

GENERAL

1. THIS SET OF DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL SPECIFICATIONS AND WITH THE DRAWINGS AND SPECIFICATIONS FROM ALL OTHER CONSULTANTS. ANY DISCREPANCIES NOTED SHALL BE REPORTED IMMEDIATELY FOR CLARIFICATION.
2. THIS SET OF DRAWINGS SHOWS THE COMPLETED STRUCTURE AND DOES NOT SHOW WORK WHICH MAY BE REQUIRED FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL SAFETY ON AND ABOUT THE JOB SITE DURING THE CONSTRUCTION PERIOD AND FOR DESIGN AND ERECTION OF ALL FALSEWORK, SHORING, BRACING ETC. TO ENSURE THE SAFETY OF ALL CONSTRUCTION TEMPORARY LOADS AND TO COMPLETE THE WORK. ADHERE STRICTLY TO ALL REQUIREMENTS OF THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA. ALL TEMPORARY WORKS AND SHORING ETC. SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN BRITISH COLUMBIA.
3. THE NEW CONCRETE FLOOR DECK INFILL ON THE MEZZANINE FLOOR WAS INCLUDED IN THE ORIGINAL STRUCTURAL DESIGN OF THE BUILDING. THE NEW FLOOR INFILL HAS BEEN DESIGNED TO ACT COMPOSITELY WITH THE EXISTING FLOOR BEAM AS PER ORIGINAL DESIGN REQUIREMENT. GENERALLY, WITH THE NEW FLOOR INFILL, THERE IS NO REDUCTION IN THE EXISTING GRAVITY AND LATERAL LOAD CAPACITY OF THE BUILDING.
4. ALL CODE REFERENCES ARE TO SAME EDITIONS AS REFERENCED IN THE NATIONAL BUILDING CODE OF CANADA ON EXISTING BUILDING DRAWINGS. ALL NEW WORK OTHER THAN PLANNED IN EXISTING BUILDING DESIGN SHALL BE REFERENCED TO THE NATIONAL BUILDING CODE OF CANADA 2015.
5. REFER TO SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS AND CODE REFERENCES.

FIELD REVIEW:

1. DEPARTMENTAL REPRESENTATIVE THROUGH CWMM CONSULTING ENGINEERS PROVIDES PROVIDES FIELD REVIEW FOR THE WORK SHOWN ON THE STRUCTURAL DRAWINGS PREPARED BY CWMM CONSULTING ENGINEERS LTD. THIS REVIEW IS A PERIODIC REVIEW AT THE PROFESSIONAL JUDGMENT OF CWMM CONSULTING ENGINEERS LTD. THE PURPOSE IS TO ASCERTAIN THAT THE WORK IS IN GENERAL CONFORMANCE WITH THE PLANS AND SUPPORTING DOCUMENTS PREPARED BY CWMM CONSULTING ENGINEERS LTD. AND TO FULFILL THE REQUIREMENTS FOR THE COMPLETION OF LETTERS OF ASSURANCE REQUIRED BY THE APPLICABLE BUILDING CODE.
2. ALL NON-CONFORMING WORKS THAT REQUIRE REMEDIAL ACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY EXTRA TIME OR COST INCURRED TO PWGSC IN RECTIFYING THE WORK SHALL BE BORNE BY THE CONTRACTOR IN ACCORDANCE WITH THE CONTRACT.

DESIGN LOADS:

1. THIS CANOPY STRUCTURE & MEZZANINE FLOOR CONCRETE DECK INFILL HAS BEEN DESIGNED FOR LOADS IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THE NATIONAL BUILDING CODE OF CANADA 2015.
- IMPORTANT CATEGORY = NORMAL (AS PER OWNER'S REQUIREMENT)
- GROUND SNOW: Ss = 1.1 kPa
RAIN LOAD: Sr = 0.1 kPa
- IMPORTANCE FACTORS FOR SNOW Is = 1.0 FOR STRENGTH
Is = 0.9 FOR SERVICEABILITY
2. SPECIFIED UNIFORM SUPERIMPOSED DEAD LOADS ON FLOORS:
- SECOND FLOOR - OFFICE AREA 1.25 kPa
SECOND FLOOR - STORAGE AREA 0.25 kPa
SECOND FLOOR - MECHANICAL SERVICE 0.25 kPa
- SECOND FLOOR LOADS INCLUDE GENERAL PARTITION LOAD OF 1.0kPa FOR OFFICE AREA SHALL BE USED.
- THESE LOADS DO NOT INCLUDE SELFWEIGHT OF STRUCTURE, WEIGHT OF MECHANICAL EQUIPMENT AND CONCRETE EQUIPMENT PADS.
3. SPECIFIED UNIFORM LIVE LOADS ON FLOORS:
- SECOND FLOORS INFILL AREA - OFFICE 2.4 kPa
SECOND FLOORS INFILL AREA - STORAGE 7.2 kPa
SECOND FLOORS INFILL AREA - MECHANICAL SERVICE 3.6 kPa
4. DESIGN SPECIFIED CONCENTRATED LIVE LOADS ON FLOORS:
- FLOORS 4.5 kN
5. WORST CASE OF UNIFORM OR CONCENTRATED LIVE LOADS WILL BE USED FOR DESIGN OF STRUCTURAL MEMBERS.

