

01	ISSUED FOR TENDER	15/03/26
revision	description	date

A	A detail no. no. du détail	A
C	B location drawing no. sur dessin no.	B
	C drawing no. dessin no.	C

project projet
CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)
KINGSTON, ONTARIO

drawing dessin

MEZZANINE FRAMING PLAN

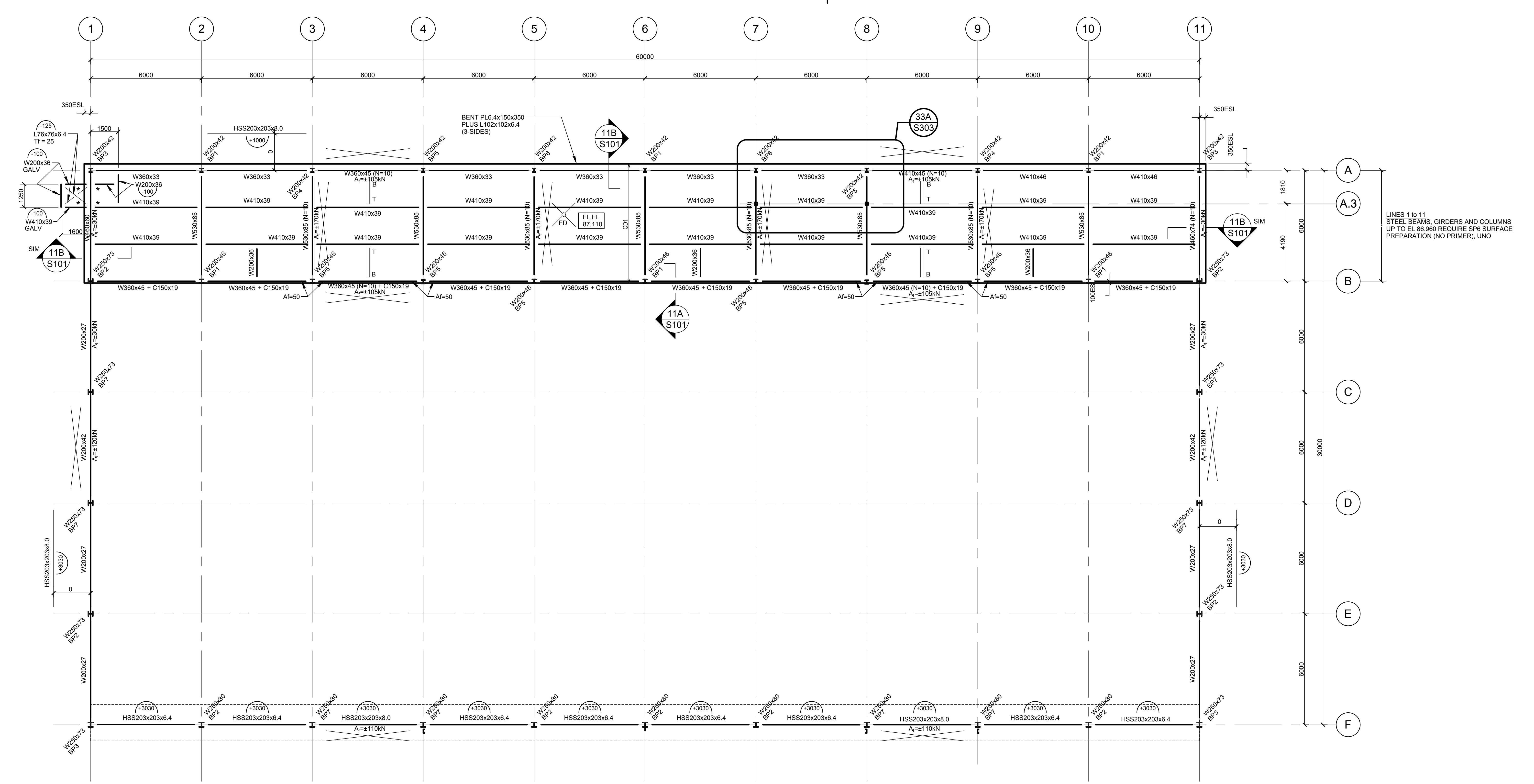
designed	IJF	conçu
date	2014/04/22	(yyyy/mm/dd)
drawn	PDJ	dessiné
date	2014/04/22	(yyyy/mm/dd)
reviewed	IJF	examiné
date	2015/03/11	(yyyy/mm/dd)
approved	IJF	approuvé
date	2015/03/11	(yyyy/mm/dd)
Tender	DUNCAN PARKER	Soumission

Project Manager Administrateur de projets
project no. no. du projet

R.055776.001

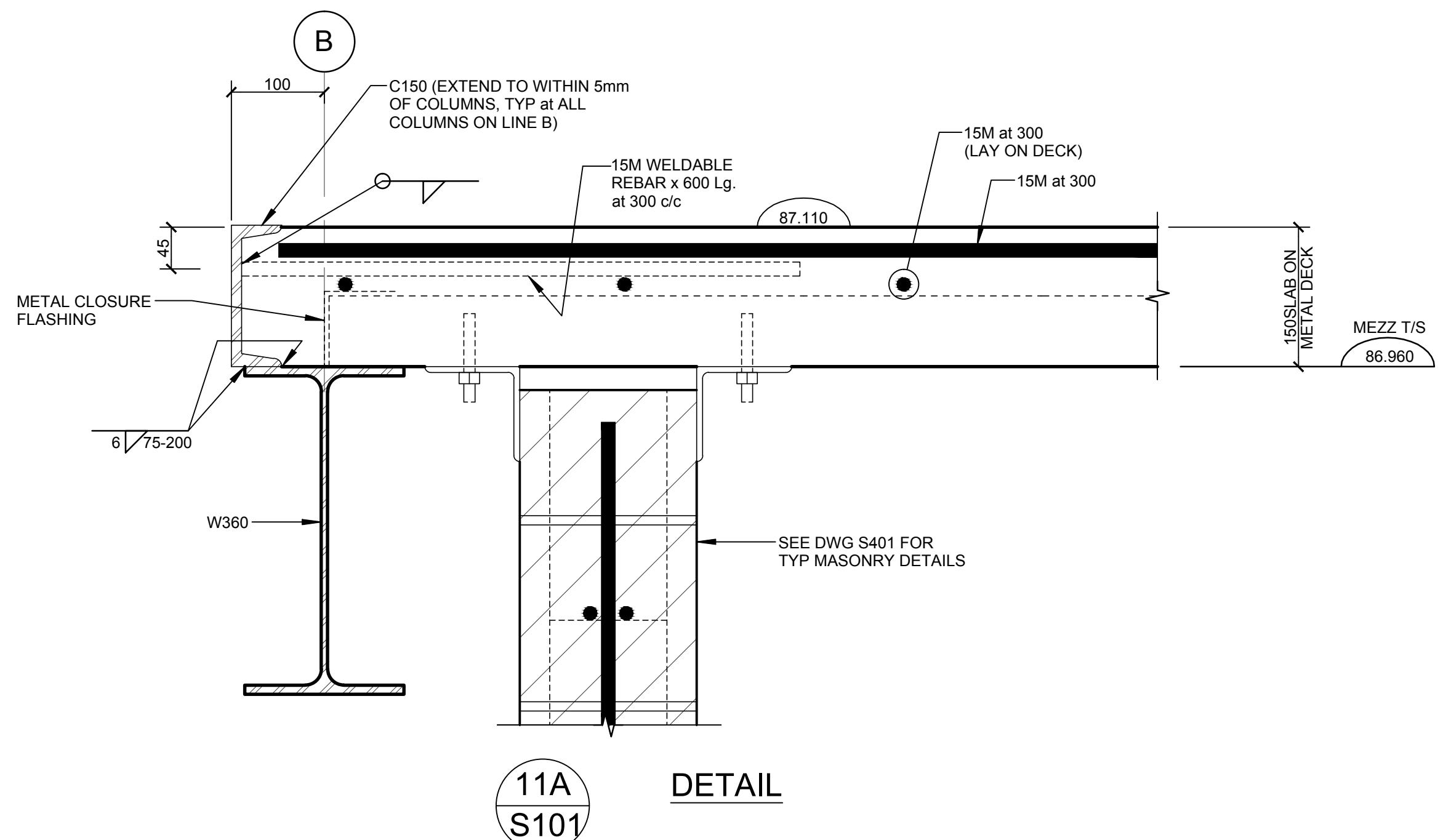
drawing no. no. du dessin

S101



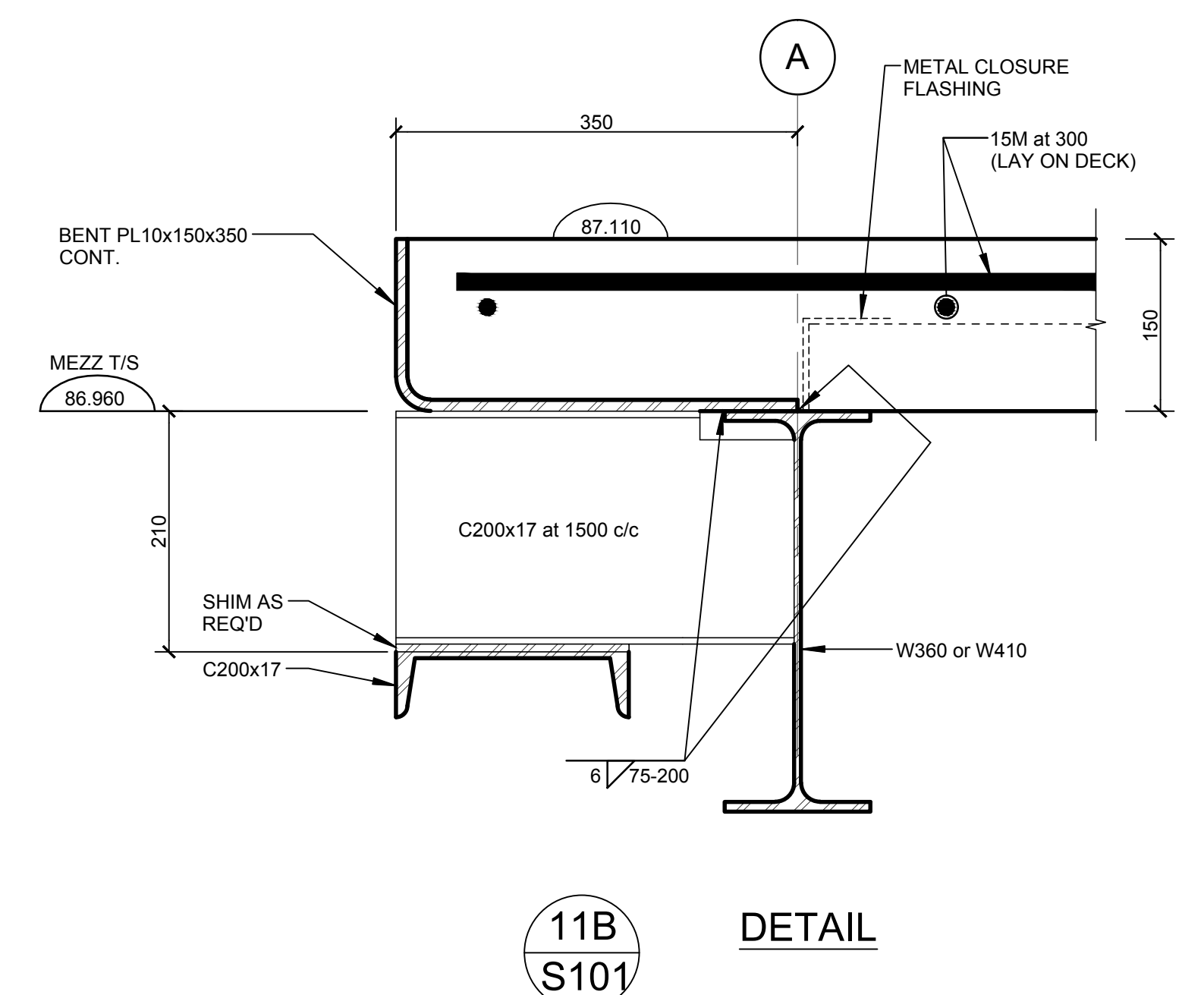
*CD1= FLOOR CONSTRUCTION UNO
150mm CONC. SLAB
15M at 300 EW
76mm, 20 Ga. MIN., COMP. METAL
FLOOR DECK, Z275
3 SPAN CONT. MIN.

FLOOR DESIGN LOADS (SPECIFIED)
DL = 5.5 kPa
LL = 9.6 kPa
TL = 15.1 kPa
** INCLUDES 1.5 kPa CONCRETE
PAD ALLOWANCE



11A S101
DETAIL

SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm



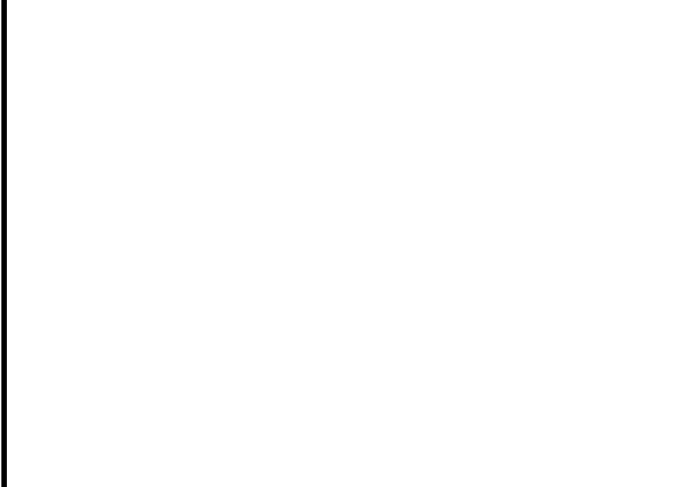
11B S101
DETAIL

SCALE: 1:5
0mm 100mm 200mm 300mm 400mm 500mm

MEZZANINE FLOOR FRAMING PLAN

- SEE GENERAL REQUIREMENTS AND TYPICAL DETAILS ON DRAWINGS DRAWINGS S400, S401, & S402.
- MEZZANINE FLOOR DATUM ELEVATION IS 87.110.
- UNLESS OTHERWISE NOTED ON PLANS OR DETAILS, THE FOLLOWING DATA APPLIES:
3.1. TOP OF SLAB IS 0 FROM DATUM ELEVATION EXCEPT AS CROSSED AND NOTED ON PLAN.
3.2. TOP OF STEEL BEAMS IS AT UNDERSIDE OF STEEL DECK, WHERE BEAMS SUPPORT JOISTS, SET TOP OF BEAMS AT UNDERSIDE OF JOIST SHOE.
3.3. WHERE BEAMS NOTED THUS \times , X IS DISTANCE TO TOP OF BEAM FROM FLOOR DATUM.
3.4. DESIGN LOADS ARE NOTED ON PLAN.
3.5. TRIM ALL SIDES OF FRAMED OPENINGS IN FLOOR WITH C150x12 UN.
- *CD1* ON PLAN DENOTES CONCRETE ON STEEL DECK AS DEFINED ON S101.
- MECHANICAL LOADS SHOWN ON PLAN ARE APPROXIMATE. EXACT MAGNITUDE AND POSITION OF MECHANICAL LOADS ARE TO BE VERIFIED WITH MECHANICAL DRAWINGS PRIOR TO JOIST DESIGN.
- *N* ON PLAN DENOTES 190 x 125 LG STUD ANCHORS.

ALL LETTERS, NUMBERS AND SYMBOLS TO BE PLOTTED FOR TENDER. PLOT SCALE: 1:1 AT 100mm x 70mm PER SHEET. READ DRAWING ACCORDINGLY.
 ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. DIMENSIONS TO FACE UNLESS OTHERWISE NOTED. DIMENSIONS TO FACE UNLESS OTHERWISE NOTED.



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project project
CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)
KINGSTON, ONTARIO

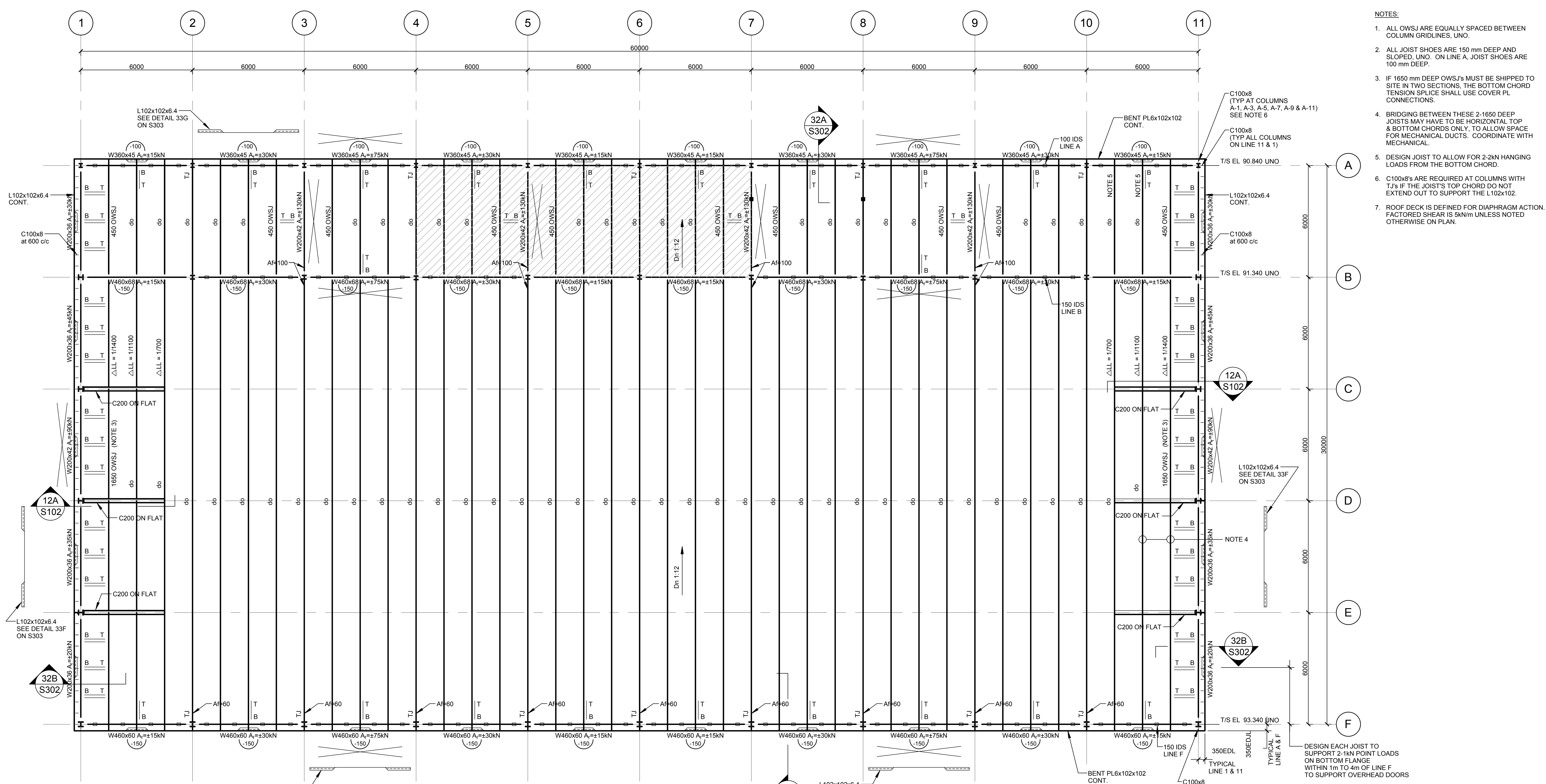
drawing dessin

ROOF FRAMING PLAN

designed	IJF	conçu
date	2014/04/22	(yyyy/mm/dd)
drawn	PDM	dessiné
date	2014/04/22	(yyyy/mm/dd)
reviewed	IJF	examiné
date	2015/03/11	(yyyy/mm/dd)
approved	IJF	approuvé
date	2015/03/11	(yyyy/mm/dd)
Tender	DUNCAN PARKER	Submission
Project Manager	Administrateur de projets	
project no.		no. du projet
	R.055776.001	
drawing no.		no. du dessin

S102

- NOTES:**
- ALL OWSJ ARE EQUALLY SPACED BETWEEN COLUMN GRIDLINES, UNO.
 - ALL JOIST SHOES ARE 150 mm DEEP AND SLOPED, UNO. ON LINE A, JOIST SHOES ARE 100 mm DEEP.
 - IF 1650 mm DEEP OWSJ'S MUST BE SHIPPED TO SITE IN TWO SECTIONS, THE BOTTOM CHORD TENSION SPLICE SHALL USE COVER PL CONNECTIONS.
 - BRIDGING BETWEEN THESE 2-1650 DEEP JOISTS MAY HAVE TO BE HORIZONTAL TOP & BOTTOM CHORDS ONLY. TO ALLOW SPACE FOR MECHANICAL DUCTS. COORDINATE WITH MECHANICAL.
 - DESIGN JOIST TO ALLOW FOR 2-2KN HANGING LOADS FROM THE BOTTOM CHORD.
 - C100x8'S ARE REQUIRED AT COLUMNS WITH TJS IF THE JOISTS TOP CHORD DO NOT EXTEND OUT TO SUPPORT THE L102x102.
 - ROOF DECK IS DEFINED FOR DIAPHRAGM ACTION. FACTORED SHEAR IS 5kN/m UNLESS NOTED OTHERWISE ON PLAN.



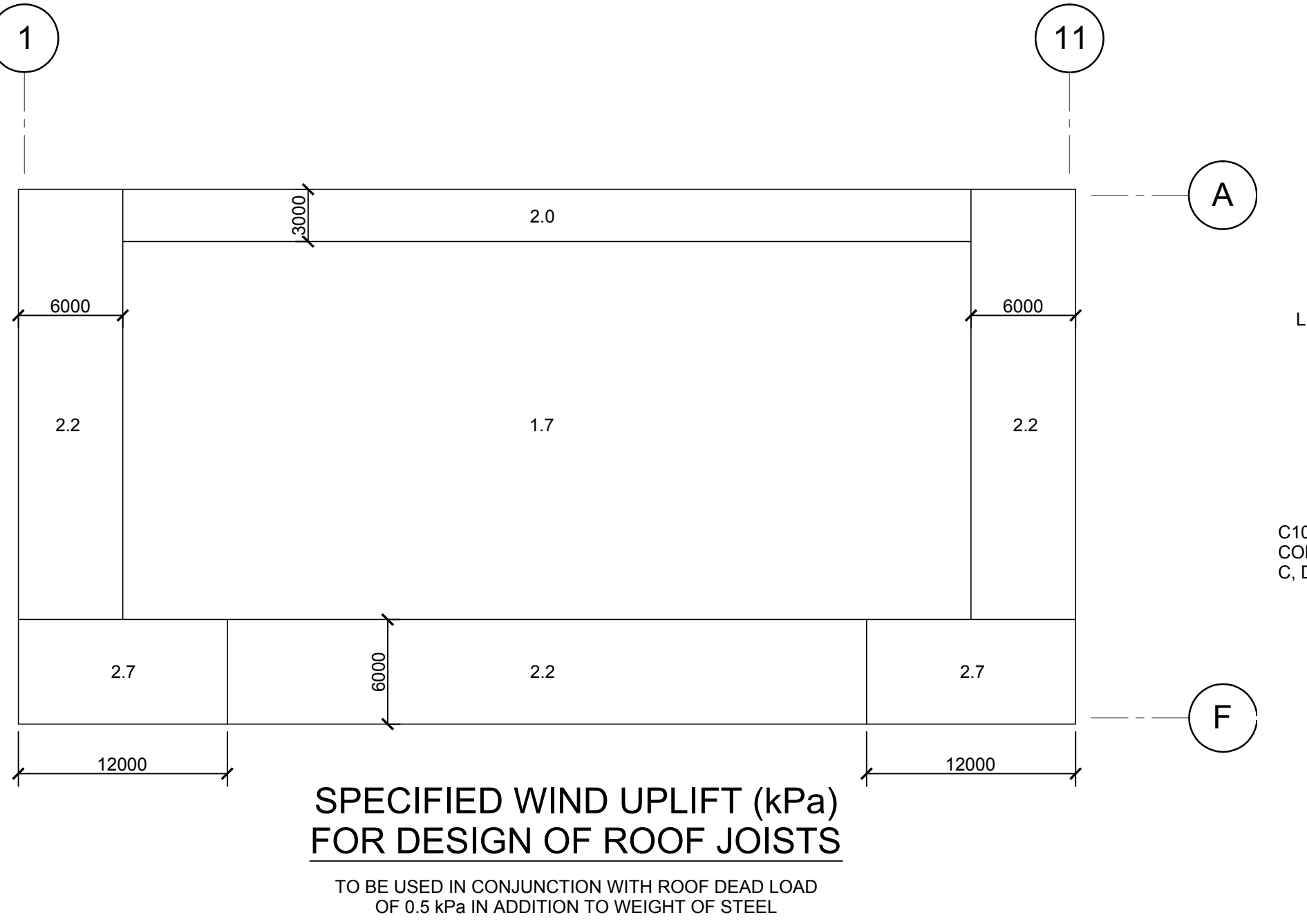
ROOF DESIGN LOADS UNO (SPECIFIED)

DL = 1.50 kPa + WOS
SL = 2.08 kPa
TL = 3.58 kPa + WOS

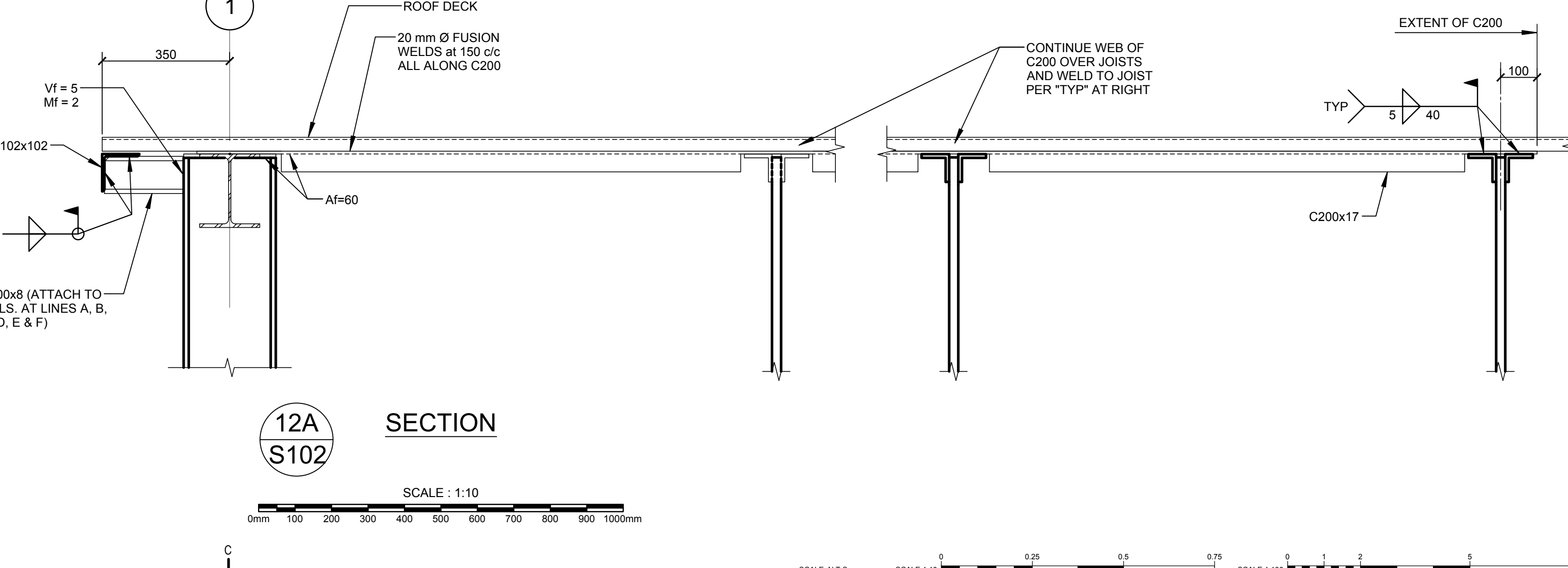
**** INCLUDES 1.0 kPa ALLOWANCE FOR HANGING EQUIPMENT**

ALL DESIGN SNOW LOADS INDICATED ON THIS DRAWING INCLUDE A ULS IMPORTANCE FACTOR (IS) OF 1.0. THIS IMPORTANCE FACTOR MAY BE REDUCED TO 0.9 FOR SLS.

