GENERAL NOTES AND DETAILS

D01) GENERAL

D01-1 GENERAL INFORMATION

1. THE INFORMATION PRESENTED ON THESE DRAWINGS HAS BEEN DESIGNED AND ANALYZED IN ACCORDANCE WITH THE 2012 (R22) ONTARIO BUILDING CODE & 2015 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 A23.3-14
   - ■1.2 STEEL STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA-S16-14
   - ☐1.3 WOOD STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA-086-14
   - ☐1.4 MASONRY STRUCTURE DESIGNED IN ACCORDANCE WITH CAN/CSA S304-14
2. ALL WORK MUST COMPLY WITH THE PROVISIONS OF THE 2012 (R22) ONTARIO BUILDING CODE, OCCUPATIONAL HEALTH & SAFETY ACT, MUNICIPAL BYLAWS AND BEST CODE PRACTICES. THE CONTRACTOR MUST CONSIDER THAT CONSTRUCTION WORK IS DEPENDENT ON SITE CONDITIONS.
3. ALL DIMENSIONS ARE IN MILLIMETRES AND ELEVATIONS IN METRES UNLESS INDICATED OTHERWISE.
4. GUARDRAILS / HANDRAILS SHALL BE DESIGNED AND CERTIFIED BY THE FABRICATOR'S PROFESSIONAL ENGINEER LICENSED IN ONTARIO IN ACCORDANCE WITH LOADS PROVIDED IN THE 2012 (R22) ONTARIO BUILDING CODE / 2015 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
5. THE ROOF HAS BEEN DESIGNED FOR THE REQUIRED STORM WATER FLOW RESTRICTION IN ACCORDANCE WITH 2012 (R22) ONTARIO BUILDING CODE REQUIREMENTS.
6. CONTRACTOR IS TO VERIFY / COORDINATE ALL DIMENSIONS / PENETRATIONS WITH ARCHITECTURAL / MECHANICAL / ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. REPORT INCONSISTENCIES BEFORE PROCEEDING WITH WORK. ANY OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS ARE TO BE APPROVED BY STRUCTURAL ENGINEER IN WRITING PRIOR TO CONSTRUCTION.
7. CAD / REVIT VERSIONS OF THE STRUCTURAL DRAWINGS SHALL BE MADE AVAILABLE TO THE CONTRACTOR UPON THE COMPLETION OF A RELEASE FORM INDEMNIFYING THE CONSULTANT FROM ANY ERRORS OR OMISSIONS ASSOCIATED WITH THE CAD / REVIT FILES.
8. LADDERS 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 (R22) ONTARIO BUILDING CODE / 2015 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
9. 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 (R22) ONTARIO BUILDING CODE / 2015 NATIONAL BUILDING CODE. STAMPED SHOP DRAWINGS TO BE SUBMITTED.
10. DEMOLITION DETAILS THAT AFFECT THE STRUCTURAL ELEMENTS HAVE BEEN REVIEWED IN ACCORDANCE WITH THE 2012 (R22) ONTARIO BUILDING CODE. WHERE REQUIRED, SUPPLEMENTARY / TEMPORARY / REMEDIAL FRAMING HAS BEEN PROVIDED.
11. 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 (R22) ONTARIO BUILDING CODE. 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 IMPOSED LOADS IN ACCORDANCE WITH THE 2012 (R22) ONTARIO BUILDING CODE. NO ELEMENTS MAY BE CONSTRUCTED WITHOUT WRITTEN CONFIRMATION OF THESE CONDITIONS BY CONTRACTOR'S ENGINEER.
12. 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.
13. NEW OPENINGS IN EXISTING / ERECTED CONCRETE / MASONRY ELEMENTS:
    - REFER TO MECH / ARCH / ELECT DRAWINGS FOR LAYOUTS.
    - SCAN T&B / E.S. OF SLAB/WALL PRIOR TO REMOVALS. MARK OUT OPENING POSITION/ALL REBAR/CONDUIT ON T&B OF SLAB / E.S. OF WALL MIN. OF 4 WEEKS PRIOR TO REINFORCING SHOP DRAWING SUBMISSION / CUTTING / CORING.
    - CONTACT ENGINEER FOR REVIEW OF SCANS/MARKS PRIOR TO COMMENCEMENT OF ANY DEMOLITION.
    - NO WORK TO COMMENCE UNTIL RECEIVING WRITTEN APPROVAL FROM ENGINEER.
    - SAWCUT/CORE OUT OPENINGS AS REQUIRED.
    - DO NOT OVERCUT.
    - ANY REQUIRED SUPPLEMENTAL STRENGTHENING/REINFORCING IS TO BE ERECTED PRIOR TO REMOVALS.
14. 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.
15. CONTRACTOR IS REQUIRED TO SUBMIT CONDUIT AND SLEEVING SHOP DRAWINGS FOR ALL FLOORS / ROOFS / WALLS / COLUMNS PRIOR TO THE ERECTION / CONSTRUCTION / FABRICATION OF ANY OF THESE ELEMENTS. THE DRAWINGS ARE TO LOCATE / DIMENSION THE CLEAR SIZES OF OPENINGS / SLEEVES / CONDUITS IN PLAN (FLOORS / ROOFS / COLUMNS) AND ELEVATION (WALLS / BEAMS). THE COORDINATION OF THE VARIOUS DISCIPLINES / SUBTRADES 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.
16. DO NOT SCALE DIMENSIONS DIRECTLY FROM THESE DRAWINGS OR ELECTRONIC FILES.
17. SPECIFIC NOTES AND DETAILS FOUND ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
18. DO NOT LOAD HEAVY MATERIALS SUCH AS MASONRY, FILL, GRAVEL, DRYWALL, ETC. ON FLOORS, TERRACES OR ROOFS WITHOUT ADEQUATE ADDITIONAL SUPPORTS. SUBMIT DETAILS TO ENGINEER FOR REVIEW.

D01-2 DESIGN LOADS:

IMPORTANCE FACTORS:

SNOW: I_S: ULS= 1.0 SLS= 0.9
WIND: I_W: ULS= 1.0 SLS= 0.75
SEISMIC: I_E: ULS= 1.0

SNOW LOAD FACTORS:

S = Is [Ss(Cb*Cw*Cs*Ca) + Sr]
Ss = 2.4 kPa
Sr = 0.4 kPa
Cb = 0.8
Cw = 1.0
Cs = 1.0

D01-3 SEISMIC SYSTEM/LOADING DATA

- SEISMIC FORCE RESISTING SYSTEM (SFRS)

  SFRS: SYSTEM & CONNECTIONS: (OBC 2012 (R22) CLAUSE 4.1.8.9/4.1.8.10)
  LATERAL LOAD RESISTING SYSTEM: CONCRETE SHEAR WALLS, CONVENTIONAL CONSTRUCTION
  Rd = 1.5
  Ro = 1.3
  CSA STANDARD: CAN/CSA A23.3-14
  APPLICABLE CLAUSE(S): 21

  SFRS: DIAPHRAGMS & CONNECTIONS: (OBC 2012 (R22) CLAUSE 4.1.8.15)
  CSA STANDARD: CAN/CSA A23.3-14
  APPLICABLE CLAUSE(S): 21

  SFRS: SYSTEM FOUNDATIONS: (OBC 2012 (R22) CLAUSE 4.1.8.16)
  CSA STANDARD: CAN/CSA
  APPLICABLE CLAUSE(S): ☐FOR ANCHORED FOOTINGS ■FOR UNANCHORED FOOTINGS
  CONFIRMATION: FOUNDATIONS HAVE BEEN DESIGNED TO RESIST THE LATERAL FORCES APPLIED TO THE SFRS IN ACCORDANCE WITH THE OBC 2012 (R22) INCLUDING ALL APPLICABLE AMPLIFICATION FACTORS.

- SEISMIC IMPORTANCE FACTOR: (OBC 2012 (R22) CLAUSE 4.1.8.5)

  I_E= 1.0

- REFERENCE CITY: **OTTAWA (M-C INTERNATIONAL AIRPORT)**

- SITE CLASS: THE NOTED SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE AND SHEAR STRENGTH PARAMETERS INDICATED ARE AS REPORTED IN THE GEOTECHNICAL REPORT BY

  ☐A ☐B ☐C ■D ☐E ☐F (SITE SPECIFIC SPECTRUM:)

- PGA: 0.235 PGV: 0.199

- PGA_{REF}: (OBC 2012 (R22) CLAUSE 4.1.8.4(4))

  $\frac{Sa(0.2)}{PGA} \quad \frac{0.446}{0.285} = 1.56 < 2.0$

- PGA_{REF}: 0.285 PGA = 0.285

- 5% DAMPED SPECTRAL RESPONSE ACCELERATION VALUES FOR REFERENCE CITY: (NATIONAL BUILDING CODE 2015 APPENDIX C)

  Sa(0.2) = 0.446
  Sa(0.5) = 0.240
  Sa(1.0) = 0.119
  Sa(2.0) = 0.056
  Sa(5.0) = 0.015
  Sa(10.0) = 0.0056

- DESIGN SPECTRAL RESPONSE ACCELERATION VALUES (DSRAV): (OBC 2012 (R22) CLAUSE 4.1.8.4)

  S(0.2) = 0.468
  S(0.5) = 0.302
  S(1.0) = 0.162
  S(2.0) = 0.0790
  S(5.0) = 0.0234
  S(10.0) = 0.00765

- SITE COEFFICIENTS: (OBC 2012 (R22) CLAUSE 4.1.8.4)

☐ CLASS 'A': (Fa = 0.69: Fv = 0.57)
F(0.2) = 0.69
F(0.5) = 0.57
F(1.0) = 0.57
F(2.0) = 0.58
F(5.0) = 0.61
F(10.0) = 0.67

☐ CLASS 'B': (Fa = 0.77: Fv = 0.63)
F(0.2) = 0.77
F(0.5) = 0.65
F(1.0) = 0.63
F(2.0) = 0.63
F(5.0) = 0.64
F(10.0) = 0.69

☐ CLASS 'C': (Fa = 1.0: Fv = 1.0)
F(0.2) = 1.0
F(0.5) = 1.0
F(1.0) = 1.0
F(2.0) = 1.0
F(5.0) = 1.0
F(10.0) = 1.0

■ CLASS 'D': (Fa = 1.05: Fv = 1.36)
F(0.2) = 1.05
F(0.5) = 1.26
F(1.0) = 1.36
F(2.0) = 1.41
F(5.0) = 1.56
F(10.0) = 1.39

☐ CLASS 'E': (Fa = 1.16: Fv = 1.93)
F(0.2) = 1.16
F(0.5) = 1.66
F(1.0) = 1.93
F(2.0) = 2.10
F(5.0) = 2.29
F(10.0) = 2.10

- SYSTEM RESTRICTION VALUE: I_EFaSa(0.2) = 0.4688 ≥ 0.35 ■ YES ☐ NO

- PERIOD DATA:

  EMPIRICAL PERIOD: (OBC 2012 (R22) CLAUSE 4.1.8.11(3)) (a),(b) or (c)

  $Ta(_{EMPIRICAL})_{NS}$ = 0.163 sec
  $Ta(_{EMPIRICAL})_{EW}$ = 0.163 sec

  MODAL PERIOD: (OBC 2012 (R22) CLAUSE 4.1.8.11(3)(d) AND 4.1.8.3(8))

  $Ta(_{MODAL})_{NS}$ = 0.325 sec
  $Ta(_{MODAL})_{EW}$ = 0.325 sec

  DESIGN PERIODS/MODE & MOMENT FACTORS: (2012 (R22) OBC TABLE (4.1.8.11)

  $\frac{S(0.2)}{S(5.0)}$ = 21.6 ≥ 8.0 ■ YES ☐ NO

  $Ta(design)_{NS}$ = 0.325 sec Mv = 1.0 J =1.0
  $Ta(design)_{EW}$ = 0.325 sec Mv = 1.0 J =1.0

- DESIGN FUNDAMENTAL PERIOD BASED DSRAV: (OBC 2012 (R22) CLAUSE 4.1.8.11(2))

  $S(Ta)_{NS}$ = 0.390
  $S(Ta)_{EW}$ = 0.390

- IRREGULARITY REVIEW: (OBC 2012 (R22) TABLE 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. OUT OF PLANE: ☐YES ■NO
  6. WEAK STOREY: ☐YES ■NO
  7. TORSIONAL: ☐YES ■NO
     B_{NS}= 1.7
     B_{EW}= 1.4
  8. NON-ORTHOGONAL: ☐YES ■NO
  9. GRAVITY INDUCED LATERAL DEMAND IRREGULARITY ☐YES ■NO

  CONCLUSION: BUILDING IS ■REGULAR ☐IRREGULAR
  DYNAMIC ANALYSIS: ☐REQUIRED ■NOT REQUIRED
  DYNAMIC PROCEDURE METHOD: ☐MODAL RESPONSE SPECTRUM ☐NUMERICAL INTEGRATION TIME HISTORY ☐N/A

- TORSIONAL ECCENTRICITY:
  ■± 0.10 Dnx (4.1.8.11(10a), B ≤ 1.7 EQUIV. STATIC FORCE PROCEDURE)
  ☐± 0.10 Dnx (4.1.8.12(4a), B ≥ 1.7)
  ☐± 0.05 Dnx (4.1.8.12(4b), B < 1.7, 3-D DYNAMIC ANALYSIS)

- STRUCTURAL SEPARATION: ■THE ADJACENT STRUCTURES HAVE BEEN SEPARATED IN ACCORDANCE WITH 4.1.8.14(1) OF THE OBC 2012 (R22) ☐N/A

- BUILDING WEIGHT FOR SEISMIC DESIGN: W = 1380 kN

- BASE SHEAR/MOMENTS:

  $V_{STATIC}= S(Ta)M_V \cdot I_E Rd \cdot Ro$

- STATIC MAXIMUM/MINIMUM VALUES:

  NORTH-SOUTH: (↕)

  $V_{MIN.} = \frac{S(4.0) \cdot M_V \cdot I_E \cdot W}{Rd \cdot Ro} = W * 0.0404 = 56\ kN$

  $V_{MAX.} = \begin{cases} \frac{0.66 \cdot S(0.2) I_E \cdot W}{Rd \cdot Ro} = W * 0.16 = 220\ kN \\ \frac{S(0.5) I_E \cdot W}{Rd \cdot Ro} = W * 0.144 = 199\ kN \end{cases}$

- EAST-WEST: (⟷)

  $V_{MIN.} = \frac{S(4.0) \cdot M_V \cdot I_E \cdot W}{Rd \cdot Ro} = W * 0.0404 = 56\ kN$

  $V_{MAX.} = \begin{cases} \frac{0.66 \cdot S(0.2) I_E \cdot W}{Rd \cdot Ro} = W * 0.16 = 220\ kN \\ \frac{S(0.5) I_E \cdot W}{Rd \cdot Ro} = W * 0.144 = 199\ kN \end{cases}$

SEISMIC LOADS		
EQUIVALENT STATIC (ES) FORCE PROCEDURE OBC 2012 (R22) CLAUSE 4.1.8.11	DYNAMIC ANALYSIS (DYI) [(1)(3)] PROCEDURE (INITIAL SCALING FACTOR) OBC 2012 (R22) CLAUSE 4.1.8.12	DESIGN (D) LOADS [(2)]
NORTH-SOUTH: (↕)	NORTH-SOUTH: (↕)	NORTH-SOUTH: (↕)
V_{ESNS} = W * = 220 kN M_{ESNS} = 1430 kN•m	V_{DYINS} = 9059 kN M_{DYINS} = 115,714 kN•m M_{PMR} = 99%	V_{DNS} = 220 kN M_{DNS} = 1430 kN•m NON-ORTHOGONAL EFFECTS HAVE BEEN CONSIDERED IN ACCORDANCE WITH 2012 (R22) OBC CLAUSE 4.1.8.8 (c) ☐ YES ■ N/A
EAST-WEST: (⟷)	EAST-WEST: (⟷)	EAST-WEST: (⟷)
V_{ESEW} = W * = 220 kN M_{ESEW} = 1430 kN•m	V_{DYINS} = 10,943 kN M_{DYINS} = 142,424 kN•m M_{PMR} = 98%	V_{DNS} = 220 kN M_{DNS} = 14304 kN•m NON-ORTHOGONAL EFFECTS HAVE BEEN CONSIDERED IN ACCORDANCE WITH 2012 (R22) OBC CLAUSE 4.1.8.8 (c) ☐ YES ■ N/A

NOTES:

(1) INITIAL DYNAMIC LOAD SCALING FACTOR

$S.F. = g \cdot \frac{Ie}{RdRo} = g \cdot 0.5031$

DYNAMIC ANALYSIS PROCEDURE LOADS ARE BASED ON THE EVALUATION OF THE BUILDING WITH THE INITIAL SCALING FACTOR APPLIED. WHEN USED THESE ARE COMPARED TO THE STATIC FORCE VALUE IN ACCORDANCE WITH 4.1.8.12(6)-(7) TO DETERMINE DESIGN LOAD VALUES.

(2) DESIGN LOAD SHEAR VALUES ARE BASED ON THE EVALUATION OF V_{ES} AND V_{DYI} IN ACCORDANCE WITH 4.1.8.12(5), (6) AND (7) OF THE 2012 (R22) OBC. LOADS INDICATED SHOW THE DESIGN BASE SHEAR AND CORRESPONDING OVERTURNING MOMENT.

(3) N/A = NOT USED IN THE DESIGN OF THE BUILDING.

D01-3.1 WIND LOADING:

- WIND

  q= 0.41 kPa
  (1 IN 50 YEARS)

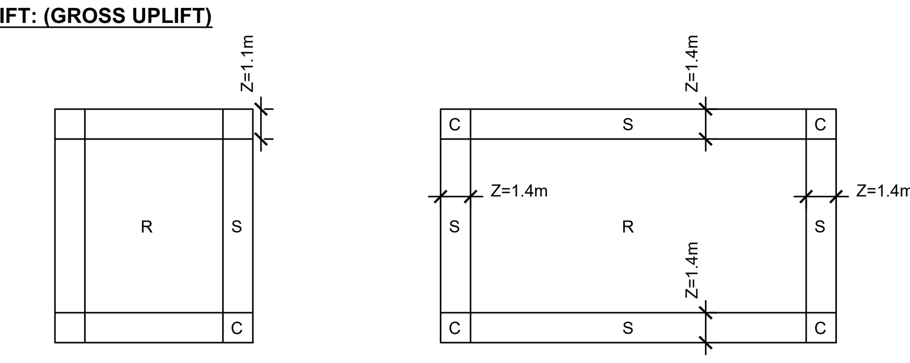
  I_W= 1.0 (ULS)
  I_W= 0.75 (SLS)
  CpCg= 1.3 (1.95 AT ENDS)

  h = 6.5m

NORTH-SOUTH: (↕)
Vbase = 140 kN
Mbase = 455 kN·m

EAST-WEST: (⟷)
Vbase = 49 kN
Mbase = 159 kN·m

WIND UPLIFT: (GROSS UPLIFT)



CANOPY

C: p = 1.6 kPa (CORNER)
S: p = 0.5 kPa (EDGES)
R: p = 0.4 kPa (FIELD)

MAIN BUILDING

C: p = 1.26 kPa (CORNER)
S: p = 0.62 kPa (EDGES)
R: p = 0.359 kPa (FIELD)

D01-4 SEISMIC ASSESSMENT OF BUILDING MODIFICATIONS: MAJOR ADDITIONS

- DESCRIPTION OF WORK:
- BUILDING AGE: ☐≥ 5 YEARS OLD ☐< 5 YEARS OLD
- BUILDING CATEGORY: ☐LOW ☐NORMAL ☐HIGH ☐POST-DISASTER
- PERFORMANCE LEVEL ASSESSMENT: (NOT APPLICABLE TO BUILDINGS < 5 YEARS)

- PERFORMANCE LEVEL OF EXISTING SFRS PRIOR TO ADDITION BASED ON 2012 (R22) OBC: (BUILDING ≥ 5 YEARS OLD)
- PERFORMANCE LEVEL OF EXISTING SFRS AFTER ADDITION BASED ON 2012 (R22) OBC: (BUILDING ≥ 5 YEARS OLD)

- UPGRADING METHODOLOGY:

☐ BUILDING ≥ 5 YEARS OLD AND THE PERFORMANCE LEVEL AFTER ADDITION > 60% OF 2012 (R22) OBC.