FOUNDATION AND SITE WORK

1. ANY SLAB ON GRADE/ELEVATOR PIT ELEVATIONS INDICATED ON THE DRAWINGS ARE GENERAL AND SHALL BE USED FOR ESTIMATING AND BIDDING PURPOSES. FOOTINGS MAY HAVE TO BE PLACED AT DIFFERENT ELEVATIONS AS A RESULT OF LOCAL SOILS CONDITIONS, UNDERGROUND SERVICES AND TO ACCOMMODATE OTHER MECHANICAL AND ELECTRICAL SERVICES. FOLLOW TYPICAL DETAILS SHOWN ON THESE DRAWINGS FOR FOOTING PLACEMENT RELATIVE TO ADJACENT FOOTINGS, SUMP AND OTHER EXCAVATED STRUCTURES AND LOCATE AS DIRECTED BY DEPARTMENTAL REPRESENTATIVE.
2. DESIGN SOIL BEARING CAPACITIES FROM EXISTING BUILDING DRAWINGS:
MAIN FLOOR SLS=50kPa ULS=75kPa
3. THE BASES OF SLAB ON GRADE/ELEVATOR PIT FOUNDATIONS SHALL BE PROTECTED FROM RAIN, SNOW AND ANY WATER INFILTRATION.
4. NO SLAB ON GRADE/ELEVATOR PIT FOUNDATIONS MAY BE POURED BEFORE THE BEARING MATERIAL HAS BEEN INSPECTED BY DEPARTMENTAL REPRESENTATIVE.
5. COORDINATE CONSTRUCTION WITH UNDERSLAB SERVICES AS SHOWN ON MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS.
6. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SLAB DRAINAGE, GROUND ELEVATIONS AND DRAINAGE SLOPES.
7. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WATERPROOFING AND SEALING REQUIREMENTS.

CONCRETE REINFORCING:

1. REFER TO SPECIFICATIONS FOR CONCRETE STRENGTH, EXPOSURE CLASS & OTHER REQUIREMENTS.
2. REINFORCING BARS $f_y = 400$ MPa. ALL DOWELS ANCHOR BOLTS AND INSERTS SHALL BE PLACED BEFORE THE CONCRETE IS POURED.
3. PROVIDE MINIMUM CONCRETE COVER TO REINFORCEMENT AS FOLLOWS:
- | | |
|------------------------------|------|
| CAST AGAINST EARTH | 75mm |
| EXPOSED TO EARTH OR WEATHER: | 50mm |
| ELSEWHERE: | 40mm |
4. MINIMUM SPLICE LENGTH SHALL BE CLASS B AS FOLLOWS, UNLESS NOTED OTHERWISE:
- | BAR | TENSION SPLICE | | |
|-----|----------------|-------|-------|
| | 25MPa | 30MPa | 32MPa |
| 10M | 450 | 400 | 400 |
| 15M | 600 | 550 | 500 |
| 20M | 750 | 700 | 650 |
| 25M | 1200 | 1100 | 1000 |
- * ALL SPLICES SHALL BE TENSION SPLICES, EXCEPT SPLICES FOR COLUMNS WHICH SHALL BE COMPRESSION SPLICES UNLESS NOTED ON DRAWINGS.
* INCREASE LENGTHS BY 30% FOR BARS WITH DEPTH OF CONCRETE CAST BELOW GREATER THAN 300mm (TOP BARS).
* ALL INCREASES ABOVE ARE CUMULATIVE.