ROOF PLAN (T/S, SEE PLAN)
SCALE: 1:100

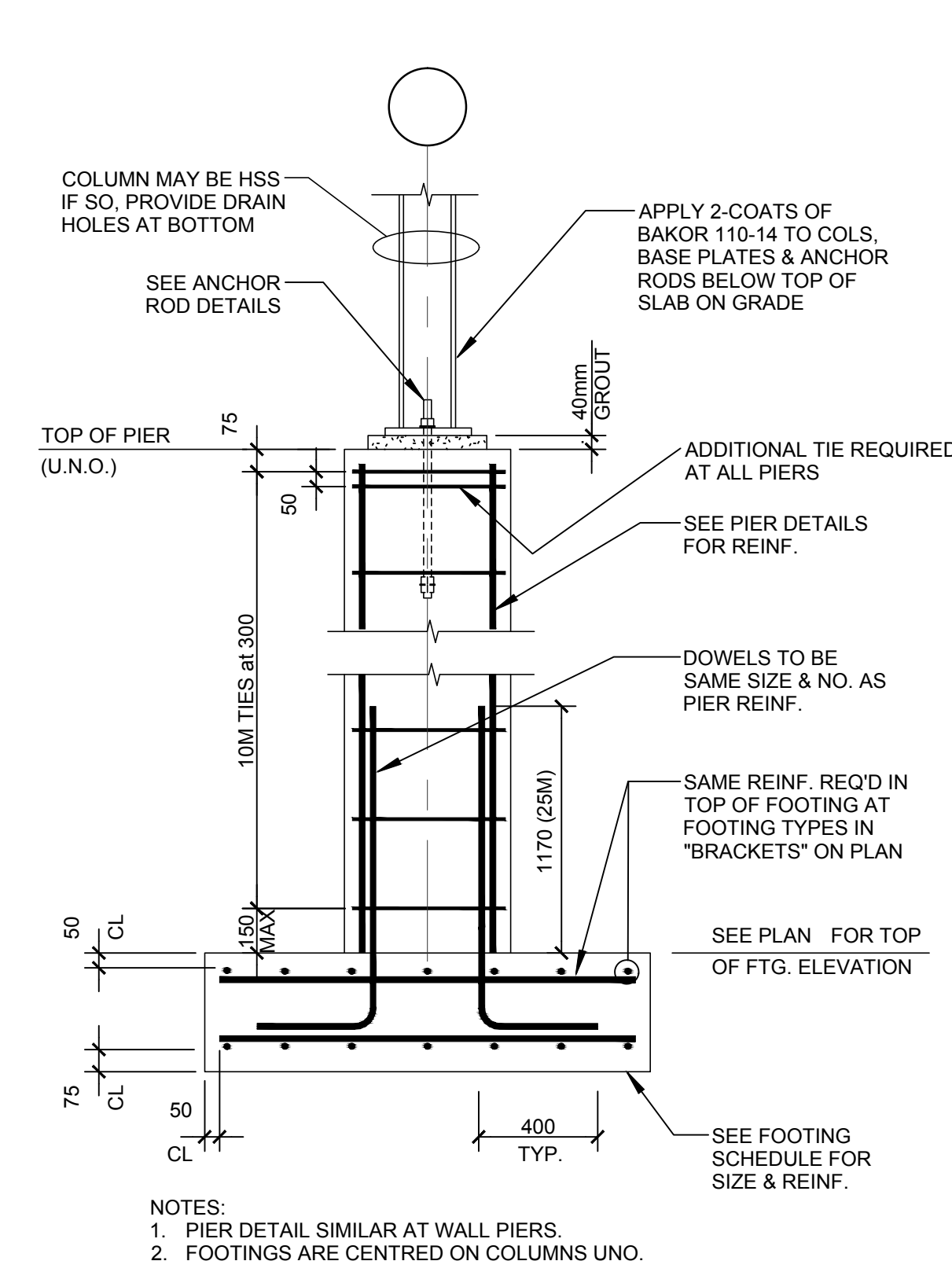
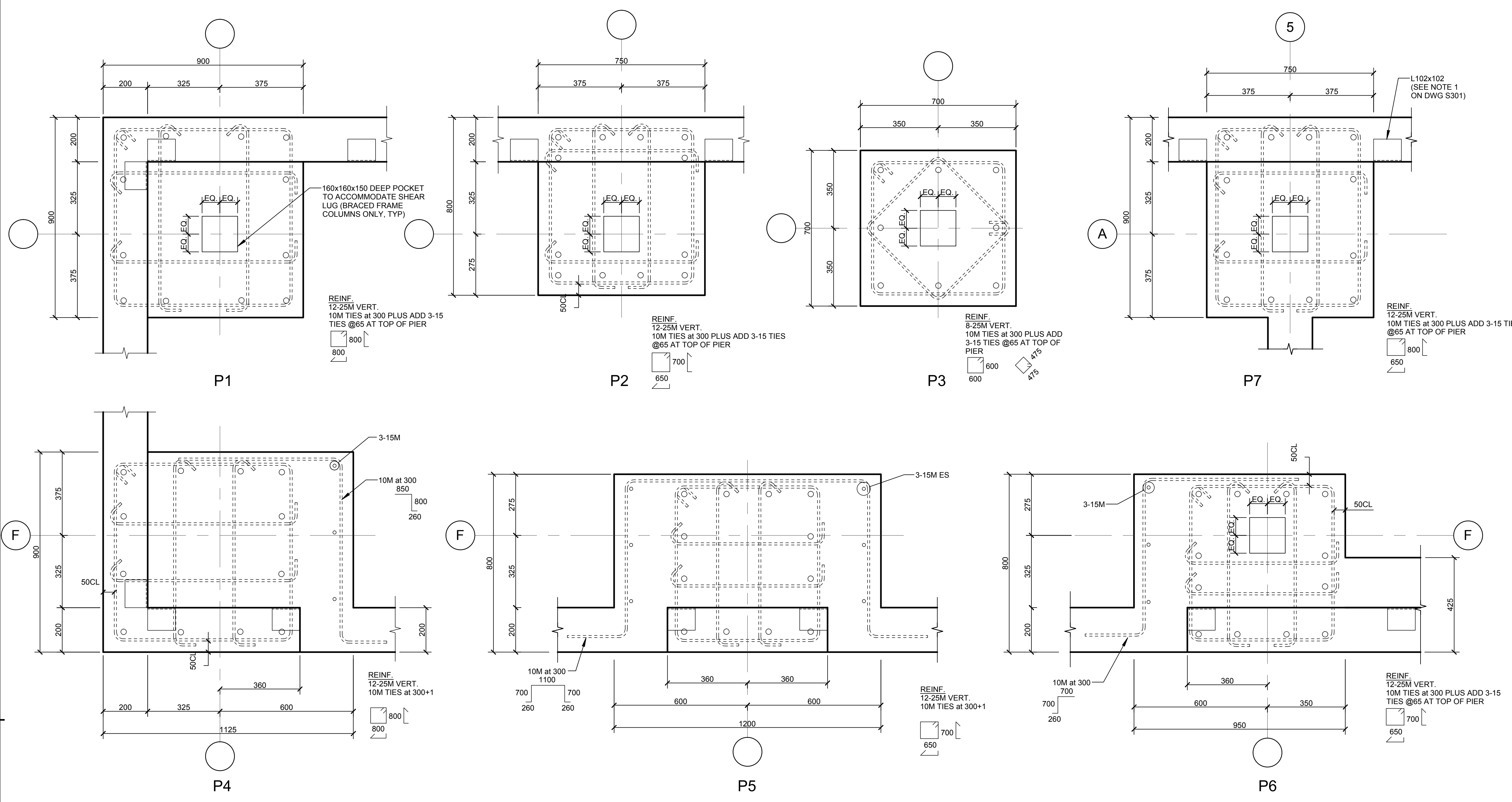


SPECIFIED WIND UPLIFT (kPa) FOR DESIGN OF ROOF JOISTS
TO BE USED IN CONJUNCTION WITH ROOF DEAD LOAD OF 0.5 kPa IN ADDITION TO WEIGHT OF STEEL



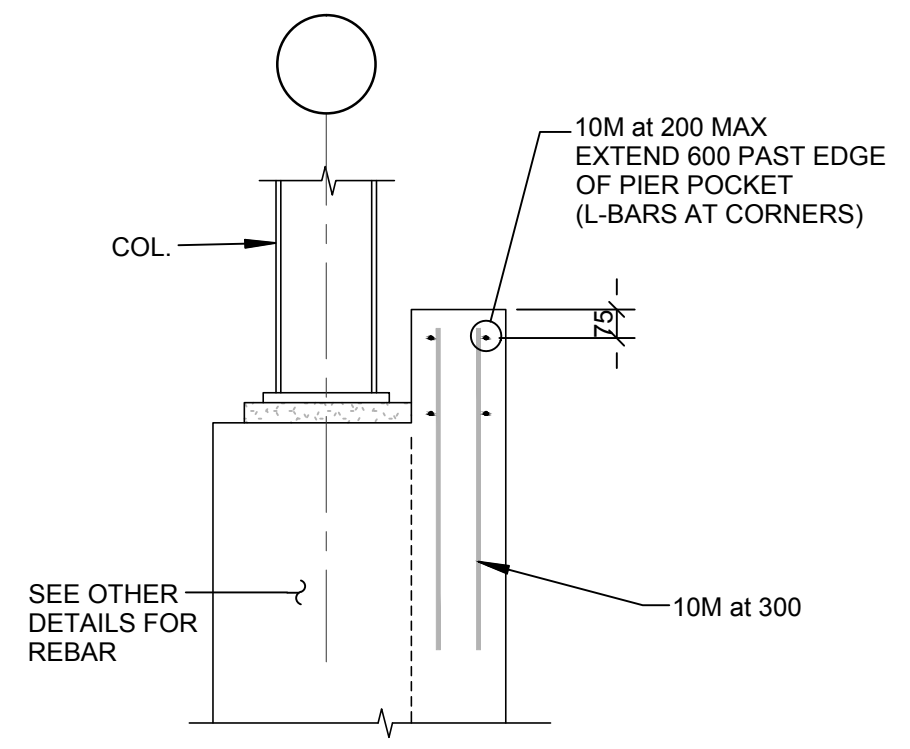
SECTION 12A S102
SCALE: 1:10

- ROOF FRAMING PLAN**
- SEE GENERAL REQUIREMENTS AND TYPICAL DETAILS ON DRAWINGS S400, S401, & S402.
 - ROOF DATUM ELEVATION SLOPES, REFER TO PLAN.
 - UNLESS OTHERWISE NOTED ON PLAN OR DETAILS, THE FOLLOWING DATA APPLIES:
3.1. UNDERSIDE OF STEEL DECK IS FROM DATUM ELEVATION EXCEPT AS CROSSED AND NOTED [EX] ON PLAN.
3.2. TOP OF STEEL BEAMS IS AT UNDERSIDE OF STEEL DECK WHERE BEAMS SUPPORT JOISTS. SET TOP OF BEAMS AT UNDERSIDE OF JOIST SHOE.
3.3. WHERE BEAMS NOTED THUS [EX], X IS DISTANCE TO TOP OF BEAM FROM ROOF DATUM.
3.4. TRIM ALL SIDES OF FRAMED OPENINGS IN ROOF WITH C150x12 UN.
3.5. PROVIDE CONTINUOUS BENT PLATES WHERE REQUIRED TO SUPPORT THE SLOPING DECK. SEE TYPICAL DETAILS.
 - MINIMUM DESIGN SNOW LOAD ON ROOF IS NOTED ON S102.
 - DESIGN RAIN LOAD ON ROOF IS INDICATED ON PLAN IF IT EXCEEDS SNOW LOAD.
 - MINIMUM DESIGN WIND UPLIFT ON ROOF IS NOTED ON S102.
 - DESIGN DEAD LOAD IS NOTED ON S102.
 - "D1" ON PLAN DENOTES STEEL DECK NOTED ON S101.
 - ROOF DECK IS DESIGNED FOR DIAPHRAGM ACTION. FACTORED SHEAR IS 5 kN/m UNLESS OTHERWISE NOTED ON PLAN.
 - UNLESS OTHERWISE NOTED, DESIGN STEEL JOISTS FOR DL+1.5, LL+ SNOW OR RAIN. ALSO DESIGN JOIST CHORDS FOR 1.0 KN POINT LOAD APPLIED ANYWHERE ALONG THEIR LENGTH. SEE PLANS FOR ADDITIONAL POINT LOADS AND MECHANICAL LOADS. SEE TYPICAL DETAIL FOR ADDITIONAL LOAD FOR THE JOISTS.
 - MECHANICAL LOADS SHOWN ON PLAN ARE APPROXIMATE. EXACT MAGNITUDE AND POSITION OF MECHANICAL LOADS ARE TO BE VERIFIED WITH MECHANICAL DRAWINGS PRIOR TO JOIST DESIGN.
 - DESIGN STEEL DECK, JOISTS AND BRIDGING FOR NET FACTORED UPLIFT OF 1.2kPa (MIN).

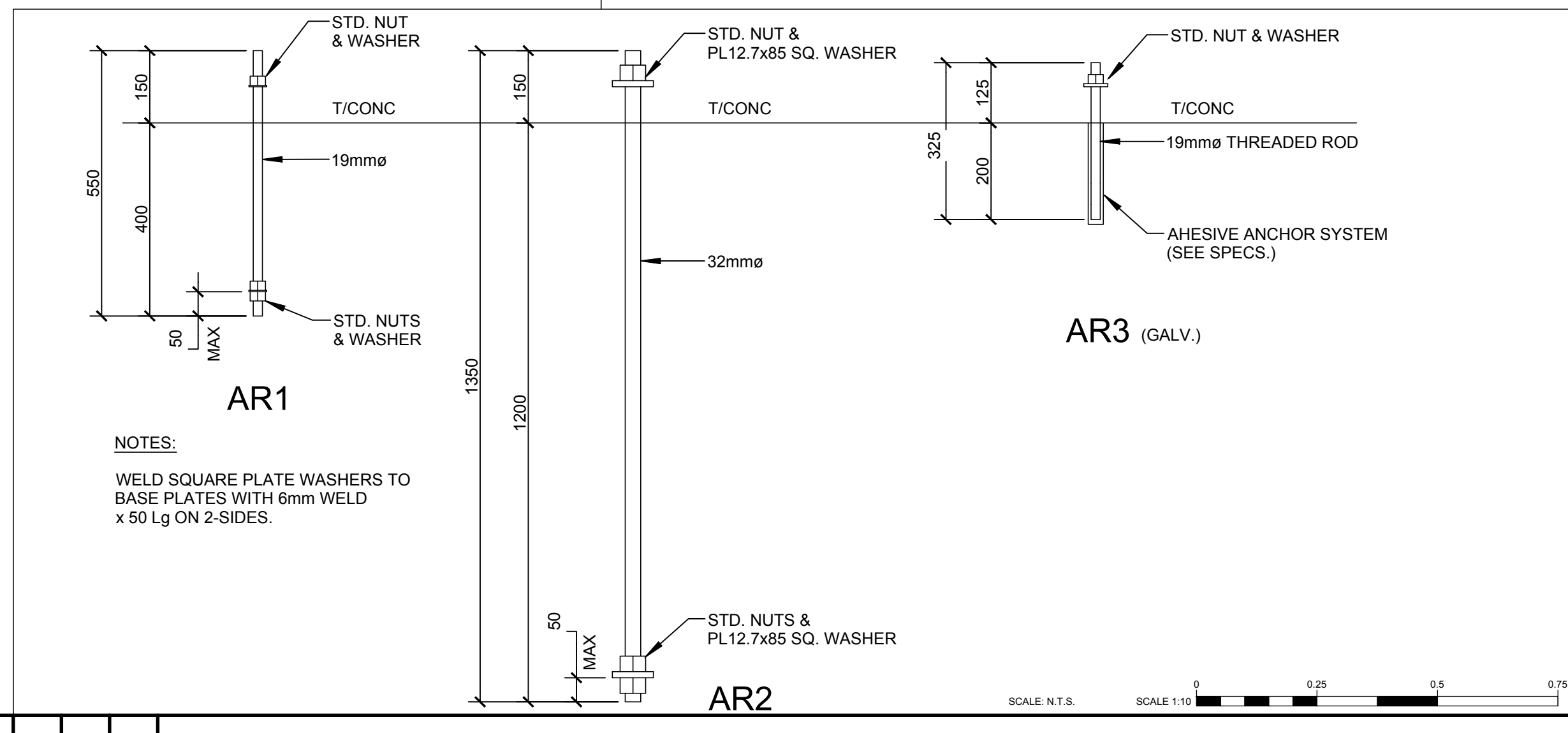
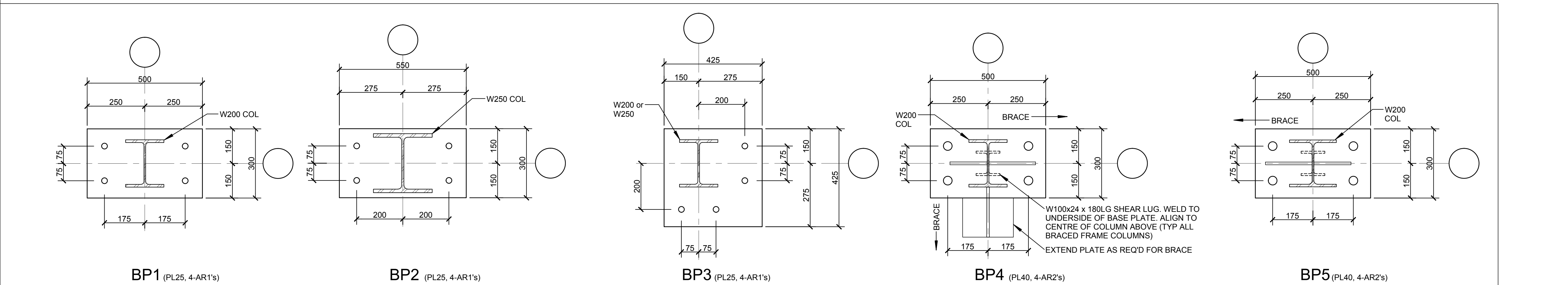


TYPICAL COLUMN FOUNDATION & PIER DETAIL
DO NOT SCALE

- TYPICAL NOTES:**
1. ALTERNATE HOOK LOCATIONS ON SUCCESSIVE TIES
 2. CONTINUE ALL HORIZONTAL WALL REINFORCING THROUGH PIERS AND AROUND CORNERS
 3. WHERE WALLS TERMINATE AT PIERS, EXTEND ALL HORIZONTAL WALL REINFORCING TO FAR SIDE OF PIER WITH A STANDARD 90° HOOK. 15M-260, 20M-310 AND 25M-400
 4. WALL REINFORCING IS NOT SHOWN ON PIER DETAILS.
 5. SEE OTHER DRAWINGS FOR WALL REINFORCING.
 6. ANCHOR RODS ARE NOT SHOWN IN PIERS AT COLUMNS. SEE THIS DRAWING FOR ANCHOR RODS.
 7. ALL PIERS TO HAVE AN ADDITIONAL TIE NEAR TOP PER TYPICAL COLUMN FOUNDATION AND PIER DETAIL.
 8. INTERSECTING WALLS ARE NOT SHOWN ON ALL PIERS.



TYPICAL DETAIL AT ALL PERIMETER PIERS
DO NOT SCALE



- NOTES:**
1. WELD SQUARE PLATE WASHERS TO BASE PLATES WITH 6mm WELD x 50 Lg ON 2-SIDES.

PIER AND BASE PLATE DETAILS

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project projet

**CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)**
KINGSTON, ONTARIO

drawing dessin

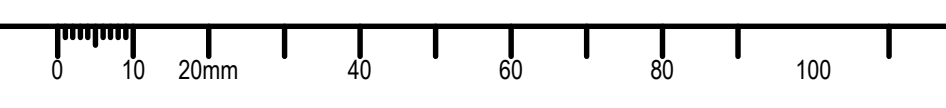
PIER AND BASE PLATE DETAILS

designed	LJF	conçu	
date	2014/04/22	(yyyy/mm/dd)	
drawn	PDM	dessiné	
date	2014/04/22	(yyyy/mm/dd)	
reviewed	LJF	examiné	
date	2015/03/11	(yyyy/mm/dd)	
approved	LJF	approuvé	
date	2015/03/11	(yyyy/mm/dd)	
Tender	DUNCAN PARKER	Submission	
Project Manager	Administrateur de projets		
project no.		no. du projet	

R.055776.001

drawing no. no. du dessin

S300





revision	description	date
01	ISSUED FOR TENDER	15/03/26

A	A detail no. / no. du détail	A
C	B location drawing no. / sur dessin no.	B
	C drawing no. / dessin no.	C

project / projet
CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)
KINGSTON, ONTARIO

drawing / dessin

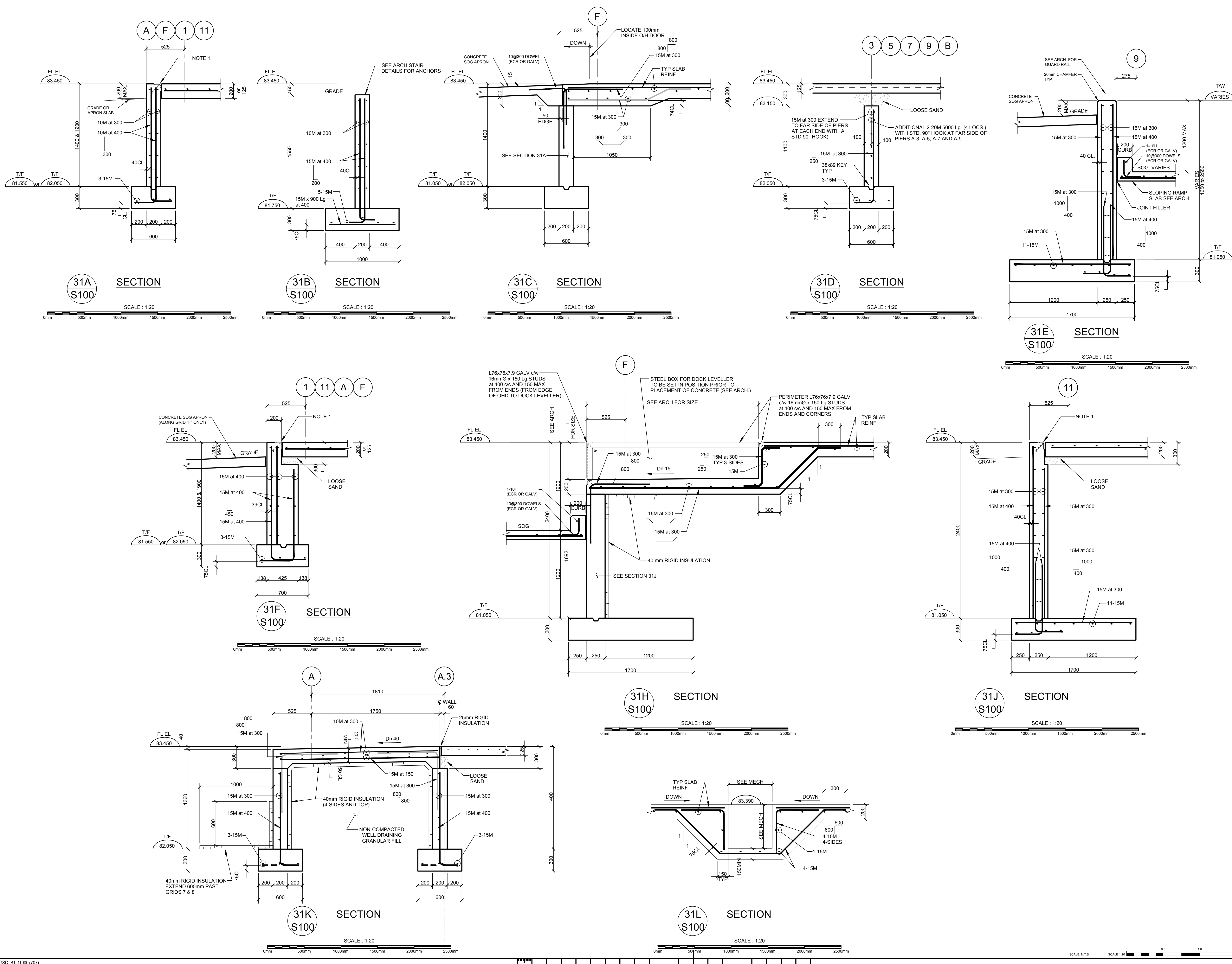
SECTIONS

designed / conçu	IJF	2014/04/22	(yyyy/mm/dd)
drawn / dessiné	PDM	2014/04/22	(yyyy/mm/dd)
reviewed / examiné	IJF	2015/03/11	(yyyy/mm/dd)
approved / approuvé	IJF	2015/03/11	(yyyy/mm/dd)

Tender / Soumission: DUNCAN PARKER

Project Manager / Administrateur de projets: R.055776.001

drawing no. / no. du dessin: S301



ALL OTHERS: INC. • PLOTTED FOR TENDER • PLOT DATE: 4 MAR 2015 10:58:45 AM • PLOT SCALE: 1:1 AT 200mm x 297mm (8 1/2" x 11 7/8") SHEET SIZE: READ DRAWING ACCORDINGLY.
 ALL OTHERS: INC. • PLOTTED FOR TENDER • PLOT DATE: 4 MAR 2015 10:58:45 AM • PLOT SCALE: 1:1 AT 200mm x 297mm (8 1/2" x 11 7/8") SHEET SIZE: READ DRAWING ACCORDINGLY.



