

A. GENERAL INFORMATION

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1. READ STRUCTURAL DOCUMENTS IN CONJUNCTION WITH CONTRACT DOCUMENTS, WHICH INCLUDE, BUT ARE NOT LIMITED TO, ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DOCUMENTS.
2. CONTRACTOR TO BE RESPONSIBLE FOR CHECKING SITE CONDITIONS AGAINST DOCUMENTS, BEFORE PROCEEDING WITH THE WORK, AND REPORT DISCREPANCIES TO THE CONSULTANT.
3. CONTRACTOR TO PROVIDE LABOUR, MATERIALS, AND EQUIPMENT TO COMPLETE ALL STRUCTURAL WORK INDICATED.
4. CARRY OUT CONSTRUCTION OPERATIONS, INCLUDING THE INSTALLATION OF TEMPORARY GUYING AND SHORING REQUIRED, ENSURING THAT THE EXISTING STRUCTURE OR MEMBERS ALREADY ERECTED ARE NOT LOADED IN EXCESS OF THEIR SAFE LOAD CARRYING CAPACITY.
5. STRUCTURAL DOCUMENTS DO NOT NECESSARILY SHOW ALL OPENINGS AND SLAB VARIATIONS REQUIRED. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR THE EXACT LOCATION, NUMBER, AND SIZE OF OPENINGS, TRENCHES, PITS, SUMPS, SLEEVES, AND DEPRESSIONS. PROVIDE STRUCTURAL FRAMING AT THESE LOCATIONS IN ACCORDANCE WITH THE APPLICABLE TYPICAL DETAIL.

B. REFERENCE STANDARDS/CODES AND ACTS

1. CONFORM WITH THE 2012 BUILDING CODE (ONTARIO REGULATION 332/12, AMENDED BY ONTARIO REGULATION 89/23), AND ANY APPLICABLE ACTS OF ANY AUTHORITY HAVING JURISDICTION, AND THE FOLLOWING:

REF	CODE	TITLE
a)	CAN/CSA A23.1	CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION
b)	CAN/CSA A23.2	METHODS OF TEST FOR CONCRETE
c)	CAN/CSA A23.3	DESIGN OF CONCRETE STRUCTURES
d)	RSIC	REINFORCING STEEL INSTITUTE OF CANADA (RSIC), MANUAL OF STANDARD PRACTICE
e)	CSA G30.18	CARBON STEEL BARS FOR CONCRETE REINFORCING

2. ALL STANDARDS AND PUBLICATIONS REFERENCED BY THE STANDARDS NOTED ABOVE ARE TO APPLY.
3. WHERE THERE ARE DIFFERENCES BETWEEN THE DOCUMENTS AND THE STANDARDS, CODES AND ACTS THE MOST STRINGENT SHALL GOVERN.

C. SUBMITTALS

1. SUBMIT FOR REVIEW BY THE VARIOUS CONSULTANTS, DETAILED INFORMATION FOR ALL TEMPORARY AND PERMANENT STRUCTURAL WORK. THIS INCLUDES, BUT IS NOT LIMITED TO:

ITEM	SUBMISSION REQUIRED	SUBMISSION TO BE SEALED BY PROFESSIONAL ENGINEER	COMMENTS
REINFORCED STEEL (REBAR) SHOP DRAWINGS	YES	NO	
CONCRETE MIX DESIGNS	YES	NO	

- 1.1 CONTRACTOR SHALL ALLOW FOR A TURN AROUND TIME OF 5 WORKING DAYS FOR THE REVIEW OF THESE SUBMISSIONS.
2. OUR REVIEW OF THE SHOP DRAWINGS IS ONLY FOR GENERAL CONFORMITY WITH STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS. COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE STRUCTURAL CONTRACT DOCUMENTS AND SPECIFICATIONS, NOR DO THEY AUTHORIZE ANY CHANGES TO THE CONTRACT. REVIEW OF A SPECIFIC ITEM SHALL NOT INCLUDE REVIEW OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THE CONTRACTOR'S RESPONSIBILITIES INCLUDE ALL QUANTITIES, DETAIL DIMENSIONS, FIELD MEASUREMENTS, FABRICATION PROCESS, MEANS, METHODS, SEQUENCES AND PROCEDURES OF CONSTRUCTION, COORDINATION OF WORK WITH ALL TRADES AND PERFORMING ALL WORK IN A SAFE AND ORDERLY MANNER. THE REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANT'S OR PROFESSIONAL'S RESPONSIBILITY RELATIVE TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THE SPECIFICATIONS (SUCH AS STRUCTURAL STEEL CONNECTIONS, STEEL JOISTS, PRECAST ELEMENTS, ETC.). AFTER REVIEW, THE DRAWINGS WILL BE STAMPED AND RETURNED TO SHOW ONE OF THE FOLLOWING:
- | | |
|---------------------|---|
| <u>NOT REVIEWED</u> | SHOWS WORK WHICH IS NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES. |
| <u>REVIEWED</u> | NO DEVIATIONS FROM THE CONTRACT DOCUMENTS NOTED. |
| <u>NOTED</u> | WE HAVE MADE COMMENTS, TO BE REVIEWED/INCORPORATED. SUBMIT RECORD PRINT. |
| <u>RESUBMIT</u> | REVIEW AND RESUBMIT FOR REVIEW. |