STRUCTURAL STEEL

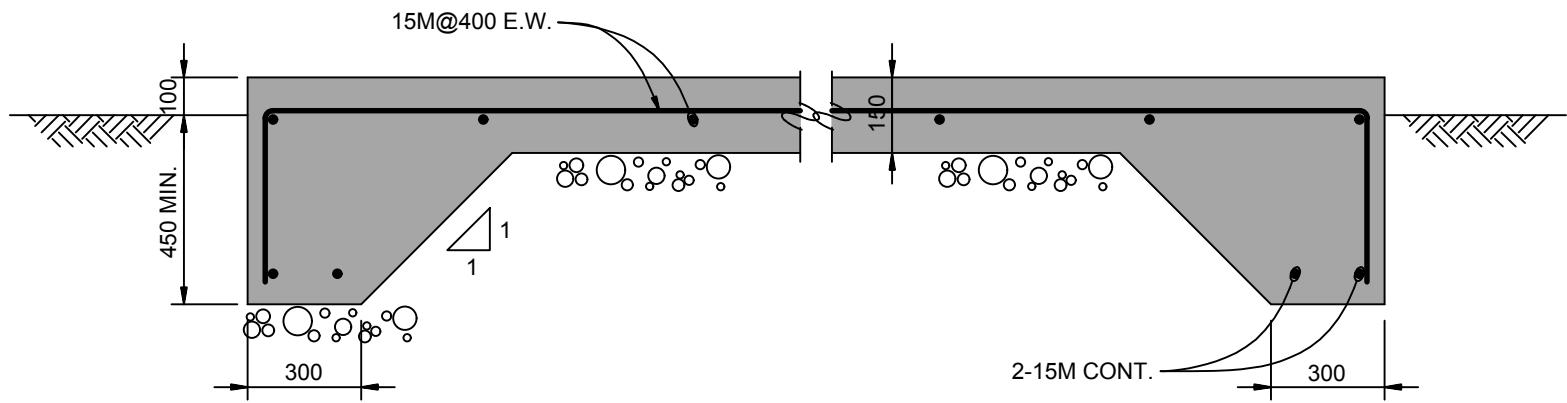
1. REFER TO SPECIFICATIONS FOR STEEL WORK, STEEL GRADE, DESIGN CODE REFERENCES AND OTHER REQUIREMENTS.
2. DRAWINGS FROM ALL CONSULTANTS SHALL BE EXAMINED FOR EXACT LOCATIONS, DIMENSIONS AND ELEVATIONS.
3. STEEL FABRICATORS AND CONTRACTOR SHALL CONFIRM ALL LOCATIONS, DIMENSIONS AND ELEVATIONS WITH ACTUAL SITE MEASUREMENTS BEFORE FABRICATION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY FABRICATION AND WORK DONE PRIOR TO REVIEW AND APPROVAL OF THE SHOP DRAWINGS.

STEEL DECK

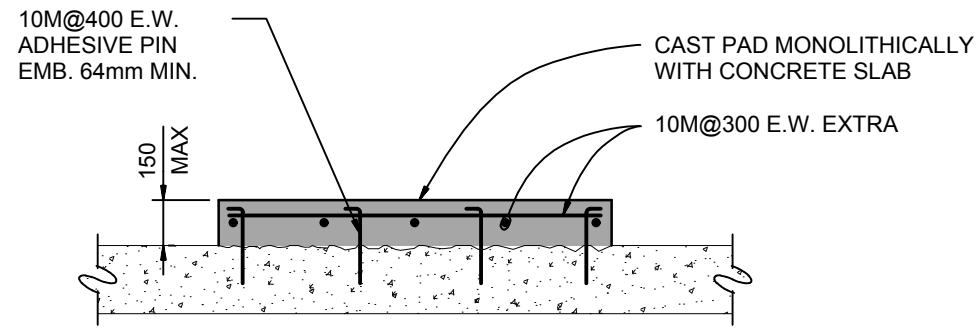
1. REFER TO SPECIFICATIONS FOR STEEL DECK GRADE, COATING DESIGN REQUIREMENTS, CODE REFERENCE AND OTHER REQUIREMENTS.
2. IMMEDIATELY AFTER DECKING IS PERMANENTLY SECURED IN PLACE, TOUCH UP GALVANIZED SURFACE WITH PRIMER WHERE BURNED BY WELDING.

ABBREVIATIONS

TYP.	TYPICAL	BOT.	BOTTOM
CONT.	CONTINUOUS	T & B	TOP AND BOTTOM
SIM.	SIMILAR	LLV	LONG LEG VERTICAL
OPP.	OPPOSITE HAND	LLH	LONG LEG HORIZONTAL
THK	THICK	OWSJ	OPEN WEB STEEL JOIST
DP.	DEEP	U.N.O.	UNLESS NOTED OTHERWISE
CL.	CLEAR	MIN.	MINIMUM
COL.	COLUMN	MAX.	MAXIMUM
PL	PLATE	R/W	REINFORCED WITH
G.L.	GRID LINE	O/C	ON CENTRES
E.W.	EACH WAY	U/S	UNDERSIDE
E.F.	EACH FACE	C/W	COMPLETE WITH
F.S.	FAR SIDE	N.T.S.	NOT TO SCALE
N.S.	NEAR SIDE	S.O.G.	SLAB ON GRADE
LG.	LONG	T.O.S.	TOP OF STEEL
STAGG.	STAGGERED	C.I.P.	CAST IN PLACE
ALT.	ALTERNATE	P.C.	PRECAST CONCRETE
H1E	HOOK ONE END	H. LVL.	HIGH LEVEL
H2E	HOOK TWO ENDS	L. LVL.	LOW LEVEL
		C.P.	COMPLETE PENETRATION