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project projet
**CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)**
KINGSTON, ONTARIO

drawing dessin

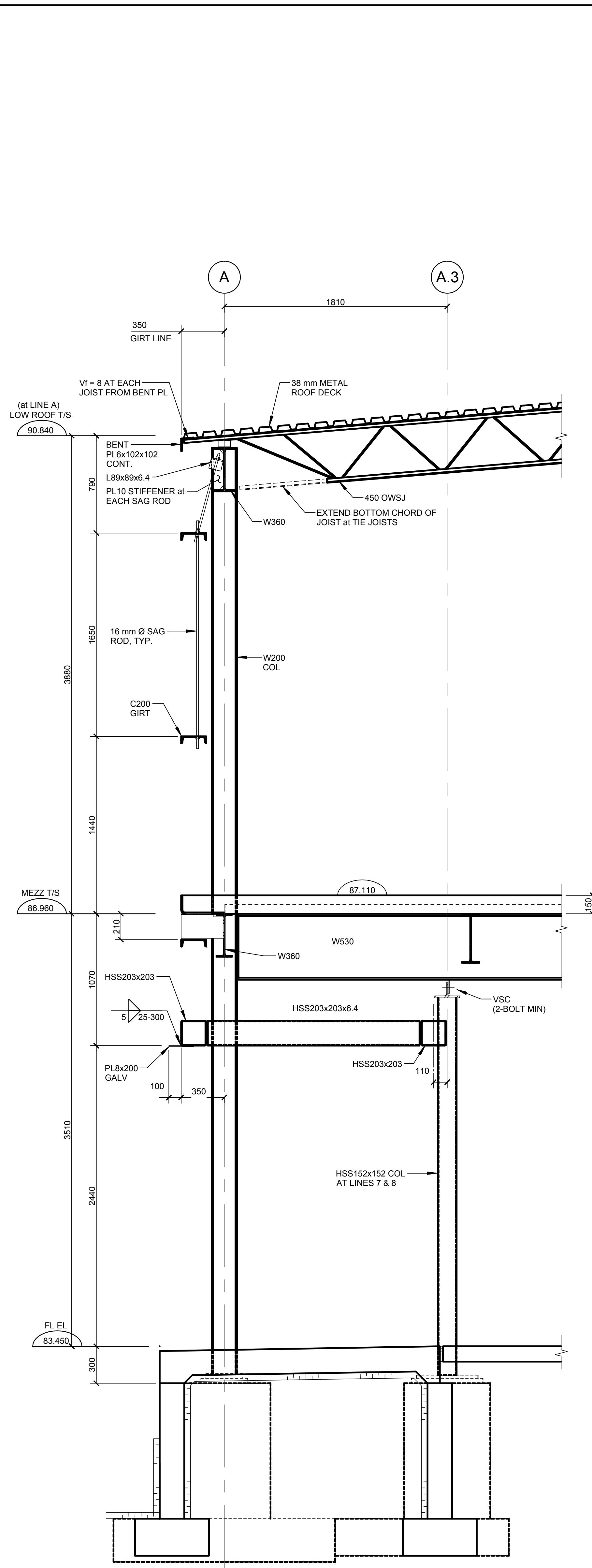
WALL SECTIONS

designed	IJF	conçu
date	2014/04/22	(yyyy/mm/dd)
drawn	PDM	dessiné
date	2014/04/22	(yyyy/mm/dd)
reviewed	IJF	examiné
date	2015/03/11	(yyyy/mm/dd)
approved	IJF	approuvé
date	2015/03/11	(yyyy/mm/dd)
Tender	DUNCAN PARKER	Soumission

Project Manager Administrateur de projets

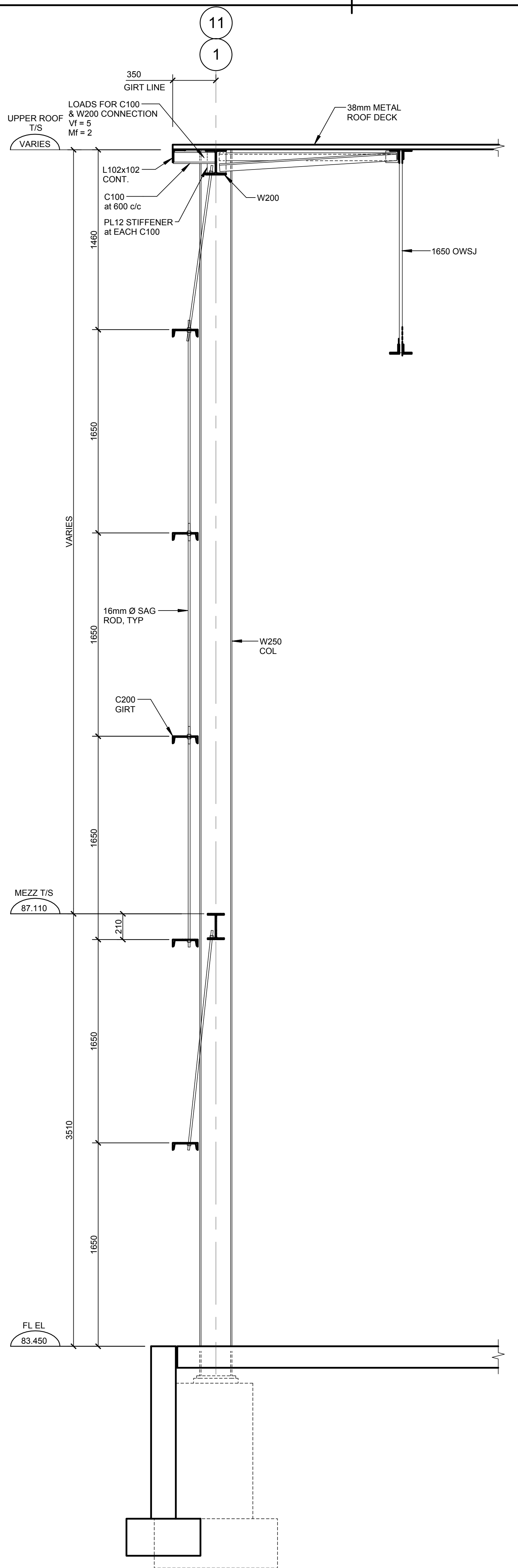
R.055776.001

drawing no. no. du dessin
S302



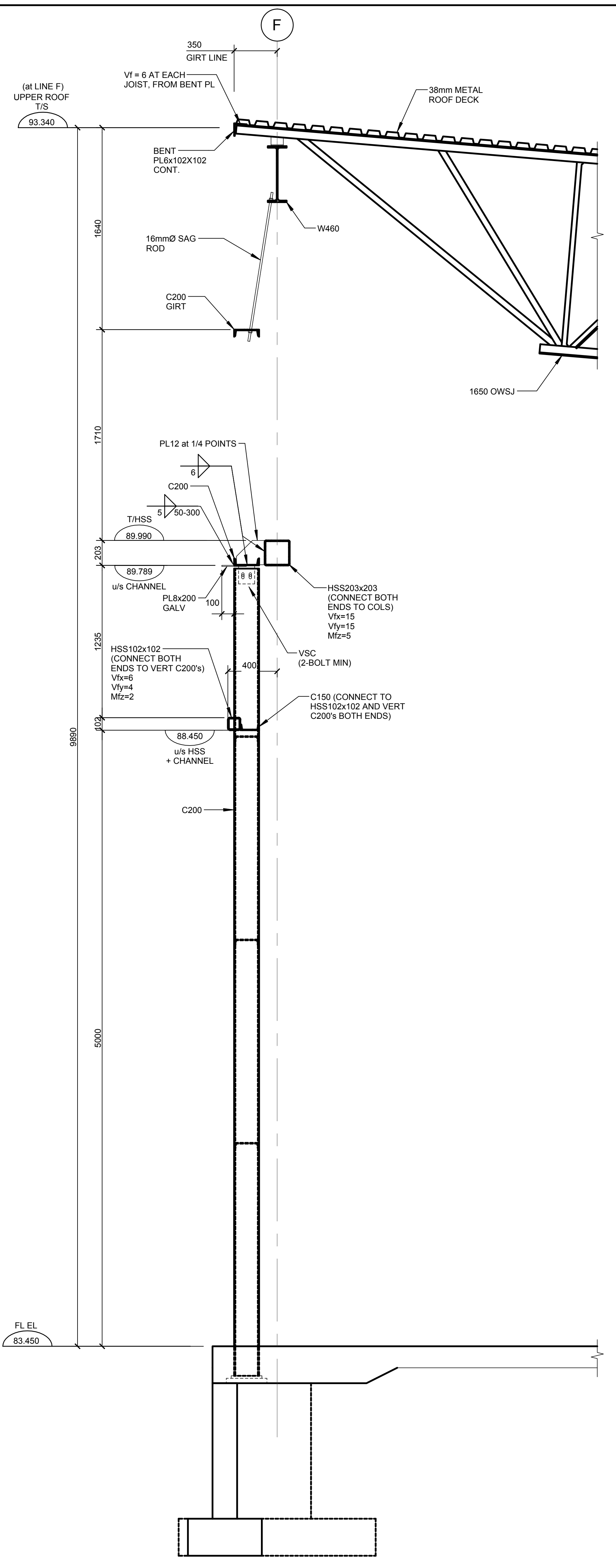
32A
S102
SECTION

SCALE: 1:20



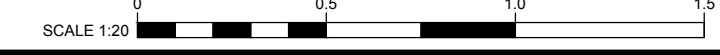
32B
S102
SECTION

SCALE: 1:20



32C
S102
SECTION

SCALE: 1:20



ALL DIMENSIONS ARE UNLESS OTHERWISE SPECIFIED IN MILLIMETERS. DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED. READ DRAWING ACCURATELY.
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GENERAL NOTES

- 1. STRUCTURAL DESIGN IS IN ACCORDANCE WITH 2010 NATIONAL BUILDING CODE OF CANADA DATED (NBCC2010) INCLUDING AMENDMENTS.
2. CHECK ALL DIMENSIONS ON STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS. REPORT ANY INCONSISTENCIES BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THESE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETERS.
3. STRUCTURAL PLANS SHOW BEARING WALLS AND COLUMNS BELOW THE FLOOR OR ROOF STRUCTURE WITH DASHED LINES. WALLS AND COLUMNS ABOVE THE FLOOR ARE SHOWN WITH CONTINUOUS LINES.
4. TYPICAL DETAILS I.E. T3001 ON DRAWINGS S400, S401, & S402 SHOW STRUCTURAL INTENT RATHER THAN ACTUAL CONDITIONS FOR THIS PROJECT.
5. CARRY ALL FOOTINGS DOWN TO STRATA CAPABLE OF SUPPORTING THE DESIGN BEARING PRESSURES NOTED AND FOR EXTERIOR FOOTINGS NOT LESS THAN REQUIRED TO PROVIDE A MINIMUM OF 1500 FROST PROTECTION.
6. PROTECT FOOTINGS, WALLS, SLABS-ON-GRADE AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
7. THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR TRENCHES SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10.
8. FOOTING STEPS SHALL BE A MINIMUM OF 1200 APART, MAXIMUM STEP APPROXIMATELY 600.
9. CENTRE FOOTINGS AND PIERS UNDER CENTROID OF COLUMNS, UNLESS OTHERWISE NOTED.
10. DO NOT BACKFILL AGAINST WALLS RETAINING EARTH UNTIL ELEMENTS PROVIDING LATERAL SUPPORT, INCLUDING SLAB ON GRADE, ARE COMPLETED. PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES OF WALLS BELOW GRADE.
11. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE WALLS ARE NOT PERMITTED, EXCEPT WHERE SHOWN ON THESE DRAWINGS. LEAVE CHASES AND POCKETS IN WALLS FOR SEATING OF SLABS AND BEAMS.
12. REINFORCEMENT FOR CONCRETE WALLS NOT COVERED BY SECTION, PLAN OR SCHEDULE SHALL BE AS FOLLOWS:
150 MAXIMUM WALL: 10 @ 300 H + 10 @ 400 V IN CENTRE
200 MAXIMUM WALL: 10 @ 300 HEF + 10 @ 500 VEF
250 MAXIMUM WALL: 10 @ 400 HEF + 10 @ 500 VEF
300 MAXIMUM WALL: 10 @ 300 HEF + 10 @ 400 VEF
THICKER WALL: 15 @ 300 HEF + 15 @ 400 VEF
13. REINFORCEMENT FOR CONCRETE CURBS NOT COVERED BY SECTION OR PLAN SHALL BE 10@400 DOWELS + 2-10#
14. REINFORCEMENT FOR CONCRETE BASES UNDER EQUIPMENT NOT COVERED BY SECTION OR PLAN SHALL BE 10@300 EA. WAY PLACED 50mm BELOW TOP OF CONCRETE.
15. BARS MARKED CONTINUOUS SHALL BE TERMINATED IN STANDARD HOOKS AT ENDS AND SPLICED USING CLASS B LAPS.
16. ALL REBAR HOOKS TO BE STANDARD LENGTH 90° OR 180° HOOKS.
17. PROVIDE CONTINUOUS GALVANIZED VERTICAL DOVETAIL ANCHOR SLOTS AT 600 CENTRES IN ALL CONCRETE SURFACES WITH MASONRY VENEER.
18. STANDARD LINTELS:
PROVIDE STANDARD LINTELS OVER ALL OPENINGS IN MASONRY WALLS AND PARTITIONS AS SHOWN ON TYPICAL DETAILS. CHECK ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS REQUIRING STANDARD LINTELS WHICH ARE NOT NECESSARILY SHOWN ON THE STRUCTURAL DRAWINGS.
SPECIAL LINTELS:
PROVIDE SPECIAL LINTELS AS PER LINTEL SCHEDULE AT LOCATIONS GIVEN ON PLAN.
19. UNLESS OTHERWISE NOTED, PROVIDE A CONTINUOUS BOND BEAM AT TOPS OF ALL WALLS. FILL ALL CHANNEL BLOCK BOND BEAMS WITH 20 MPa CONCRETE REINFORCED WITH 1-10 TOP AND BOTTOM CONTINUOUS.
20. UNLESS OTHERWISE NOTED, ALL BEARING BEAMS SHALL HAVE A MINIMUM BEARING OF 200. AND ALL CONCRETE SLABS SHALL HAVE A MINIMUM BEARING OF 100. VOIDS IN MASONRY UNITS UNDER BEAMS AND JOISTS SHALL BE PREFILLED WITH GROUT FOR A MINIMUM VERTICAL DEPTH OF 600 AND A LENGTH OF 400. UNLESS OTHERWISE NOTED, USE 75% SOLID BLOCKS FOR FILLING. DO NOT USE MORTAR TO FILL MASONRY UNITS.
21. MINIMUM CONCRETE COVER TO REINFORCING BARS, CLOSEST TO THE CONCRETE SURFACE, IN mm, UNLESS OTHERWISE NOTED:
FOR CONCRETE EXPOSURE CLASSES N, F1 AND F2:
FOOTINGS ----- 75 TO BOTTOM BARS, 50 TO TOP BARS
PIERS ----- 50
COLUMNS ----- 40
40 TO SURFACES EXPOSED TO GROUND OR OUTSIDE.
20 TO PROTECTED SURFACES (ENTIRELY WITHIN THE VAPOUR BARRIER OF THE BUILDING ENVELOPE)
SLABS ----- 25 TO PROTECTED SURFACES (ENTIRELY WITHIN THE VAPOUR BARRIER OF THE BUILDING ENVELOPE)
BEAMS ----- 40
FOR CONCRETE EXPOSURE CLASSES C1 AND C3:
ALL STRUCTURAL ELEMENTS (INCLUDING SLABS AND WALLS) - 60.
INCREASE COVER WHERE REQUIRED TO MAINTAIN MINIMUM RATIO OF COVER TO NOMINAL BAR DIAMETER OF 1 FOR CLASS N, 1.5 FOR CLASSES F1 AND F2 AND 2 FOR CLASSES C1 AND C3.

SHOP DRAWING REVIEW

- 1. REVIEW OF 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 SATISFACTORY MANNER. THE REVIEW OF SHOP DRAWINGS DOES NOT IMPLY ANY CHANGE IN ANY OTHER CONSULTANTS' OR PROFESSIONALS' RESPONSIBILITIES RELATED TO DESIGN OF SPECIFIC ITEMS AS OUTLINED BY THE SPECIFICATIONS (SUCH AS STRUCTURAL STEEL CONNECTIONS, STEEL JOISTS, PRECAST ELEMENTS, ETC.).
2. AFTER REVIEW, THE DRAWINGS WILL BE STAMPED AND RETURNED TO SHOW ONE OF THE FOLLOWING:
NOT REVIEWED - SHOWS WORK WHICH IS NOT WITHIN THE SCOPE OF STRUCTURAL CONSULTING SERVICES.
REVIEWED - RELEASED FOR FABRICATION.
NOTED - RELEASED FOR FABRICATION AFTER REVISIONS NOTED ARE MADE. SUBMIT FINAL RECORD PRINT.
RESUBMIT - CORRECT AND RESUBMIT FOR REVIEW PRIOR TO FABRICATION.

MATERIAL AND DESIGN DATA

- 1. FOOTING BEARING RESISTANCE:
- 150 kPa AT ULTIMATE LIMIT STATES DESIGN
- 150 kPa AT SLS (SERVICEABILITY LIMIT STATES DESIGN)
MODULUS OF SUBGRADE REACTIONS (ASSUMED FOR DESIGN OF SLABS ON GRADE) 24,000 kN/m³
SEE SOILS REPORT PREPARED BY: DBA ENGINEERING LTD.
REPORT NUMBER: 12-2334-01. DATED: NOVEMBER 8, 2012
2. CONCRETE SPECIFIED COMPRESSIVE STRENGTH, f'c, IS 25 MPa EXCEPT FOR:
DOCKING AREA - 35 MPa
SLAB ON GRADE - 30 MPa
AND WHERE SHOWN ON PLANS AND SCHEDULES
INCREASE STRENGTH AS REQUIRED FOR REQUIRED CLASS OF EXPOSURE. REFER TO SPECIFICATIONS.
3. REINFORCING STEEL: CAN/CSA G30.18M - GRADE 400R
400W
4. STRUCTURAL STEEL (EXCEPT HSS): CAN/CSA G40.21M
- WIDE FLANGES: 350 W
- ANCHOR RODS: 300 W
- ALL OTHER STEEL: 300 W
5. STRUCTURAL STEEL (HSS ONLY):
- ASTM A500 GRADE C (345 MPa FOR SQUARE/RECTANGULAR AND 317 MPa FOR ROUND) OR
G40.21 GRADE 300W CLASS C OR H
- HSS MEMBERS REQUIRED TO BE GALVANIZED SHALL BE CLASS H, OR STRESS RELIEVED PRIOR TO GALVANIZING
6. STRUCTURAL MASONRY:
- HOLLOW BLOCK: CSA A185.1 - H/S18MM
- SOLID BLOCK: CSA A185.1 - S/S15MM
- MORTAR: CSA A179M - TYPE S
- GROUT FOR BLOCK CORES: CSA A179M - COARSE GROUT
1:3 CEMENT-SAND-PEA-STONE
BY VOLUME WITH 200 SLUMP
- SPECIFIED COMPRESSIVE STRENGTH, f'm, IS:
HOLLOW BLOCK - 9.8 MPa
SOLID AND GROUTED HOLLOW BLOCK - 7.5 MPa
- SPECIFIED FLEXURAL TENSILE STRENGTH IN NORMAL TO BED JOINTS IS:
SOLID AND HOLLOW BLOCK - 0.4 MPa
GROUTED HOLLOW BLOCK - 0.65 MPa
8. DESIGN LOADS FOR BUILDING STRUCTURE:
DESIGN LOADS PRESENTED BELOW HAVE BEEN DEVELOPED FOR THE REFERENCED BUILDING TO BE LOCATED IN THE FOLLOWING MUNICIPALITY: KINGSTON, ON
THE VALUES FOR CLIMATIC DATA USED IN THE DETERMINATION OF DESIGN LOADS HAVE BEEN OBTAINED FROM THE SUPPLEMENTARY STANDARD SB-1 TABLE 1.2
1. GRAVITY LOADS AS SHOWN ON PLANS
2. GROUND SNOW LOAD AND ASSOCIATED RAIN LOAD:
Sg = 2.1 kN/m²
Sr = 0.4 kN/m²
3. SPECIFIED SNOW LOAD
S = 1.6 [Sg x Cd x Cw x Cs x Ca + Sr] = 1.6 x [2.1 x 0.8 x 1.0 x 0.1 x 0.4 + 0.4] = 1.6 x 2.08 kN/m²
4. WIND:
IMPORTANCE CATEGORY = NORMAL
IMPORTANCE FACTOR:
Iw = 1.0 (ULS)
Iw = 0.75 (SLS)
150 Yr HOURLY WIND PRESSURE:
q = 0.47 kPa
TERRAIN TYPE: OPEN
ROUGH
H = MAX HEIGHT ABOVE GRADE = 8.64 m
Ds = SMALLER PLAN DIMENSION = 30.0 m
%g = 8.64/30.0 = 0.288
CONCLUSION: BUILDING IS: LOW RISE
HIGH RISE
EXTERNAL PRESSURE CO-EFFICIENT, GUST EFFECT FACTOR & EXPOSURE FACTOR
LOW RISE NOT APPLICABLE
NS WIND
Cp WINDWARD = 0.97 (AT H)
Cp LEeward = 0.55
EW WIND
Cp WINDWARD = 0.75
Cp LEeward = -0.55
HIGH RISE
Cp WINDWARD = 0.85 (VARIES WITH HEIGHT)
Cp LEeward = 0.55 (AT H/2)
Cg = 2.0
NS WIND
D = m
HD = m
Cp WINDWARD = m
Cp LEeward = m
EW WIND
D = m
HD = m
Cp WINDWARD = m
Cp LEeward = m
FACTORED DESIGN LOADS (1.4W)
NS WIND
BASE SHEAR (ULS) = 280 kN
BASE OVERTURNING MOMENT (ULS) = 2520 kN.m
EW WIND
BASE SHEAR (ULS) = 140 kN
BASE OVERTURNING MOMENT (ULS) = 1195 kN.m
5. SEISMIC:
SEISMIC FORCE RESISTING SYSTEM (SFRS):
SFRS: SYSTEM & CONNECTIONS: (CLAUSE 4.1.8.9/4.1.8.10)
LATERAL LOAD RESISTING SYSTEM: CONVENTIONAL CONSTRUCTION OF BRACED FRAME
Rd = 1.5
Ro = 1.3
CSA STANDARD: CAN CSA-S16-09
APPLICABLE CLAUSES: 27.10
SFRS: DIAPHRAGMS & CONNECTIONS: (CLAUSE 4.1.8.15)
CSA STANDARD: CAN CSA-S16-09
APPLICABLE CLAUSES: 27.10
SFRS: SYSTEM FOUNDATIONS: (CLAUSE 4.1.8.16)
CSA STANDARD: CSA A23.3-04
APPLICABLE CLAUSES: 21.11
FOR ANCHORED FOOTINGS
FOR UNANCHORED FOOTINGS
IMPORTANCE FACTOR: (CLAUSE 4.1.8.5)
IE = 1.0
PROJECT LOCATION: KINGSTON ON
5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES
PGA = 0.12
Sd(0.2) = 0.29
Sd(0.5) = 0.18
Sd(1.0) = 0.099
Sd(0) = 0.031
SITE CLASS: THE NOTED SITE CLASSIFICATION FOR SEISMIC SITE RESISTANCE AND SHEAR WAVE VELOCITY PARAMETERS INDICATED ARE AS REPORTED IN THE GEOTECHNICAL REPORT DBA ENGINEERING LTD. BY 12-2334-01
HORIZONTAL SHEAR WAVE VELOCITY:
Fa = 1.0
Fv = 1.0
DESIGN SPECTRAL RESPONSE ACCELERATION VALUES
S(0.2) = 0.29
S(0.5) = 0.18
S(1.0) = 0.099
S(0) = 0.031
S(4.0) = 0.0155
IeFaSa (0.2) = 0.29
FUNDAMENTAL PERIOD DATA
EMPIRICAL FORMULA (CLAUSE 4.1.8.11(3))
Tn = 0.185 sec

MATERIAL AND DESIGN DATA (CONT'D)