D. MATERIALS

1. PROVIDE ONLY NEW STRUCTURAL MATERIALS IN ACCORDANCE WITH THE REFERENCE STANDARDS AND THE FOLLOWING, UNLESS OTHERWISE NOTED.
- 1.1 CONCRETE:

STRUCTURAL ELEMENT AND EXPOSURE	EXPOSURE CLASS PER CSA A23.1	CONCRETE STRENGTH f _c (MPa)	SLUMP (mm)	MAX W/C RATIO	AIR CONTENT
FRAMED SLABS AND BEAMS		20			
INTERIOR WALLS		30	80		

TOLERANCE FOR SLUMP SHALL BE ± 20 mm FOR SPECIFIED SLUMP LESS THAN 80 mm AND ± 30 mm FOR SPECIFIED SLUMP BETWEEN 80 mm AND 170 mm

- 1.2 REINFORCING STEEL: CONFORM TO CSA G30 SERIES, GRADE 400
- 1.3 PLYWOOD: CONFORM TO CSA O121 (DOUGLAS FIR PLYWOOD).

E. EXECUTION

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| 1. | CONCRETE |
| 1.1. | CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE PROVIDED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS; AT MID-SPAN IF POSSIBLE AND BE CLEAR OF SUPPORTS AND POINT LOADS. |
| 2. | ALTERATIONS AND/OR CONNECTIONS TO EXISTING STRUCTURE |
| 2.1. | INSPECT THE EXISTING BUILDING AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS. |
| 2.2. | DO NOT CUT CONCRETE REINFORCEMENT UNLESS REVIEWED AND APPROVED BY THE CONSULTANT. |
| 2.3. | WHERE REQUIRED TO AVOID CUTTING EXISTING REINFORCEMENT, MODIFY THE LAYOUT OF NEW THROUGH BOLTS, EXPANSION ANCHORS AND OTHER ANCHORING DEVICES. |
| 2.4. | MAKE GOOD THE EXISTING WORK. |
| 3. | CUTTING AND CORING OF EXISTING STRUCTURE |
| 3.1. | PRIOR TO CUTTING AND CORING ANY OPENINGS IN THE EXISTING BUILDING, PROVIDE THE CONSULTANT WITH A SLEEVING DRAWING INDICATING THE SIZE AND LOCATION OF OPENINGS RELATIVE TO BUILDING GRIDLINES. EXISTING OPENINGS IN THE VICINITY OF THE NEW OPENING MUST ALSO BE SHOWN. |
| 3.2. | ALL DIMENSIONS PROVIDED TO THE CONSULTANT ARE TO BE CONFIRMED WITH THE APPROPRIATE CONTRACTOR (MECHANICAL OR ELECTRICAL) PRIOR TO CUTTING/CORING. |
| 3.3. | ANY REVISIONS TO THE DIMENSIONS BY THE CONSULTANT MUST BE REVIEWED BY THE APPROPRIATE CONTRACTOR PRIOR TO CUTTING/CORING. |
| 3.4. | ALL PRICES FOR CUTTING/CORING ARE TO INCLUDE ANY COSTS ASSOCIATED WITH X-RAYING, SCANNING, ETC. |