CONFIRMATION: THE BUILDING STRUCTURE'S SFRS HAS BEEN UPGRADED, AS REQUIRED, TO MAINTAIN THE PERFORMANCE LEVEL OF THE EXISTING BUILDING STRUCTURE WITH THE NEW CONNECTED ADDITION.

☐ BUILDING ≥ 5 YEARS OLD, THE PERFORMANCE LEVEL AFTER ADDITION ≤ 60% OF 2012 (R22) OBC, AND, BUILDING IS POST-DISASTER.

CONFIRMATION: THE BUILDING STRUCTURE'S SFRS HAS BEEN UPGRADED TO RESIST AT LEAST 100% OF THE SEISMIC FORCES PRESCRIBED BY 2012 (R22) OBC.

☐ BUILDING ≥ 5 YEARS OLD AND THE PERFORMANCE LEVEL AFTER ADDITION ≤ 60% OF 2012 (R22) OBC AND BUILDING IS NOT POST-DISASTER.

CONFIRMATION: THE BUILDING STRUCTURE'S SFRS HAS BEEN UPGRADED TO RESIST AT LEAST 75% OF THE SEISMIC FORCES PRESCRIBED BY 2012 (R22) OBC.

☐ BUILDING IS < 5 YEARS OLD

CONFIRMATION: THE BUILDING STRUCTURE'S SFRS HAS BEEN UPGRADED TO RESIST AT LEAST 100% OF THE SEISMIC FORCES PRESCRIBED BY 2012 (R22) OBC.

D01-4.1 FIREWALL ADDITION AT EXISTING

ADDITION ANALYSIS: (BASED ON ORIGINAL PHASE II BUILDING)
- MASS = 470KN = 8.3% < 10% OF EXISTING BUILDING WEIGHT
- AREA = Om² < 10% OF TOTAL EXISTING AREA.
- AREA = Om² < 200m² OF NEW TOTAL AREA.
- EXISTING BUILDING IS IN GOOD CONDITION.
- CONCLUSION: PROCEED WITHOUT SEISMIC UPGRADE.
- THE STRUCTURAL ENGINEER CONFIRMS THAT IN OUR PROFESSIONAL OPINION THE ADDITION TO THE EXISTING STRUCTURE DOES NOT REPRESENT A MATERIAL ALTERATION TO THE EXISTING BUILDING SYSTEM AND COMPLIES WITH SECTION 11.3 OF THE 2012 (R22) OBC. THE STRUCTURAL ENGINEER ALSO CONFIRMS THAT THE NEW CONSTRUCTION AND IT'S ATTACHMENT TO THE EXISTING BUILDING SYSTEM COMPLIES WITH PART 4 OF THE 2012 (R22) OBC IN ACCORDANCE WITH CLAUSE 11.3.2 AND THAT THE EXISTING BUILDING IS STRUCTURALLY ADEQUATE TO SAFELY RESIST THE TRANSFER OF GRAVITY FORCES.

D01-5 DEFINITIONS:

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

@	AT (SPACING c/c)	mm	MILLIMETRES
ARCH.	ARCHITECTURAL	MAX.	MAXIMUM
B	BOTTOM	MECH.	MECHANICAL
BLL	BOTTOM LOWER LAYER	MIN.	MINIMUM
BUL	BOTTOM UPPER LAYER	N.F.	NEAR FACE
c/c	CENTRE TO CENTRE	N.T.S.	NOT TO SCALE
℄	CENTRE LINE	o.c.	ON CENTRE
CONT.	CONTINUOUS	O.F.	OUTSIDE FACE
CW	CORE WALL	P.C.O.	PILE CUT-OFF
EA.	EACH	⅊	PLATE
E.E.	EACH END	SFD	STEP FOOTING DOWN
E.F.	EACH FACE	SMR	STANDARD GALVANIZED LADDER MASONRY REINFORCEMENTS
EL.	ELEVATION	SW	SHEAR WALL
E.S.	EACH SIDE	T	TOP
E.W.	EACH WAY	TLL	TOP LOWER LAYER
F.F.	FAR FACE	TUL	TOP UPPER LAYER
HOR.	HORIZONTAL	T.O.P.C.	TOP OF PILE CAP
HDMR	HEAVY DUTY GALVANIZED TRUSS TYPE MASONRY REINFORCEMENT	TYP.	TYPICAL
I.F.	INSIDE FACE	U/N	UNLESS OTHERWISE NOTED
LL	LOWER LAYER	UL	UPPER LAYER
m	METRES	U/S	UNDERSIDE
		VERT.	VERTICAL

D01-6 SHOP DRAWINGS

1. SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL WORK AND ANY WORK AFFECTING THE STRUCTURE TO THE CONSTRUCTION MANAGER. OBTAIN ARCHITECT'S & ENGINEER'S APPROVAL BEFORE PROCEEDING WITH THE FABRICATION.
2. 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).
   a) DRAWINGS FOR ANY TEMPORARY WORK.
   b) DRAWINGS FOR ANY STRUCTURAL PARTS DESIGNED BY THE CONTRACTOR'S FORCES INCLUDING EXTERIOR BUILDING ENVELOPE
   c) STRUCTURAL STEEL/JOISTS
   d) FORMWORK
3. SHOP DRAWINGS MUST BE REVIEWED AND STAMPED REVIEWED BY THE CONTRACTOR BEFORE ISSUING TO THE ARCHITECT/ENGINEER. 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.
4. SUBMIT STRUCTURAL STEEL, STEEL JOIST AND STEEL DECK SHOP DRAWINGS FOR STRUCTURAL ENGINEER'S REVIEW BEFORE FABRICATION. ALL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER IN THE PROVINCE OF ONTARIO.
5. 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 QUANTITIES AND DETAILED DESIGN OF THE MATERIALS AND COMPONENTS AS REQUIRED TO PROVIDE THE COMPLETE AND SATISFACTORY JOB DESCRIBED IN THE DESIGN DOCUMENTS REMAINS WITH THE CONTRACTOR.

D01-7 TYPICAL DETAILS

1. TYPICAL DETAILS NOTED IN THE FOLLOWING SECTIONS TO BE USED WHERE SPECIFIC DETAILS HAVE NOT BEEN PROVIDED ON DRAWINGS / SECTIONS.
2. WHERE MORE THAN ONE DETAIL APPLIES MORE EXPENSIVE VERSION WILL GOVERN.
3. DETAILS ARE TO BE READ IN CONJUNCTION WITH PLANS/ SPECIFICATIONS.

D01-8 SECONDARY COMPONENTS AND THEIR ATTACHMENTS

1. SECONDARY COMPONENTS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:
   a) ARCHITECTURAL COMPONENTS SUCH AS GUARD AND HAND RAILS, FLAG POTS, CANOPIES, CEILINGS ETC.
   b) SITE WORK ELEMENTS EXTERIOR TO THE BASE BUILDING SUCH AS LANDSCAPING COMPONENTS, POOLS, SIGNS AND CIVIL WORK.
   c) CLADDING, WINDOW MULLIONS, GLAZING AND STORE FRONT.
   d) SKYLIGHTS AND GLASS CANOPIES.
   e) ATTACHMENTS AND BRACING FOR ELECTRICAL AND MECHANICAL COMPONENTS.
   f) GLASS BLOCK INCLUDING ATTACHMENTS.
   g) ELEVATORS.
   h) ARCHITECTURAL PRECAST AND PRECAST CLADDING.
   i) WINDOW WASHING EQUIPMENT AND ITS ATTACHMENTS.
   j) INTERIOR AND EXTERIOR LIGHT GAUGE STEEL STUD WALLS.
   k) ROOFING MATERIAL.
   l) ARCHITECTURAL BRICK VENEER.
2. DESIGN AND DETAILING OF THE ABOVE ITEMS AND THEIR ATTACHMENTS ARE NOT THE RESPONSIBILITY OF THE ENGINEER. THEY SHALL BE DESIGNED BY SPECIALTY STRUCTURAL ENGINEERS RETAINED BY CONTRACTOR, WHO WILL SEAL ALL RELATED SHOP DRAWINGS, REVIEW THE COMPONENTS IN THE FIELD AND PROVIDE ALL REQUIRED SEALED LETTERS TO THE AUTHORITIES HAVING JURISDICTION.
3. SECONDARY OR NON-STRUCTURAL COMPONENTS AND THEIR ATTACHMENTS SHALL BE DESIGNED IN ACCORDANCE WITH PART 4 OF THE BUILDING CODE AS PER NOTE #14 IN "GENERAL" ON THIS DRAWING.
4. SEALED SHOP DRAWINGS OF THE SECONDARY OR NON-STRUCTURAL COMPONENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO THE ENGINEER ONLY FOR THE REVIEW OF THEIR EFFECT ON THE PRIMARY STRUCTURAL SYSTEM. SUBCONTRACTOR OF THESE COMPONENTS IS RESPONSIBLE FOR PROTECTION OF ALUMINUM-STEEL CONNECTIONS AGAINST GALVANIC CORROSION.
5. IN ADDITION TO CONSTRUCTION TOLERANCE, NON-STRUCTURAL COMPONENTS SHALL BE DETAILED FOR THE FOLLOWING BUILDING MOVEMENT AND DEFLECTION:
   a) VERTICAL DEFLECTIONS OF BEAMS, SLABS AND DECKING: +/- 20mm(3/4")
      DIFFERENTIAL DEFLECTIONS OF EDGE BEAMS AND EDGES OF SLABS: +/- 16mm(5/8")
   b) HORIZONTAL DRIFT DURING WIND AND EARTHQUAKE BETWEEN FLOORS:
      DRIFT WITHOUT DAMAGE TO NON-STRUCTURAL COMPONENTS: +/- 13mm(1/2")
      DRIFT WITHOUT COLLAPSE OF NON-STRUCTURAL COMPONENTS: +/- 50mm(2")
   c) MOVEMENT AT EXPANSION JOINTS:
      PERPENDICULAR: +/- 50mm(2")
      PARALLEL: +/- 50mm(2")
      VERTICAL: +/- 25mm(1")

D01-9 DEMOLITION

1. CONTRACTOR REQUIRED TO SUBMIT DEMOLITION PLAN PRIOR TO PERFORMING WORK. DEMOLITION PLANS AND DETAILS BY CONTRACTOR'S ENGINEER LICENSED IN ONTARIO ARE TO BE STAMPED AND SUBMITTED FOR REVIEW A MINIMUM OF 4 WEEKS PRIOR TO DEMOLITION WORK.
2. ALL DEMOLITION, TEMPORARY SHORING, AND UNDERPINNING WORK ARE PART OF THE CONTRACTOR'S RESPONSIBILITIES AND DEPEND ON EXECUTION METHODS. CONTRACTOR MUST ENSURE ALL REQUIRED MEASUREMENTS ARE TAKEN AND THAT ADEQUATE SUPPORTS ARE PROVIDED TO MAINTAIN STRUCTURAL INTEGRITY AND WORKERS' SAFETY.
3. CONTRACTOR MUST ENSURE THAT ANY STRUCTURAL ELEMENT REQUIRING REMOVAL DOES NOT SUPPORT ANY ELEMENT THAT IS TO BE MAINTAINED.
4. ALL TEMPORARY SHORING WORK MUST BE DESIGNED, APPROVED AND STAMPED BY AN ENGINEER LICENSED IN ONTARIO. ALL WORK MUST BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT.
5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING BUILDINGS.

D31 FOUNDATIONS

D31-1 FOOTINGS

ALL FOOTINGS TO BEAR ON UNDISTURBED NATIVE MATERIAL WITH MINIMUM ALLOWABLE BEARING STRENGTHS AS NOTED AND AS APPROVED BY GEOTECHNICAL ENGINEER ON SITE.
REFERENCE GEOTECHNICAL REPORT:
REPORT AUTHOR:

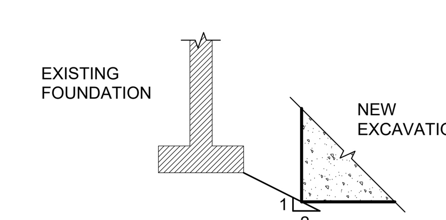
D31-2 EXCAVATION, FOUNDATIONS AND BACKFILL

REFER TO GEOTECHNICAL REPORT.

1. PRIOR TO ANY EXCAVATION, VERIFY LOCATION OF EXISTING SERVICES AND TAKE ALL NECESSARY MEASURES TO MAINTAIN SERVICES WHERE REQUIRED. NOTIFY OWNER AND ENGINEER IF ANY SERVICES NOT SHOWN ON PLAN OR OTHERWISE EXPECTED ARE ENCOUNTERED. DO NOT PROCEED FURTHER UNTIL DIRECTED.
2. CARE MUST BE TAKEN TO AVOID UNDERMINING EXISTING BUILDING FOUNDATIONS OR UNDERGROUND SERVICES.
3. PROTECT SUB-GRADE FROM FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
4. FOOTINGS MUST BEAR ON APPROVED BEARING SURFACES.
5. BACKFILL TO WITHIN 200mm OF UNDERSIDE OF SLAB WITH GRANULAR 'B' TYPE II IN LAYERS UP TO 12" THICK, COMPACTED TO MINIMUM 100% SPMDD OR AS PER GEOTECHNICAL REPORT.
6. FINAL 200mm UNDER SLAB TO BE GRANULAR 'A' COMPACTED TO MINIMUM 100% SPMDD OR AS PER GEOTECHNICAL REPORT.
7. RE-USE OF EXCAVATED GRANULAR MATERIAL IS SUBJECT TO APPROVAL OF GEOTECHNICAL CONSULTANT.

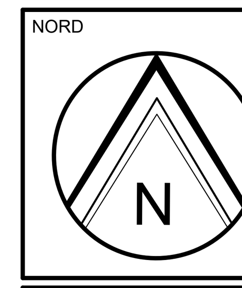
D31-3 PROTECT LATERAL STABILITY OF BEARING STRATA UNLESS NOTED:

UNLESS OTHERWISE OUTLINED IN GEOTECHNICAL REPORT DO NOT EXCAVATE BELOW A LINE EXTENDING DOWNWARD FROM ANY BEARING STRATA AT A SLOPE OF 1 VERTICAL TO 2 HORIZONTAL. ADJUST FOOTING AND TRENCH ELEVATIONS TO MEET THIS REQUIREMENT (SEE DIAGRAM).

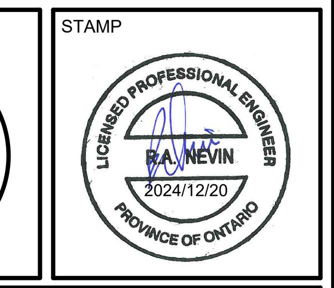


No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD



STAMP



BPA

PROJECT Mercedez-Benz Star Motors of Ottawa EXPANSION
400 West Hunt Club Rd, Ottawa, Ontario

DRAWING GENERAL NOTES AND DETAILS

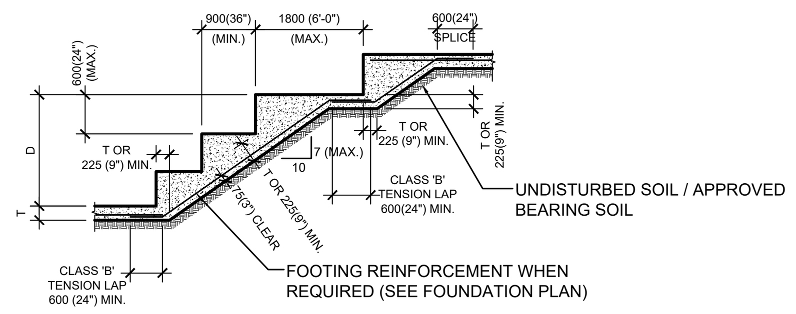
DRAWN:	A.D	DRAWING No.
DESIGNED:	R.N	S000
DATE:	DEC. 2024	
SCALE:	NTS	
PROJECT No:	23-0083	

2023-03-22 2:16:34 PM

GENERAL NOTES AND DETAILS

D31-4 FOOTINGS STEPS:

LOCATIONS OF FOOTING STEPS TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION.



NOTES:

1. IF 'D' EXCEEDS 1800 (6'-0") PROVIDE HORIZONTAL SECTIONS OF 1200 (4'-0") MINIMUM LENGTH BETWEEN EVERY SET OF STEPS.
2. STEPPED FOOTINGS SHALL BE CAST AS A SINGLE UNIT.
3. 'T' DENOTES FOOTING THICKNESS.

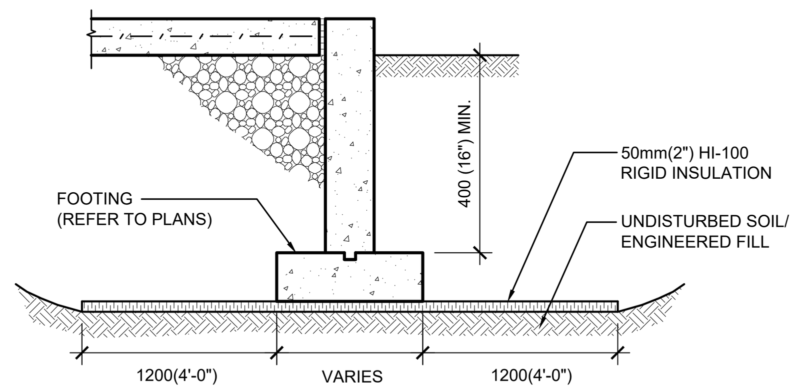
D31-5 MINIMUM FROST COVER REQUIREMENTS (OTTAWA)

(NOTE: INCREASE DEPTHS AS REQUIRED BY GEOTECHNICAL REPORT/ENGINEER)

AT HEATED BUILDINGS:	1500mm (5'-0")
AT HEATED BUILDING (SNOW CLEARED):	1800mm (6'-0")
AT ISOLATED AREAS:	2100mm (7'-0")

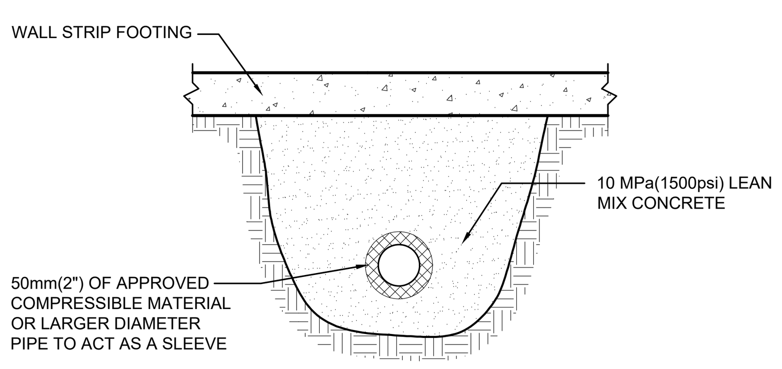
D31-6 ALTERNATE FROST COVER DETAIL

(NOTE: ONLY TO BE USED AFTER WRITTEN APPROVAL BY ENGINEER/WHERE GEOTECHNICAL REPORT REQUIRES MORE SOIL COVER/EXTENTS OF INSULATION, SOILS REPORT GOVERNS)



D31-7 PIPE CROSSING BELOW STRIP FOOTING:

(NOTE: LOCATIONS WHERE PIPES CROSS BELOW FOOTINGS ARE TO BE APPROVED BY ENGINEER IN WRITING PRIOR TO CONSTRUCTION. ENGINEER RESERVES THE RIGHT TO RELOCATE PIPES AS REQUIRED OR LOWER FOOTINGS TO SUIT.)