- ALTERNATE METHOD OF MECHANICS (CLAUSE 4.1.8.11(3)(a))
Tn(NS) = sec
Tn(EW) = sec
DESIGN PERIOD:
Tn(NS) = 0.185 sec
Tn(EW) = 0.185 sec
DESIGN SPECTRAL RESPONSE ACCELERATION AT FUNDAMENTAL PERIOD:
S(0.2) = 0.29
Mn(NS) = 1.0
J(NS) = 1.0
S(4.0) = 0.0155
Mn(EW) = 1.0
J(EW) = 1.0
IRREGULARITY REVIEW (CLAUSE 4.1.8.6)
1. VERTICAL STIFFNESS: YES NO
2. WEIGHT: YES NO
3. VERTICAL GEOMETRIC: YES NO
4. IN-PLANE DISCONTINUITY: YES NO
5. CUT-OF-PLANE: YES NO
6. WEAK STOREY: YES NO
7. TORSIONAL: YES NO
8. NON-ORTHOGONAL CONCLUSION: BUILDING IS: REGULAR IRREGULAR
DYNAMIC ANALYSIS: REQUIRED NOT REQUIRED
DYNAMIC PROCEDURE METHOD: MODAL RESPONSE SPECTRUM NUMERICAL INTEGRATION TIME HISTORY
TORSIONAL ECCENTRICITY PROCEDURE:
B ± 0.10 Dnx (CLAUSE 4.1.8.11 (10)(a)), B ± 1.7 (EQUIV. STATIC FORCE)
A ± 0.10 Dnx (CLAUSE 4.1.8.12 (4)(a)), B ± 1.7 (3-D DYNAMIC ANALYSIS)
A ± 0.05 Dnx (CLAUSE 4.1.8.12 (4)(b)), B ± 1.7, (3-D DYNAMIC ANALYSIS)
BASE SHEARS / OVERTURNING MOMENTS
EQUIVALENT STATIC FORCE PROCEDURE:
BASE SHEARS
NS DIRECTIONS:
VMN = S(2.0) Mv le W(Rd Ro) = 0.0238 W
VMAX = (2/3) S(2.0) le W(Rd Ro) = 0.0991 W
EW DIRECTIONS:
VMN = S(2.0) Mv le W(Rd Ro) = 0.0238 W
VMAX = (2/3) S(2.0) le W(Rd Ro) = 0.0991 W
DESIGN BASE SHEARS / OVERTURNING MOMENTS:
V(NS) = 0.0991 W = 0.0991 x 5275 = 523 kN
M(NS) = -M x J = -3690 x 1.0 = -3690 kN.m
V(EW) = 0.0991 W = 0.0991 x 5275 = 523 kN
M(EW) = -M x J = -3690 x 1.0 = -3690 kN.m
DCA DETAIL DRILLED CONCRETE ANCHOR
D.F.-L DIAMETER
D.M. DIMENSION
D.L. DEAD LOAD IN kN/m²
D.M.A DOWN DRILLED MASONRY ANCHOR
D.O. DITTO
D.P. DEEP DRAWING
D.W.G. DWELL
EA EACH
E.C.R. EPOXY COATED REINFORCEMENT
EE EACH END
EF EACH FACE
E.J. EXP.JT. EXPANSION JOINT
EL. ELEV. ELEVATION
EMBED. EMBEDMENT
EQ. EQUAL
EX. EXIST. EXISTING
FD FLOOR DRAIN
FF FAR FACE
F.N.L. FINISHED FLOOR
F.M.C FULL MOMENT CONNECTION
F.T.G. FOOTING
f.c COMPRESSIVE STRENGTH OF CONC IN MPa
fy YIELD STRENGTH IN MPa
GALV. GALVANIZED STEEL
GB GRADE BEAM
GL GRIDLINE
h TOTAL THICKNESS
H. HOR. HORIZONTAL
H.G. HOT DIPPED GALVANIZED
HEF HORIZONTAL EACH FACE
HH HOOK-HOOK (HOOK EACH END)
HOLE THROUGH CONCRETE BEAM
HOLE THROUGH STEEL BEAM
HORIZONTAL IN CENTRE
HK HOOK
HP HIGH POINT
IBA INTEGRITY BARS ADDED
IBE INTEGRITY BARS EXTERIOR
IBI INTEGRITY BARS INTERIOR
JG JOIST GIRDER
ld TENSION DEVELOPMENT LENGTH OF REBAR
lcc COMPRESSION DEVELOPMENT LENGTH OF REBAR
L SINGLE ANGLE
JL DOUBLE ANGLES
LEG. LEFT END
LONGLENGTH LONGLENGTH
UPPER LEVEL BM/JOIST LOWER LEVEL BM/JOIST
L.L. LEVEL LOAD IN kN/m² (+ INDICATES TENSION, - INDICATES COMPRESSION)
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LSV LONG SIDE VERTICAL
LPH LONG SIDE HORIZONTAL
LP LOW POINT
MAX. MAXIMUM
M.O. FACTORED MOMENT IN kN.m
M.J. MOVEMENT JOINT
MIN. MINIMUM
M.M. MOMENT CONNECTION
M.M. FACTORED TORSION IN kN.m
NF NEAR FACE
NTS NOT TO SCALE
O.C. ON CENTRE
O.O. OUT TO OUT
O.P.G. OPENING
P POINT LOAD IN kN
P.L. FACTORED POINT LOAD IN kN
P.L. PLATE
RA ROCK ANCHOR
RD ROOF DRAIN
REIN. REINFORCEMENT
REF. RIGHT END
RF RIGID FRAME
R.F. FACTORED VERTICAL REACTION IN kN
R.H.F. FACTORED HORIZONTAL REACTION IN kN
SCA STEEL COLUMN ABOVE (NO STEEL COLUMN BELOW)
SDF STEP DOWN FOOTING IN DIRECTION OF ARROW
S.D.L. SUPERIMPOSED DL (EXCLUDING SELF-WEIGHT) IN kN/m²
SECT. SECTION
SIM. SIMILAR
S.J. STEEL JOIST
S.L.S. SERVICEABILITY LIMIT STATE
SL. SLAB
S.L.1, S.L.2 SHELF ANGLE 1, ETC
SOG SLAB ON GRADE
SPF SPRUCE PINE FIR
STRIP STRIP
STIFF. STIFFENER
T THICKNESS
TOP TOP EACH WAY
THK. THICK
T.J. THE JOIST
TLE TOP LEFT END
TLL TOP LOWER LAYER
TOP TOP OF FOOTING
TOP TOP OF PILE
TPC TOP OF PILE CAP
TRE TOP RIGHT END
TUL TOP UPPER LAYER
TYP. TYPICAL
ULS ULTIMATE LIMIT STATE
UNL UNLESS NOTED
UPT. UPTURNED
V.B. VERTICAL BRACING
V.V. VERTICAL VERTICAL EACH FACE
V.F. FACTORED SHEAR IN kN
V.C. VERTICAL IN CENTRE
V.VERT. VERTS. VERTICAL, VERTICALS
VSC VERTICALLY SLOTTED CONNECTION TO ALLOW FOR DEFLECTION
VXB VERTICAL 'X' BRACING
WC WIND COLUMN
WWA WINDOW WASHING ANCHORS
WWF WELDED WIRE FABRIC
ZRP ZINC RICH PAINT
SECTION NUMBER
SECTION DRAWING REFERENCE
MASONRY WALL
FULLY GROUTED MASONRY WALL
STRUCTURAL PRECAST CONCRETE
SEE GENERAL NOTES
DCA DETAIL DRILLED CONCRETE ANCHOR
DET. DETAIL
D.F.-L DIAMETER
D.M. DIMENSION
D.L. DEAD LOAD IN kN/m²
D.M.A DOWN DRILLED MASONRY ANCHOR
D.O. DITTO
D.P. DEEP DRAWING
D.W.G. DWELL
EA EACH
E.C.R. EPOXY COATED REINFORCEMENT
EE EACH END
EF EACH FACE
E.J. EXP.JT. EXPANSION JOINT
EL. ELEV. ELEVATION
EMBED. EMBEDMENT
EQ. EQUAL
EX. EXIST. EXISTING
FD FLOOR DRAIN
FF FAR FACE
F.N.L. FINISHED FLOOR
F.M.C FULL MOMENT CONNECTION
F.T.G. FOOTING
f.c COMPRESSIVE STRENGTH OF CONC IN MPa
fy YIELD STRENGTH IN MPa
GALV. GALVANIZED STEEL
GB GRADE BEAM
GL GRIDLINE
h TOTAL THICKNESS
H. HOR. HORIZONTAL
H.G. HOT DIPPED GALVANIZED
HEF HORIZONTAL EACH FACE
HH HOOK-HOOK (HOOK EACH END)
HOLE THROUGH CONCRETE BEAM
HOLE THROUGH STEEL BEAM
HORIZONTAL IN CENTRE
HK HOOK
HP HIGH POINT
IBA INTEGRITY BARS ADDED
IBE INTEGRITY BARS EXTERIOR
IBI INTEGRITY BARS INTERIOR
JG JOIST GIRDER
ld TENSION DEVELOPMENT LENGTH OF REBAR
lcc COMPRESSION DEVELOPMENT LENGTH OF REBAR
L SINGLE ANGLE
JL DOUBLE ANGLES
LEG. LEFT END
LONGLENGTH LONGLENGTH
UPPER LEVEL BM/JOIST LOWER LEVEL BM/JOIST
L.L. LEVEL LOAD IN kN/m² (+ INDICATES TENSION, - INDICATES COMPRESSION)
LLH LONG LEG HORIZONTAL
LLV LONG LEG VERTICAL
LSV LONG SIDE VERTICAL
LPH LONG SIDE HORIZONTAL
LP LOW POINT
MAX. MAXIMUM
M.O. FACTORED MOMENT IN kN.m
M.J. MOVEMENT JOINT
MIN. MINIMUM
M.M. MOMENT CONNECTION
M.M. FACTORED TORSION IN kN.m
NF NEAR FACE
NTS NOT TO SCALE
O.C. ON CENTRE
O.O. OUT TO OUT
O.P.G. OPENING
P POINT LOAD IN kN
P.L. FACTORED POINT LOAD IN kN
P.L. PLATE
RA ROCK ANCHOR
RD ROOF DRAIN
REIN. REINFORCEMENT
REF. RIGHT END
RF RIGID FRAME
R.F. FACTORED VERTICAL REACTION IN kN
R.H.F. FACTORED HORIZONTAL REACTION IN kN
SCA STEEL COLUMN ABOVE (NO STEEL COLUMN BELOW)
SDF STEP DOWN FOOTING IN DIRECTION OF ARROW
S.D.L. SUPERIMPOSED DL (EXCLUDING SELF-WEIGHT) IN kN/m²
SECT. SECTION
SIM. SIMILAR
S.J. STEEL JOIST
S.L.S. SERVICEABILITY LIMIT STATE
SL. SLAB
S.L.1, S.L.2 SHELF ANGLE 1, ETC
SOG SLAB ON GRADE
SPF SPRUCE PINE FIR
STRIP STRIP
STIFF. STIFFENER
T THICKNESS
TOP TOP EACH WAY
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T.J. THE JOIST
TLE TOP LEFT END
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TOP TOP OF FOOTING
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TUL TOP UPPER LAYER
TYP. TYPICAL
ULS ULTIMATE LIMIT STATE
UNL UNLESS NOTED
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V.B. VERTICAL BRACING
V.V. VERTICAL VERTICAL EACH FACE
V.F. FACTORED SHEAR IN kN
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f.c COMPRESSIVE STRENGTH OF CONC IN MPa
fy YIELD STRENGTH IN MPa
GALV. GALVANIZED STEEL
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M.M. MOMENT CONNECTION
M.M. FACTORED TORSION IN kN.m
NF NEAR FACE
NTS NOT TO SCALE
O.C. ON CENTRE
O.O. OUT TO OUT
O.P.G. OPENING
P POINT LOAD IN kN
P.L. FACTORED POINT LOAD IN kN
P.L. PLATE
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RD ROOF DRAIN
REIN. REINFORCEMENT
REF. RIGHT END
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R.F. FACTORED VERTICAL REACTION IN kN
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SDF STEP DOWN FOOTING IN DIRECTION OF ARROW
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SECT. SECTION
SIM. SIMILAR
S.J. STEEL JOIST
S.L.S. SERVICEABILITY LIMIT STATE
SL. SLAB
S.L.1, S.L.2 SHELF ANGLE 1, ETC
SOG SLAB ON GRADE
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HOLE THROUGH STEEL BEAM
HORIZONTAL IN CENTRE
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IBE INTEGRITY BARS EXTERIOR
IBI INTEGRITY BARS INTERIOR
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L.L. LEVEL LOAD IN kN/m² (+ INDICATES TENSION, - INDICATES COMPRESSION)
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M.M. MOMENT CONNECTION
M.M. FACTORED TORSION IN kN.m
NF NEAR FACE
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O.C. ON CENTRE
O.O. OUT TO OUT
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P POINT LOAD IN kN
P.L. FACTORED POINT LOAD IN kN
P.L. PLATE
RA ROCK ANCHOR
RD ROOF DRAIN
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REF. RIGHT END
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SECT. SECTION
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S.J. STEEL JOIST
S.L.S. SERVICEABILITY LIMIT STATE
SL. SLAB
S.L.1, S.L.2 SHELF ANGLE 1, ETC
SOG SLAB ON GRADE
SPF SPRUCE PINE FIR
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TRE TOP RIGHT END
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V.B. VERTICAL BRACING
V.V. VERTICAL VERTICAL EACH FACE
V.F. FACTORED SHEAR IN kN
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V.VERT. VERTS. VERTICAL, VERTICALS
VSC VERTICALLY SLOTTED CONNECTION TO ALLOW FOR DEFLECTION
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FULLY GROUTED MASONRY WALL
STRUCTURAL PRECAST CONCRETE
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H.G. HOT DIPPED GALVANIZED
HEF HORIZONTAL EACH FACE
HH HOOK-HOOK (HOOK EACH END)
HOLE THROUGH CONCRETE BEAM
HOLE THROUGH STEEL BEAM
HORIZONTAL IN CENTRE
HK HOOK
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IBA INTEGRITY BARS ADDED
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JG JOIST GIRDER
ld TENSION DEVELOPMENT LENGTH OF REBAR
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L SINGLE ANGLE
JL DOUBLE ANGLES
LEG. LEFT END
LONGLENGTH LONGLENGTH
UPPER LEVEL BM/JOIST LOWER LEVEL BM/JOIST
L.L. LEVEL LOAD IN kN/m² (+ INDICATES TENSION, - INDICATES COMPRESSION)
LLH LONG LEG HORIZONTAL
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LSV LONG SIDE VERTICAL
LPH LONG SIDE HORIZONTAL
LP LOW POINT
MAX. MAXIMUM
M.O. FACTORED MOMENT IN kN.m
M.J. MOVEMENT JOINT
MIN. MINIMUM
M.M. MOMENT CONNECTION
M.M. FACTORED TORSION IN kN.m
NF NEAR FACE
NTS NOT TO SCALE
O.C. ON CENTRE
O.O. OUT TO OUT
O.P.G. OPENING
P POINT LOAD IN kN
P.L. FACTORED POINT LOAD IN kN
P.L. PLATE
RA ROCK ANCHOR
RD ROOF DRAIN
REIN. REINFORCEMENT
REF. RIGHT END
RF RIGID FRAME
R.F. FACTORED VERTICAL REACTION IN kN
R.H.F. FACTORED HORIZONTAL REACTION IN kN
SCA STEEL COLUMN ABOVE (NO STEEL COLUMN BELOW)
SDF STEP DOWN FOOTING IN DIRECTION OF ARROW
S.D.L. SUPERIMPOSED DL (EXCLUDING SELF-WEIGHT) IN kN/m²
SECT. SECTION
SIM. SIMILAR
S.J. STEEL JOIST
S.L.S. SERVICEABILITY LIMIT STATE
SL. SLAB
S.L.1, S.L.2 SHELF ANGLE 1, ETC
SOG SLAB ON GRADE
SPF SPRUCE PINE FIR
STRIP STRIP
STIFF. STIFFENER
T THICKNESS
TOP TOP EACH WAY
THK. THICK
T.J. THE JOIST
TLE TOP LEFT END
TLL TOP LOWER LAYER
TOP TOP OF FOOTING
TOP TOP OF PILE
TPC TOP OF PILE CAP
TRE TOP RIGHT END
TUL TOP UPPER LAYER
TYP. TYPICAL
ULS ULTIMATE LIMIT STATE
UNL UNLESS NOTED
UPT. UPTURNED
V.B. VERTICAL BRACING
V.V. VERTICAL VERTICAL EACH FACE
V.F. FACTORED SHEAR IN kN
V.C. VERTICAL IN CENTRE
V.VERT. VERTS. VERTICAL, VERTICALS
VSC VERTICALLY SLOTTED CONNECTION TO ALLOW FOR DEFLECTION
VXB VERTICAL 'X' BRACING
WC WIND COLUMN
WWA WINDOW WASHING ANCHORS
WWF WELDED WIRE FABRIC
ZRP ZINC RICH PAINT
SECTION NUMBER
SECTION DRAWING REFERENCE
MASONRY WALL
FULLY GROUTED MASONRY WALL
STRUCTURAL PRECAST CONCRETE
SEE GENERAL NOTES
DCA DETAIL DRILLED CONCRETE ANCHOR
DET. DETAIL
D.F.-L DIAMETER
D.M. DIMENSION
D.L. DEAD LOAD IN kN/m²
D.M.A DOWN DRILLED MASONRY ANCHOR
D.O. DITTO
D.P. DEEP DRAWING
D.W.G. DWELL
EA EACH
E.C.R. EPOXY COATED REINFORCEMENT
EE EACH END
EF EACH FACE
E.J. EXP.JT. EXPANSION JOINT
EL. ELEV. ELEVATION
EMBED. EMBEDMENT
EQ. EQUAL
EX. EXIST. EXISTING
FD FLOOR DRAIN
FF FAR FACE
F.N.L. FINISHED FLOOR
F.M.C FULL MOMENT CONNECTION
F.T.G. FOOTING
f.c COMPRESSIVE STRENGTH OF CONC IN MPa
fy YIELD STRENGTH IN MPa
GALV. GALVANIZED STEEL
GB GRADE BEAM
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IBI INTEGRITY BARS INTERIOR
JG JOIST GIRDER
ld TENSION DEVELOPMENT LENGTH OF REBAR
lcc COMPRESSION DEVELOPMENT LENGTH OF REBAR
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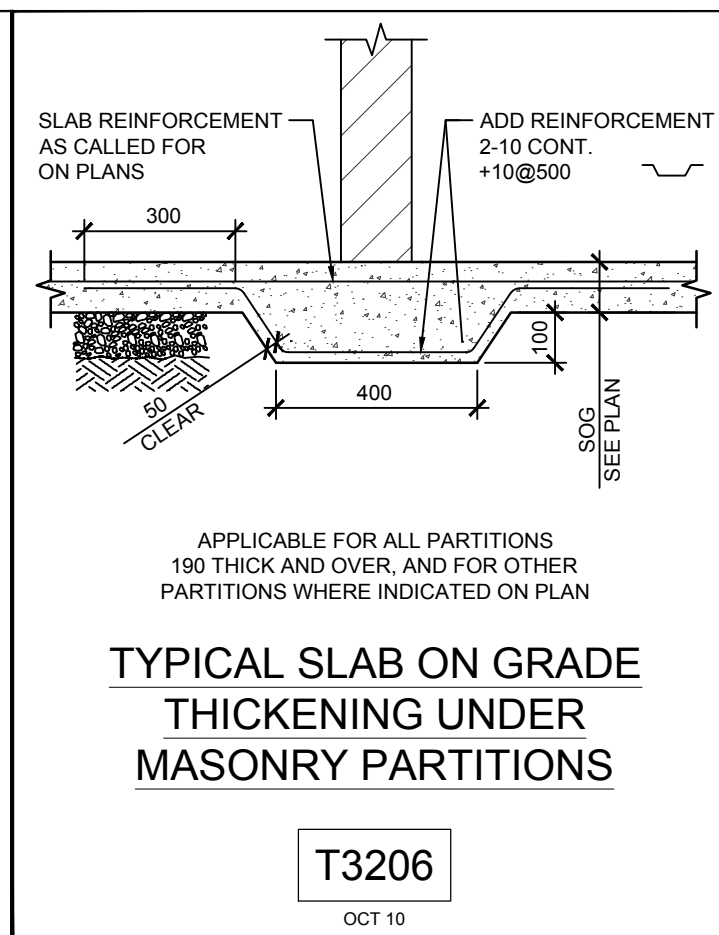
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revision	description	date

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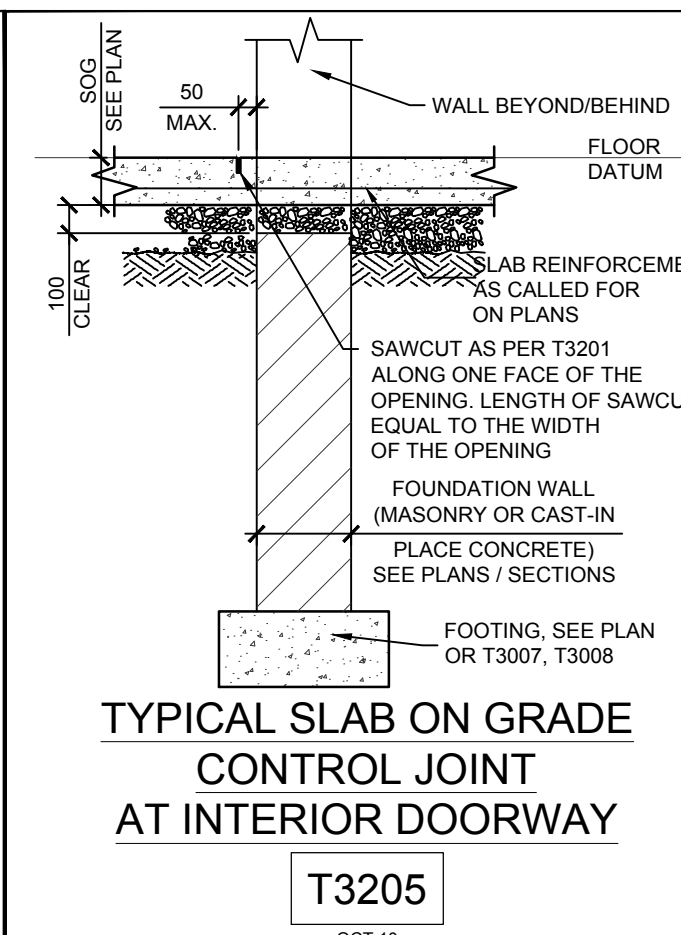
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**CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)**
KINGSTON, ONTARIO

drawing dessin
TYPICAL DETAILS

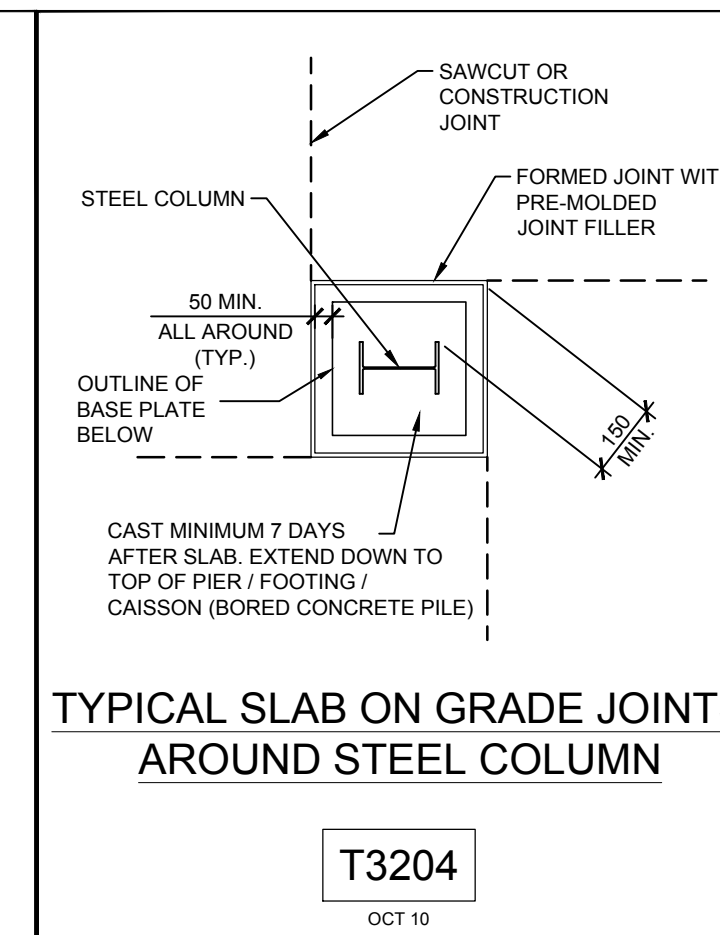
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reviewed	LJF	examiné
date	2015/01/30	(yyyy/mm/dd)
approved	LJF	approuvé
date	2015/01/30	(yyyy/mm/dd)
Tender	DUNCAN PARKER	Submission
Project Manager	Administrateur de projets	
project no.	no. du projet	
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drawing no.	no. du dessin	



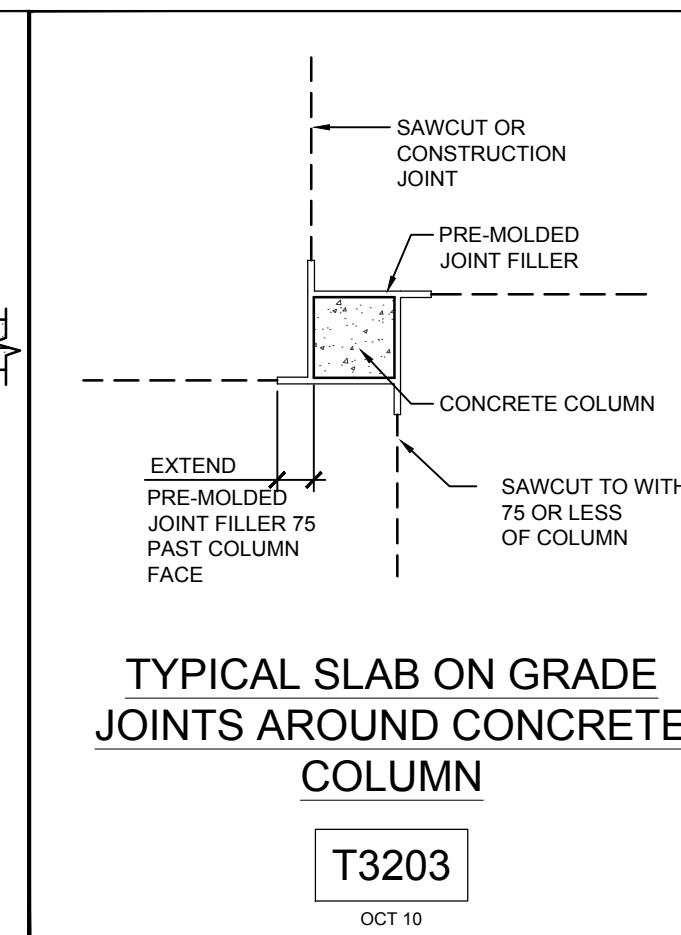
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TYPICAL SLAB ON GRADE THICKENING UNDER MASONRY PARTITIONS



