OTHER DRAWINGS AS NOTED:
  - DRAWINGS FOR ANY TEMPORARY WORK
  - DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTOR'S FORCES INCLUDING EXTERIOR BUILDING ENVELOPE
  - STRUCTURAL STEEL JOISTS
  - FORMWORK
- SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE CONTRACTOR BEFORE ISSUING TO THE DEPARTMENTAL REPRESENTATIVE. SHOP DRAWINGS NOT STAMPED BY THE CONTRACTOR WILL BE REJECTED. ANY DELAYS IN THE CONSTRUCTION SCHEDULE DUE TO NONCOMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- SUBMIT STRUCTURAL, STEEL, JOIST AND STEEL DECK SHOP DRAWINGS FOR DEPARTMENTAL REPRESENTATIVE'S REVIEW BEFORE FABRICATION. ALL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO.
- SHOP DRAWINGS ARE REVIEWED FOR CONFORMANCE WITH THE GENERAL DESIGN CONCEPT. THIS REVIEW DOES NOT IMPLY APPROVAL OF THE DETAILED DESIGN OR QUANTITIES DESCRIBED IN THE SHOP DRAWINGS. THE RESPONSIBILITY FOR THE QUANTITY AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS IS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.

D03- CONCRETE

D03-1 CONCRETE COVER (CLEAR TO REINFORCING):

US FOOTINGS, PILE CAPS, GRADE BEAMS (AGAINST SOIL)	75mm
FOOTINGS, PILE CAPS, GRADE BEAMS (SIDES & TOP)	50mm
WALLS	40mm
SLABS	25mm UN
BEAMS	40mm (TO STRIPPUS)
COLUMNS	40mm (TO TIE/S)
RAILINGS	40mm (TO TOP STEEL)

PROVIDE 32mm COVER FOR BOTTOM STEEL FOR SLAB ABOVE SHR. FIRE RATED AREAS.  
PROVIDE 50mm COVER FOR COLUMNS IN SHR. FIRE RATED AREAS.

D03-2 CONCRETE MIXES

PROPORTION NORMAL DENSITY CONCRETE IN ACCORDANCE WITH CANCSA-A23.1, TO GIVE THE FOLLOWING QUALITY FOR ALL CONCRETE AS INDICATED.

LOCATION	28 DAY STRENGTH	SLUMP	CLASS OF EXPOSURE
PAVEMENT & WALKS	32 MPa	75mm	C-2
FOOTINGS/FOUNDATIONS	30 MPa	75mm	F-2

\*OBTAIN THESE SLUMPS WITH AID OF SPECIFIED WATER REDUCING AGENT.  
\*NOTE: ALL CONCRETE EXPOSED TO EXTERIOR CONDITIONS TO HAVE MINIMUM 6% AIR ENTRAINMENT.

READY-MIXED CONCRETE AND CONCRETE PROPORTIONS SHALL BE IN ACCORDANCE WITH CSA A23.1, CLAUSE 12 AND AS FOLLOWS:

- MINIMUM ALLOWABLE COMPRESSIVE STRENGTH SHALL BE 30 MPa (4400 psi) AT 28 DAYS OF AGE, UNLESS OTHERWISE NOTED OR SHOWN.
- IF BLENDED NORMAL PORTLAND CEMENT/CEMENTITIOUS HYDRAULIC SLAG IS USED EXCEPT FOR FLOOR MIXES, SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT. TOTAL VOLUME OF CEMENT IN CONCRETE FLOOR MIXES SHALL BE 100% NORMAL PORTLAND CEMENT.
- PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CANCSA-A23.1-M16.
- USE OF CALCIUM CHLORIDE NOT PERMITTED.
- DO NOT CHANGE CONCRETE MIX WITHOUT PRIOR APPROVAL OF CONSULTANT. SHOULD CHANGE IN MATERIAL SOURCE BE PROPOSED, NEW MIX DESIGN TO BE APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.