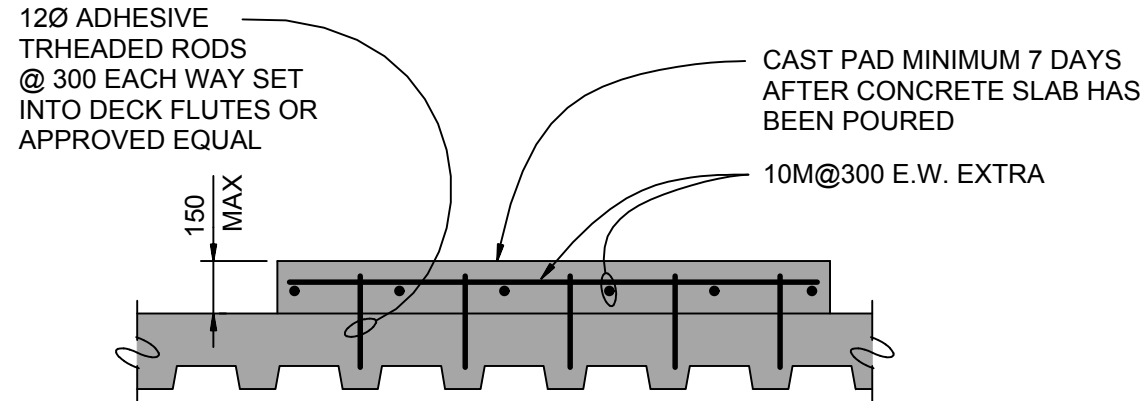


TYPICAL EQUIPMENT PADS ON GRADE



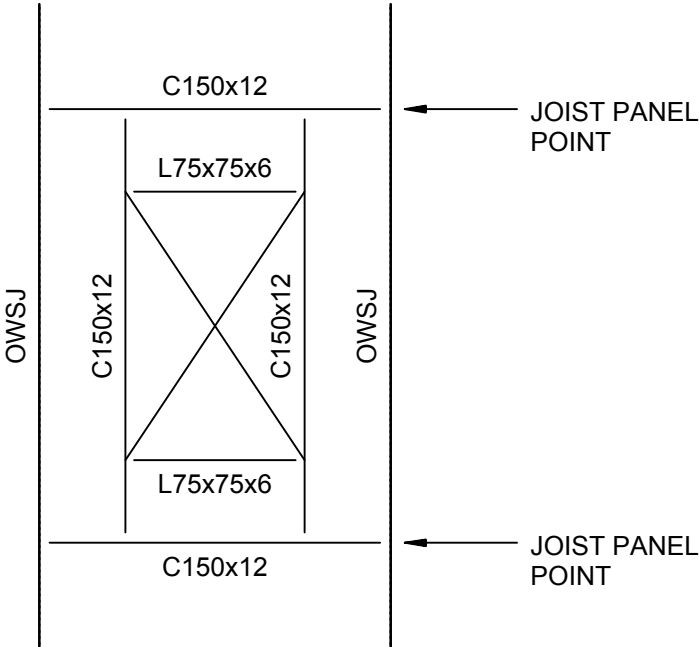
(FOR LOCATION AND SIZE OF PADS AND ANCHOR BOLTS FOR EQUIPMENT SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS)

TYPICAL EQUIPMENT PADS ON CONCRETE SLABS



(FOR LOCATION AND SIZE OF PADS AND ANCHOR BOLTS FOR EQUIPMENT SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS)

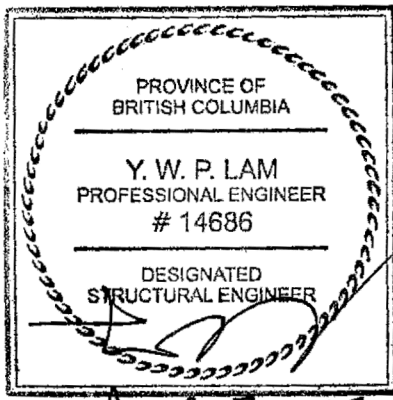
TYPICAL EQUIPMENT PADS ON CONCRETED STEEL DECK



DECK OPENINGS > 450 SQUARE

SIZE OF OPENING TO BE CONFIRMED BY TRADE REQUIRING SAME PRIOR TO FABRICATION

DRAWING LIST (STRUCTURAL)	
S101	GENERAL NOTES & TYPICAL DETAILS
S201	FIRST FLOOR NEW FLOOR PLAN
S202	SECOND FLOOR NEW FLOOR PLAN
S203	ROOF NEW ROOF PLAN
S301	SECTIONS & DETAILS SHEET-1
S302	SECTIONS & DETAILS SHEET-2



5		
4		
3	ISSUED FOR TENDER	2017/04/27
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1	ISSUE FOR 66% SUBMISSION	2016/12/21
0	ISSUE FOR 33% SUBMISSION	2016/11/10

Revision/Revision	Description/Description	Date/Date
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Client/client

CANADA BORDER SERVICES AGENCY

Project title/Titre du projet
**Canada Devanning Wing
#202-97th Street
Osoyoos BC V0H 1V1**