D03 CONCRETE

D03-1 CONCRETE COVER (CLEAR TO REINFORCING)

U/S FOOTINGS, PILE CAPS, GRADE BEAMS (AGAINST SOIL)	75mm (3")
FOOTINGS, PILE CAPS, GRADE BEAMS (SIDES & TOP)	50mm (2")
WALLS	40mm (1 1/2")
SLABS	25mm (1") U/N
BEAMS	40mm (1 1/2")(TO STIRRUPS)
COLUMNS	40mm (1 1/2")(TO TIES)
BALCONIES	40mm (1 1/2")(TO TOP STEEL)

FOR PARKING GARAGES:

COLUMNS	60mm (2 3/8")
WALLS	50mm (2")
SLABS	40mm (1 1/2") (TO TOP STEEL) 30mm (1 3/16") (TO BOTTOM STEEL)

PROVIDE 32mm (1 1/4") COVER FOR BOTTOM STEEL FOR SLAB ABOVE 3HR, FIRE RATED AREAS. PROVIDE 50mm (2") COVER FOR COLUMN TIES IN 3HR, FIRE RATED AREAS.

D03-2 SLAB REINFORCING STEEL

1. SPACING OF BARS SHALL BE APPROXIMATELY UNIFORM WITHIN THE CORRESPONDING STRIPS. DO NOT ELIMINATE OR DISPLACE REINFORCEMENT TO ACCOMMODATE HARDWARE. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE THE PLACING OF CONCRETE.
2. WHERE TENSION LAPS ARE SPECIFIED, LAP REINFORCING STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF CAN3-A23.3, LATEST EDITION. ALL OTHER LAPS AND EMBEDMENT OF DOWELS SHALL BE 24 BAR DIAMETERS, BUT NOT LESS THAN 600mm (24") IF NOT SPECIFIED OTHERWISE. WIRE MESH LAPS SHALL BE 150mm (6") MINIMUM.

TYPICAL REBAR REQUIREMENTS:

LAPS: AS ON DRAWINGS (TENSION LAPS)

≥ 36 BAR Ø	≥ 1.5ld	FOR LATERAL SYSTEMS
≥ 600mm(24")	≥ 1.3ld	FOR WALL AND SLABS

BAR DESIGNATION IN SLABS:

METRIC: 10-15M 6400/4100 T MEANS 10 BARS, SIZE 15M, TOP OF SLAB, 5- 6400 LONG / 5- 4100 LONG ALTERNATING (+ HOOK LENGTH FOR TOP BARS AT SLAB EDGES)

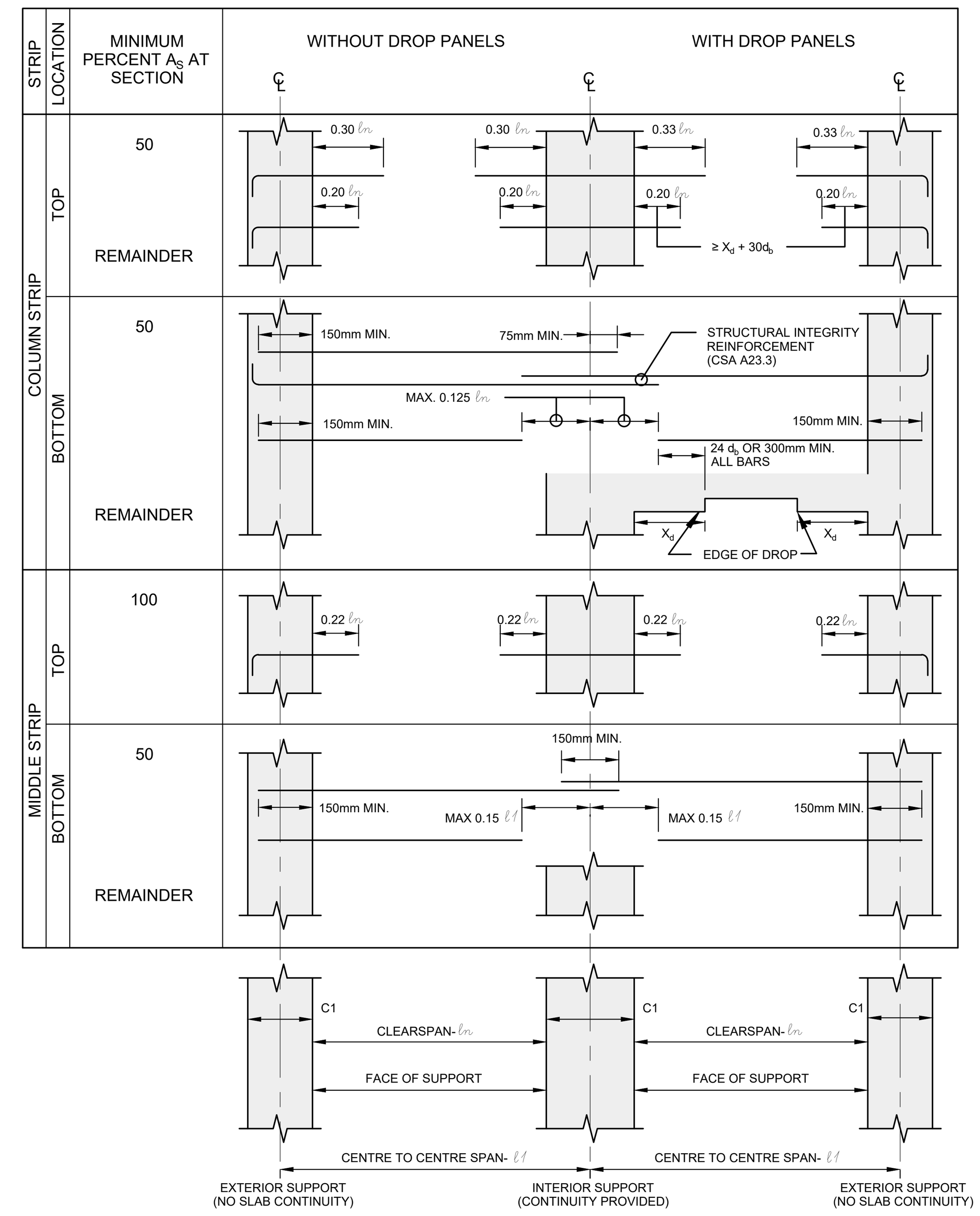
IMPERIAL: 10-15M 150/086 MEANS 10 BARS, SIZE 15M, TOP OF SLAB, 5- 15'-0" LONG / 5- 8'-6" LONG ALTERNATING (+HOOK LENGTH FOR TOP BARS AT SLAB EDGES)

PROVIDE HOOKS WHERE TOP BARS TERMINATE AT EDGES. PROVIDE HOOKS ON BOTTOM BARS WHERE NOTED AND AT ALL CANTILEVER ENDS.

3. PLACE BARS AS NOTED, IF NOT NOTED THEN FOLLOW REINFORCING STEEL MANUAL.

D03-3 MINIMUM LENGTH OF SLAB REINFORCEMENT

1. AT SLAB EDGES AND OPENINGS CARRY ALL TOP BARS TO 50mm (2") FROM SLAB EDGE AND PROVIDE STANDARD 90 OR 180 DEGREE HOOKS.
2. EXTEND BOTTOM BARS TO 50mm (2") FROM SLAB EDGES/OPENINGS.
3. EXTEND BOTTOM BARS MINIMUM 150mm (6") PAST ℄ OF SUPPORT AT ALL ENDS AND SINGLE SPANS SUPPORTED ON WALLS/BEAMS.
4. WHERE 150mm(6") EMBEDMENT IS NOT POSSIBLE PROVIDE STANDARD 90° HOOK LAID FLAT.
5. IN TWO-WAY SLABS WITHOUT BEAMS, MINIMUM LENGTH OF TOP/BOTTOM BARS IS TO BE AS PER REINFORCING STEEL MANUAL FOR STANDARD PRACTICE (CHAPTER 5 "DETAILING"). REFER ALSO TO TYPICAL CS/MS LAYOUTS.
6. COLUMN STRIP WIDTH ON EACH SIDE OF COLUMN ℄ IS AS SHOWN ON PLANS. REFER ALSO TO TYPICAL STRIP DETAIL.
7. PLACE STRUCTURAL INTEGRITY BARS WITHIN WIDTH OF COLUMN OR CAPITAL, IN ACCORDANCE WITH STRUCTURAL INTEGRITY STEEL TYPICAL DETAIL. PLACE OTHER BARS IN REMAINING WIDTH OF COLUMN STRIP.
8. PROVIDE CHAIRS AND BAR SUPPORTS IN ACCORDANCE WITH RSIC DETAILING MANUAL.
9. PLACE LONG AND SHORT BARS ALTERNATING.
10. PLACE BARS UNIFORMLY DISTRIBUTED EXCEPT
    A) PLACE AT LEAST 50% OF TOP BARS IN COLUMN STRIP WITHIN SUPPORT WIDTH PLUS SLAB THICKNESS EACH SIDE OF COLUMN FACE OR EDGE OF COLUMN CAPITAL.
    B) WHERE NOTED OTHERWISE ON PLAN.
11. BAR LENGTHS ARE AS SHOWN, UNLESS NOTED OTHERWISE ON PLAN.
12. DO NOT USE PRIMARY REINFORCING BARS AS CHAIR BARS, FABRICATOR TO PROVIDE CHAIRING BARS AS REQUIRED. IF NOT, E.O.R. OR E.O.R. REP. WILL HAVE THE PLACER REMOVE AND REINSTATE REQUIRED REINFORCING BAR AS REQUIRED ON SITE.



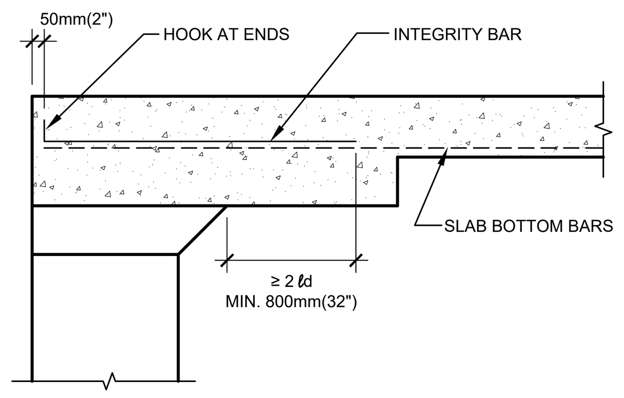
D03-4 INTEGRITY BARS (SEE REINFORCING PLANS)

1. PROVIDE ADDITIONAL INTEGRITY BARS IN THE BOTTOM OF SLABS, CENTRED ON EACH COLUMN.
2. INTEGRITY BARS SHALL BE AS INDICATED ON REINFORCING PLANS.
3. Ln IS THE LONGER OF ADJACENT CLEAR SPANS FROM COLUMN OR CAPITAL FACE.
4. COLUMN STRIP WIDTH ON EACH SIDE OF COLUMN ℄ IS AS SHOWN IN TYPICAL DETAIL, UNLESS NOTED OTHERWISE ON PLAN.
5. PLACE STRUCTURAL INTEGRITY BARS WITHIN WIDTH OF COLUMN OR CAPITAL, IN ACCORDANCE WITH STRUCTURAL INTEGRITY STEEL TYPICAL DETAIL. PLACE OTHER BARS IN REMAINING WIDTH OF COLUMN STRIP.
6. PROVIDE CHAIRS AND BAR SUPPORTS IN ACCORDANCE WITH ACI DETAILING MANUAL.
7. TERMINATE TOP BARS AT DISCONTINUOUS EDGE IN STANDARD 90 DEGREE HOOK, OR EXTEND INTO ADJACENT SLAB, IN ACCORDANCE WITH ONE-WAY SLAB DETAILS.
8. EXTEND BOTTOM BARS TO 75mm (3") OF DISCONTINUOUS EDGE WITH NO SPANDREL BEAMS, OR EXTEND 150mm (6") MINIMUM INTO SPANDREL BEAM. AT CONTINUOUS DROP EXTEND ALTERNATE BARS TO 75mm (3") OF EDGE AND 150mm (6") INTO CONTINUOUS DROP.
9. WHERE INTEGRITY BARS ARE NOT INDICATED, THEY SHALL BE AS FOLLOWS:

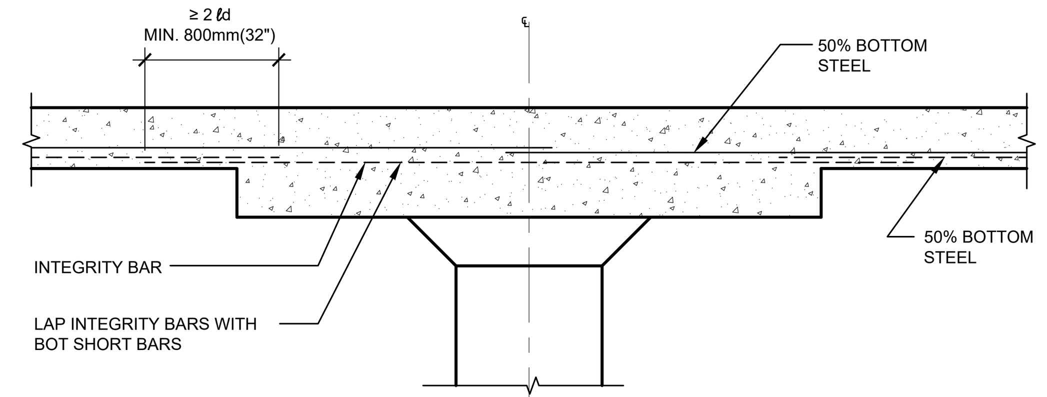
PROVIDE ADDITIONAL BOTTOM STEEL AT ALL COLUMNS U/N

INTERIOR COL.:	4-20M x 2000mm B.E.W.
EXTERIOR COL.:	3-20M x 1400mm BOT. + HOOK 3-20M x 2000mm BOT.
EXTERIOR CORNER COL.:	4-15M x 1400 BOT. + HOOK

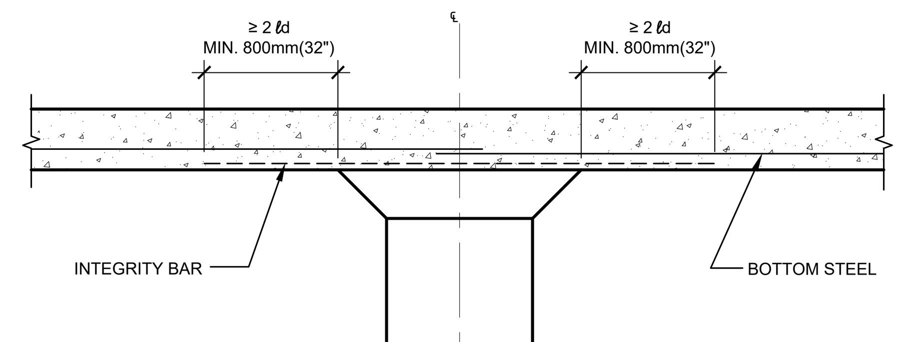
D03-4 INTEGRITY BARS (CONT'D)



DETAIL: EXTERIOR SUPPORT



DETAIL: SUPPORT: DROP PANEL



DETAIL: SUPPORT: NO DROP PANEL

D03-5 TYPICAL CAMBERING REQUIREMENTS

1. PROVIDE UPWARD SLAB AND BEAM CAMBERS AS INDICATED ON PLANS. CAMBER BOTH THE UNDERSIDE AND TOP OF CONCRETE IN A PARABOLIC PROFILE SO AS TO MAINTAIN THE STRUCTURAL THICKNESSES SHOWN. ADJUST CAMBERS AS DIRECTED BY CONSULTANT FOR "NON-TYPICAL BAYS" BASED ON SPAN AND SUPPORT CONDITIONS.
2. PRIOR TO CONCRETING VERIFY FORMWORK IN PLACE CAMBERS BY SURVEY AND REPORT THE RESULTS TO THE ARCHITECT. (REFER ALSO TO SPECIFICATIONS FOR SURVEYING REQUIREMENTS).
3. PLACE, SCREED AND FINISH SLAB CONCRETE TO SPECIFIED SLAB AND BEAM THICKNESSES.
4. CARRY OUT SURVEYING IN ACCORDANCE WITH THE SPECIFICATIONS. CAMBERS ON SUBSEQUENT FLOORS MAY BE ADJUSTED TO SUIT THE ACTUAL BEHAVIOUR OF FIRST TYPICAL FLOOR SLABS. REPEAT ITEMS 2 & 3 AS REQUIRED.
5. WHERE NOT NOTED ABOVE OR ON PLANS, CAMBER BEAMS FOR SPAN/500 (SPAN DEFINED AS CENTRE LINE TO CENTRE LINE OF SUPPORTS).
6. FOR SLAB CAMBERS ON UPPER FLOORS REFER TO PLANS.

D03-6 SLAB AND WALL OPENINGS

1. DISPLACE BARS LATERALLY AT SLAB OPENINGS. D O N O T C U T. PLACE HALF OF DISPLACED BARS EACH SIDE OF OPENING AND INFILL BETWEEN WITH BARS OF MATCHING SIZE & SPACING.
2. PROVIDE 1-15M TOP AND BOTTOM MINIMUM ADDITIONAL REINFORCEMENT AROUND SLAB OPENINGS 300x300 (12"x12") OR LARGER (UNLESS NOTED). EXTEND 24 BAR DIAMETER (600mm (24") MIN.) BEYOND CORNER.
3. PROVIDE THE FOLLOWING MINIMUM ADDITIONAL REINFORCEMENT AROUND WALL OPENINGS 300x300 (12"x12") OR LARGER (UNLESS NOTED). EXTEND 24 BAR DIAMETER BEYOND CORNERS EACH WAY.
   200(8") WALLS: 1-20M
   250(10") WALLS: 2-20M
   300(12") OR THICKER WALLS: 2-20M
4. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS TO THOSE INDICATED.
5. PROVIDE OPENINGS IN WALLS AND SLABS AS SHOWN ON STRUCTURAL DRAWINGS OR OTHERWISE REQUIRED BY VARIOUS TRADES. ENGINEER'S APPROVAL MUST BE OBTAINED FOR LOCATIONS AND SIZES OF OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS. ALL OPENINGS MUST BE FORMED BEFORE THE SLAB OR WALL IS POURED. DO NOT CUT ANY OPENINGS, AFTER CONCRETING, UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER.
6. PROVIDE SLEEVES IN SLABS OR WALLS FOR MECHANICAL PIPING AND AVOID OPENINGS WHERE POSSIBLE. ENGINEER'S APPROVAL MUST BE OBTAINED FOR ANY CONCENTRATION OF SLEEVES IN COLUMN BAND AND AROUND COLUMN. SLEEVING DRAWINGS MUST BE SUBMITTED FOR APPROVAL MINIMUM OF 4 WEEKS PRIOR TO POURING OF CONCRETE.