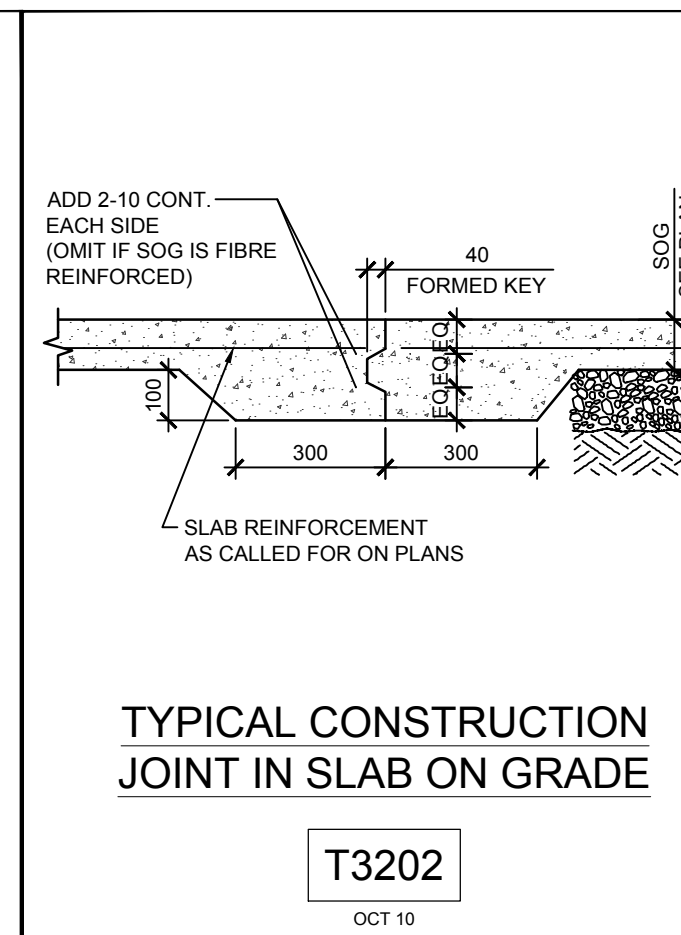
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TYPICAL SLAB ON GRADE CONTROL JOINT AT INTERIOR DOORWAY



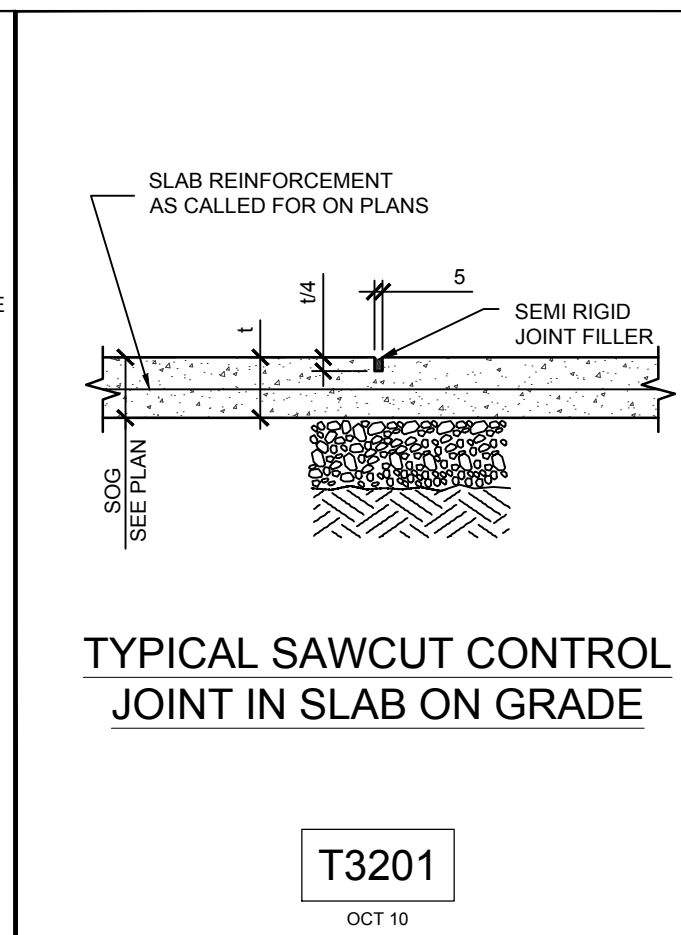
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TYPICAL SLAB ON GRADE JOINTS AROUND STEEL COLUMN



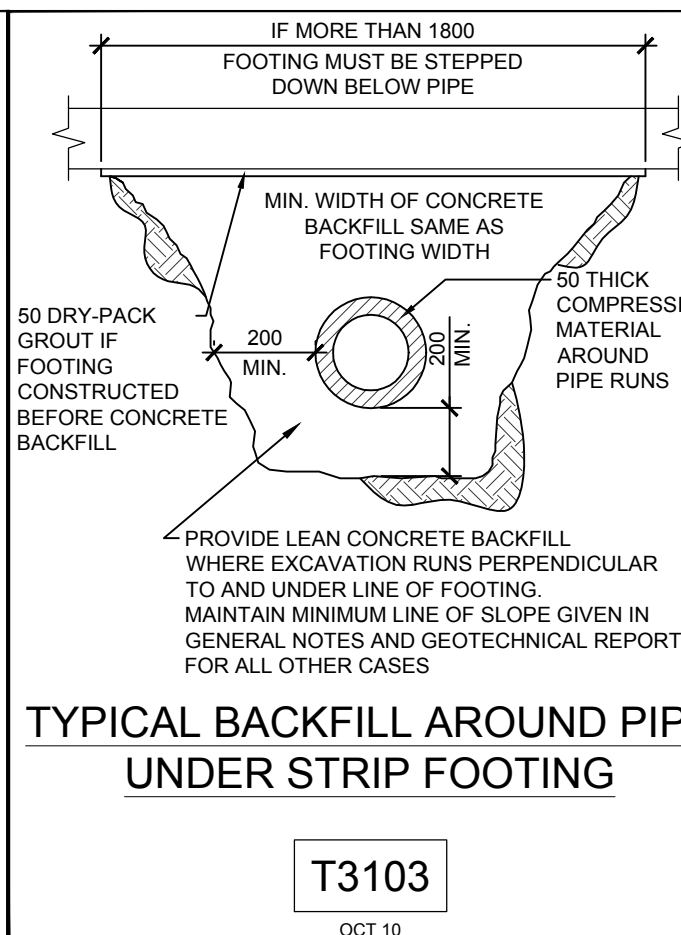
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TYPICAL SLAB ON GRADE JOINTS AROUND CONCRETE COLUMN



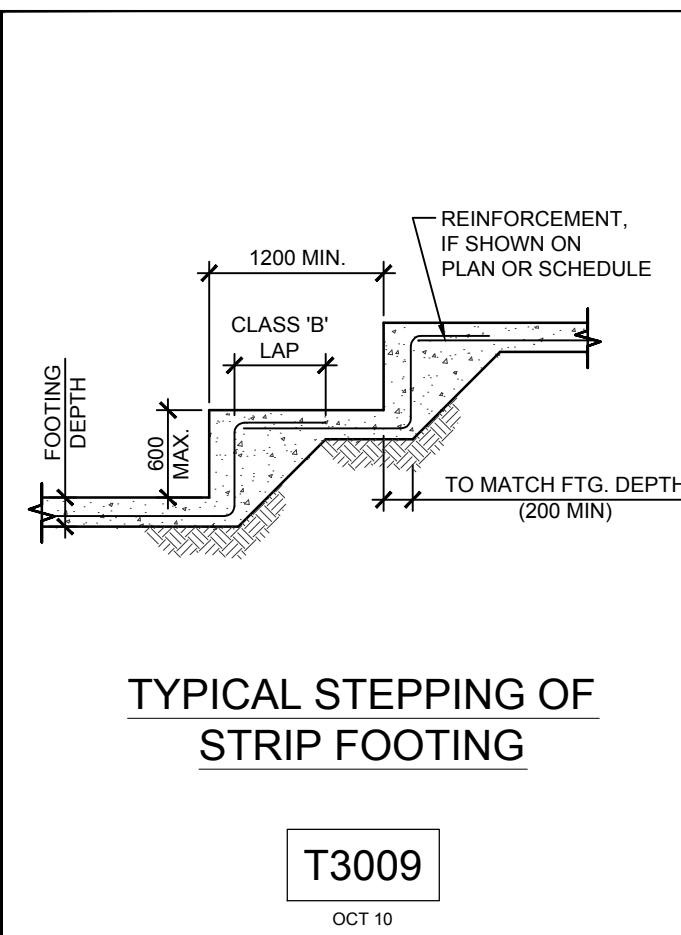
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TYPICAL CONSTRUCTION JOINT IN SLAB ON GRADE



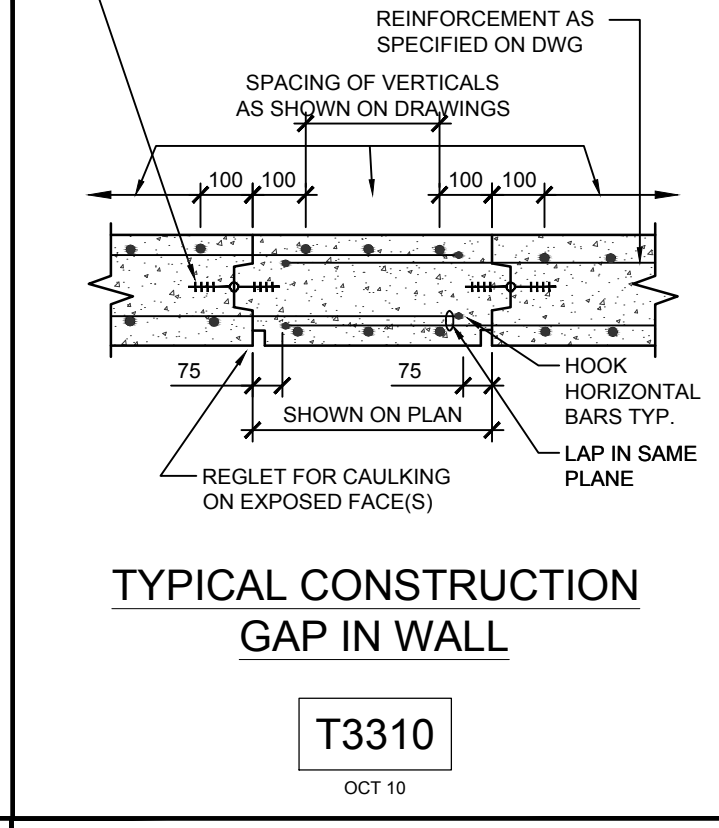
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TYPICAL SAWCUT CONTROL JOINT IN SLAB ON GRADE



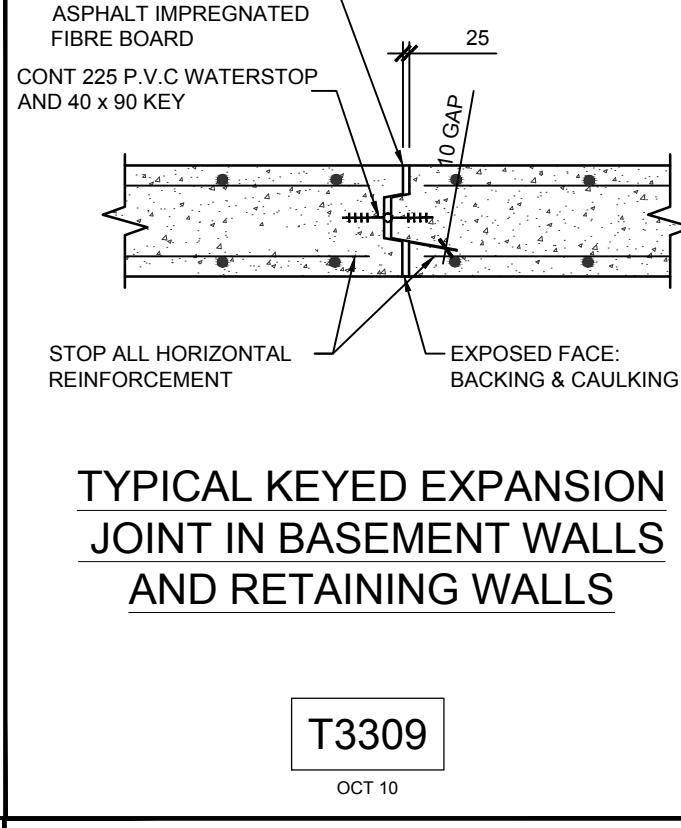
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TYPICAL BACKFILL AROUND PIPE UNDER STRIP FOOTING



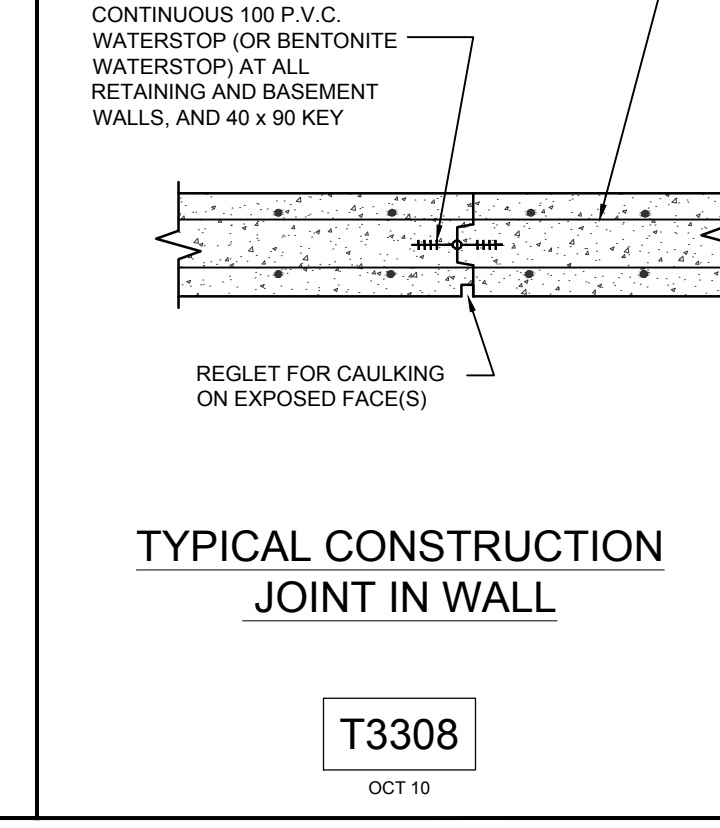
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TYPICAL STEPPING OF STRIP FOOTING



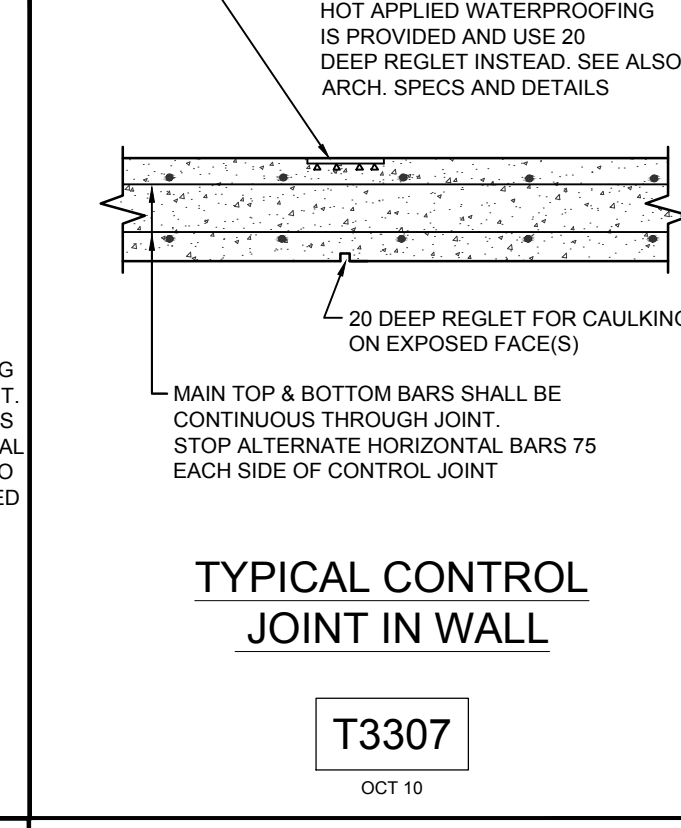
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TYPICAL CONSTRUCTION GAP IN WALL



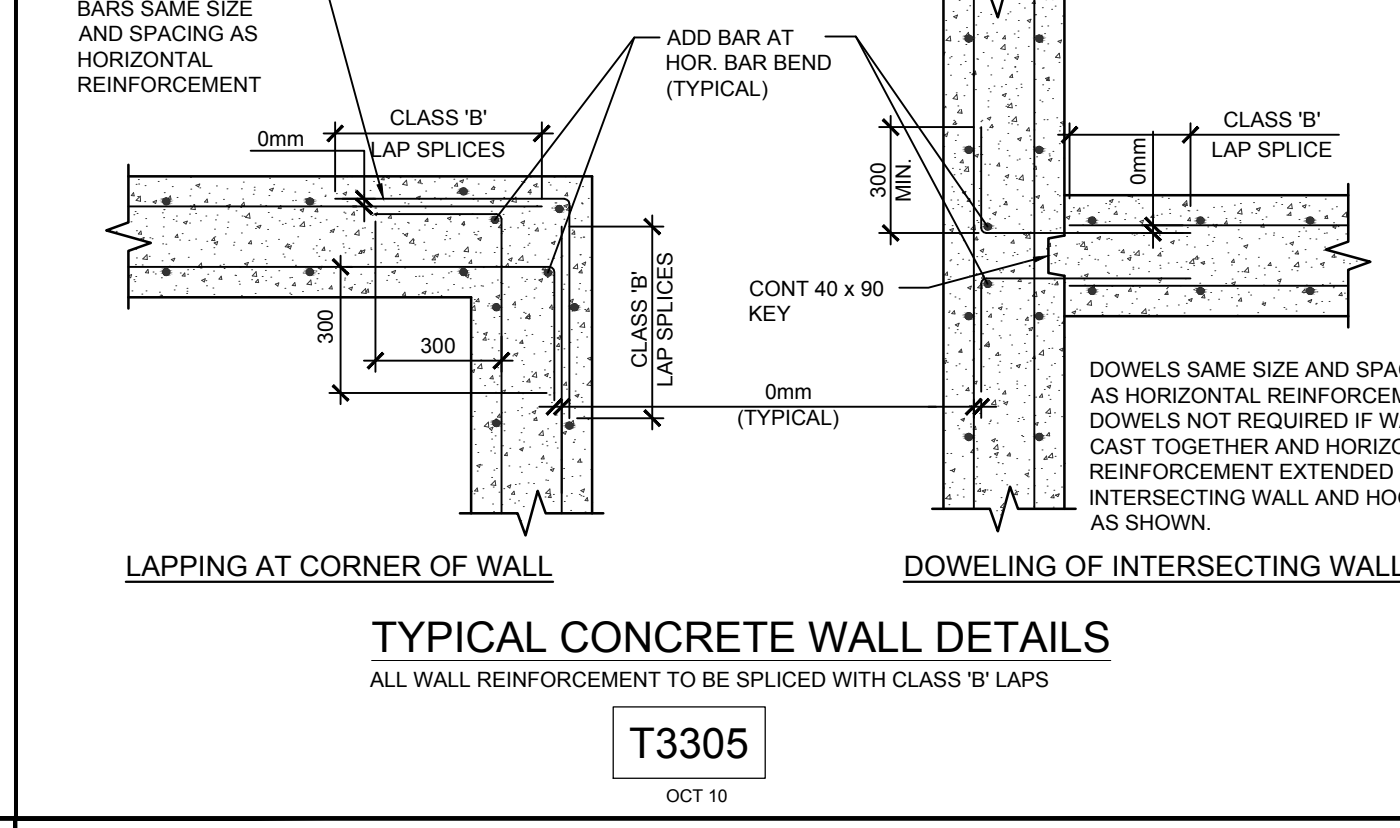
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TYPICAL KEYED EXPANSION JOINT IN BASEMENT WALLS AND RETAINING WALLS



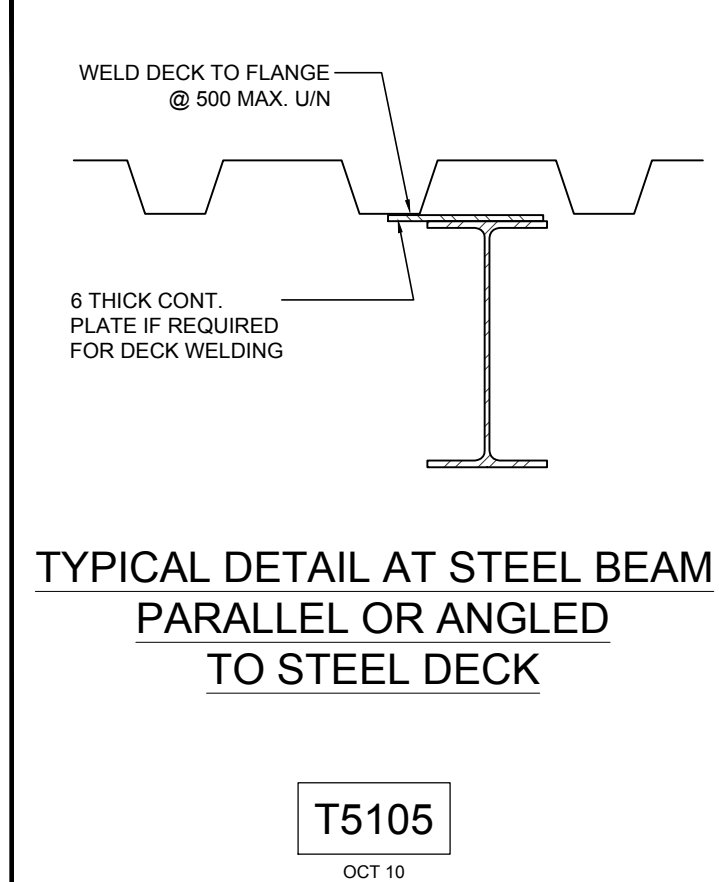
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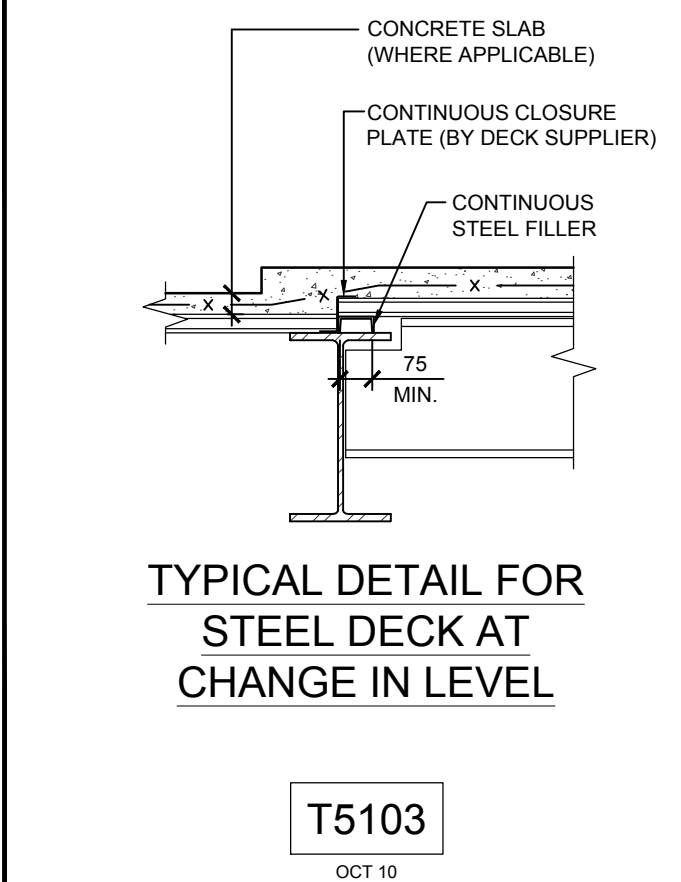
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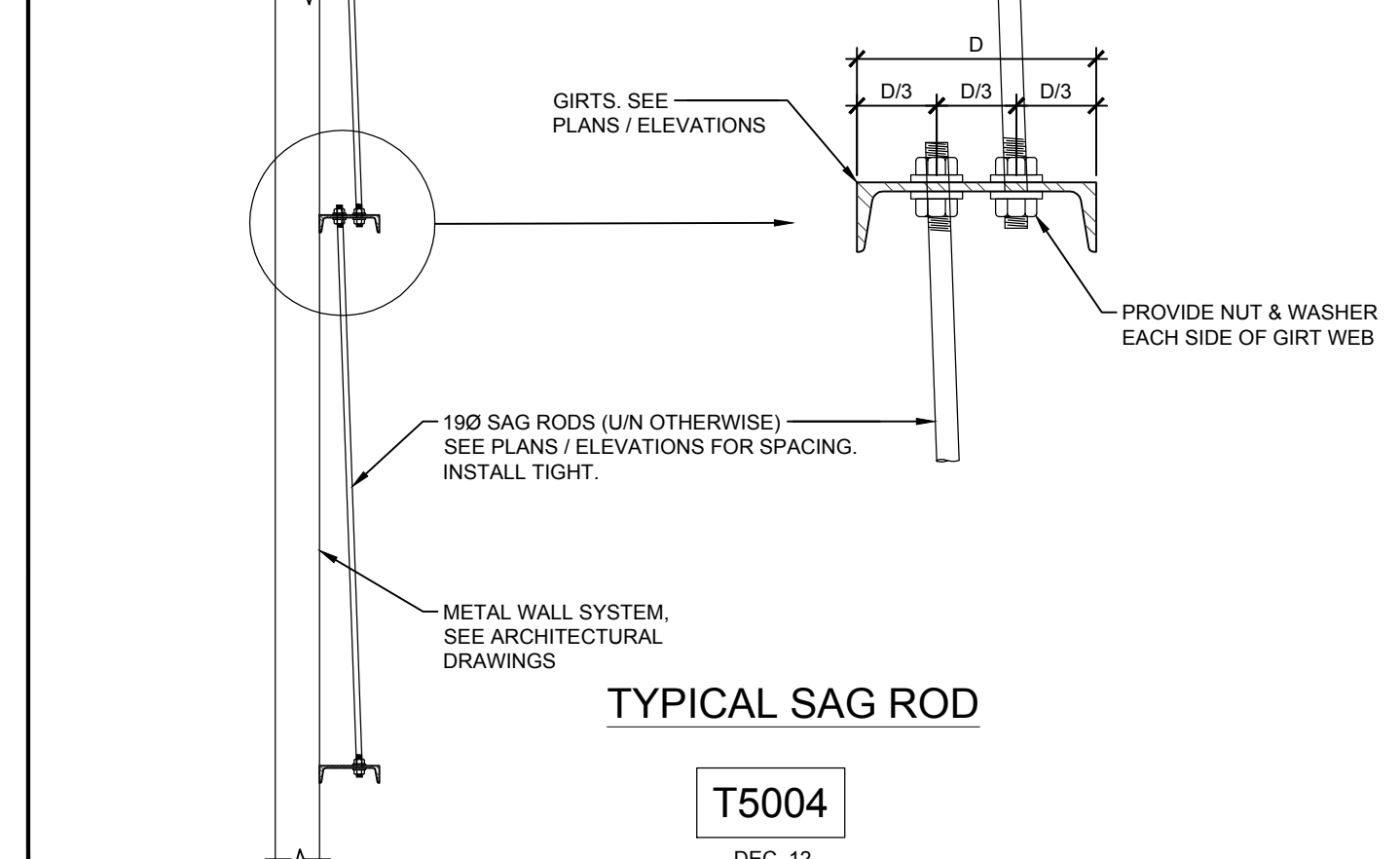
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TYPICAL CONCRETE WALL DETAILS