OKANAGAN & KOOTENAY DISTRICT OFFICE RELOCATION

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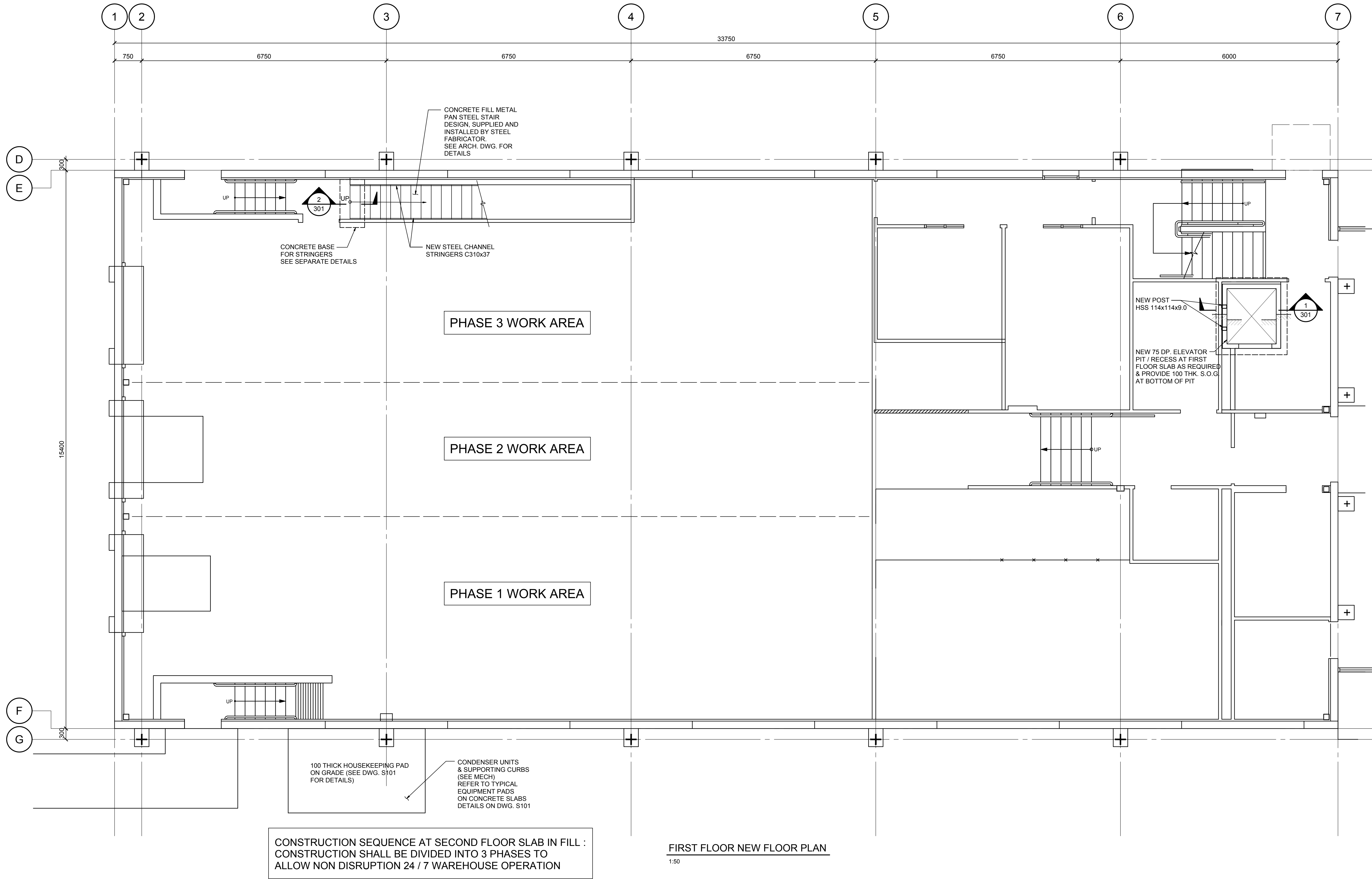
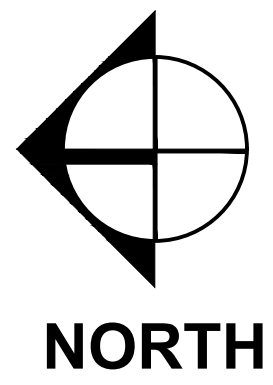
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JULIAN HO

PWGSC, Regional Manager, Architectural and Engineering Services/
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GENERAL NOTES & TYPICAL DETAILS

Project No./No. du projet R.082890.001	Sheet/Feuille S101 OF XX	Revision no./ La Révision no. 3
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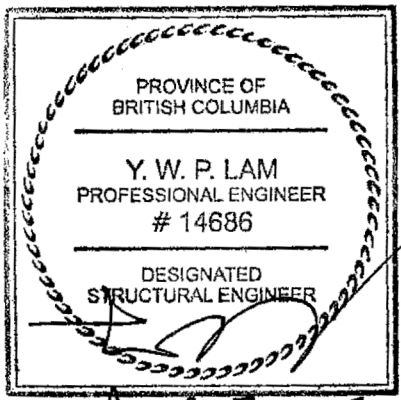