D05- STEEL

D05-1 STRUCTURAL STEEL:

STRUCTURAL STEEL SHALL COMPLY WITH CAN3-S16.1-01(09) UNLESS OTHERWISE NOTED.

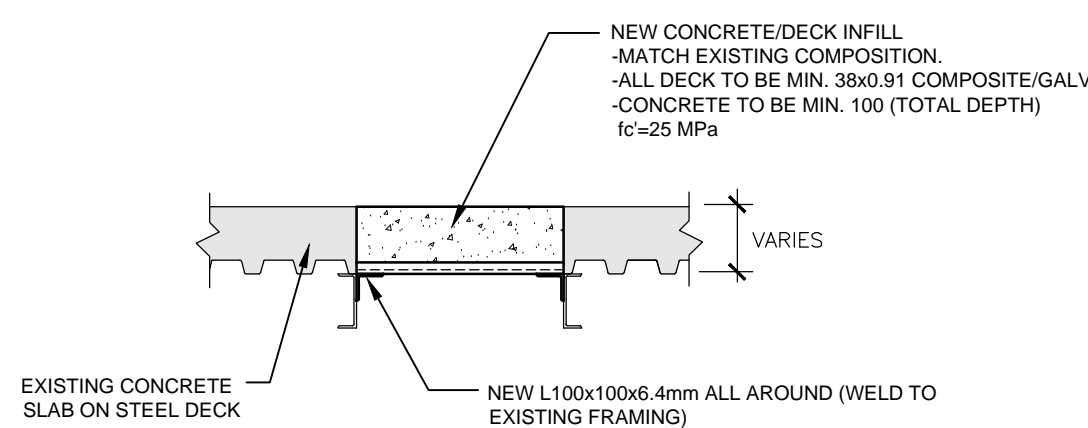
ITEM	APPLICABLE SPECIFICATION (UNLESS OTHERWISE NOTED)
ROLLED SECTIONS	G40.21M - 350W
HEI (TUBE) SECTIONS CONNECTION	G40.21M - 350W (A500)
BOLTS	A325 (BEARING TYPE)
ANCHOR BOLTS	A307 (UNLESS OTHERWISE NOTED IN BASEPLATE SCHEDULE)
BRIDGE FRAME BEARING PLATES	G40.21M-350W

- ALL STEEL WORK SHALL BE GIVEN ONE COAT OF APPROVED PRIMER.
- FIELD AND SHOP CONNECTIONS SHALL BE WELDED OR HIGH TENSILE BOLTED (ASTM STANDARD A325).
- WELDING SHALL CONFORM TO LATEST CSA SPECIFICATION W59 AND BE UNDERTAKEN BY A FABRICATOR APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA SPECIFICATION W47.1.
- ALL EXPOSED STEEL SHALL BE CONTINUOUS AND BE GROUND SMOOTH.
- ALL EXTERIOR EXPOSED STRUCTURAL STEEL SHALL BE GALVANIZED OR PAINTED WITH APPROVED RUST INHIBITIVE PAINT.
- STRUCTURAL STEEL MEMBERS SHALL NOT BE SPLICED UNLESS APPROVED BY THE DEPARTMENTAL REPRESENTATIVE IN WRITING.
- WHERE STRUCTURAL STEEL MEMBERS SPECIFIED ON THE STRUCTURAL DRAWINGS ARE UNAVAILABLE TO THE CONTRACTOR, THE STRUCTURAL STEEL CONTRACTOR SHALL PROVIDE MEMBERS HAVING ALL SECTION PROPERTIES EQUAL TO OR BETTER THAN THAT OF THE SPECIFIED MEMBERS AT NO ADDITIONAL COST. CONTACT DEPARTMENTAL REPRESENTATIVE FOR ACCEPTANCE OF ANY AND ALL SUBSTITUTIONS.