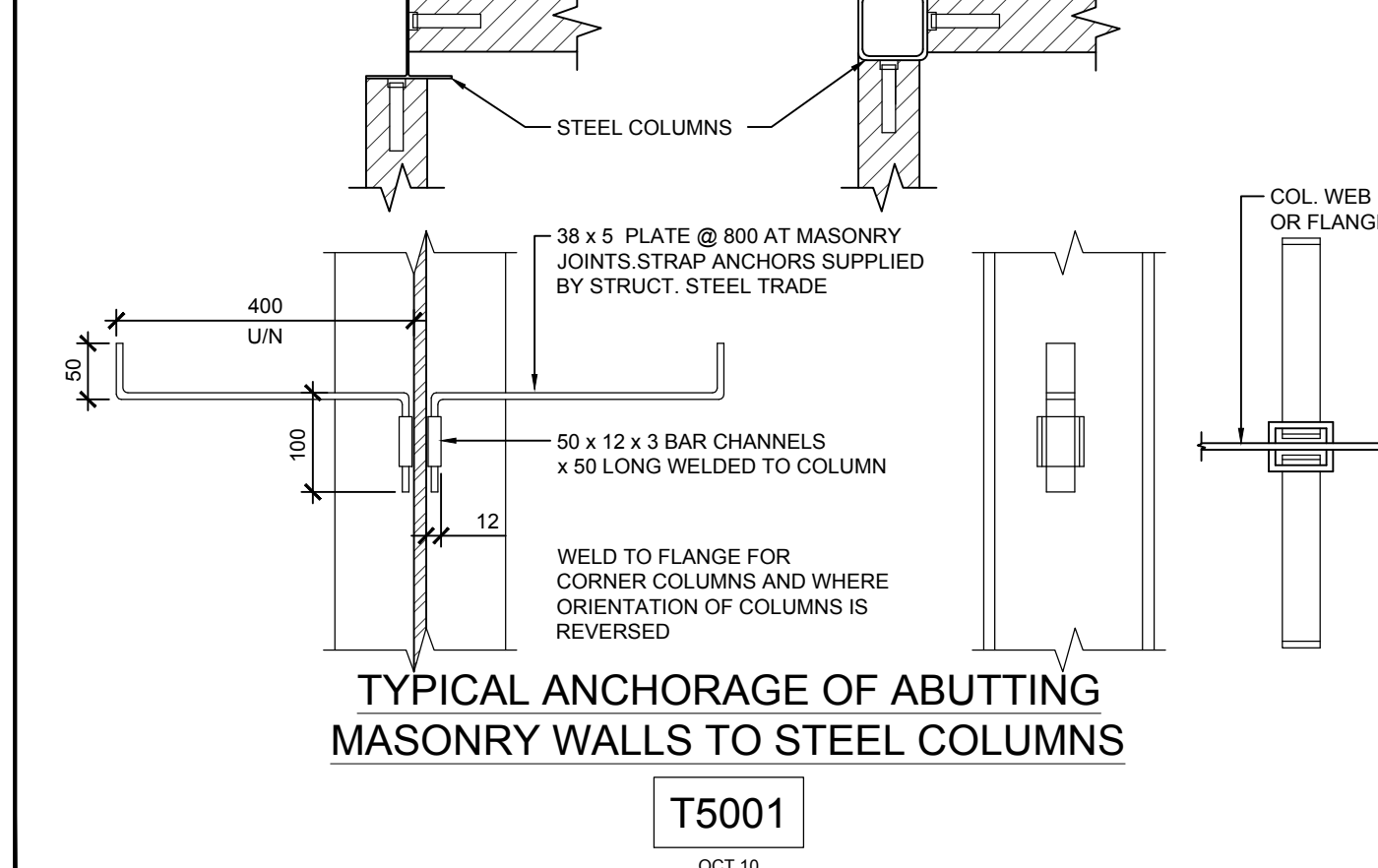
T5105
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TYPICAL DETAIL AT STEEL BEAM PARALLEL OR ANGLED TO STEEL DECK



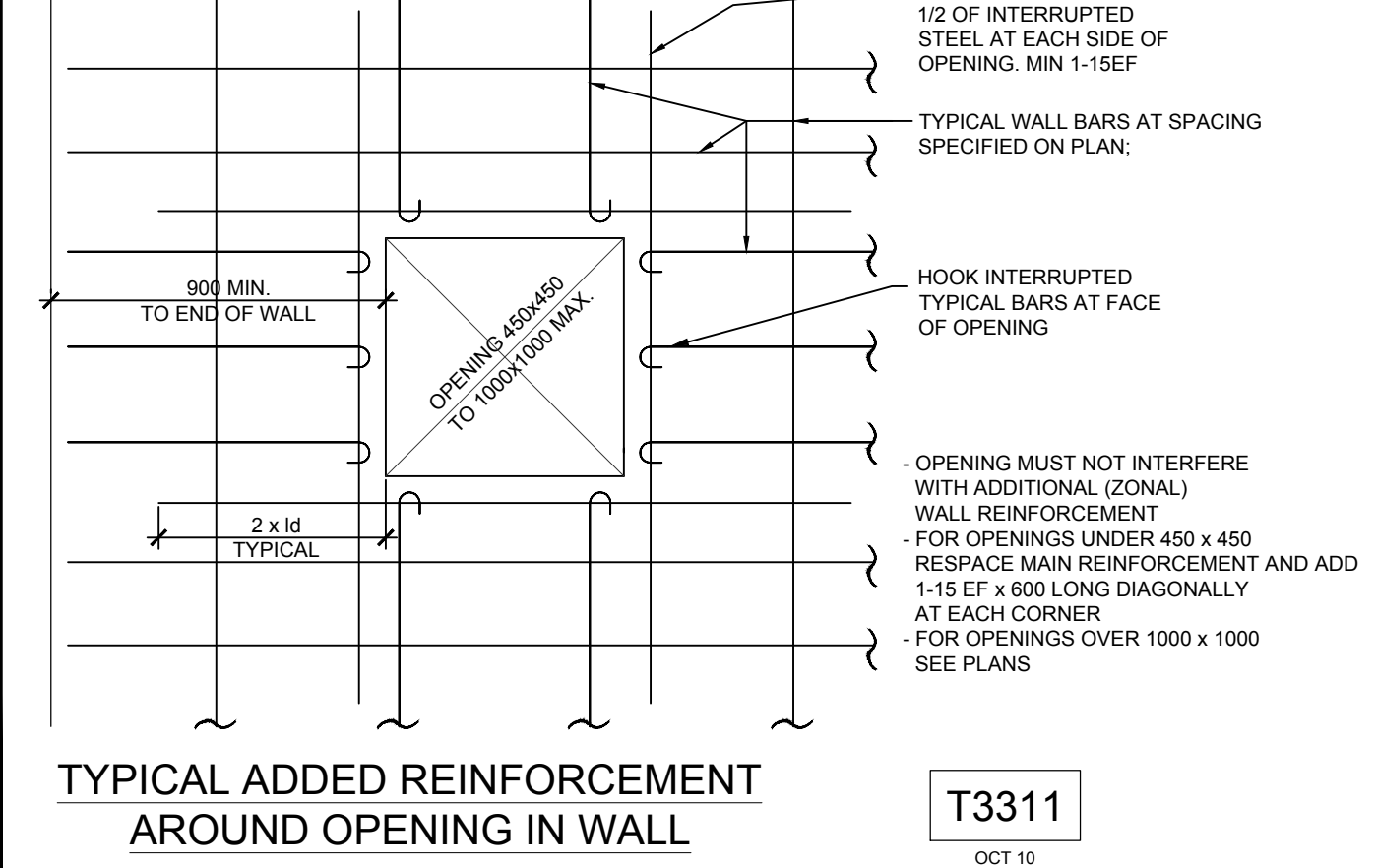
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TYPICAL DETAIL FOR STEEL DECK AT CHANGE IN LEVEL



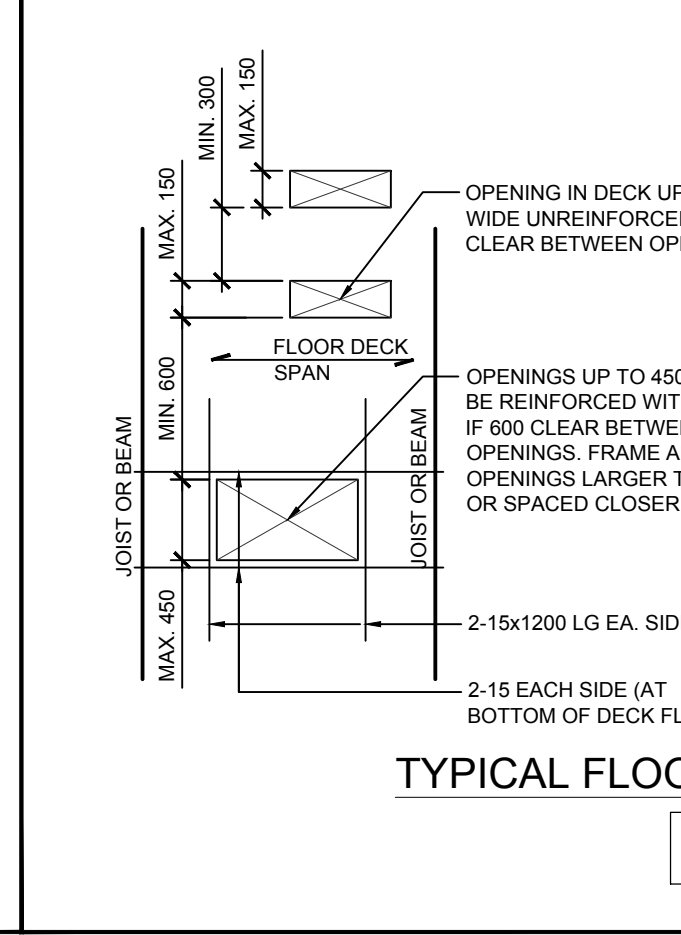
T5004
DEC. 12
TYPICAL SAG ROD



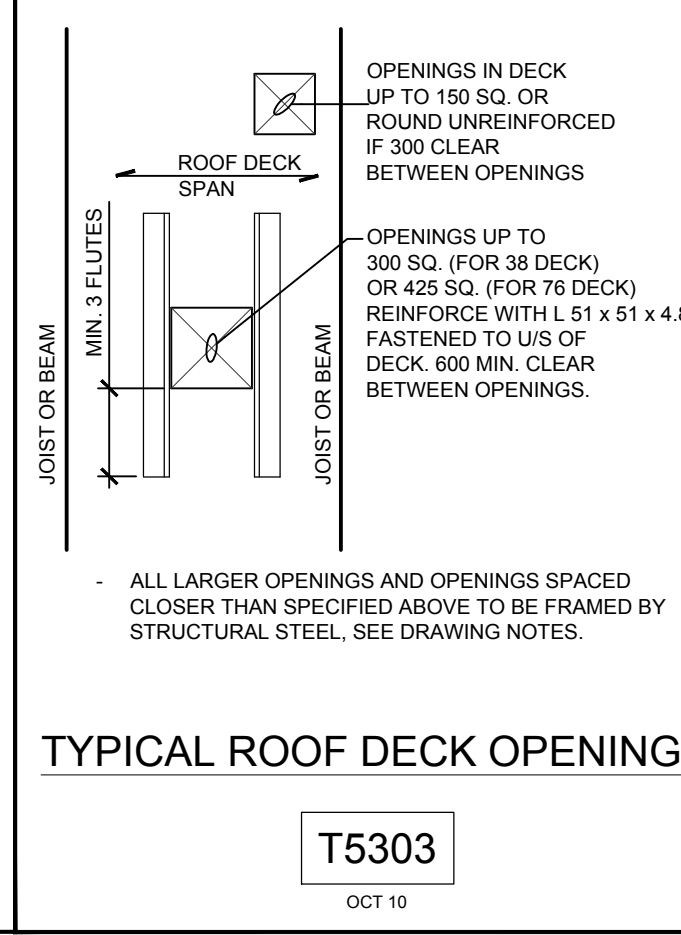
T5001
OCT 10
TYPICAL ANCHORAGE OF ABUTTING MASONRY WALLS TO STEEL COLUMNS



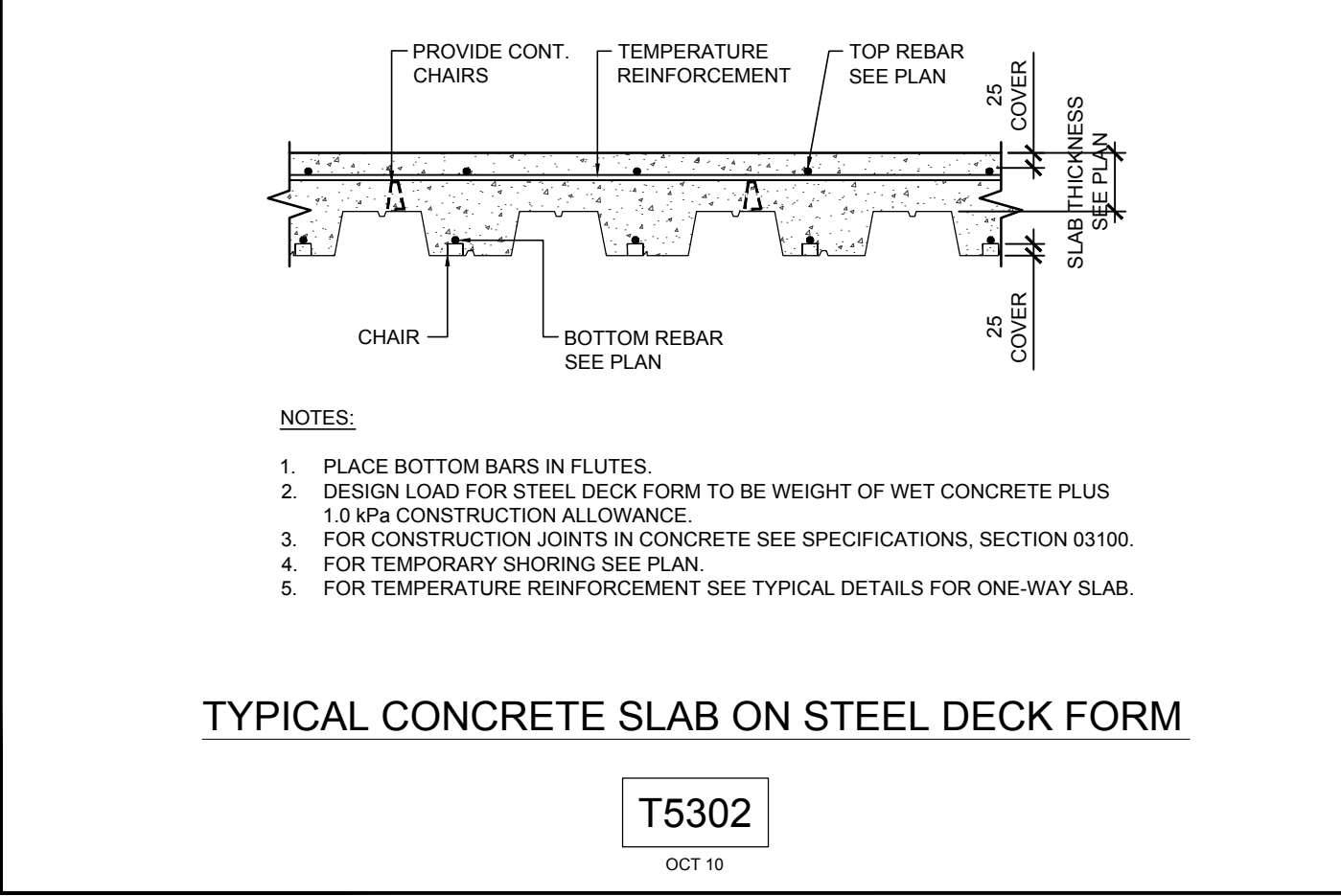
T3311
OCT 10
TYPICAL ADDED REINFORCEMENT AROUND OPENING IN WALL



T5304
OCT 10
TYPICAL FLOOR DECK OPENINGS MODIFIED

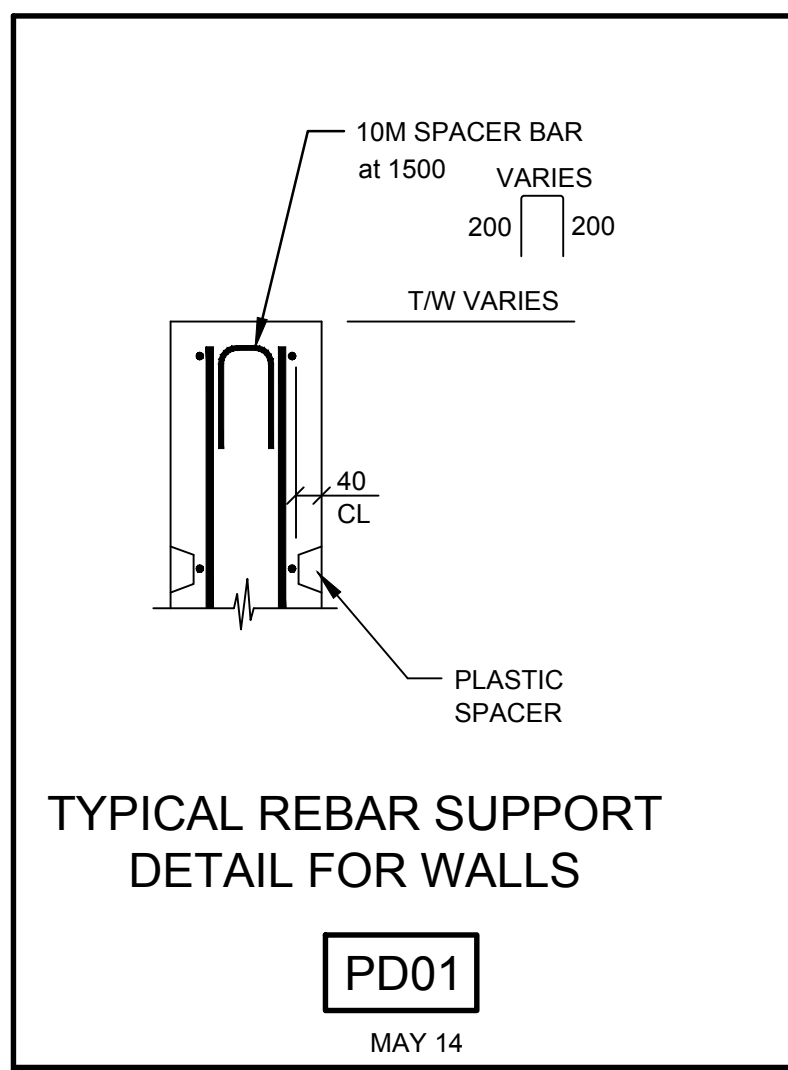


T5303
OCT 10
TYPICAL ROOF DECK OPENINGS



T5302
OCT 10
TYPICAL CONCRETE SLAB ON STEEL DECK FORM

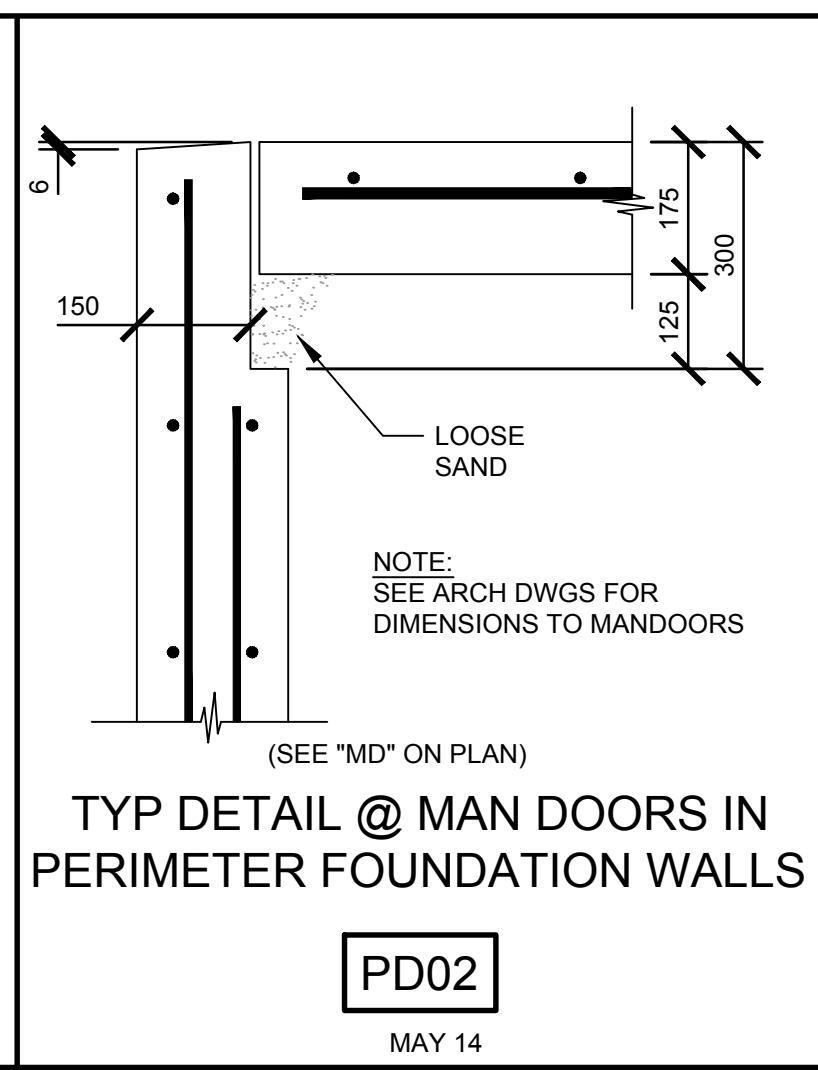
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TYPICAL REBAR SUPPORT
DETAIL FOR WALLS