CONSTRUCTION SEQUENCE AT SECOND FLOOR SLAB IN FILL :
CONSTRUCTION SHALL BE DIVIDED INTO 3 PHASES TO
ALLOW NON DISRUPTION 24 / 7 WAREHOUSE OPERATION

FIRST FLOOR NEW FLOOR PLAN
1:50

NOTES:

1. CONSTRUCTION SEQUENCE AT SECOND FLOOR SLAB IN FILL.
CONSTRUCTION SHALL BE DIVIDED INTO 3 PHASES TO ALLOW
NON DISRUPTION 24 / 7 WAREHOUSE OPERATION IN FIRST FLOOR.
CONTRACTOR SHALL COORDINATE WITH OPERATION AUTHORITY
& MECHANICAL CONSULTANT FOR PHASING ARRANGEMENT PRIOR
TO CONSTRUCTION.



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5		
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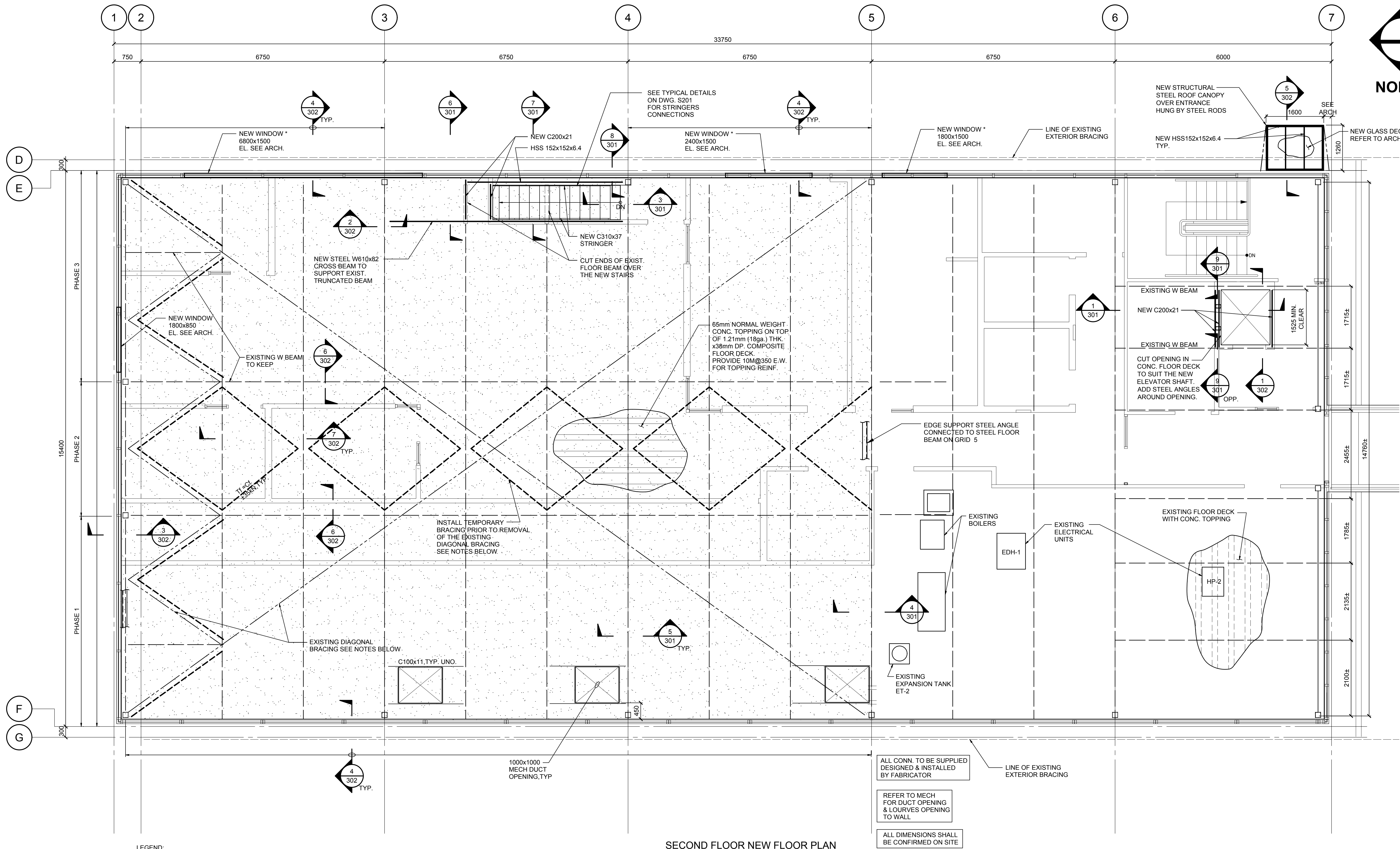
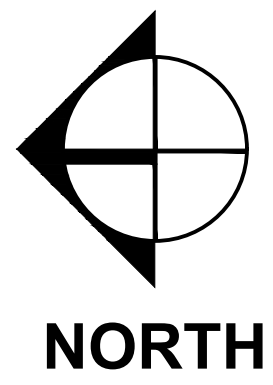
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FIRST FLOOR NEW
FLOOR PLAN

Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.082890.001	S201 OF XX	3



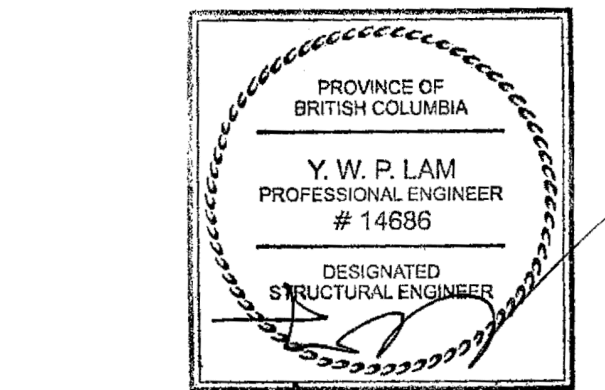
SECOND FLOOR NEW FLOOR PLAN

LEGEND:

- DENOTE EXISTING DIAGONAL BRACES ON TOP OF FLOOR BEAMS TO BE REMOVED IN PHASES
- DENOTE EXISTING FLOOR STEEL TO KEEP
- DENOTE L102x102x9.5 TEMPORARY BRACING
- NEW WINDOW * DENOTE FRAMING BY STEEL STUD FABRICATOR PROVIDE STRUCTURAL STEEL REINFORCEMENT AS REQUIRED

NOTES:

- FOR CONCRETE TOPPING ON TOP OF METAL DECK, 28 DAYS CONCRETE STRENGTH FOR COMPOSITE FLOOR SLAB SHALL BE 25Mpa.
- CONSTRUCTION SEQUENCE AT SECOND FLOOR SLAB IN FILL CONSTRUCTION SHALL BE DIVIDED INTO 3 PHASES TO ALLOW NON DISRUPTION 24 / 7 WAREHOUSE OPERATION IN FIRST FLOOR. CONTRACTOR SHALL COORDINATE WITH OPERATION AUTHORITY & MECHANICAL CONSULTANT FOR PHASING ARRANGEMENT PRIOR TO CONSTRUCTION.
- COMPLETE ALL TEMPORARY BRACING PRIOR TO REMOVAL OF EXISTING DIAGONAL BRACING.
- INSTALL FLOOR DECK & STEEL STUDS AND POUR CONCRETE TOPPING IN PLACE AS SPECIFIED.
- REMOVE TEMPORATRY BRACING AND CONNECTIONS WITHOUT DAMAGES TO THE EXISTING BEAMS.
- REINSTATE THE EXISTING BEAMS TO MATCH THEIR ORIGINAL CONDITION BY REMOVAL OF ALL LEAVE IN TRMPORARY ATTACHMENTS AND REPAIR ALL DAMAGES AS REQUIRED.



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5		
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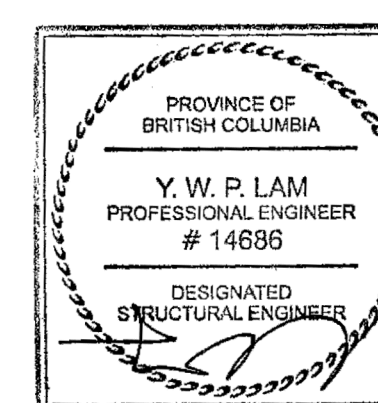
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JULIAN HO
PWGSC Regional Manager, Architectural and Engineering Services/
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SECOND FLOOR NEW
FLOOR PLAN

Project No./No. du projet
R.082890.001
Sheet/Feuille
S202
Revision no./
La Révision
no.
3



5		
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ROOF NEW
ROOF PLAN

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R.082890.001

Sheet/Feuille	Revision no., Lg. Révision
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S203