D05-2 STEEL DECK:

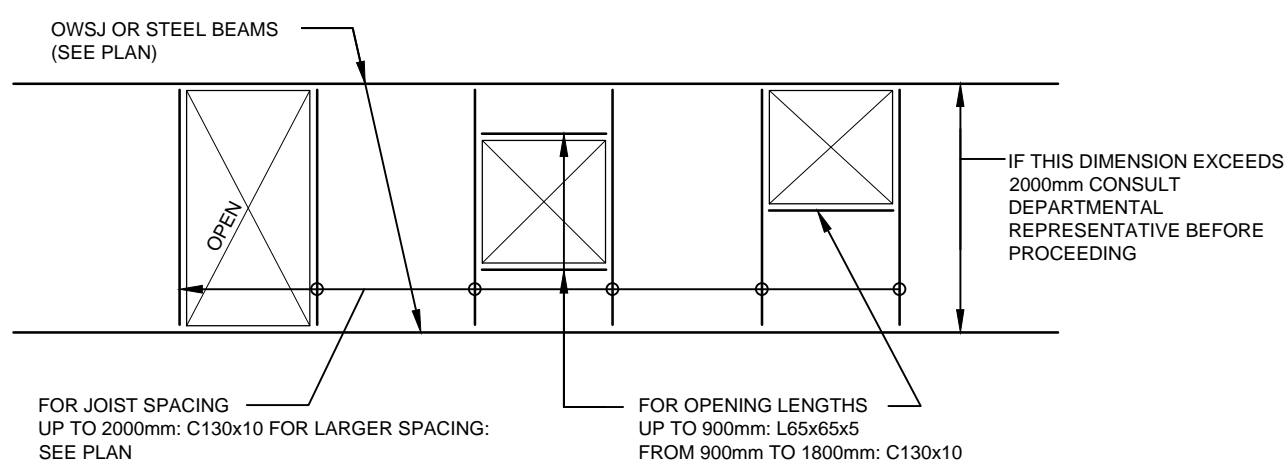
- ALL METAL DECK SHALL BE A MINIMUM OF 38mm DEEP, WITH DECK FLUTES AT 150mm CENTRES, CONTINUOUS OVER AT LEAST THREE SPANS, AND SHALL BE FORMED FROM SHEET STEEL CONFORMING TO CSB8 100/150/200. MINIMUM GAUGE (A) WITH A BASE STEEL NOMINAL THICKNESS SPECIFIED ON PLANS, AND A MINIMUM ZINC COATING DESIGNATION OF "H95" OR BETTER.
- DECK CONNECTIONS TO SUPPORTING STRUCTURE TO BE AS FOLLOWS (UN ON PLANS):
  - 20mm Ø FUSION WELDS @ 150mm
  - 20mm Ø FUSION WELDS @ 300mm TRANS
  - 20mm Ø FUSION WELDS @ 300mm PERIMETER
  - SIDE LAP: BUTT JUNCTION @ 300mm o.c.
- ALL WELDS SHALL BE PRIME PAINTED BY DECK CONTRACTOR.
- STEEL DECK CONTRACTOR TO REINFORCE ALL OPENINGS IN DECK 400mm IN SIZE OR SMALLER.
- ALL DECK CLOSURES SHALL BE SUPPLIED AND INSTALLED BY THE DECK CONTRACTOR. (PROVIDE DECK CLOSURES AT ALL AREAS WHERE DECK EDGES ARE WELD).
- WEDGE THE FLUTES OF THE STEEL ROOF DECK UNDER WOOD SLEEPERS CARRYING ROOF TOP UNITS (THIS SHALL ALSO APPLY TO ROOF TOP UNITS WITH METAL CURBS).
- NO MECHANICAL OR ELECTRICAL EQUIPMENT/ACCESSORIES SHALL BE HUNG FROM THE STEEL DECK.
- HANGERS FOR SUSPENSION OF CEILING ARE TO BE ATTACHED TO THE STEEL JOISTS. THESE MAY HOWEVER BE ATTACHED IN BETWEEN STEEL JOISTS TO THE SIDE OF THE DECK FLUTES AND BY LOOPING AND TYING AROUND, BUT ON NO ACCOUNT SHOULD THESE HANGERS BE PUNCHED THROUGH THE BOTTOM FLUTES.