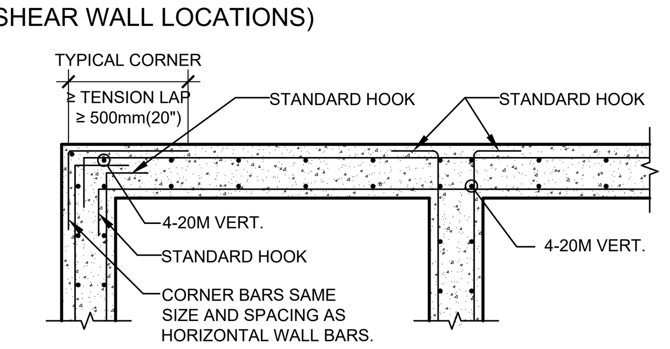
D03-7 MINIMUM WALL REINFORCING

UNLESS OTHERWISE NOTED PROVIDE:

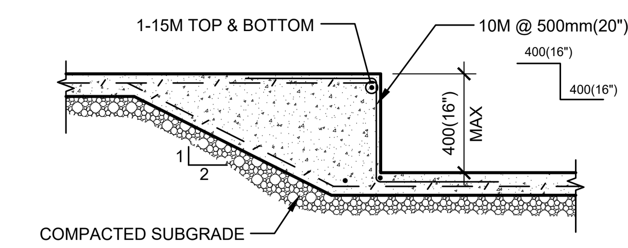
WALL THICKNESS	VERTICAL BARS (.0025Ag)	HORIZONTAL BARS (.0025Ag)	VERTICAL EACH END
150mm(6")	10M @ 250(10")	10M @ 250(10")	1-15M
200mm(8")	15M @ 400(16")	15M @ 400(16")	1-20M
250mm(10")	10M @ 300(12") E.F.	10M @ 300(12") E.F.	2-20M
300mm(12")	10M @ 250(10") E.F.	10M @ 250(10") E.F.	2-20M
350mm(14")	15M @ 450(18") E.F.	15M @ 450(18") E.F.	2-25M
400mm(16")	15M @ 400(16") E.F.	15M @ 400(16") E.F.	2-25M

D03-8 HORIZONTAL WALL STEEL DETAIL AT CORNERS U/N:

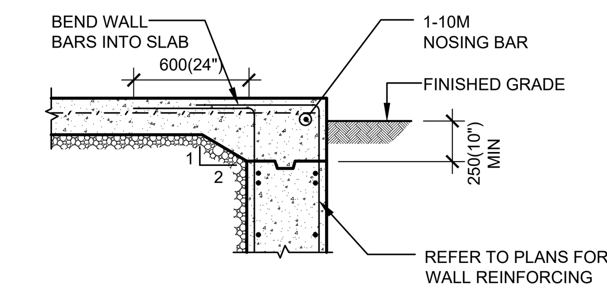
(NON-SHEAR WALL LOCATIONS)



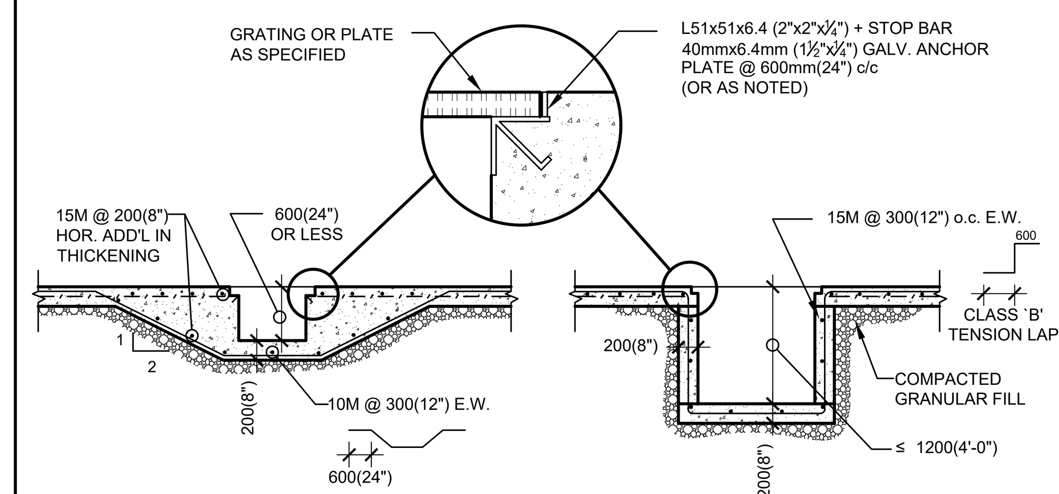
D03-9 SLAB ON GRADE ELEVATION CHANGE U/N:



D03-10 SLAB ON GRADE AT DOORS:

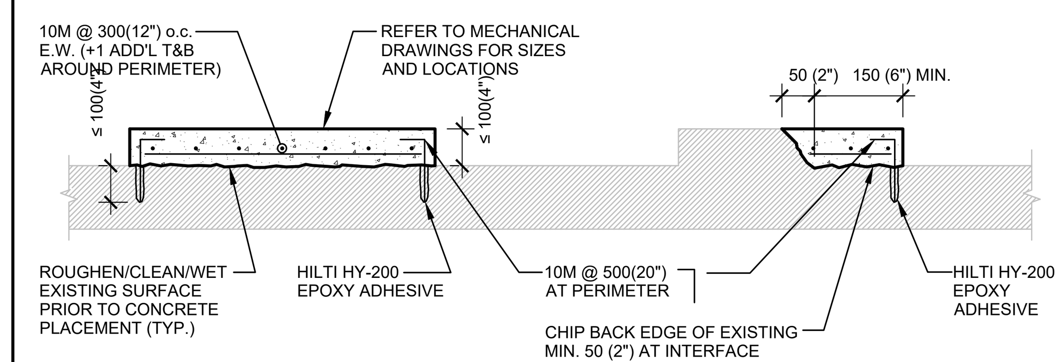


D03-11 PITS/TRENCHES, PADS AND CURBS U/N:



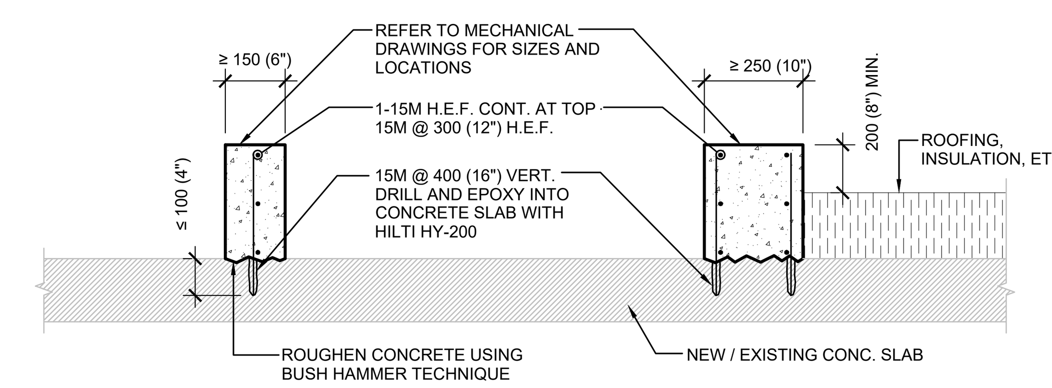
SHALLOW

DEEP

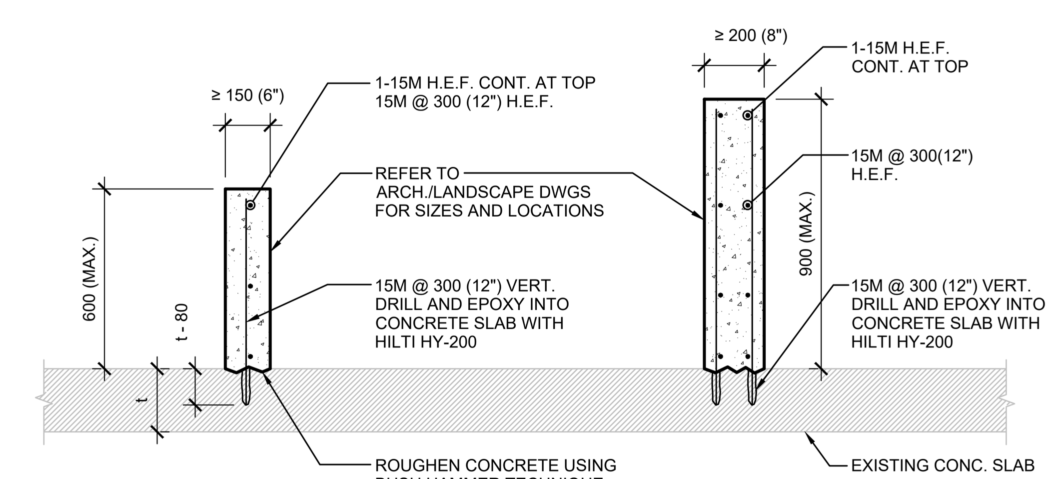


TYPICAL MECHANICAL PADS

TYPICAL MECHANICAL PAD EXTENSIONS TO EXISTING



TYPICAL MECHANICAL CURBS



TYPICAL CONCRETE CURBS AT EXISTING

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD

N

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A. NEVIN
2024/12/20
PROVINCE OF ONTARIO

BPA

PROJECT Mercedez-Benz Star Motors of Ottawa EXPANSION
400 West Hunt Club Rd, Ottawa, Ontario

DRAWING GENERAL NOTES AND DETAILS

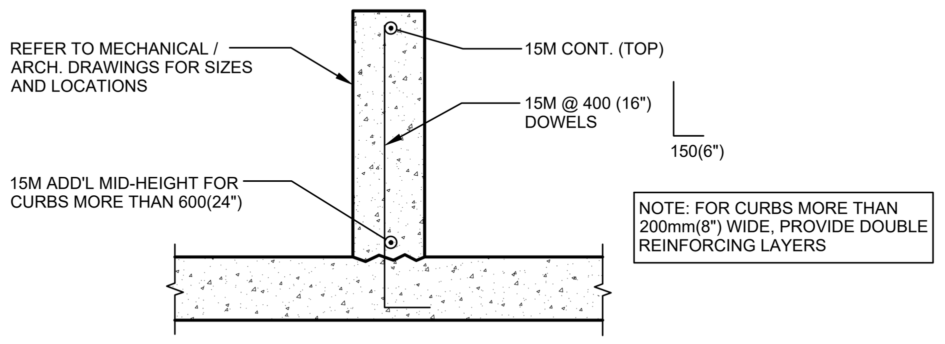
DRAWN:	A.D
DESIGNED:	R.N
DATE:	DEC. 2024
SCALE:	NTS
PROJECT No:	23-0083

DRAWING No. S001

2023-03-22 2:16:34 PM

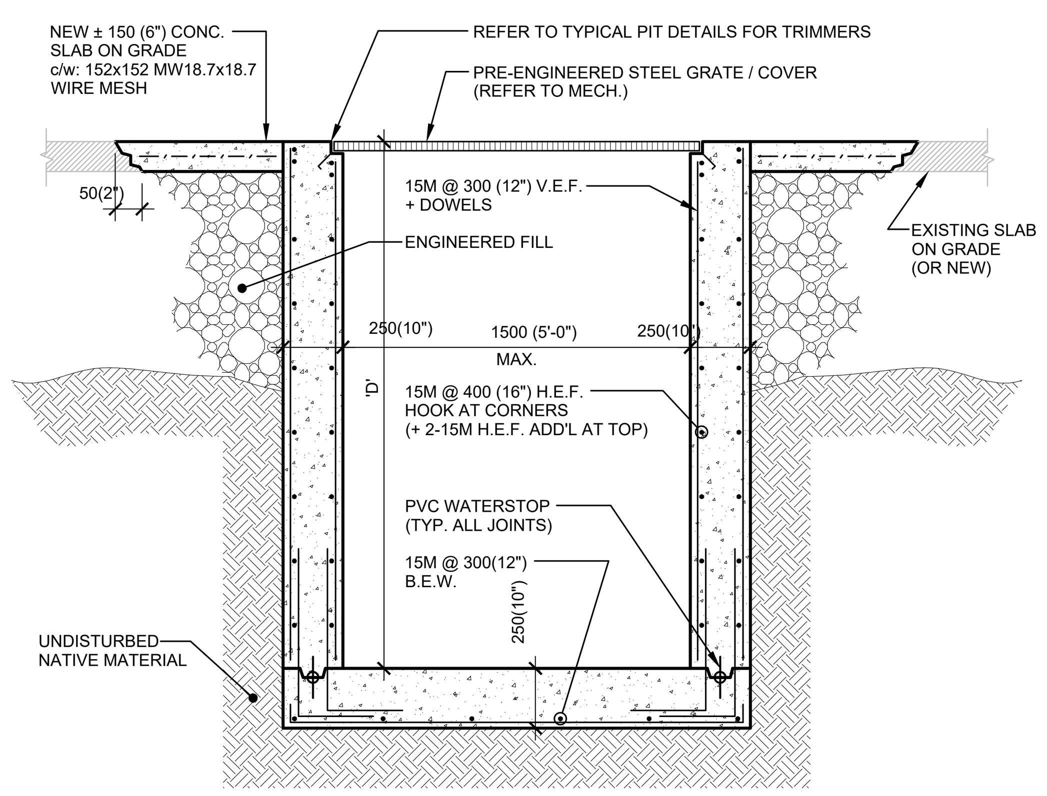
GENERAL NOTES AND DETAILS

D03-11 PITS/TRENCHES, PADS AND CURBS U/N CONT'D



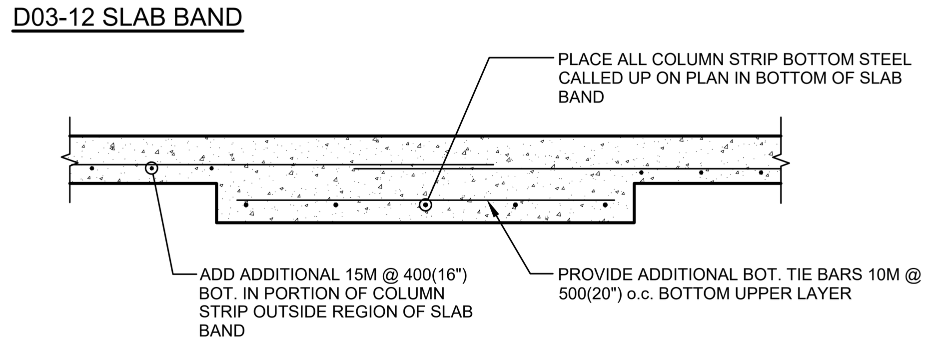
TYPICAL CONCRETE CURB (MAXIMUM 600mm(24") HIGH U/N)

- DETAILS NOTED ARE TO BE READ IN CONJUNCTION WITH PLANS / SPECIFICATIONS
- DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN ON DRAWINGS

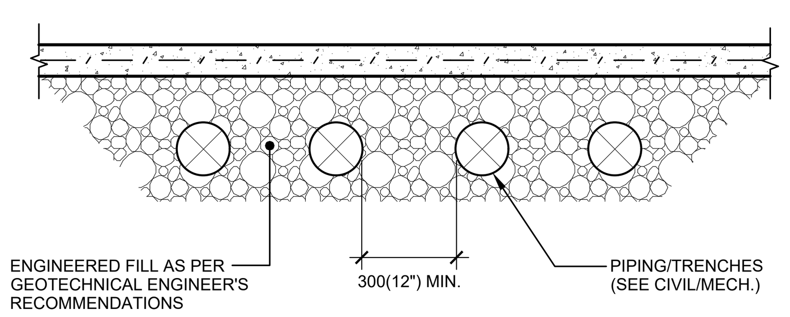


DEEP SUMP / MECH. PITS: 1200 ≤ D ≤ 3000 (4'-0" ≤ D ≤ 10'-0")

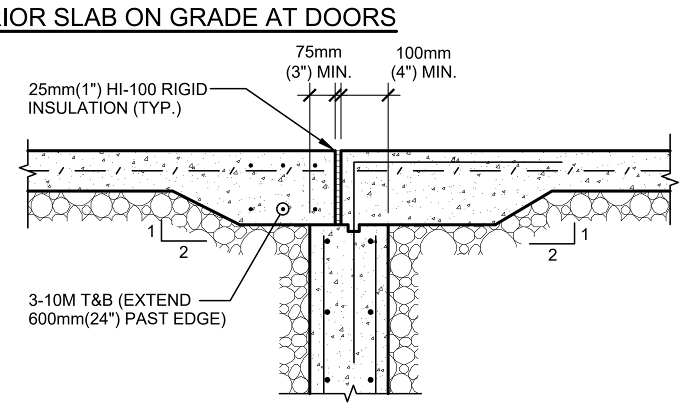
D03-12 SLAB BAND



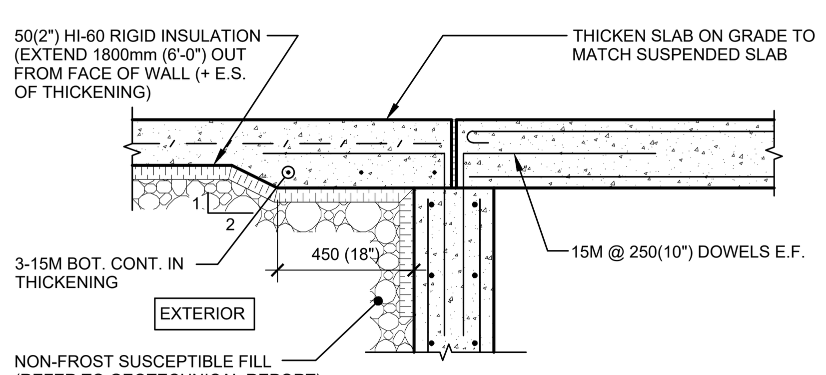
D03-13 UNDERSLAB/UNDERGROUND PIPING TRENCHES



D03-14 EXTERIOR SLAB ON GRADE AT DOORS

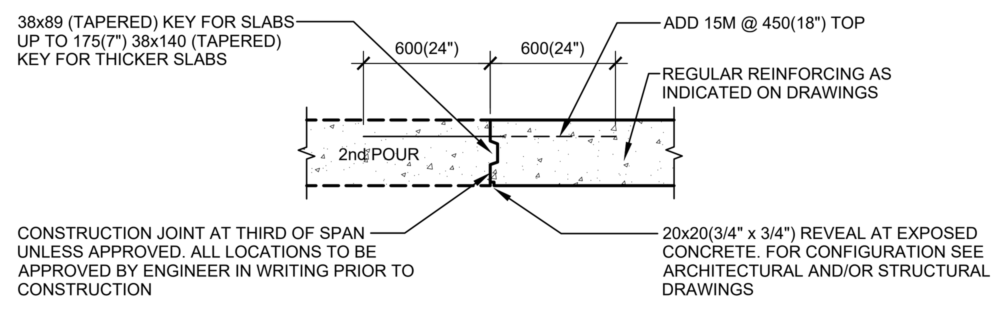


SLAB-ON-GRADE



SUSPENDED SLAB

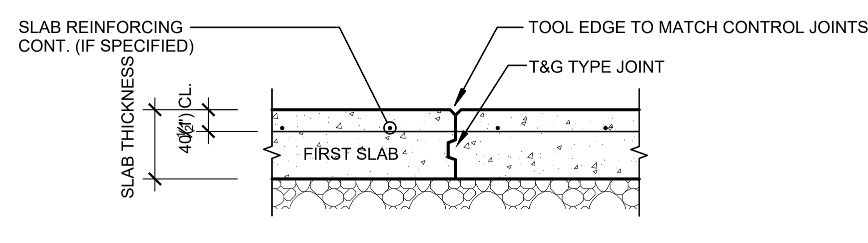
D03-15 CONSTRUCTION JOINTS



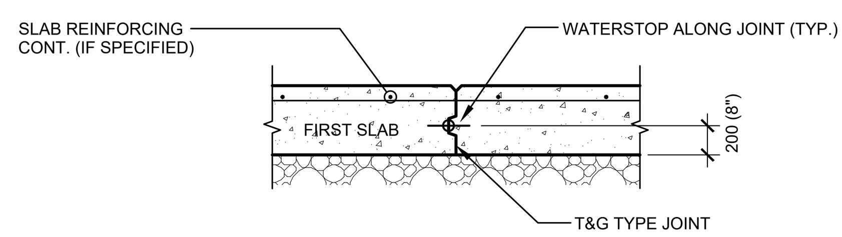
STRUCTURAL SLAB

NOTES:

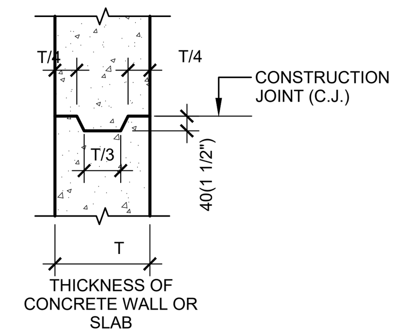
1. WHERE BARS ARE EPOXY COATED INCREASE BAR LENGTHS BY 20%.
2. FOR TRANSFER BEAMS OR BEAMS GREATER THAN 900(3'-0") DEEP, LOCATION AND DETAIL OF CONSTRUCTION JOINT TO BE APPROVED BY ENGINEER. IT SHALL BE ASSUMED JOINTS ARE NOT PERMITTED FOR TENDERING PURPOSES.
3. CONCRETE SLABS SHALL BE CONCRETED IN SECTIONS NOT EXCEEDING 560m² (6000 ft²) IN AREA. EACH POUR SHALL BE BOUNDED BY A VERTICAL BULKHEAD OR ABUTTING CONSTRUCTION. PROVIDE ADDITIONAL REINFORCING AS PER DETAILS ON TYPICAL DETAILS DRAWING.