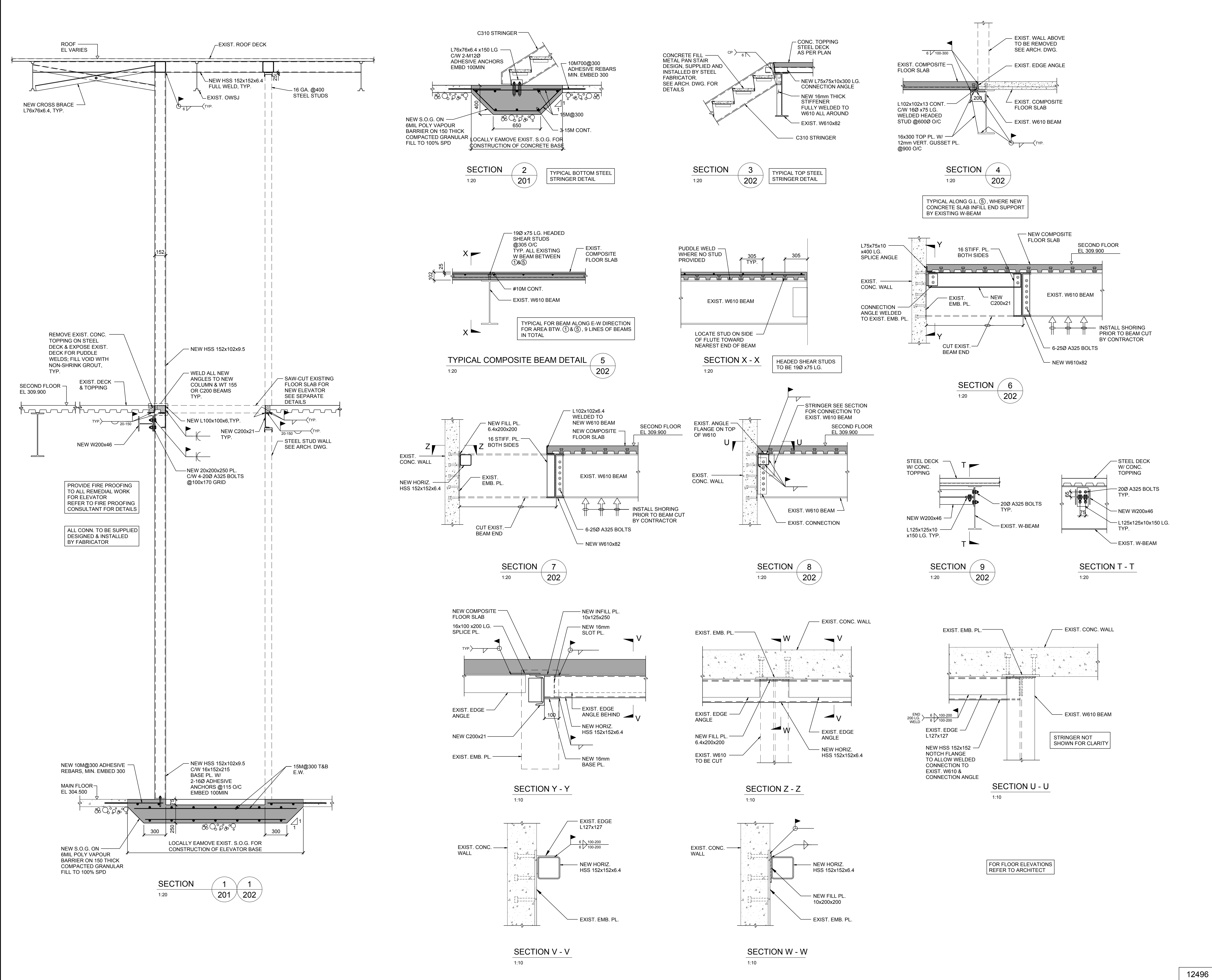
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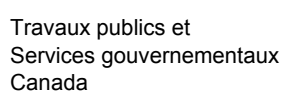
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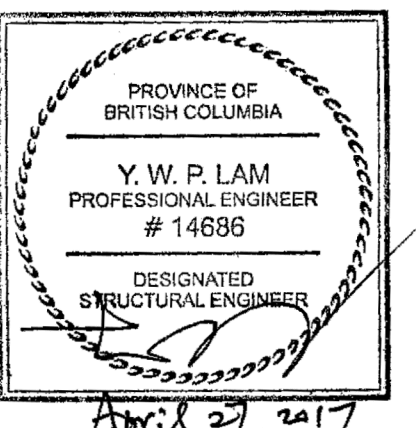


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SERVICES IMMOBILIERS
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PROVINCE OF
BRITISH COLUMBIA
Y. W. P. LAM
PROFESSIONAL ENGINEER
14686
DESIGNATED
STRUCTURAL ENGINEER
April 27, 2017

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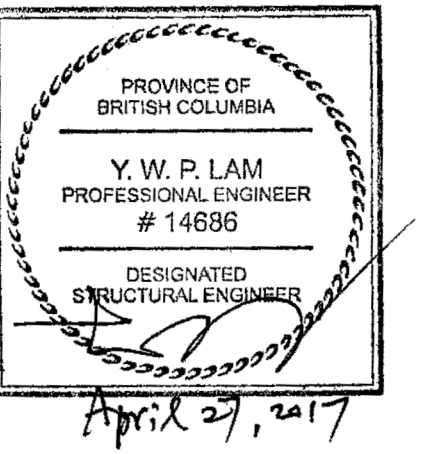
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JULIAN HO

PWGS Regional Manager, Architectural and Engineering Services/
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SECTIONS & DETAILS
SHEET 1

Project No./No. du projet R.082890.001	Sheet/Feuille S301 OF XX	Revision no./ La Révision no. 3
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Project No./No. du projet	Sheet/Feuille	Revision no./ La Révision no.
R.082890.001	S302 OF XX	3