F. QUALITY CONTROL

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| GENERAL | |
| 1.1 | IMPLEMENT A SYSTEM OF QUALITY CONTROL TO ENSURE THAT THE MINIMUM STANDARDS SPECIFIED HEREIN ARE ATTAINED. |
| 1.2 | BRING TO THE ATTENTION OF THE CONSULTANT ANY DEFECTS IN THE WORK OR DEPARTURES FROM THE CONTRACT DOCUMENTS, WHICH MAY OCCUR DURING CONSTRUCTION. THE CONSULTANT WILL DECIDE UPON CORRECTIVE ACTION AND GIVE RECOMMENDATIONS IN WRITING. |
| 1.3 | THE CONSULTANT'S GENERAL REVIEW DURING CONSTRUCTION AND INSPECTION AND TESTING BY INDEPENDENT INSPECTION AND TESTING AGENCIES REPORTING TO THE CONSULTANT ARE BOTH UNDERTAKEN TO INFORM THE OWNERSHIP OF THE CONTRACTOR'S PERFORMANCE AND SHALL IN NO WAY AUGMENT THE CONTRACTOR'S QUALITY CONTROL OR RELIEVE THE CONTRACTOR OF CONTRACTUAL RESPONSIBILITY. |
| 2. | NOTIFICATION |
| 2.1 | PRIOR TO COMMENCING SIGNIFICANT SEGMENTS OF THE WORK, GIVE THE CONSULTANT APPROPRIATE NOTIFICATION (MINIMUM 24 HOURS) SO AS TO AFFORD THEM REASONABLE OPPORTUNITY TO REVIEW THE WORK. FAILURE TO MEET THIS REQUIREMENT MAY BE CAUSE FOR THE CONSULTANT TO CLASSIFY THE WORK AS DEFECTIVE. |
| 3. | DEFECTIVE MATERIALS AND WORK |
| 3.1 | WHERE EVIDENCE EXISTS THAT DEFECTIVE WORK HAS OCCURRED OR THAT WORK HAS BEEN CARRIED OUT INCORPORATING DEFECTIVE MATERIALS, THE CONSULTANT MAY HAVE TESTS, INSPECTIONS OR SURVEYS PERFORMED, ANALYTICAL CALCULATIONS OF STRUCTURAL STRENGTH MADE, AND THE LIKE, IN ORDER TO HELP DETERMINE WHETHER THE WORK MUST BE CORRECTED OR REPLACED. TESTS, INSPECTIONS OR SURVEYS OR CALCULATIONS CARRIED OUT UNDER THESE CIRCUMSTANCES WILL BE MADE AT THE CONTRACTOR'S EXPENSE, REGARDLESS OF THEIR RESULTS, WHICH MAY BE SUCH THAT, IN THE CONSULTANT'S OPINION, THE WORK MAY BE ACCEPTABLE. |
| 3.2 | MATERIALS OR WORK, WHICH FAIL TO MEET SPECIFIED REQUIREMENTS, MAY BE REJECTED BY THE CONSULTANT WHENEVER FOUND AT ANY TIME PRIOR TO FINAL ACCEPTANCE OF THE WORK. REGARDLESS OF PREVIOUS REJECTION, IF RE-FOCUSED, DEFECTIVE MATERIALS OR WORK, SHALL BE PROMPTLY REMOVED AND REPLACED OR REPAIRED TO THE SATISFACTION OF THE CONSULTANT, AT NO EXPENSE TO THE OWNER. |