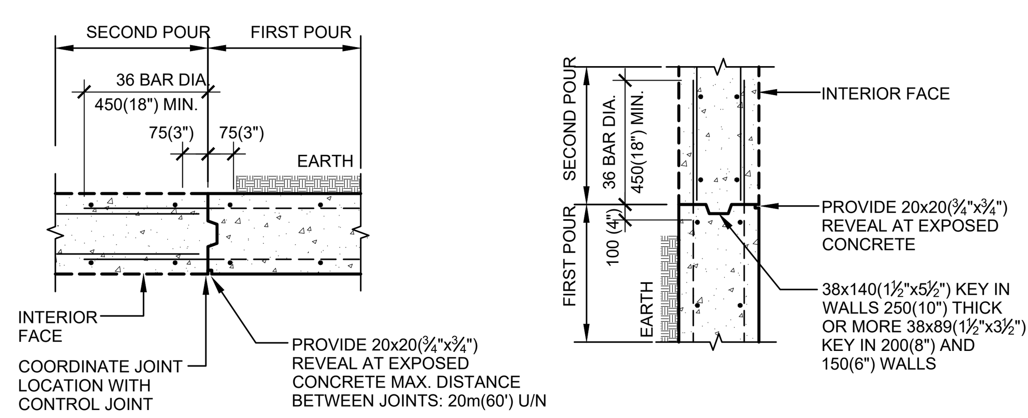
CONSTRUCTION JOINT IN SLAB ON GRADE
TONGUE AND GROOVE JOINT



CONSTRUCTION JOINT IN RAFT SLAB



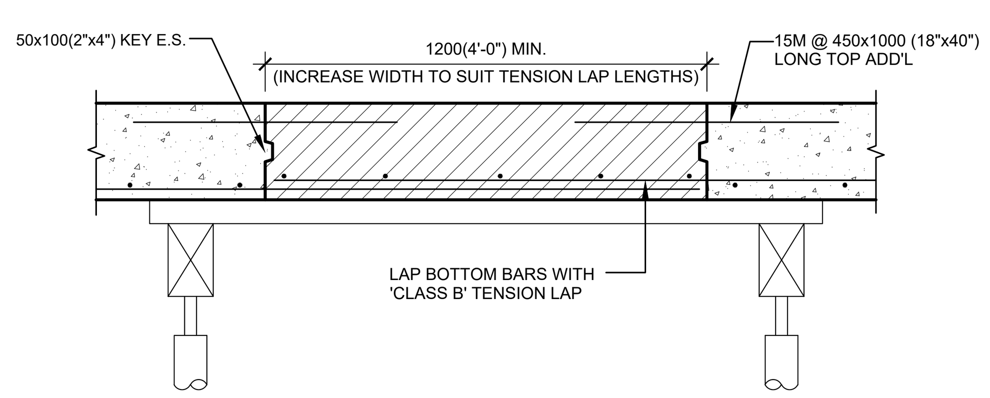
CONSTRUCTION JOINT KEY DETAIL



CONSTRUCTION JOINTS IN WALLS

VERTICAL JOINT — HORIZONTAL POUR

D03-16 CLOSURE STRIP (AS REQUIRED ON PLAN)



NOTES:

1. SLABS ON E.S. OF CLOSURE STRIPS TO BE CONCRETED FIRST.
2. ALL FORMS IN BAY CONTAINING CLOSURE STRIP SHALL REMAIN IN PLACE UNTIL THE CONCRETE IN THE CLOSURE STRIP IS >10 DAYS OLD.
3. CLOSURE STRIP SHALL BE CONCRETED 28 DAYS (OR MORE) AFTER ADJACENT PORTIONS OF THE SLAB.
4. AFTER REMOVAL OF THE FORMS RESHORE THE ENTIRE BAY & KEEP SHORES IN PLACE UNTIL CONCRETE IN CLOSURE STRIP IS 28 DAYS OLD. IF THE SLABS ARE TO BE SUBJECT TO CONSTRUCTION LOADS ADEQUATE SHORES SHALL BE PROVIDED AND REMAIN IN POSITION FOR SUCH TIME AS THE LOADS ARE IMPOSED.
5. FORMS & SHORES UNDER CLOSURE STRIP TO STAY IN POSITION UNTIL CONCRETE IN THE STRIP IS 28 DAYS OLD.
6. REINFORCING SHOP DRAWINGS REQUIRED TO SHOW REINFORCING DETAILING/ADDITIONAL BARS AT STRIPS.

D03-17 CONCRETE MIXES

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

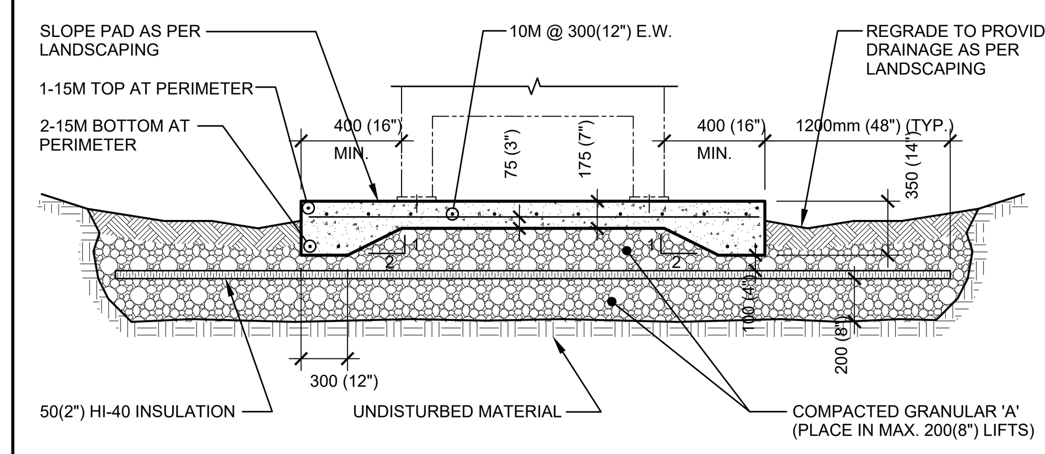
LOCATION	28 DAY STRENGTH	SLUMP (SEE NOTE 6)	CLASS OF EXPOSURE
SLAB ON GRADE (INTERIOR)	25 MPa		N
SLAB ON GRADE (EXTERIOR)	32 MPa		C-2
FOUNDATION WALLS (NOT IN SHEAR WALLS OR COLUMNS)	25 MPa		F-2
FOOTINGS	REFER TO SCHEDULES		
SHEAR WALLS	REFER TO SCHEDULES		
INTERIOR COLUMNS/PIERS	25 MPa		N
SUSPENDED SLABS	REFER TO PLANS		
PAVEMENT & WALKS	32 MPa		C-2
RETAINING WALLS	35 MPa		C-1
EXTERIOR LANDSCAPE WALL ELEMENTS	35 MPa		C-1

* 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:

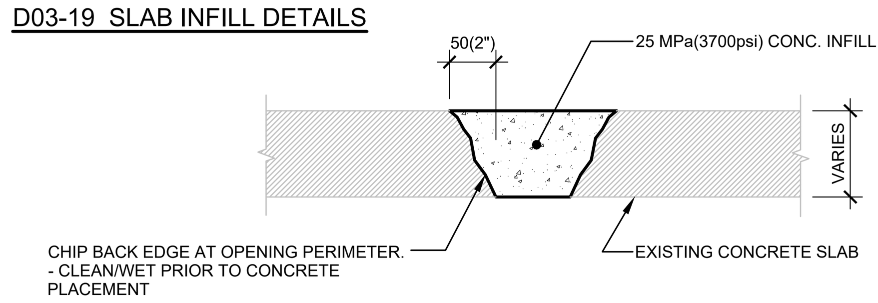
1. MINIMUM ALLOWABLE COMPRESSIVE STRENGTH SHALL BE 30 MPa (4400psi) AT 28 DAYS OF AGE, UNLESS OTHERWISE NOTED OR SHOWN.
2. IF BLENDED NORMAL PORTLAND CEMENT/CEMENTITIOUS HYDRAULIC SLAG IS USED EXCEPT FOR FLOOR MIXES. SLAG CONTENT SHALL NOT BE MORE THAN 25% OF TOTAL MASS OF CEMENT. TOTAL VOLUME OF CEMENT IN CONCRETE FLOOR MIXES SHALL BE 100% NORMAL PORTLAND CEMENT.
3. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED WILL PRODUCE CONCRETE OR SPECIFIED QUALITY AND YIELD AND THAT STRENGTH WILL COMPLY WITH CAN/CSA-A23.1-M06.
4. USE OF CALCIUM CHLORIDE NOT PERMITTED.
5. DO NOT CHANGE CONCRETE MIX WITHOUT PRIOR APPROVAL OF CONSULTANT. SHOULD CHANGE IN MATERIAL SOURCE BE PROPOSED, NEW MIX DESIGN TO BE APPROVED BY CONSULTANT.
6. UNLESS SPECIFIED, SLUMP TO BE AS REQUIRED TO FACILITATE CONSTRUCTION TECHNIQUES, PLACEMENT, AND REBAR CONGESTION.

D03-18 EXTERIOR EQUIPMENT PADS



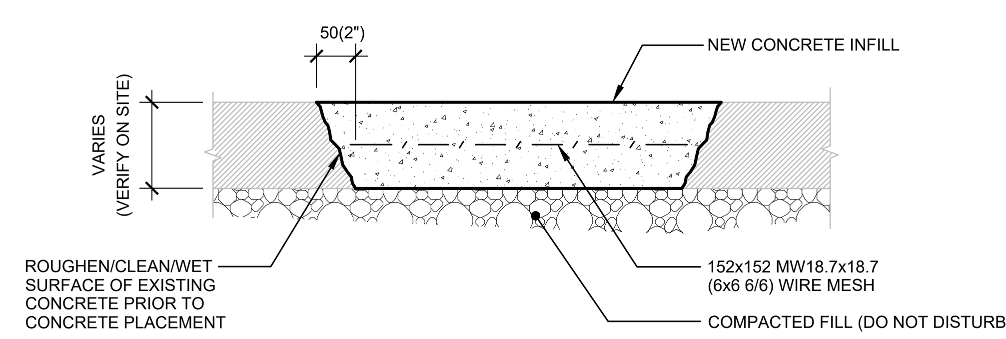
NOTE:
PROVIDE EXTERIOR PADS AS REQUIRED. REFER TO ARCH/LANDSCAPE DWGS FOR LOCATIONS/DIMENSIONS.

D03-19 SLAB INFILL DETAILS

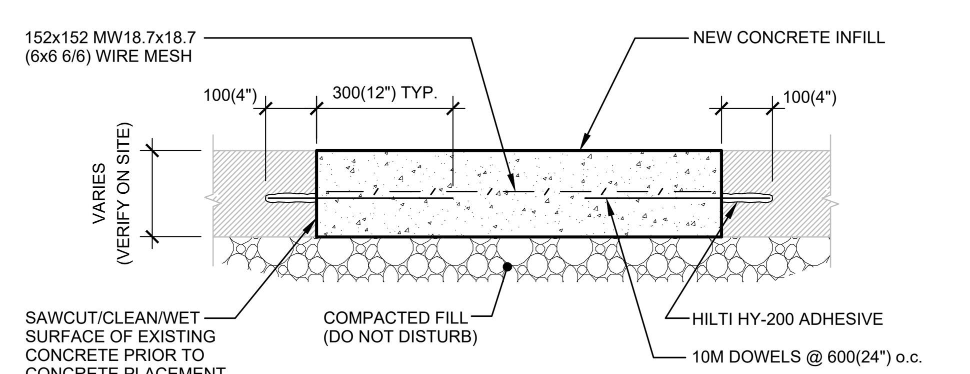


TYPICAL SLAB INFILL: OPENING < 300x300 (12"x12")

D03-20 SLAB ON GRADE REMOVAL/REINSTATEMENT

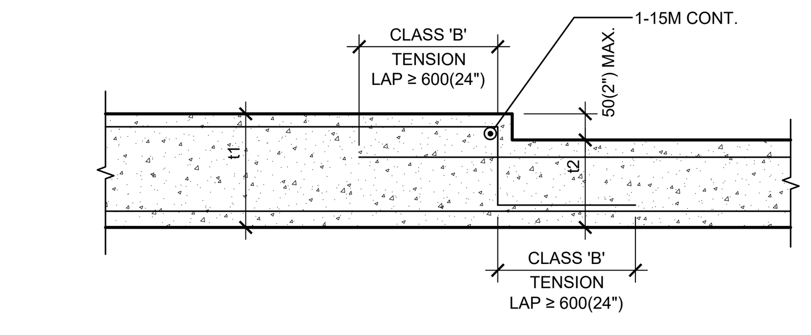


OPTION 1: NO DOWELS

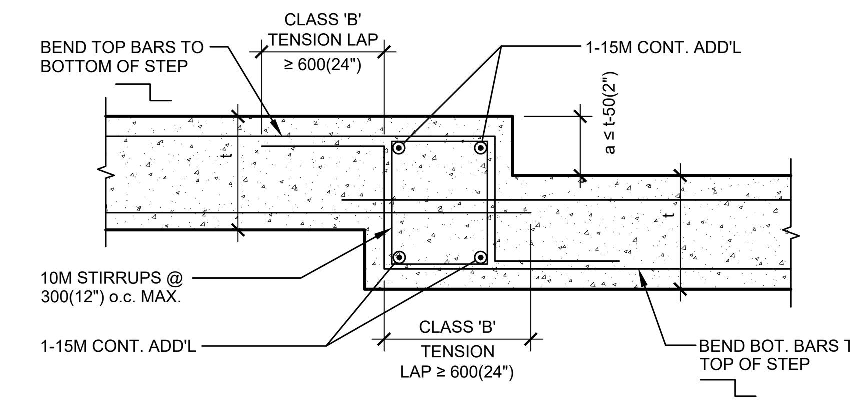


OPTION 2: DOWELS

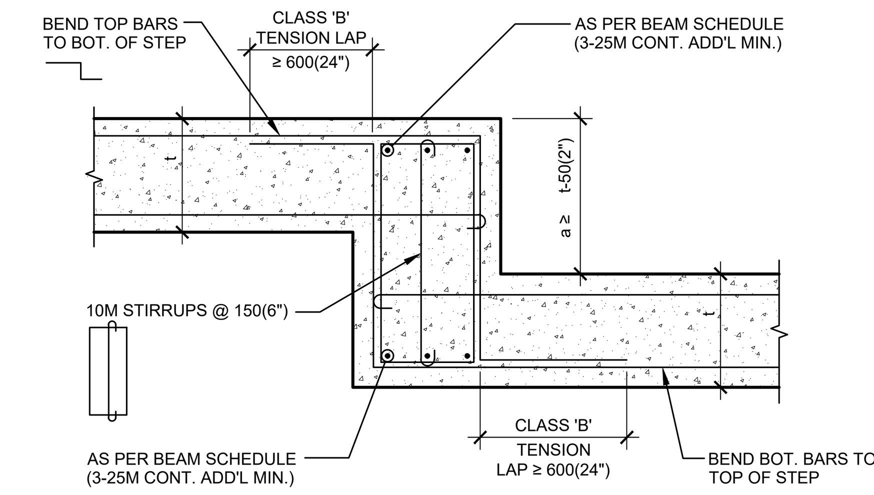
D03-21 CHANGE OF LEVEL IN REINFORCING SLAB (U/N)



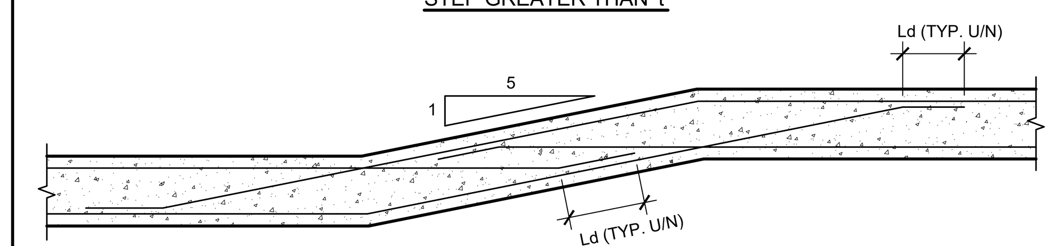
STEP WITH DIFFERENT SLAB THICKNESS



STEP SMALLER THAN 't'



STEP GREATER THAN 't'

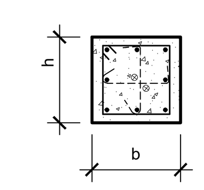


NOTE:
THESE DETAILS APPLY WHERE CONTINUOUS BARS ARE INTERRUPTED DUE TO CHANGE OF SLOPE IN SLAB UNLESS NOTED OTHERWISE ON THE DRAWINGS.