PD01

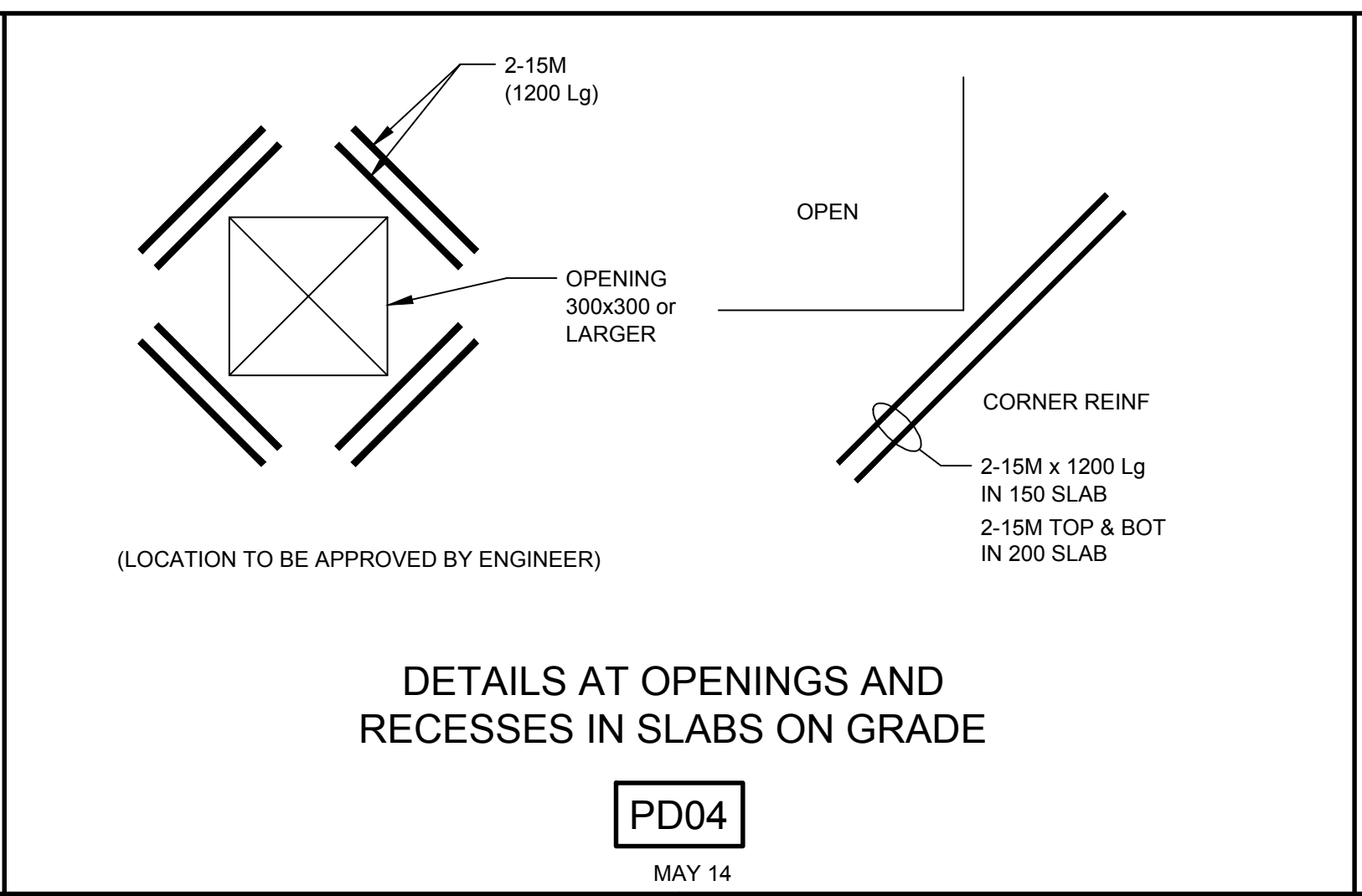
MAY 14



TYP DETAIL @ MAN DOORS IN
PERIMETER FOUNDATION WALLS

PD02

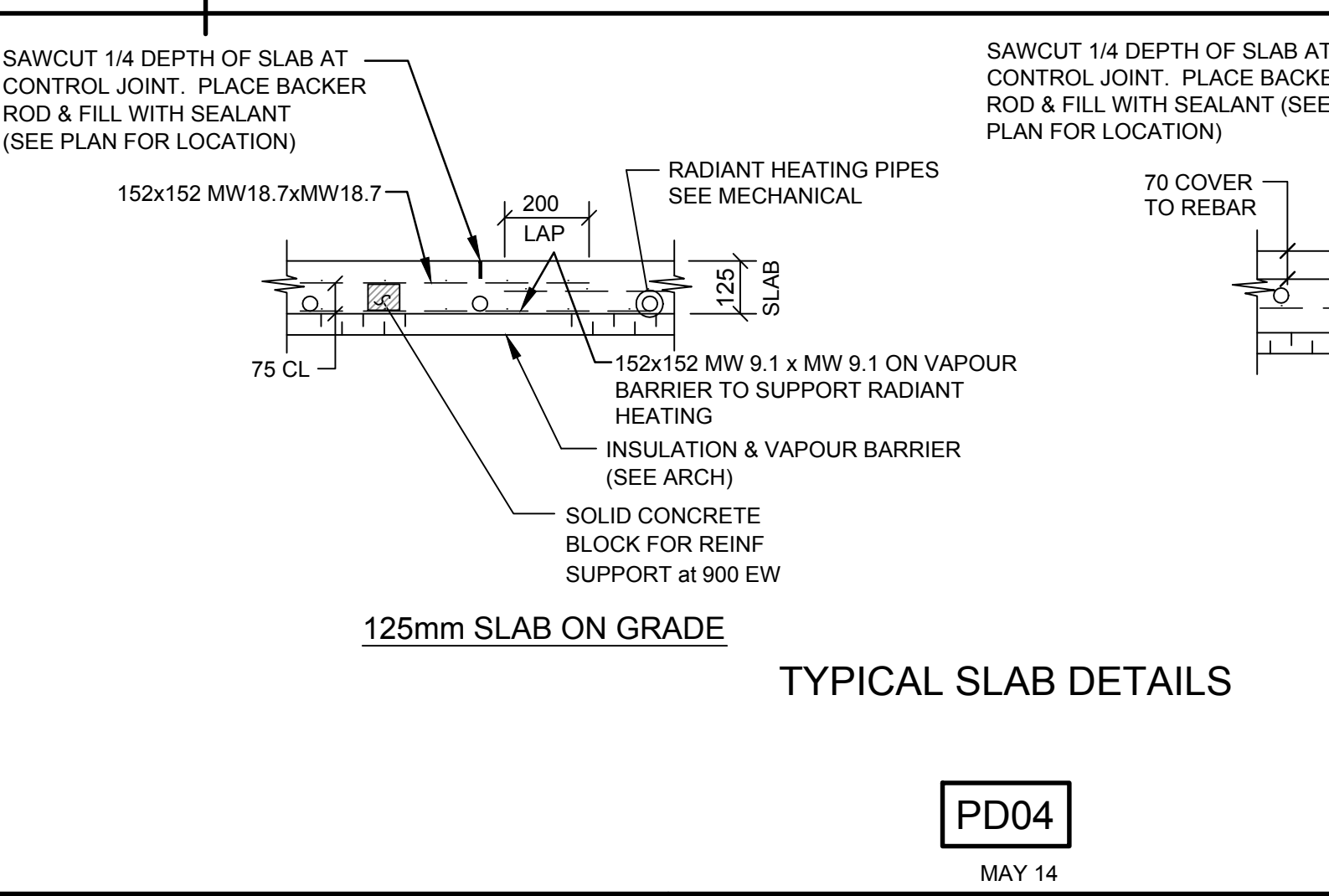
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DETAILS AT OPENINGS AND
RECESSES IN SLABS ON GRADE

PD04

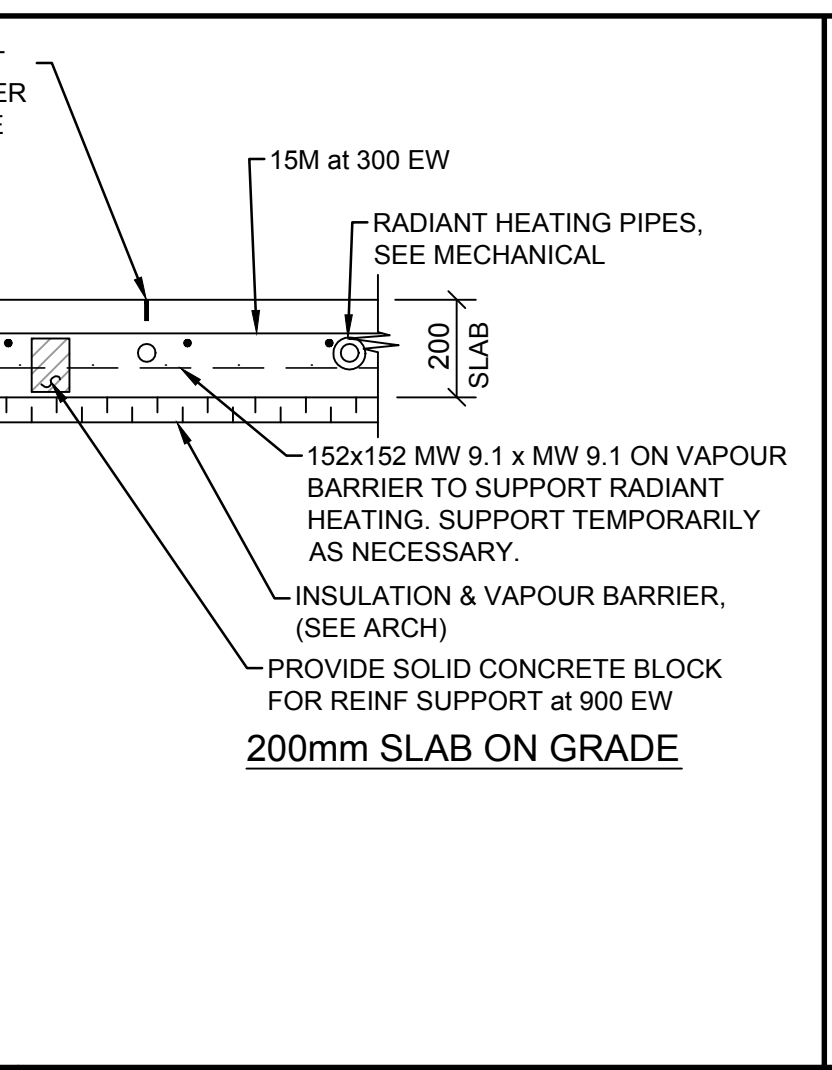
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TYPICAL SLAB DETAILS

PD04

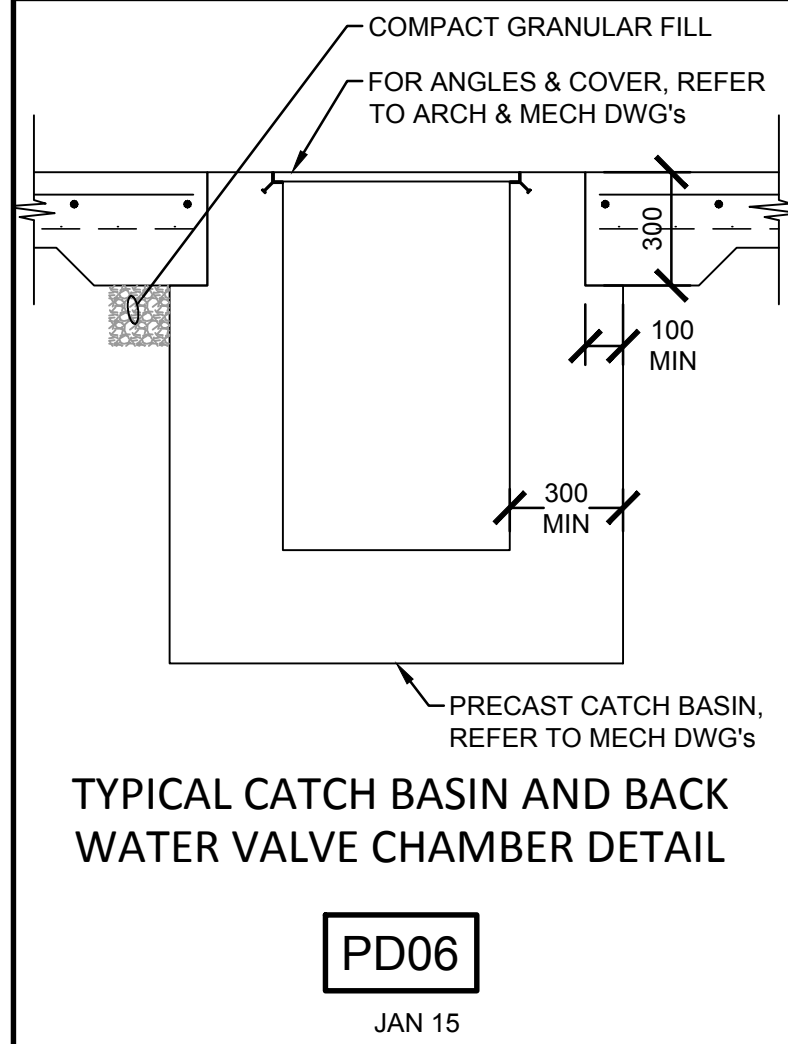
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TYPICAL HOUSEKEEPING PAD

PD05

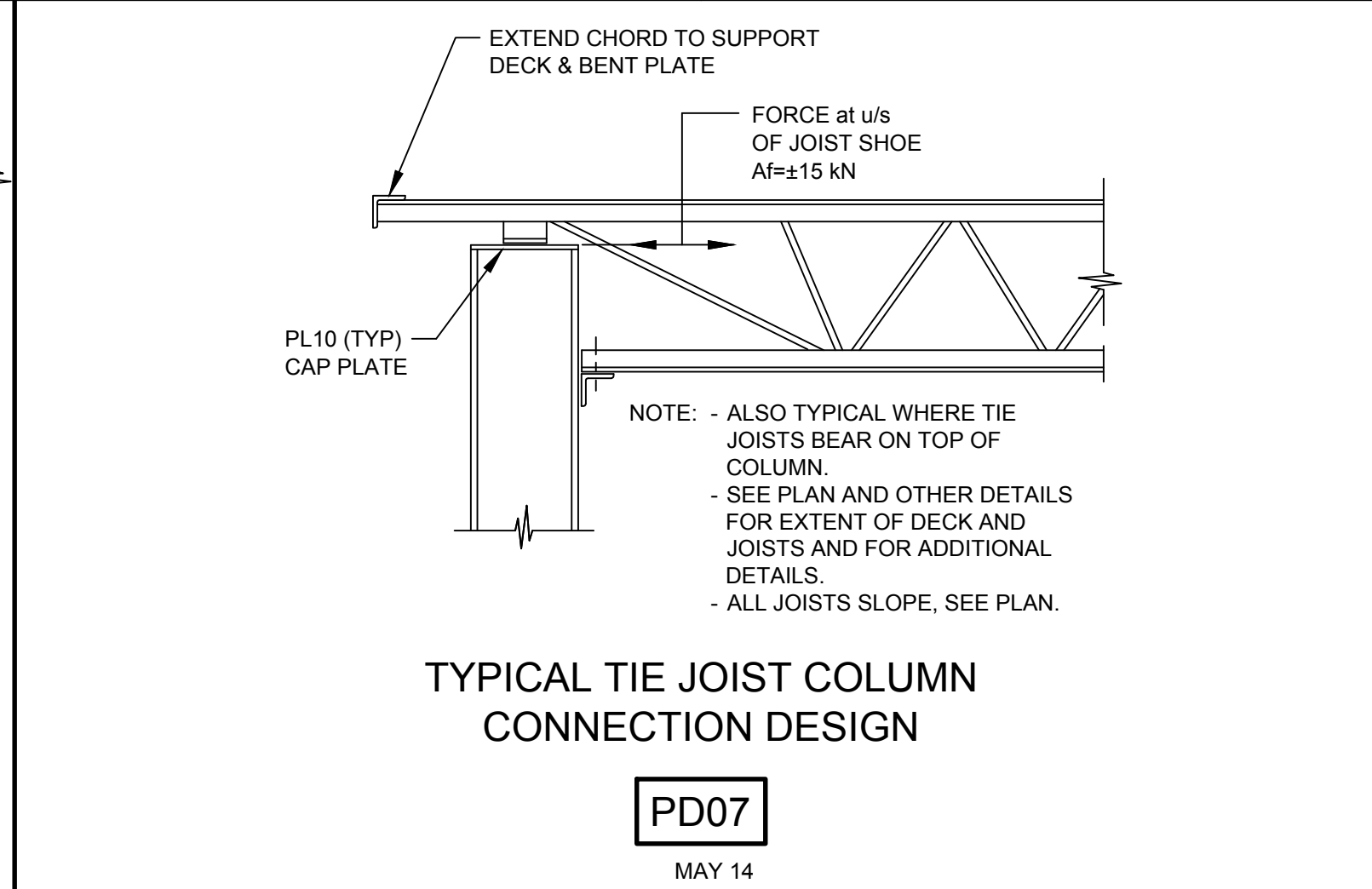
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TYPICAL CATCH BASIN AND BACK
WATER VALVE CHAMBER DETAIL

PD06

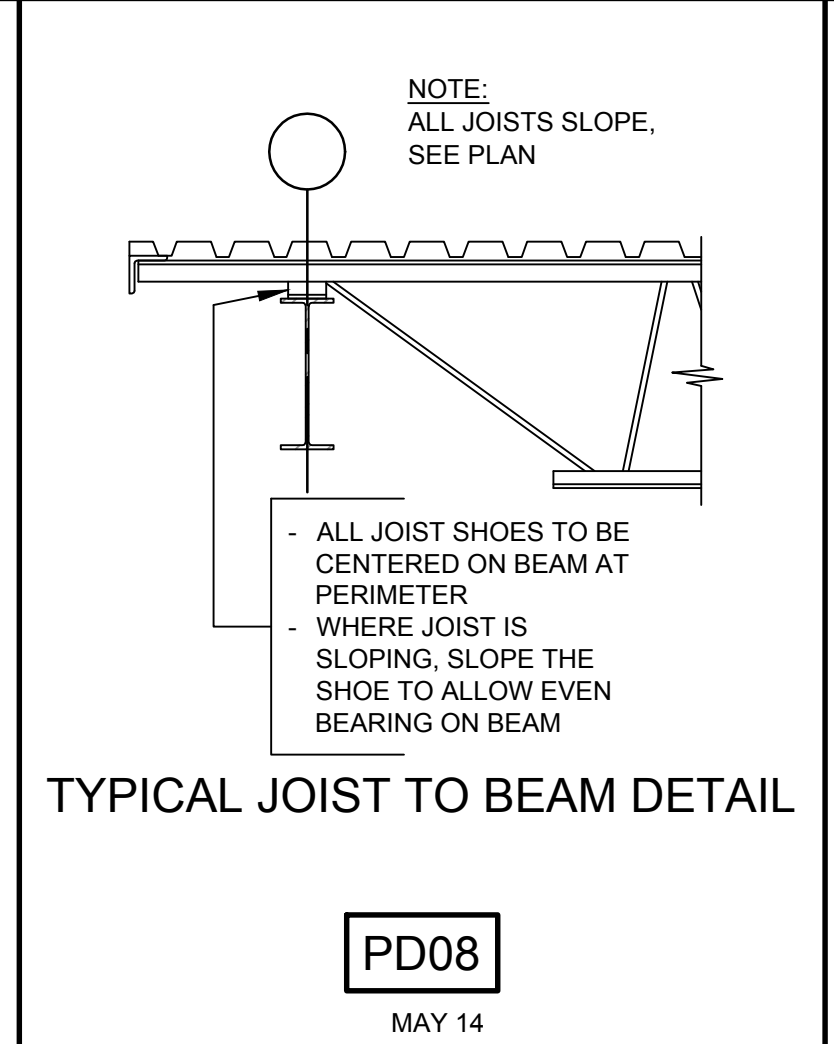
JAN 15



TYPICAL TIE JOIST COLUMN
CONNECTION DESIGN

PD07

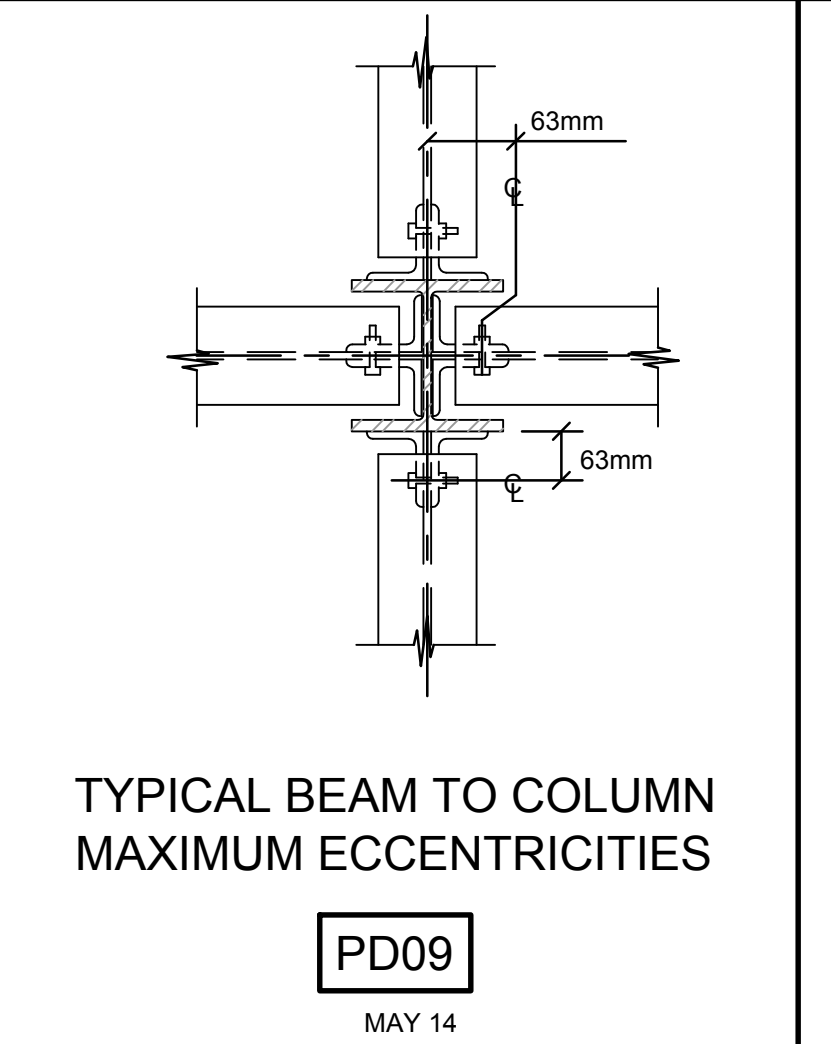
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TYPICAL JOIST TO BEAM DETAIL

PD08

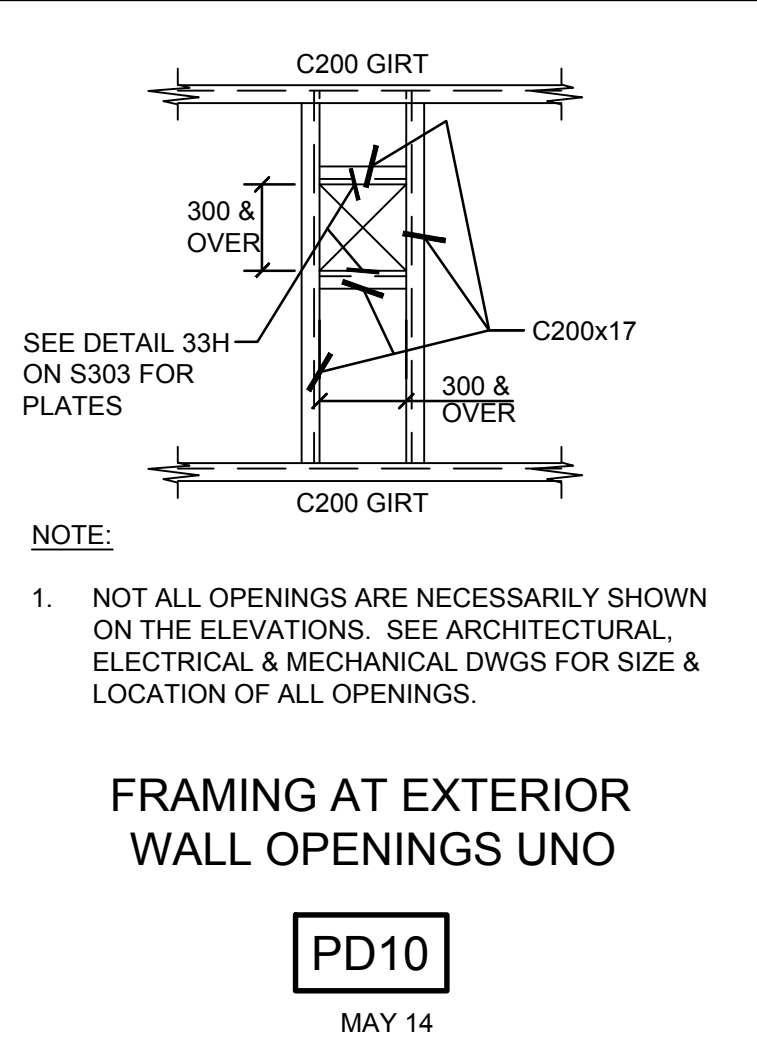
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TYPICAL BEAM TO COLUMN
MAXIMUM ECCENTRICITIES

PD09

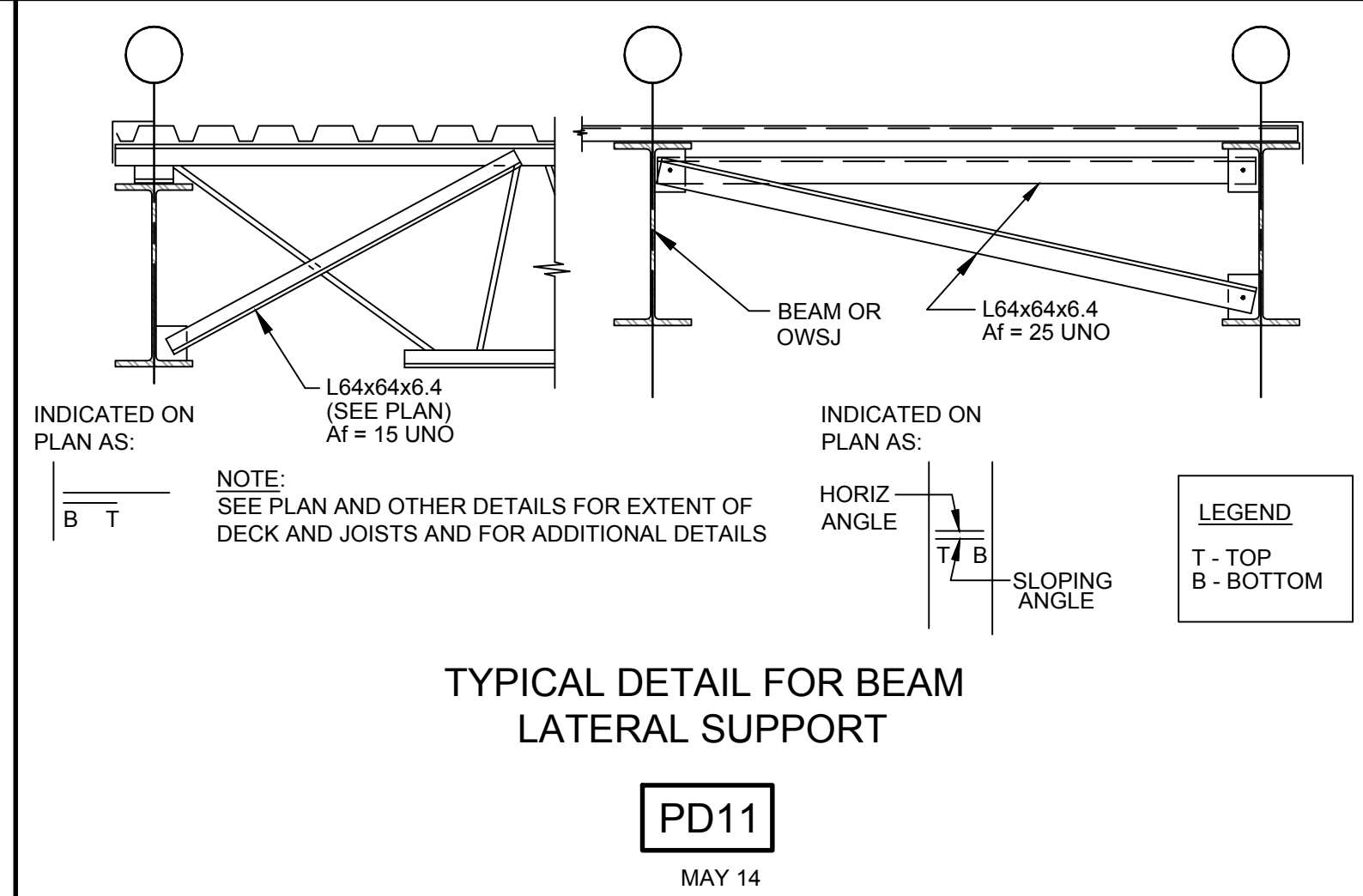
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FRAMING AT EXTERIOR
WALL OPENINGS UNO