STRUCTURAL ABBREVIATIONS					TD-G01
A BOLT	ANCHOR BOLT	fc	28 DAYS CONCRETE	OF	OUTSIDE FACE
ADJ	ADJUSTABLE		COMPRESSIVE STRENGTH	OPEN	OPENING
AFB	ASPHALT FINISHED FLOOR	FDN	FOUNDATION	OWEN	OPEN WEEL JOINT
AFB	ASPHALT IMPERMEGATED FIBREBOARD	FP	PAR FACE	OWEN	OPEN WEEL JOINT (FACTORED)
ALT	ALTERNATE	FL	FLOOR	PC	PRECAST
ARCH	ARCHITECTURAL	FL	FLOOR	PL	PLATE
	ANNUALLY ACCUMULATED	FTG	FOOTING	PROJ	PROJECTIONS
AS	SNOW LOAD	FY	YIELD STRENGTH	PSF	POUNDS PER SQUARE FOOT
B	AT	GA	GAUGE	PT	PRESSURE TREATED
B, BOTT	BOTTOM	GALV	GALVANIZED	RD	ROOF DRAIN
B/B	BACK TO BACK	GEN	GENERAL	RI	REACTION (FACTORED)
B/EW	BOTTOM EACH WAY	HEF	HORIZONTAL EACH FACE	RAIUS	RADIUS
BL	BOREHOLE	HF	HORIZONTAL FACE (FACTORED)	REINF	REINFORCED, REINFORCEMENT
BH	BOTTOM LOWER LAYER	HH	HOCK EACH END	REF	REFERENCE
BLDG	BUILDING	HF	HORIZONTAL, OUTSIDE FACE	RE	RIGHT END
BEAM	BEAM	HOZ	HORIZONTAL	REQ	REQUIRED
BPL	BEARINGBASE PLATE	H, HORIZ	HORIZONTAL	REV	REVISION, REVISED
BRDG	BRIDGING	HSC	HORIZONTALLY SLOTTED CONNECTION	RF	REINFORCED WITH
BUL	BOTTOM UPPER LAYER	HS	HORIZONTAL SECTION	SAD	SAD
C	CAMBER	INS	INSIDE FACE	SD	STEP DOWN FOOTING
C	EPOXY COATED	IN	INCHES)	SC	SECTION
C, C/C	CENTRE TO CENTRE	INTERIOR	INTERIOR	SM	SIMILAR
CS	COLUMN ABOVE	JT	JOINT	SL	SLAB
CS	COLUMN BELOW	K	KIP	SOG	SOG SLAB ON GRADE
CANT	CANTILEVER	K/FT	KIP PER FOOT	SPDR	STANDARD PROCTOR DRY DENSITY
C/	COMPRESSIVE FORCE (FACTORED)	KG	KILOGRAMMS	ST	STRAIGHT
C/	CONTROL JOINT	KLF	KIPS PER LINEAR FOOT	STIFF	STIFFENER
CJ	CENTRELINE	KN	KILONEWTON	STRIP	STRIPUP
C	C	KN	KILONEWTON	STRUCT	STRUCTURAL
COMP	COMPOSITE	kNm	KILONEWTON PER METRE	STD	STANDARD
CONC	CONCRETE	kPa	KILOPASCAL	SQ	SQUARE
CONT	CONTINUOUS	KSF	KIPS PER SQUARE FOOT	STP	STOP
CW	COMPLETE WITH	KSI	KIPS PER SQUARE INCH	TL	TENSILE FORCE (FACTORED)
DEMO	DEMOLITION	L	SINGLE ANGLE	TEMP	TEMPORARY TEMPERATURE
DET	DET	LEFT END	LEFT END	TEW	TOP EACH WAY
DIAG Ø	DIAMETER	LG	LONG	TJ	TIE JOINT
DIA Ø	DIAGONAL	LL	LONG LOWER, LOWER LAYER	TLL	TOP LOWER LAYER
DL	DEEP	LLV	LONG LOWER VERTICAL	TM	PERSONAL WOUND (FACTORED)
DL	DEEP	LLV	LONG LOWER VERTICAL	TOO	TOP OF DECK
DP	DEAD	m	METRE	TOS	TOP OF STEELSLAB
DWG(S)	DRAWING(S)	M	MOMENT CONNECTION	TRANS	TRANSVERSE
DWG(S)	DRAWING(S)	M	UPPER WELD (UNLESS NOTED)	TR	TRUSS
DN	DOWN	MECH	MECHANICAL	TYPE	TYPICAL
EA	EACH	M	MOMENT (FACTORED)	UL	UPPER
E	EACH END	ML	MIDDLE LINE	UNLESS NOTED OTHERWISE	
EF	EACH FACE	mm	MILLIMETRE	US	UNDERSIDE
ELEV	ELEVATION	MPa	MEGAPASCAL	V	VERTICAL
EL	ELEVATION	NM	BENDING MOMENT	V	VERTICAL
EL	ELEVATOR		ABOUT X AXIS (FACTORED)	VBF	VERTICAL BEARER FRAME
EMBED	EMBEDMENT	NM	BENDING MOMENT	VEF	VERTICAL EACH FACE
EQ	EQUAL	NF	NEAR FACE	VLF	VERTICAL LOWER FACE
ES	EACH SIDE	NF	NEAR FACE	VSC	VERTICALLY SLOTTED CONNECTION
EX, EXIST	EXISTING	NC	NOT IN CONTRACT	VW	WIDE FLANGE BEAM
EX, EXP JT	EXPANSION JOINT	NS	NORTH-SOUTH	W	WEIGHT, STRUCTURAL
EW	EAST WAY	NTS	NOT TO SCALE	WEL	WELDED W/ FIBRO OR WELDED W/ FLANGE
EXT	EXTERNAL			WFP	WORKING POINT

LIST OF STRUCTURAL DRAWINGS

<u>SHEET NO.</u>	<u>SHEET TITLE</u>
S1.01	GENERAL NOTES AND TYPICAL DETAILS
S2.01	12TH AND 13TH FLOOR FRAMING PLAN AND SECTION

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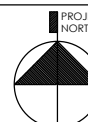
2	ISSUE FOR PERMIT & TENDER	24.07.24
1	95% CLIENT REVIEW	24.07.19
NO.	ISSUED	YY.MM.D