BREAKS IN SLOPED SLAB

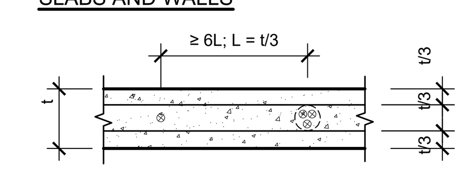
D03-22 EMBED CONDUIT AND PIPE

COLUMNS



1. CONDUIT PLACEMENT TO CONFORM TO CSA A23.1
2. CONDUIT AREA SHALL NOT EXCEED 1% OF THE GROSS AREA (bxh).
3. CONDUIT TO BE SECURED TO TIES. CONDUIT SHALL NOT BE TIED TO VERTICAL REBAR.
4. CONDUIT MAY ONLY BE PLACED IN COLUMN AFTER RECEIVING WRITTEN APPROVAL BY ENGINEER.
5. CONTRACTOR SHOULD ASSUME CONDUIT IS NOT PERMITTED TO BE PLACED IN COLUMN FOR PRICING PURPOSES.
6. CONDUIT MAY NOT BE PLACED IN SLABS OR COLUMNS UNLESS APPROVED BY ENGINEER. CONTRACTOR TO SUBMIT CONDUIT LAYOUT DRAWINGS A MINIMUM OF 4 WEEKS PRIOR TO CONCRETING.
7. CONDUIT NOT APPROVED BY ENGINEER SHALL BE REMOVED/RELOCATED AS DIRECTED BY ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

SLABS AND WALLS



1. CONDUIT SHALL BE PLACED IN THE MIDDLE THIRD OF THE SLAB OR WALL.
2. CONDUIT SHALL NOT BE TIED TO REBAR.
3. CONDUIT SHALL ALWAYS RUN PARALLEL OR PERPENDICULAR TO COLUMN LINES.
4. CROSSING OF CONDUIT SHALL BE DONE AT 90° ANGLES.
5. CONDUIT MAY NOT BE PLACED IN SLABS OR WALL UNLESS APPROVED BY ENGINEER. CONTRACTOR TO SUBMIT CONDUIT LAYOUT DRAWINGS A MINIMUM OF 4 WEEKS PRIOR TO CONCRETING.
6. CONDUIT NOT APPROVED BY ENGINEER SHALL BE REMOVED/RELOCATED AS DIRECTED BY ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD

N

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A. NEVIN
2024/12/20
PROVINCE OF ONTARIO

BPA

PROJECT
Mercedez-Benz
Star Motors of Ottawa
EXPANSION
400 West Hunt Club Rd,
Ottawa, Ontario

DRAWING
GENERAL NOTES AND DETAILS

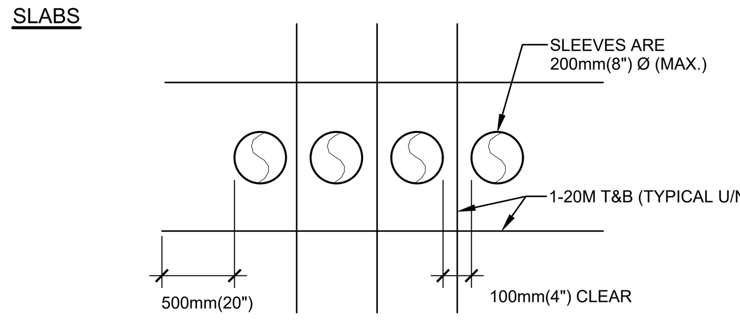
DRAWN:	A.D	DRAWING No.
DESIGNED:	R.N	S002
DATE:	DEC. 2024	
SCALE:	NTS	
PROJECT No:	23-0083	

2023-03-22 2:16:34 PM

GENERAL NOTES AND DETAILS

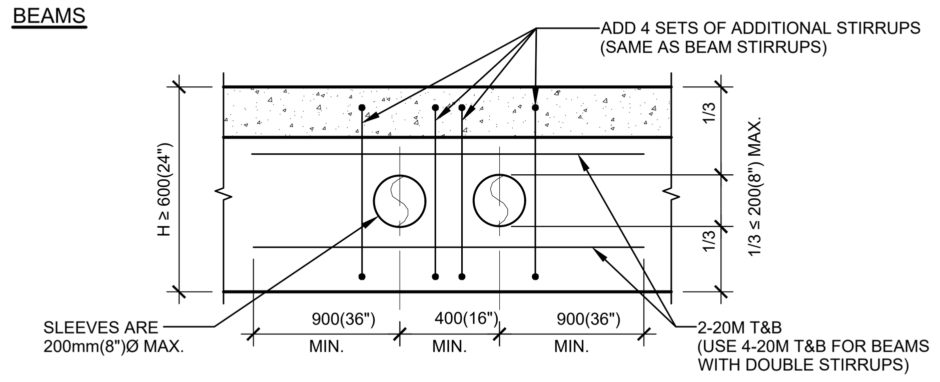
D03-23 SLEEVES THROUGH SLABS AND BEAMS

SLABS



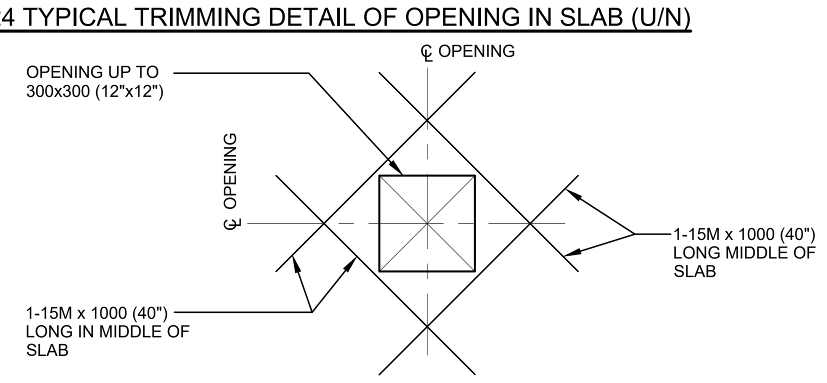
1. SLEEVES SHALL NOT BE PLACED NEAR COLUMNS, CAPITALS OR DROP PANELS, UNLESS ENGINEER IS NOTIFIED.
2. INCREASE BAR LENGTHS BY 20% FOR EPOXY REBAR.
3. INFORM ENGINEER IF ANY SLEEVES EXCEED 200mm (8")Ø.
4. ALL SLEEVES SHALL BE COORDINATED WITH SUB-CONTRACTORS AND BE INDICATED ON REBAR SHOP DRAWINGS.
5. SLEEVE MAY NOT BE PLACED IN SLABS OR WALLS UNLESS APPROVED BY ENGINEER. CONTRACTOR TO SUBMIT SLEEVE LAYOUT DRAWINGS A MINIMUM OF 4 WEEKS PRIOR TO CONCRETING.
6. SLEEVE NOT APPROVED BY ENGINEER SHALL BE REMOVED/RELOCATED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

BEAMS

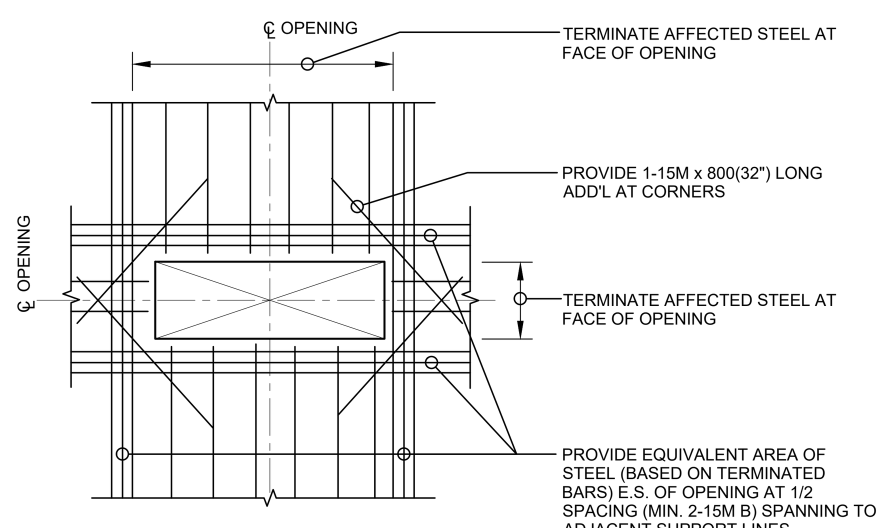


1. SLEEVES SHALL NOT BE PLACED IN BEAMS UNLESS ENGINEER IS NOTIFIED.
2. INCREASE BAR LENGTHS BY 20% FOR EPOXY REBAR.
3. INFORM ENGINEER IF ANY SLEEVES EXCEED 200mm(8")Ø.
4. ALL SLEEVES SHALL BE COORDINATED WITH SUB-CONTRACTORS AND BE INDICATED ON REBAR SHOP DRAWINGS.
5. SLEEVE MAY NOT BE PLACED IN SLABS OR WALLS UNLESS APPROVED BY ENGINEER. CONTRACTOR TO SUBMIT SLEEVE LAYOUT DRAWINGS A MINIMUM OF 4 WEEKS PRIOR TO CONCRETING.
6. SLEEVE NOT APPROVED BY ENGINEER SHALL BE REMOVED/RELOCATED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S OWN EXPENSE.

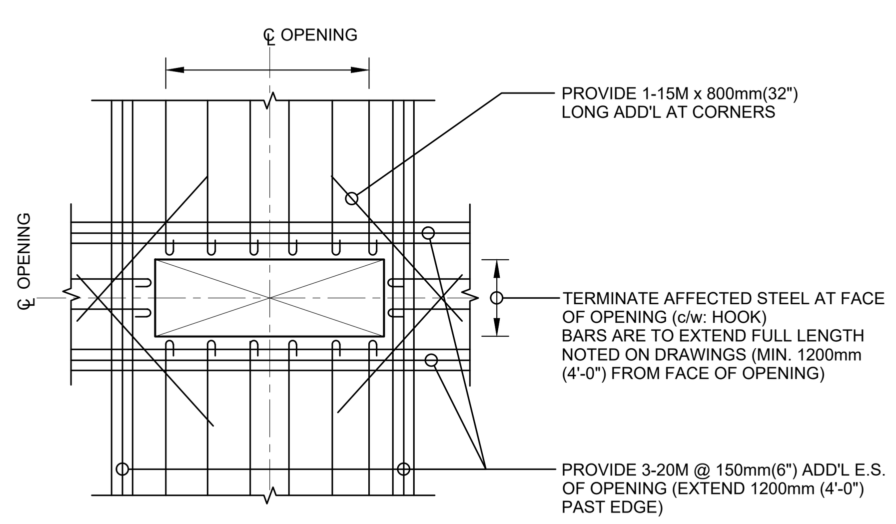
D03-24 TYPICAL TRIMMING DETAIL OF OPENING IN SLAB (U/N)



OPENINGS < 300x300(12"x12")

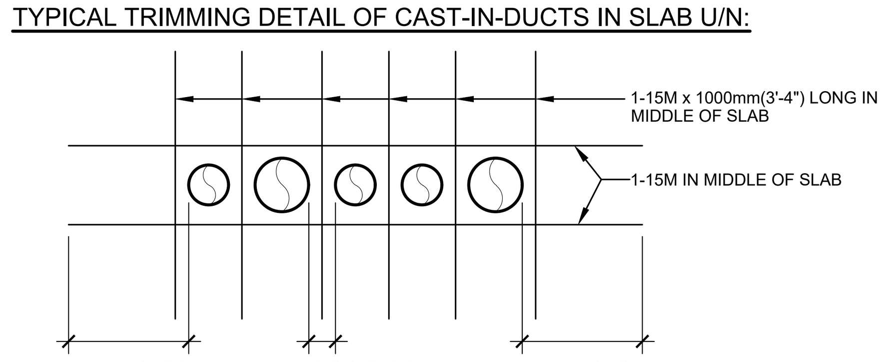


BOTTOM STEEL



TOP STEEL

TYPICAL TRIMMING DETAIL OF CAST-IN-DUCTS IN SLAB U/N:

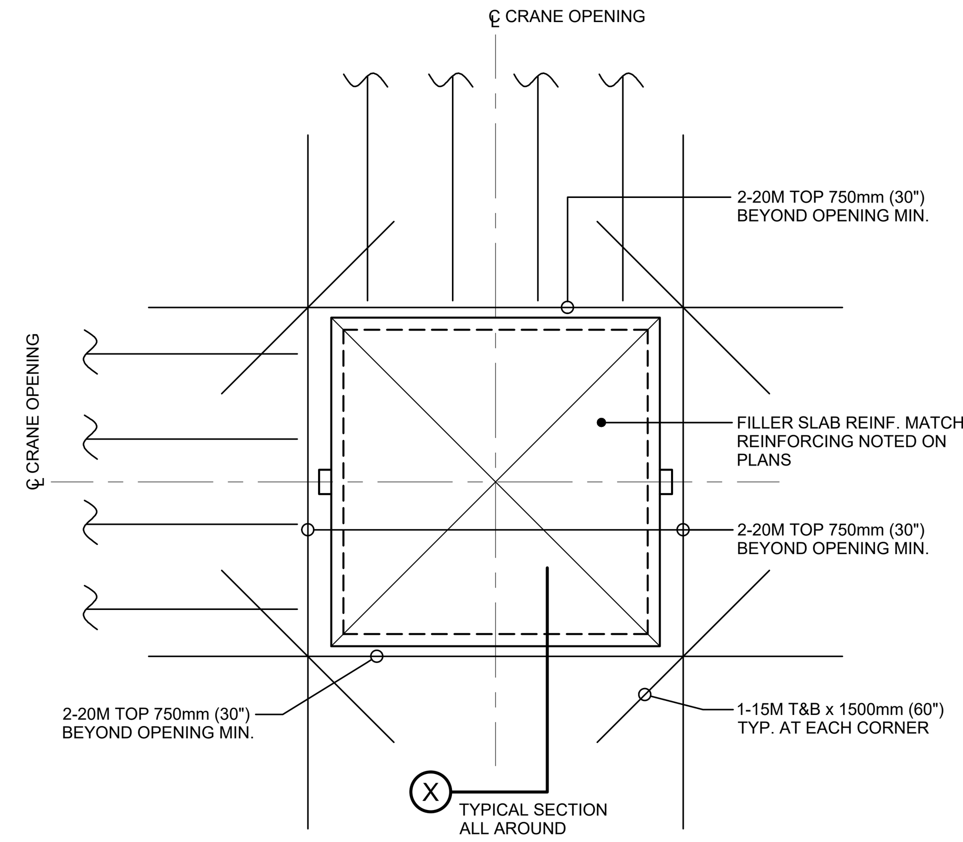


TRIMMING NOTES:

1. SEE STRUCTURAL PLANS FOR APPROXIMATE SIZE AND LOCATION OF OPENINGS AND ARCH./MECH./ELECT. DRAWINGS FOR EXACT DIMENSIONS.
2. IF OPENINGS LARGER THAN 300mm (1'-0") WIDE ARE REQUIRED AND ARE NOT SPECIFICALLY NOTED ON THE DRAWINGS THE ENGINEER MUST BE INFORMED SO PROPER DETAILS CAN BE SUPPLIED.
3. UNLESS OTHERWISE NOTED OPENINGS SMALLER THAN 200x200mm (8"x8") DO NOT REQUIRE TRIMMER BARS.

SLEEVES < 200mm(8")Ø

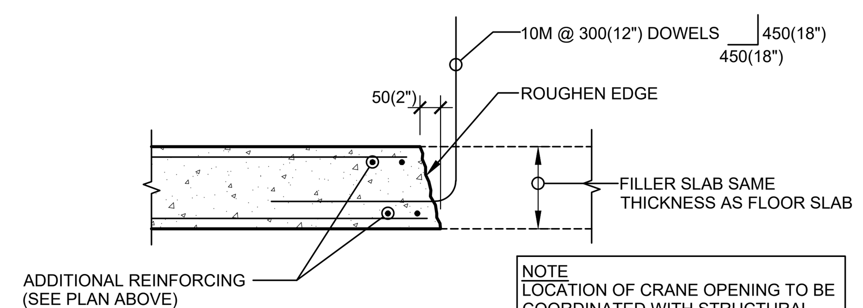
D03-25 TYPICAL CRANE OPENING (U/N)



PLAN

NOTES:

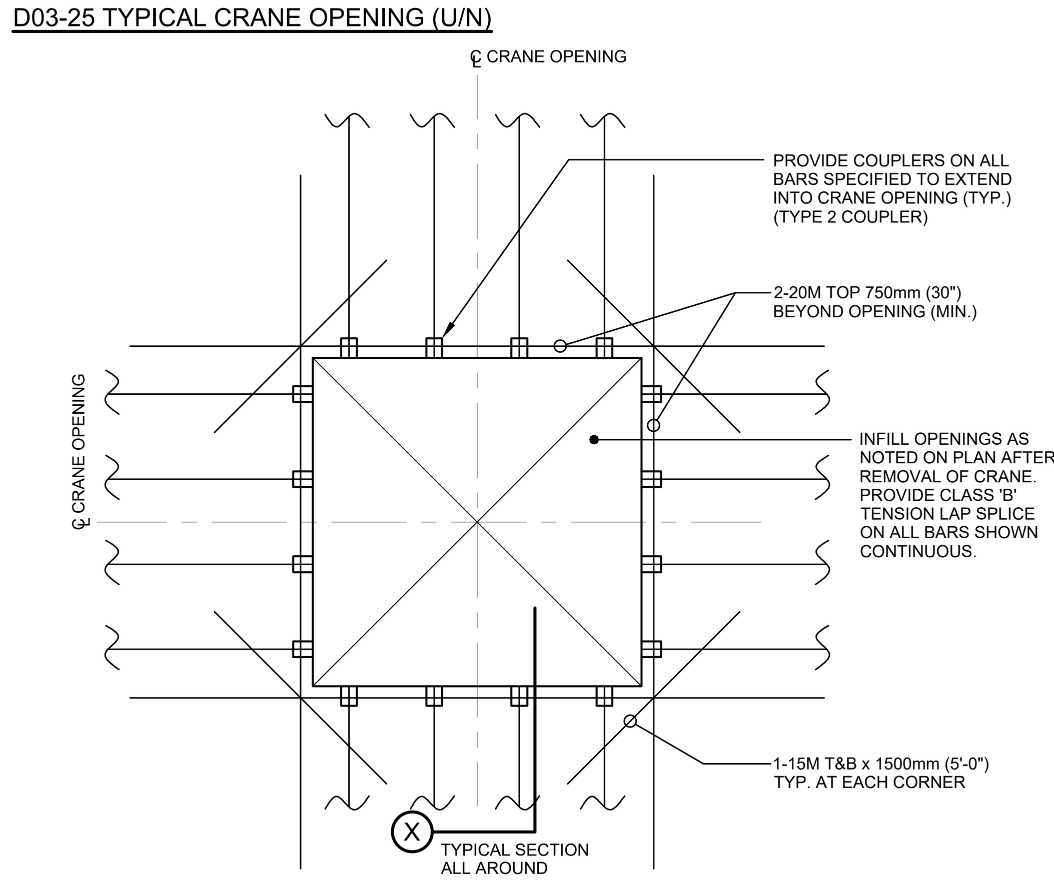
1. CUT BOTTOM REINFORCING STEEL RUNNING THROUGH CRANE OPENING.
2. PROVIDE ON EACH SIDE OF OPENING 1/2 OF AREA STEEL INTERRUPTED (CUT) BY THE CRANE OPENING 2-20M MIN. THESE BARS SHALL SPAN TO ADJACENT SUPPORTS.



SECTION X

NOTE
LOCATION OF CRANE OPENING TO BE COORDINATED WITH STRUCTURAL CONSULTANT BEFORE PROCEEDING.