PD10

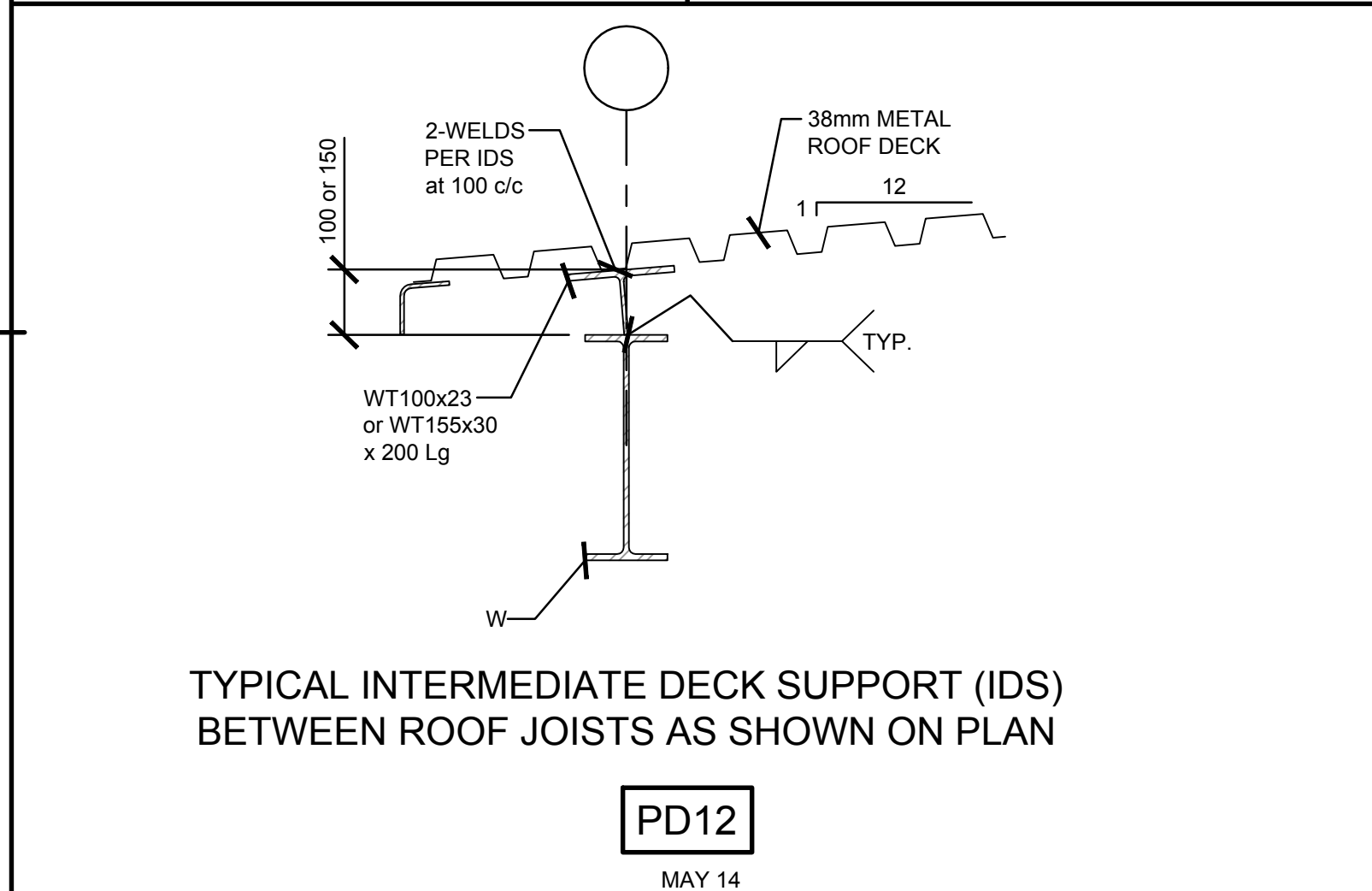
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TYPICAL DETAIL FOR BEAM
LATERAL SUPPORT

PD11

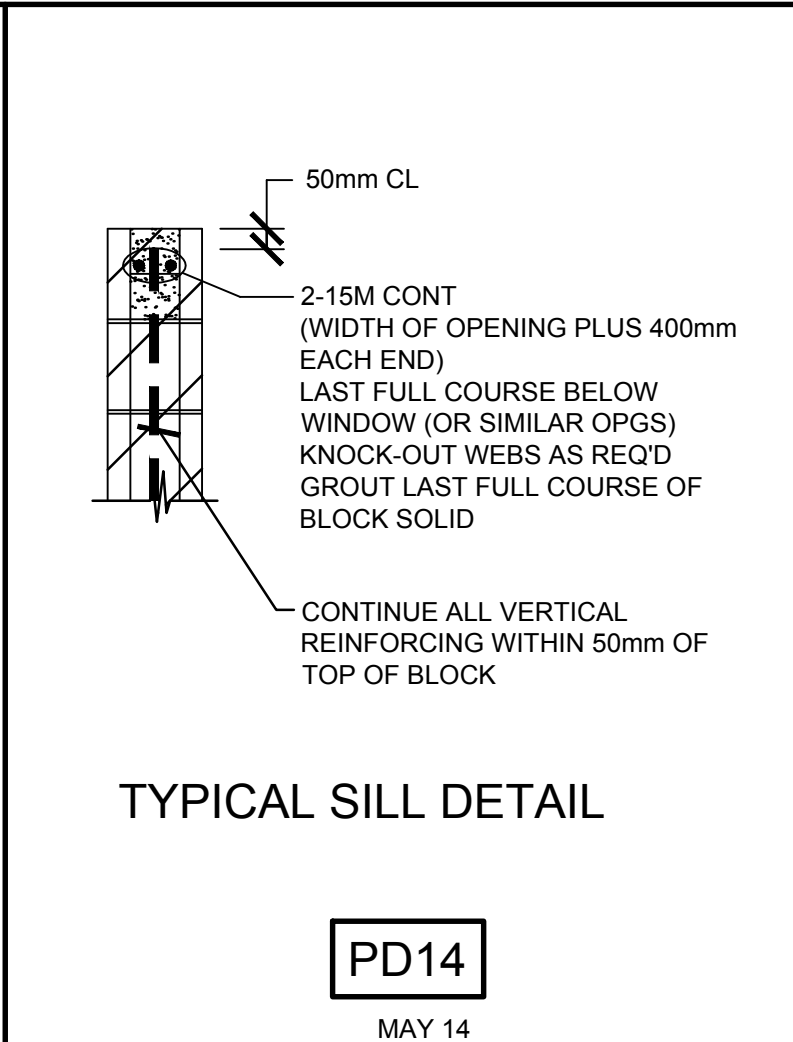
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TYPICAL INTERMEDIATE DECK SUPPORT (IDS)
BETWEEN ROOF JOISTS AS SHOWN ON PLAN

PD12

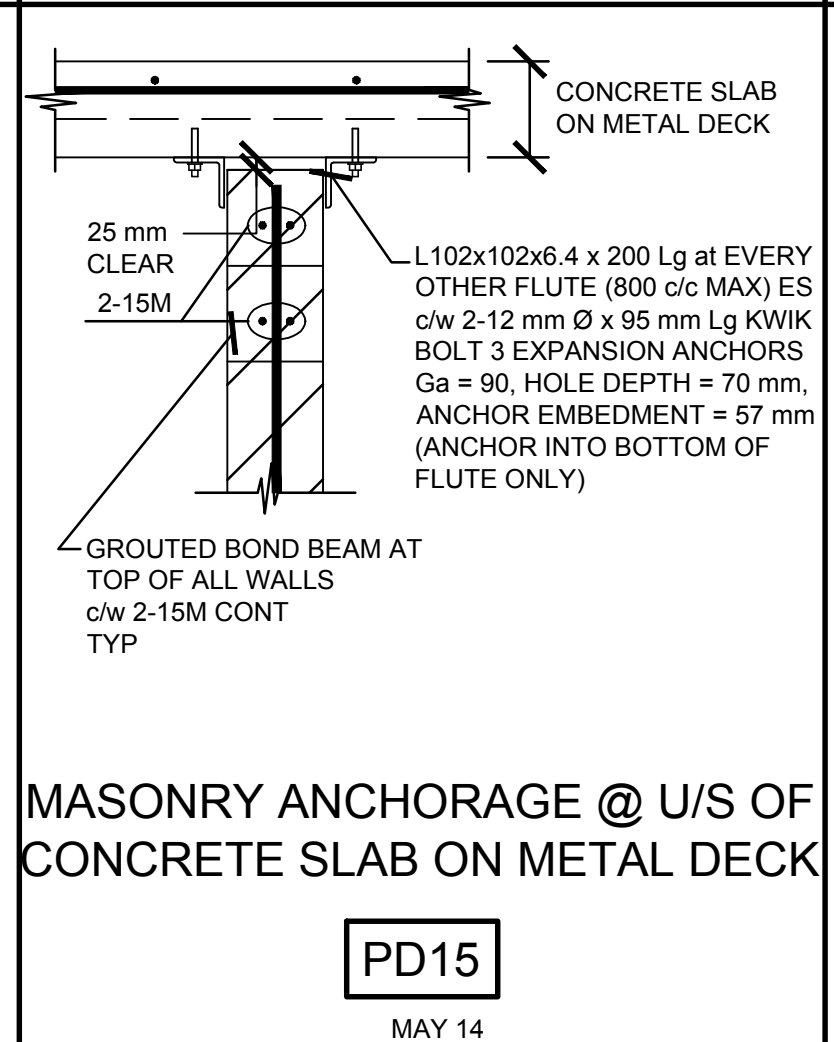
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TYPICAL SILL DETAIL

PD14

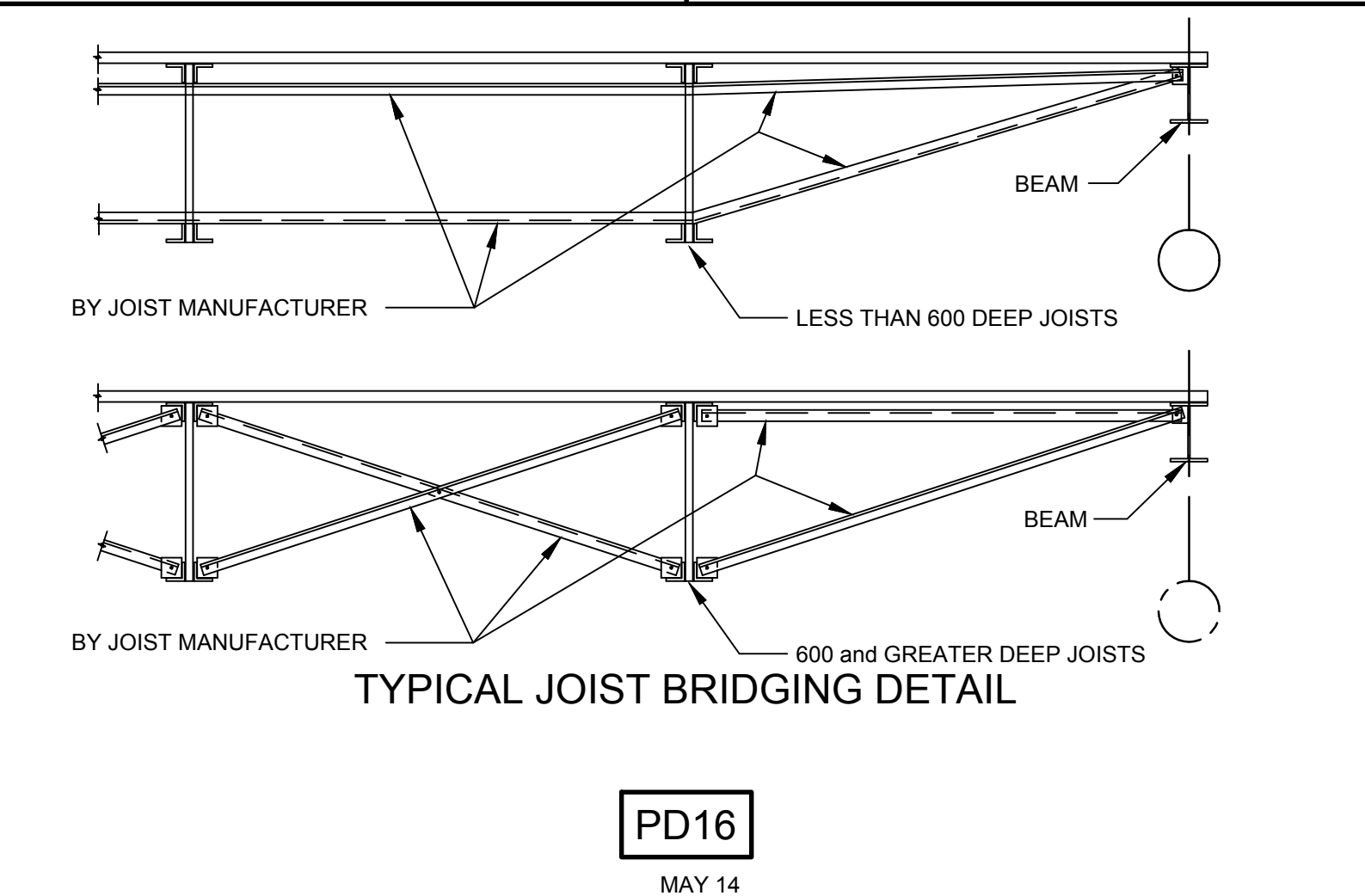
MAY 14



MASONRY ANCHORAGE @ U/S OF
CONCRETE SLAB ON METAL DECK

PD15

MAY 14



TYPICAL JOIST BRIDGING DETAIL

PD16

MAY 14

WALL DESCRIPTION (mm)	HORIZONTAL JOINT REINFORCING		VERTICAL REINFORCING	
	SPACING	TYPE	SPACING	BAR
190 BLOCKWALL PARTITION	400 c/c	2-4.76 mm SIDE RODS WITH 3.66 mm CONTINUOUS DIAGONAL CROSS RODS (TRUSS PATTERN)	1200	15M

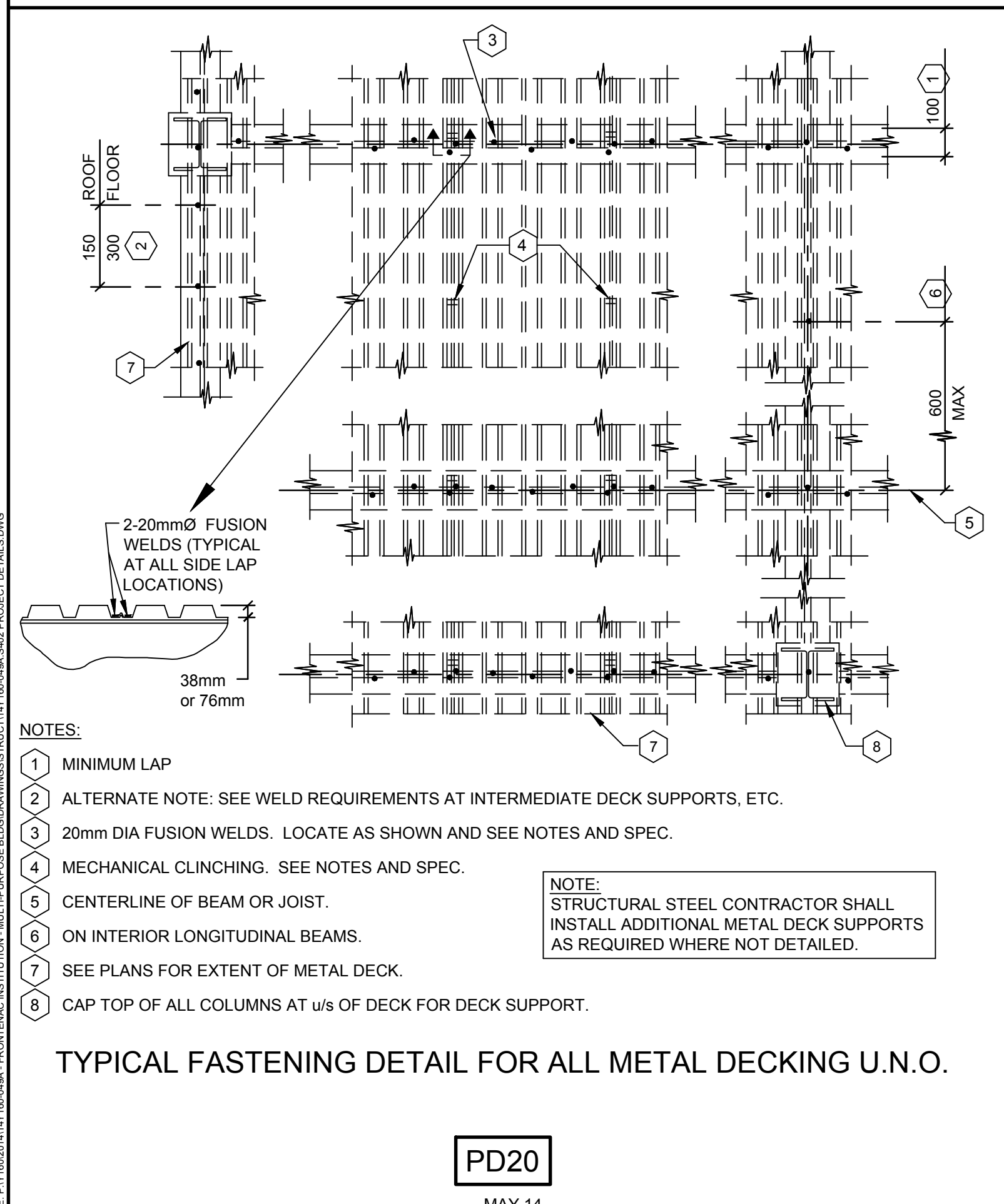
1. SEE ARCH FOR LOCATION OF ALL MASONRY WALLS.

NOTE:
1. VERTICAL REINFORCING IS MINIMUM.
2. PROVIDE VERTICAL REINFORCING AT ENDS OF WALLS AND CORNERS.
3. ADDITIONAL VERTICAL REINFORCING IS REQ'D AT EACH SIDE OF OPENINGS, ETC.
4. DOWELS FOR MASONRY ARE TO MATCH ALL VERTICAL REINFORCING PER THIS SCHEDULE.

MASONRY WALL REINFORCING SCHEDULE

PD17

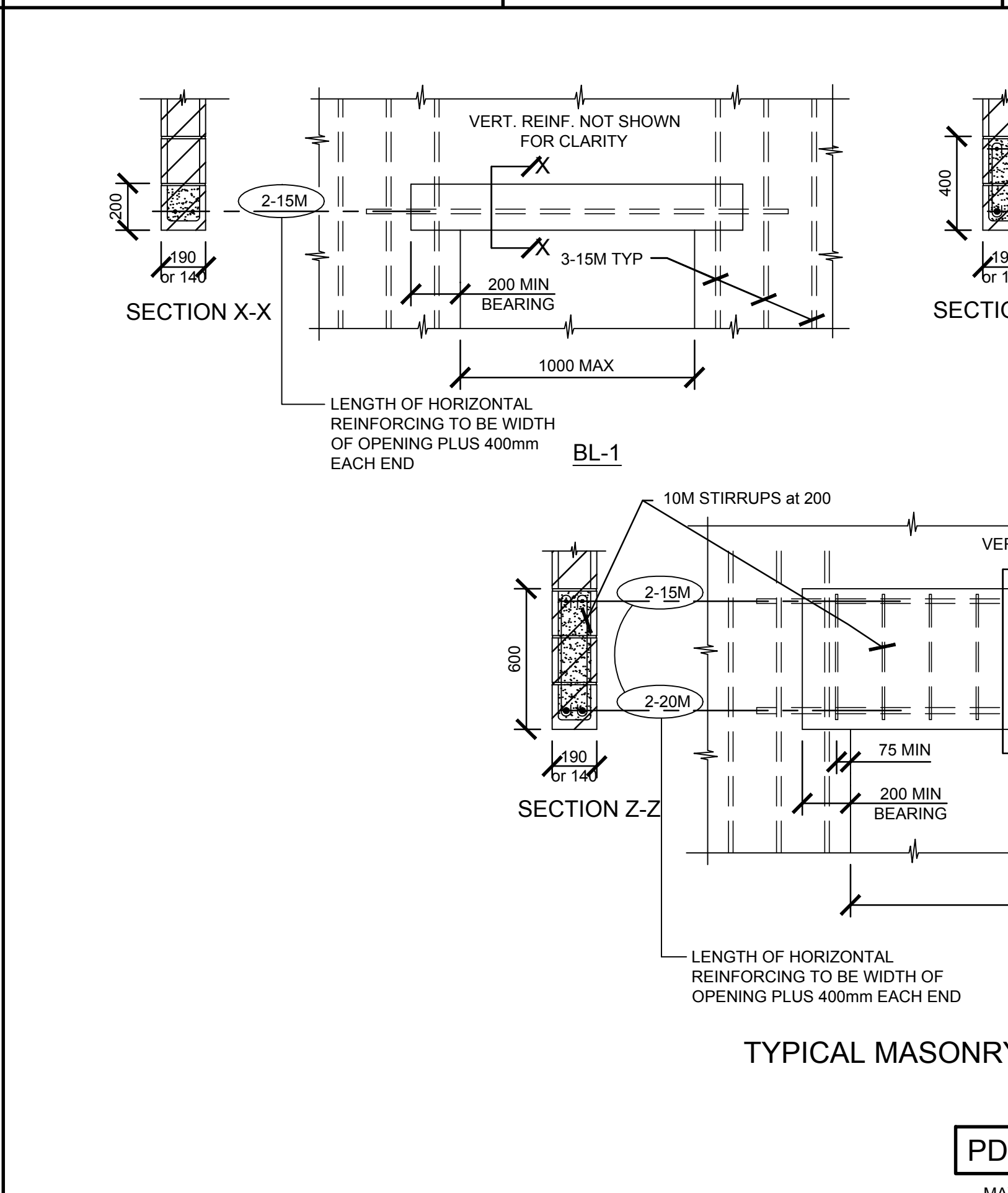
MAY 14



TYPICAL FASTENING DETAIL FOR ALL METAL DECKING U.N.O.

PD20

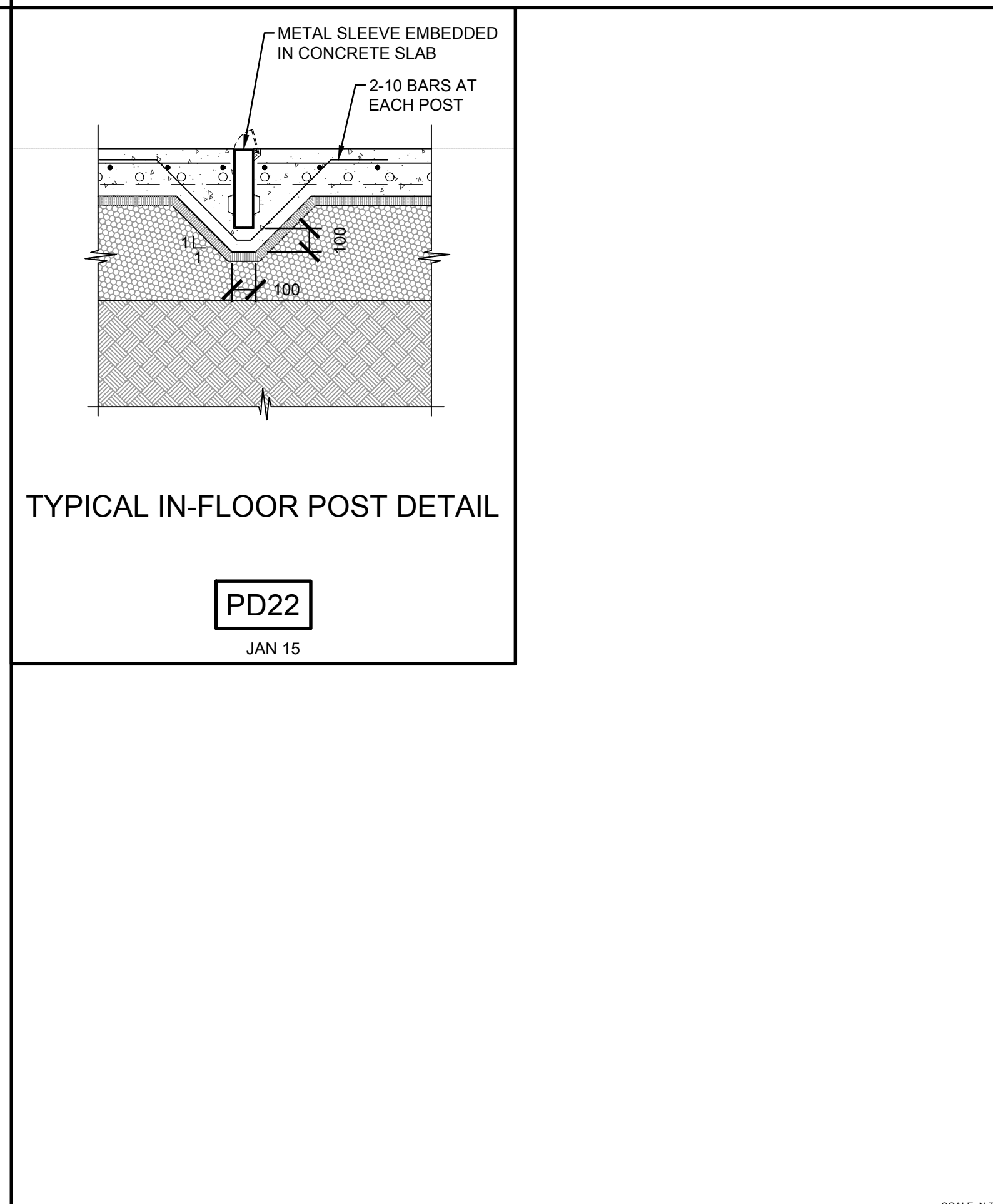
MAY 14



TYPICAL MASONRY LINTEL DETAILS

PD21

MAY 14



TYPICAL IN-FLOOR POST DETAIL

PD22

JAN 15

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

Real Property Operations Branch
Real Property Operations Solutions
Direction générale des opérations immobilières
Solutions - Opérations immobilières

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key plan plan-c6

stamp scbau

14Y160-049A

01	ISSUED FOR TENDER	15/03/26
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revision	description	date
A	A detail no. du detail	
B	B location drawing no. sur dessin no.	
C	C drawing no. dessin no.	

project project

CSC MULTI-PURPOSE BUILDING
CBI MINIMUM INSTITUTION (FRONTENAC)
KINGSTON, ONTARIO

drawing dessin

PROJECT DETAILS

designed	LJF	conçu
date	2014/04/22	(yyyy/mm/dd)
drawn	PDM	dessiné
date	2014/04/22	(yyyy/mm/dd)
reviewed	LJF	examiné
date	2015/01/30	(yyyy/mm/dd)
approved	LJF	approuvé
date	2015/01/30	(yyyy/mm/dd)

Tender DUNCAN PARKER Submission

Project Manager Administrateur de projets

project no. no. du projet

R.055776.001

drawing no. no. du dessin

S402

SCALE: N.T.S.