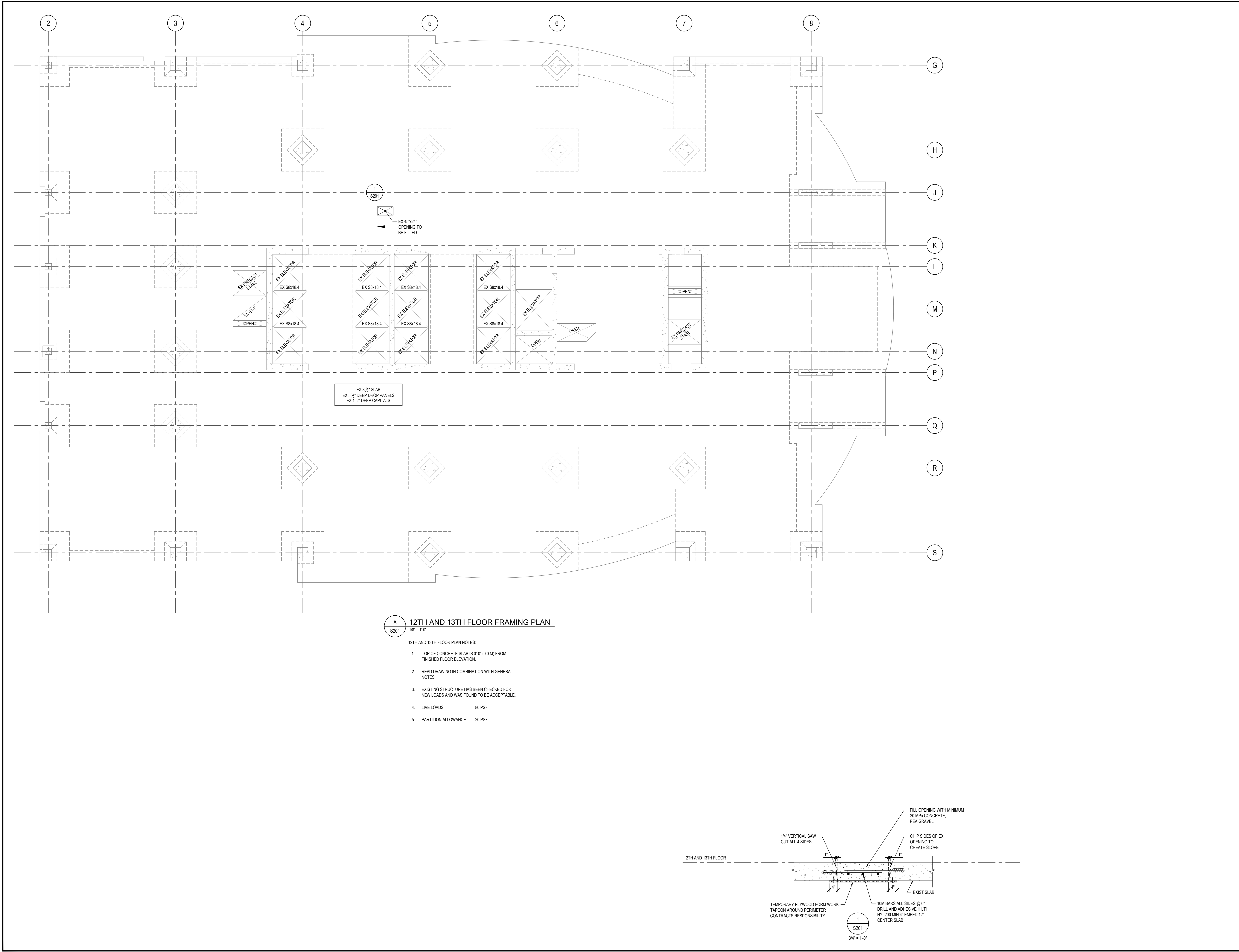
CITY OF TORONTO
CYBER COMMAND CENTRE
55 JOHN ST. 12TH FLOOR
TORONTO ONTARIO
M5V 3C6

Drawing Title:

GENERAL NOTES AND TYPICAL DETAILS

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2	ISSUE FOR PERMIT & TENDER	24.07.24
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CITY OF TORONTO CYBER COMMAND CENTRE 55 JOHN ST. 12TH FLOOR TORONTO ONTARIO MSV 3C6		
Drawing Title: 12TH AND 13TH FLOOR FRAMING PLAN AND SECTION		
Scale: AS NOTED		
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ARCH E1 - 30x42		