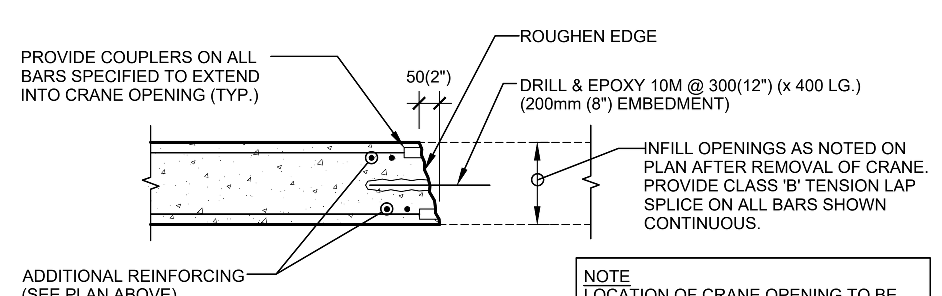
D03-25 TYPICAL CRANE OPENING (U/N)



PLAN

NOTES:

1. CUT BOTTOM REINFORCING STEEL RUNNING THROUGH CRANE OPENING.
2. PROVIDE ON EACH SIDE OF OPENING 1/2 OF AREA STEEL INTERRUPTED (CUT) BY THE CRANE OPENING 2-20M MIN. THESE BARS SHALL SPAN TO ADJACENT SUPPORTS

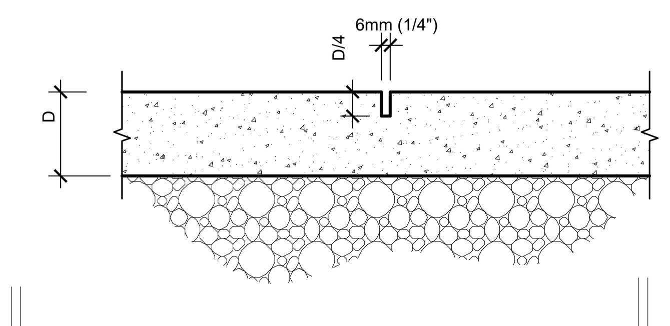


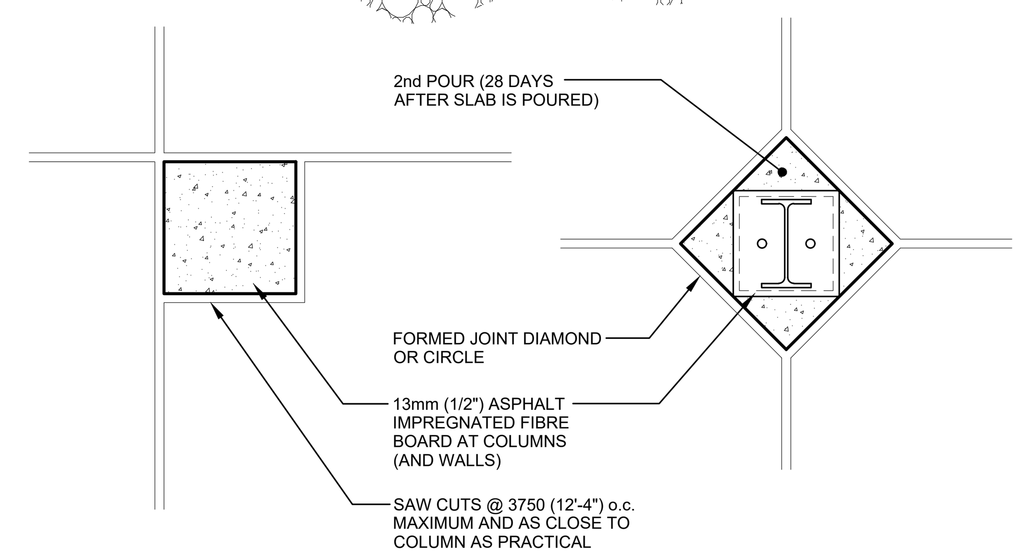
SECTION X

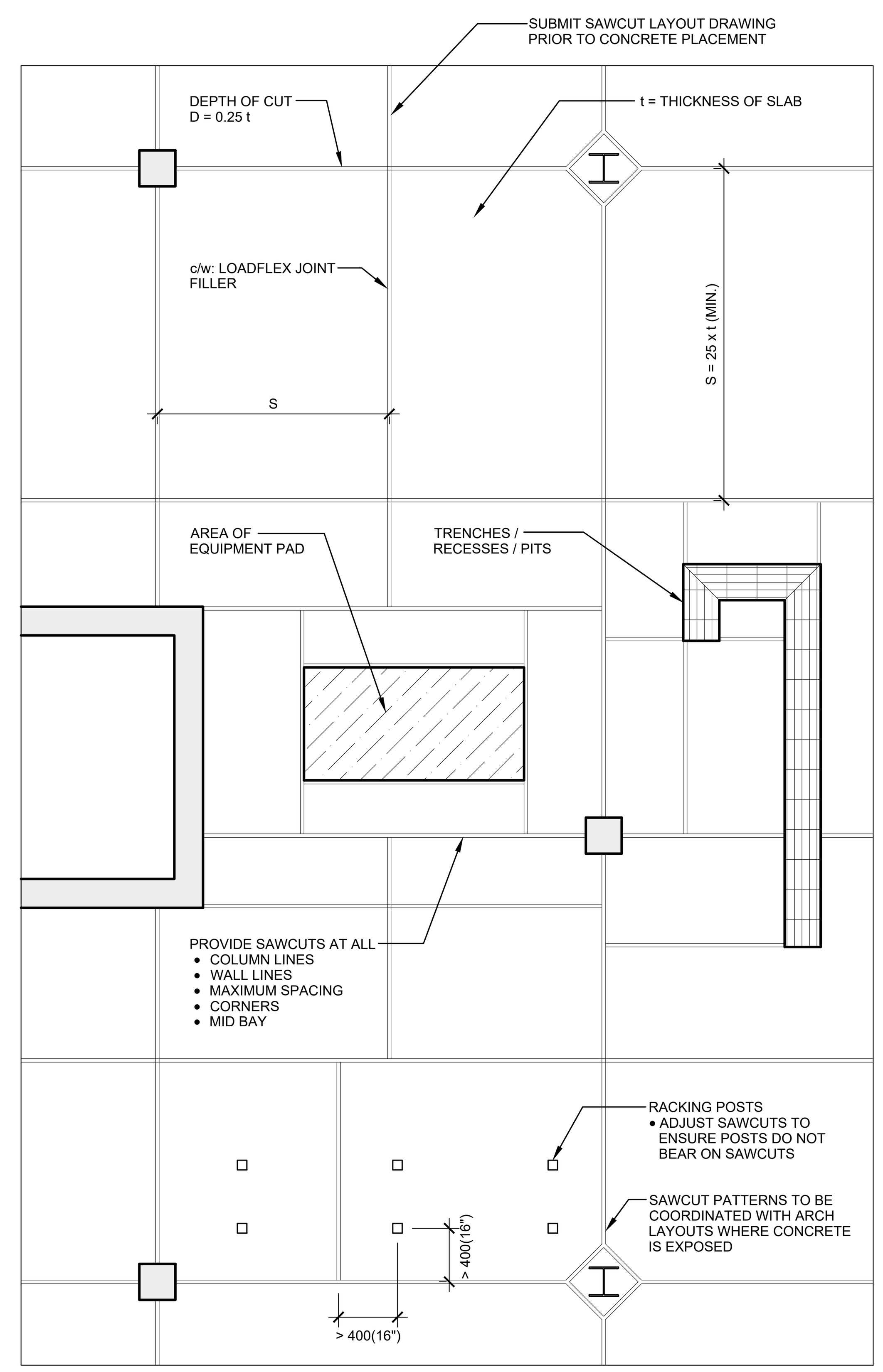
NOTE
LOCATION OF CRANE OPENING TO BE CO-ORDINATED WITH STRUCTURAL CONSULTANT BEFORE PROCEEDING.

D03-26 SLAB ON GRADE CONTROL JOINTS AND SAWCUTS

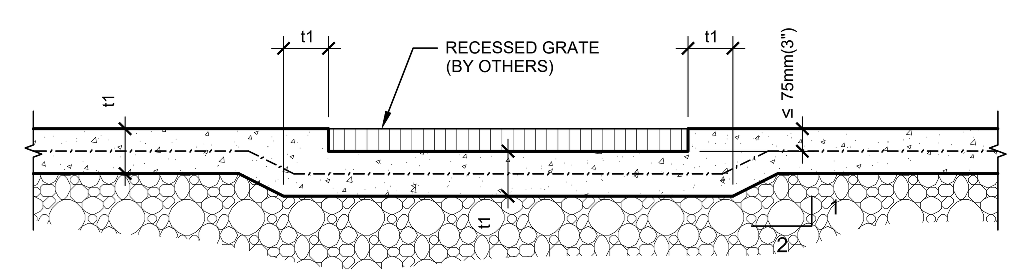
1. SLAB ON GRADE TO BE PLACED ON COMPACTED GRANULAR MATERIAL IN STRICT ACCORDANCE WITH THE SOILS REPORT. COMPACTION TESTS ON FILL MATERIAL TO BE CARRIED OUT PRIOR TO SLAB ON GRADE PLACEMENT.
2. PROVIDE APPROVED PRE-FORMED KEYED CONTROL JOINTS OR SAW CUTS (WITHIN 18 HOURS) AT MAXIMUM SPACING 3.75 m. CUT 1/3 DEPTH OF SLAB AND FILL WITH APPROVED MASTIC JOINT FILLER.
3. BREAK BOND AT SURFACES OF CONTACT WITH OTHER CONCRETE (USE ASPHALT WATERPROOFING, HEAVY DUTY POLYETHYLENE OR SAND LAYER).
4. PROVIDE 10mm ASPHALT IMPREGNATED FIBRE BOARD AND CAULKING AROUND ALL COLUMNS AND ALONG ALL WALLS.
5. PROVIDE POLY FIBRE REINFORCING TYPICAL UNLESS OTHERWISE NOTED.
6. PROVIDE CIRCULAR OR RECTANGULAR POCKETS AROUND COLUMNS. PLACE CONCRETE IN POCKET 4 WEEKS AFTER SLAB IS CONSTRUCTED.
7. DO NOT PLACE SLAB ON GRADE IN ONE CONTINUOUS POUR IN LENGTHS EXCEEDING 30.0m IN EITHER DIRECTION.
8. SUBMIT FOR REVIEW LAYOUT DRAWING WITH CONSTRUCTION JOINT LOCATIONS AND SAW CUT PATTERN.
9. MAINTAIN MINIMUM SPECIFIED THICKNESS AT ALL DEPRESSIONS AND CHANGES IN ELEVATIONS.
10. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATIONS OF ALL FINISHES AND DEPRESSIONS.





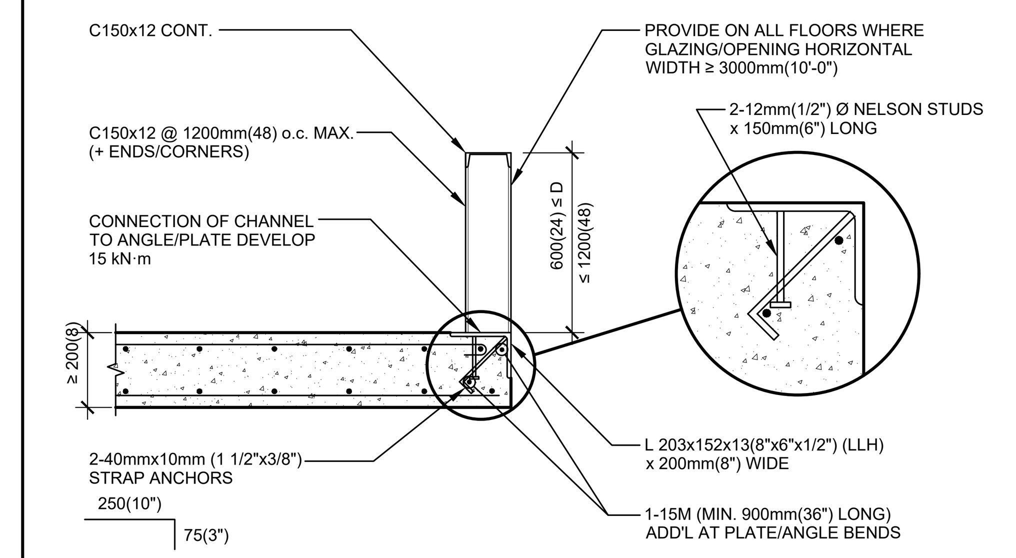


TYPICAL SAWCUT PATTERNS

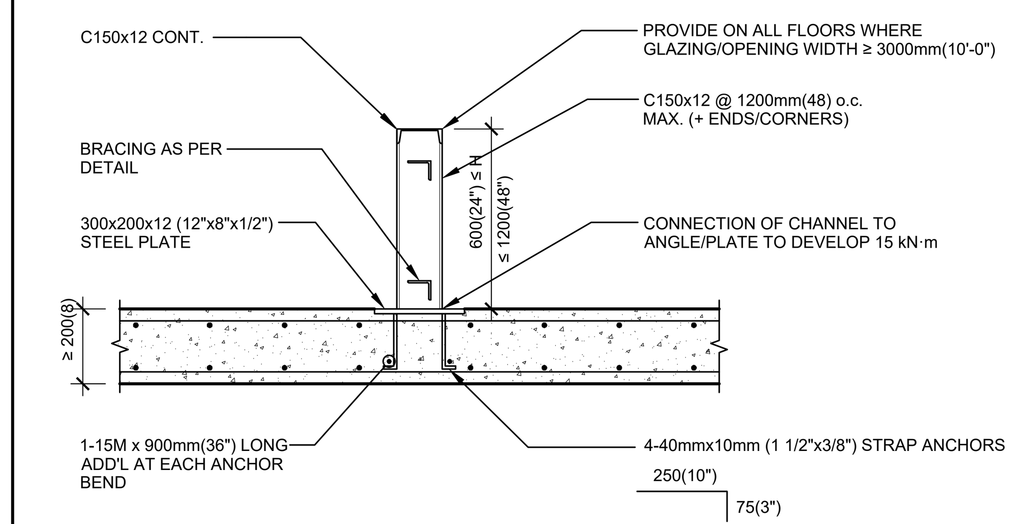


RECESSED FLOOR GRATES

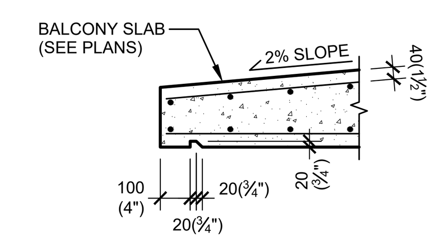
D03-27 SLAB EDGE DETAILS: PARAPETS / GLAZING



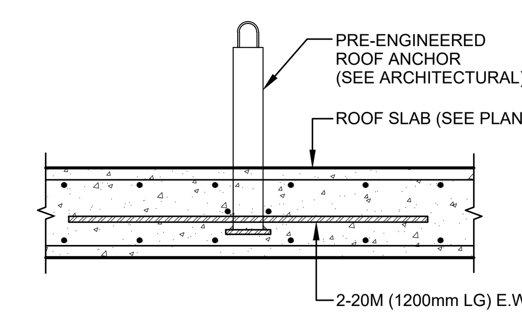
DETAIL: PARAPET/STRIP GLAZING AT CONCRETE EDGES



DETAIL: PARAPETS/STRIP GLAZING AT INTERIOR OF CONCRETE SLAB



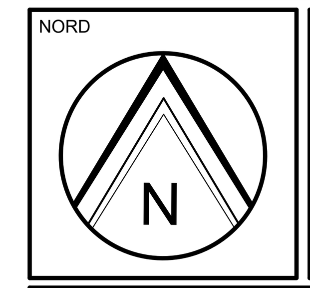
TYPICAL DETAIL:
BALCONY DRIP EDGE



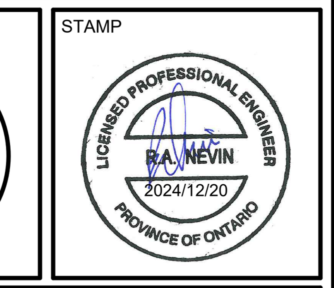
TYPICAL DETAIL: ADDITIONAL
REINFORCING AT ROOF ANCHORS

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD



STAMP



BPA

PROJECT
Mercedez-Benz
Star Motors of Ottawa
EXPANSION

400 West Hunt Club Rd,
Ottawa, Ontario

DRAWING
GENERAL NOTES AND DETAILS

DRAWN:	A.D	DRAWING No.
DESIGNED:	R.N	S003
DATE:	DEC. 2024	
SCALE:	NTS	
PROJECT No:	23-0083	

2023-03-22 2:16:34 PM

GENERAL NOTES AND DETAILS

FOUNDATION WALL SCHEDULE

MARK	DESCRIPTION	FLOOR	SIZE (W)	NOTES
FW1	TYPICAL EXTERIOR FOUNDATION WALL	FOOTING TO GROUND	300	10M @ 250 V.E.F. 10M @ 250 H.E.F. f'c = 25 MPa, F-2

NOTES:

1. CONCRETE STRENGTHS: U/N: (MIN.)
   PARKING AREAS: 35 MPa, C-1
   FROST WALLS (NO BASEMENT): 30 MPa, F-1
   AREAWELLS: 35 MPa, C-1
   RETAINING WALLS: 35 MPa, C-1
2. SEE SECTIONS / TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
3. ALL WALLS TO BE CONTINUOUS IN VERTICAL / HORIZONTAL BARS
   BASEMENT WALLS:
   HORIZONTAL BARS: CLASS 'B' TENSION LAP (BOT. BARS)
   VERTICAL BARS: CLASS 'B' TENSION LAP (TOP BARS)

   AREAWELL WALLS:
   HORIZONTAL BARS: CLASS 'B' TENSION LAP (TOP BARS)
   VERTICAL BARS: CLASS 'B' TENSION LAP (TOP BARS)

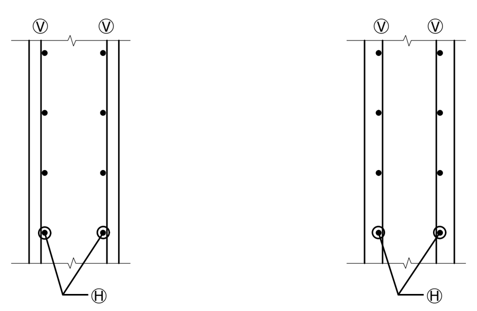
   RETAINING WALLS:
   HORIZONTAL BARS: CLASS 'B' TENSION LAP (TOP BARS)
   VERTICAL BARS: V.I.F. (HIGH SIDE): CLASS 'B' TENSION LAP (TOP BARS)
   V.O.F. (LOW SIDE): CLASS 'B' TENSION LAP (BOT. BARS)

   OTHER WALLS (NOT SHEAR WALLS / BASEMENT / AREAWELL):
   HOR. / VERT. BARS: CLASS 'B' TENSION LAP (BOT. BARS)

   ALL WALLS:
   HOOK ALL VERTICALS 90° INTO TOP OF SLAB AT TERMINATION
   V.I.F.: BEND IN 24 BAR Ø MIN. 450mm
   V.O.F.: BEND IN 48 BAR Ø MIN. 700mm
   PROVIDE STANDARD 90° HOOKS TO HORIZONTALS AT ALL CORNERS / INTERSECTIONS
4. PROVIDE SHEAR KEY AT TOP / BOTTOM OF ALL LIFTS.
5. PROVIDE DOWELS TO MATCH VERTICALS IN ALL FOOTINGS.
6. LAYERING OF BARS:

TYPICAL WALL

AREAWELL WALL



7. REFER TO S300 DRAWINGS FOR SHEAR WALLS / CORE WALLS. SCHEDULE IS FOR WALLS THAT ARE NOT PART OF SFRS.
8. REFER TO ARCH. FOR STEPS IN FOUNDATION WALLS.