D05-4 OPENINGS THROUGH STEEL DECK:



TYPICAL SLAB INFILL: OPENING < 1200x1200


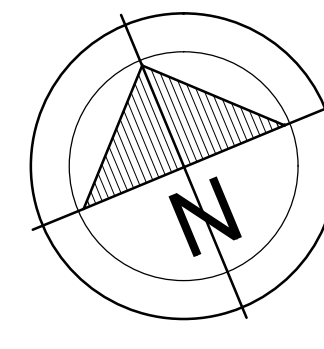
D05-5 TYPICAL DETAILS FOR TRIMMING TO OPENINGS THROUGH STEEL ROOF DECK:

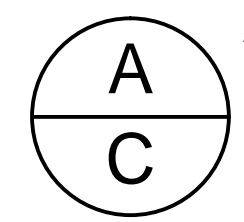
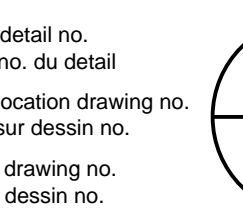
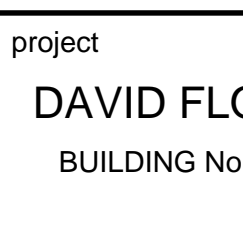
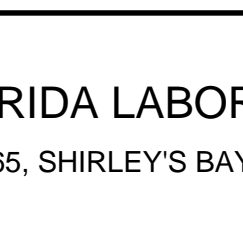


NOTES:

- TOP OF ALL TRIMMING STEEL AT UNDERSIDE OF STEEL DECK UNLESS OTHERWISE NOTED.
- LOCATION OF ALL MECHANICAL UNITS AND OPENINGS THROUGH ROOF IS BASED ON INFORMATION SHOWN ON MECHANICAL DRAWINGS. THE STRUCTURAL STEEL SUB-CONTRACTOR MUST CONFIRM ALL THESE DIMENSIONS AND SIZES WITH THE MECHANICAL CONTRACTOR.
- UNITS MUST BE DESIGNED FOR ADDITIONAL LOADS FROM MECHANICAL UNITS.
- IF ACTUAL LOCATIONS OR DETAILS VARY FROM THOSE SHOWN, THE DEPARTMENTAL REPRESENTATIVE MUST BE INFORMED AND INSTRUCTIONS RECEIVED BEFORE PROCEEDING WITH THE WORK.
- THE STRUCTURAL STEEL SUB-CONTRACTOR IS TO SUBMIT ERECTION DRAWINGS TO THE DEPARTMENTAL REPRESENTATIVE FOR APPROVAL OF SIZE AND LOCATION OF OPENINGS FOR MECHANICAL UNITS.

5.		
4.	ISSUED FOR ADDENDUM #1	2016.07.26
3.	ISSUED FOR TENDER	2016.04.07
2.	ISSUED FOR 99% REVIEW	2015.01.16
1.	ISSUED FOR 86% REVIEW	2015.11.17

No.	Revision	Date
 		

project project  
DAVID FLORIDA LABORATORY  
BUILDING No. 65, SHIRLEY'S BAY, ONTARIO

BUILDING ENVELOPE REFIT  
PROJECT

drawing dessin

GENERAL NOTES  
AND DETAILS

designed	M.SAUMURE	conçu
date		
drawn	J.LABBÉ	dessiné
date	15/09/27	
reviewed	R.MUNDEN	examiné
date		
approved	R.MUNDEN	approuvé
date		
scale		

project no. no. du projet  
CSA15-G1

drawing no. no. du dessin  
S-000