FOOTING SCHEDULE

MARK	SIZE (LxWxT)	NOTES
F1	1500x1500x300	5-15M B.E.W. $q_{SLS} \geq$ 100 kPa $q_{ULS} \geq$ 150 kPa
F2	1700x1700x300	6-15M T&B E.W. $q_{SLS} \geq$ 100 kPa $q_{ULS} \geq$ 150 kPa
F3	600x300 DP	TYPICAL STRIP FOOTING 3-15M CONT. $q_{SLS} \geq$ 100 kPa $q_{ULS} \geq$ 150 kPa

NOTES:

1. ALL FOOTINGS TO BEAR ON SUITABLE BEARING STRATA AS APPROVED BY GEOTECHNICAL ENGINEER/IN ACCORDANCE WITH GEOTECHNICAL REPORT WITH MINIMUM BEARING PRESSURES NOTED IN TABLE.
2. PROVIDE MINIMUM 1500(5'-0") FROST COVER TO ALL FOOTINGS EXPOSED TO EXTERIOR CONDITIONS U/N ON DRAWINGS/GEOTECHNICAL REPORT.
3. CONCRETE STRENGTH: f'c = MPa(psi) U/N
4. TOPS OF INTERIOR FOOTINGS/WALL/PIERS TO BE A MINIMUM OF 300(12") BELOW THE TOP OF THE SLAB ON GRADE. STEP DOWN INTERIOR FOOTINGS TO EXTERIOR FOOTINGS AS REQUIRED. FINAL BEARING ELEVATIONS TO BE BASED ON GEOTECHNICAL REPORT DATA U/N.
5. FOOTING AND BOTTOM OF WALL ELEVATIONS TO BE ESTABLISHED FROM PLANS AND GEOTECHNICAL REPORT. WALLS/COLUMNS ARE TO BE TERMINATED SUCH THAT THEY ARE FOUNDED ON SUITABLE BEARING STRATA (WITH APPROPRIATE FROST COVER) APPROVED BY GEOTECHNICAL ENGINEER ON SITE. REFER ALSO TO GEOTECHNICAL REPORT.
6. FOOTINGS ARE TO BE LOWERED AS REQUIRED IN THE AREAS OF PITS/SHAFTS AT FOUNDATION LEVEL SUCH THAT THE U/S OF THE PIT/SHAFT IS AT THE TOP OF THE FOOTING. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ELEVATIONS/STEPS IN FOOTINGS. CONTRACTOR IS REQUIRED TO PREPARE FOOTING ELEVATION DRAWINGS PRIOR TO EXCAVATION.

PIER SCHEDULE

MARK	SIZE	REINFORCING
P1	450x450	8 - 20M VERT. + DOWELS 3 - 10M TIES @ 300 o.c.
P2	500 Ø	CANOPY 8 - 20M VERT. FULL HEIGHT 1 - 10M TIES @ 300

NOTES:

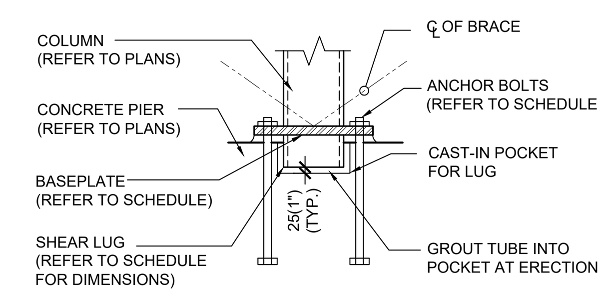
1. TOPS OF PIERS TO BE -300mm (-12") BELOW TOP OF SLAB ON GRADE (U.N.O.).
2. TOPS OF EXTERIOR PIERS TO BE AT +/- 150mm ABOVE FINISHED GRADE (REFER TO ARCH.)
3. PIERS DIMENSIONS ARE TO BE CENTRED ON SUPPORTED COLUMNS (U.N.O.). INCREASE CONCRETE SIZE TO SUIT FOUNDATION WALL OFFSETS.
4. VERTICAL BARS IN PIERS MAY BE LAPPED WITH COMPRESSION LAPS WHERE NO BRACE/MOMENT FRAMES ARE PRESENT. WHERE BRACE/MOMENT FRAMES ARE PRESENT VERTICAL BARS ARE TO BE EXTEND TO FULL HEIGHT ABOVE FOOTING TO TOP OF PIERS (NO LAPS ARE PERMITTED UNLESS APPROVED BY ENGINEER IN WRITING). CLASS 'B' TENSION LAPS (MIN. 1.5ld) MAY BE USED WHERE HEIGHT OF PIER EXCEEDS 2400 (8'-0").
5. CONCRETE STRENGTH: f'c = 25 MPa
   EXTERIOR OR EXTERIOR WALL: CLASS F-2
   INTERIOR: CLASS N
6. PROVIDE ADDITIONAL GROUP OF TIES AT TOP 150mm(6") SPACING

BASEPLATE SCHEDULE: SINGLE STOREY BUILDINGS

MARK	SIZE (LxWxT)	NOTES
B℄1	300x300x20	TYPICAL COLUMN 4 -16 Ø ANCHOR BOLTS 300 75
B℄2	400x400x20	BRACE FRAMES 4 -25 Ø SEISMIC HEADED ANCHORS SHEAR LUG 50mm(h) x 12.7mm(t) x 400(lg) 900
B℄3	400 Ø x 20mm THICK	4 -16 Ø A307 ANCHOR BOLTS 300 75

NOTES:

1. LENGTH OF ANCHORS IS EMBEDMENT LENGTH. FABRICATOR TO PROVIDE ADDITIONAL LENGTH AS REQUIRED FOR THREADS/TOLERANCES, ETC.
2. ALL ANCHORS TO BE CAST-IN (CONCRETE) OR GROUTED INTO PLACE (MASONRY).
3. PROVIDE MIN. 25(1") THICK GROUT BED BELOW BASE PLATE U/N.
4. SEISMIC SHEAR LUG DETAIL; (REFER TO SCHEDULE FOR LOCATIONS)



5. SEISMIC HEADED ANCHORS: FOLLOWING OUTLINES MINIMUM WASHER PLATE (c/w: NUT ABOVE/BELOW PLATE-TACK WELD NUT TO PLATE) SIZES FOR BOLT ENDS:

16mmØ: 52x52x16mm	(5/8"Ø: 2"x2"x5/8")
19mmØ: 63x63x16mm	(3/4"Ø: 2 1/2"x2 1/2"x5/8")
25mmØ: 76x76x20mm	(1"Ø: 3"x3"x3/4")
28mmØ: 82x82x20mm	(1 1/8"Ø: 3 1/4"x3 1/4"x3/4")
32mmØ: 89x89x20mm	(1 1/4"Ø: 3 1/2"x3 1/2"x3/4")
38mmØ: 102x102x20mm	(1 1/2"Ø: 4"x4"x3/4")

6. ANCHOR BOLT EMBEDMENT LENGTHS HAVE BEEN DEVELOPED IN ACCORDANCE WITH CAN/CSA A23.3-04 CLAUSES 7.1.4, ANNEX D, 12.2, AND 21.2.7. DEPTHS ARE BASED ON MINIMUM EMBEDMENT AND THE DEVELOPMENT OF THE PIER REINFORCING STEEL IN TENSION ABOVE THE CONE OF FAILURE CREATED BY THE BOLT HEAD.

STEEL COLUMN SCHEDULE

MARK	SIZE	NOTES
C1	HSS 152 x 152 x 6.4	TYPICAL INTERIOR COLUMN CLASS 'C' A500

NOTES:

1. REFER TO PLANS FOR ELEVATIONS AND ORIENTATIONS.
2. ALL HSS COLUMNS TO BE CLASS 'C' A500.
3. CONTRACTOR TO COORDINATE LENGTHS OF COLUMNS BEARING AT PIERS AND INTERIOR FOOTINGS.

REQUIRED SUBMITTALS

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

ITEM	REQ'D SUBMITTAL	ENGINEER'S STAMP REQ'D	NOTES
REBAR SHOP DRAWINGS	YES	NO	
CONCRETE MIX DESIGNS	YES	NO	
MASONRY GROUT MIX DESIGN	NO	NO	
BLOCK MILL REPORT	NO	NO	
STRUCTURAL STEEL SHOP DRAWINGS	YES	YES	FOR CONNECTIONS / OWSJ ONLY
I-SPAN JOIST SHOP DRAWINGS	NO	YES	
ENGINEERED LUMBER / WOOD TRUSSES	NO	YES	
MISCELLANEOUS STEEL SHOP DRAWINGS	YES	YES	STAMP FOR STAIRS, LADDERS AND GUARDS
STEEL DECK SHOP DRAWINGS	YES	YES	
FALL ARREST ANCHORS	NO	YES	
SEISMIC RESTRAINT OF NON-STRUCTURAL ITEMS	YES	YES	
STEEL STUDS	YES	YES	
PRECAST CONCRETE	NO	YES	

TESTING / PERIODIC REVIEW / INSPECTION

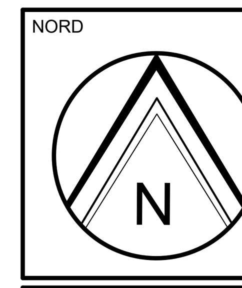
THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

ITEM	REQ'D	COMMENTS
SOIL BEARING CAPACITY	YES	BY SOILS ENGINEER
REINFORCING STEEL PLACEMENT	YES	INSPECT FINAL PLACEMENT
CONCRETE COMPRESSIVE TESTS	YES	MIN. 2 SETS PER 100 CUBIC METRES
CONCRETE SLUMP	YES	
STRUCTURAL STEEL BOLTING	YES	INSPECT ALL FIELD WELDS
GENERAL STEEL REVIEW	NO	
STRUCTURAL STEEL WELDING	YES	WELDING INSPECTOR TO REVIEW ALL FIELD WELDS
MORTAR CUBES	YES	

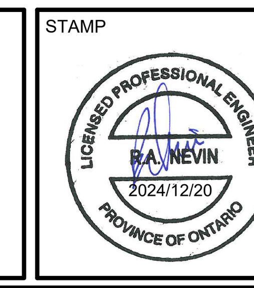
GENERAL CONTRACTOR TO NOTIFY EOR 48 HRS PRIOR TO ANY REQUIRED REVIEW.

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD



STAMP



BPA

PROJECT
Mercedez-Benz
Star Motors of Ottawa
EXPANSION

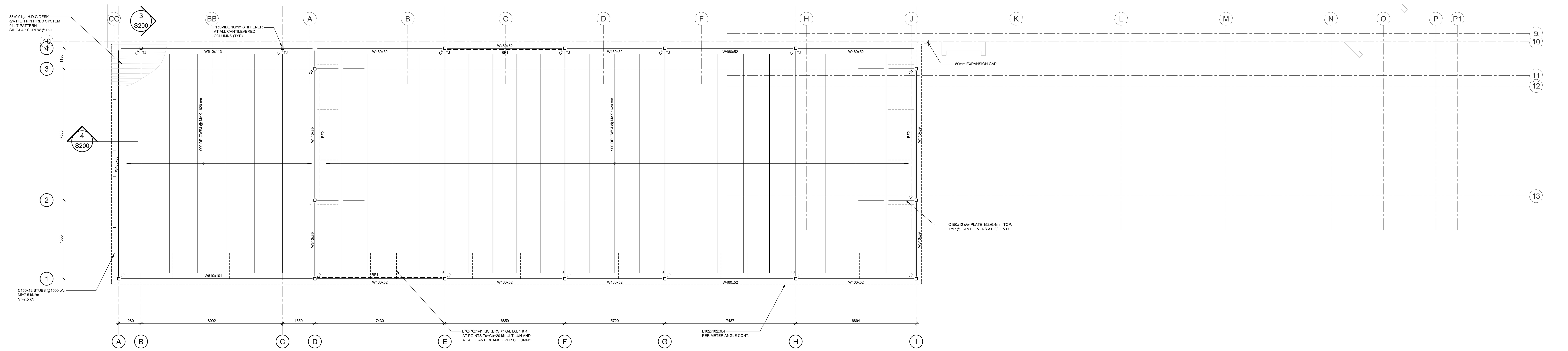
400 West Hunt Club Rd,
Ottawa, Ontario

DRAWING
SCHEDULES

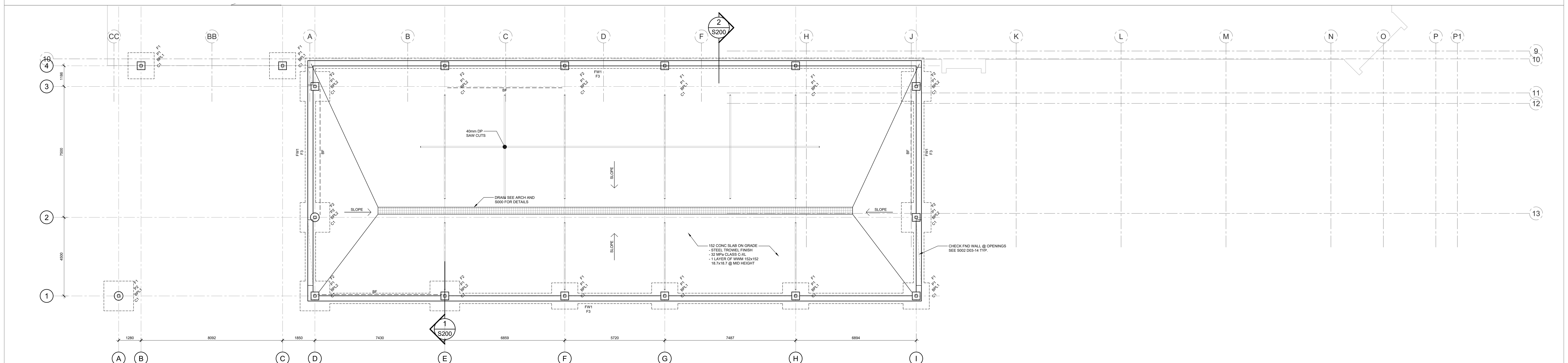
DRAWN:	A.D
DESIGNED:	R.N
DATE:	DEC. 2024
SCALE:	NTS
PROJECT No:	23-0083

DRAWING No.
S004

2023-03-22 2:16:34 PM



ROOF PLAN
SCALE: 1:75



FOOTING/ FOUNDATION PLAN
SCALE: 1:75

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD

N

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A. NEVIN
2024/12/20
PROVINCE OF ONTARIO

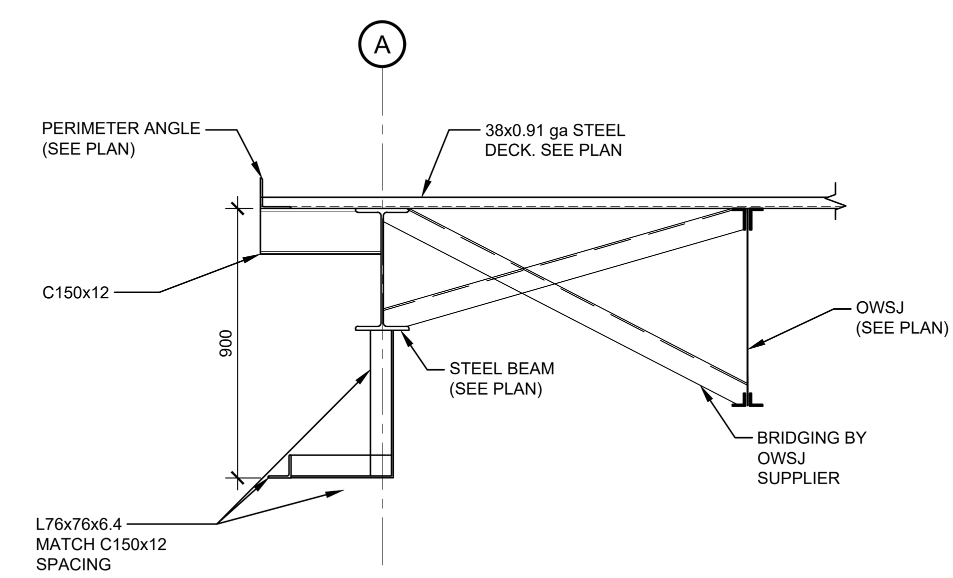
PROJECT
Mercedez-Benz
Star Motors of Ottawa
EXPANSION
400 West Hunt Club Rd,
Ottawa, Ontario

DRAWING
PLAN VIEW

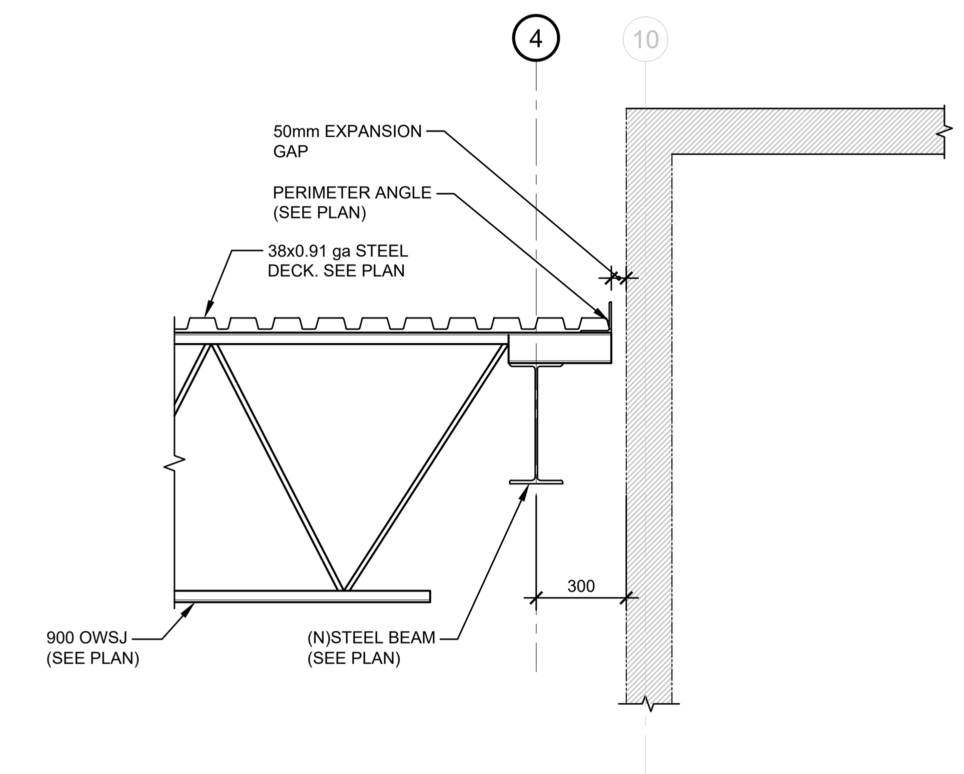
DRAWN:	A.D
DESIGNED:	R.N
DATE:	DEC. 2024
SCALE:	NTS
PROJECT No:	23-0083

DRAWING No.
S100

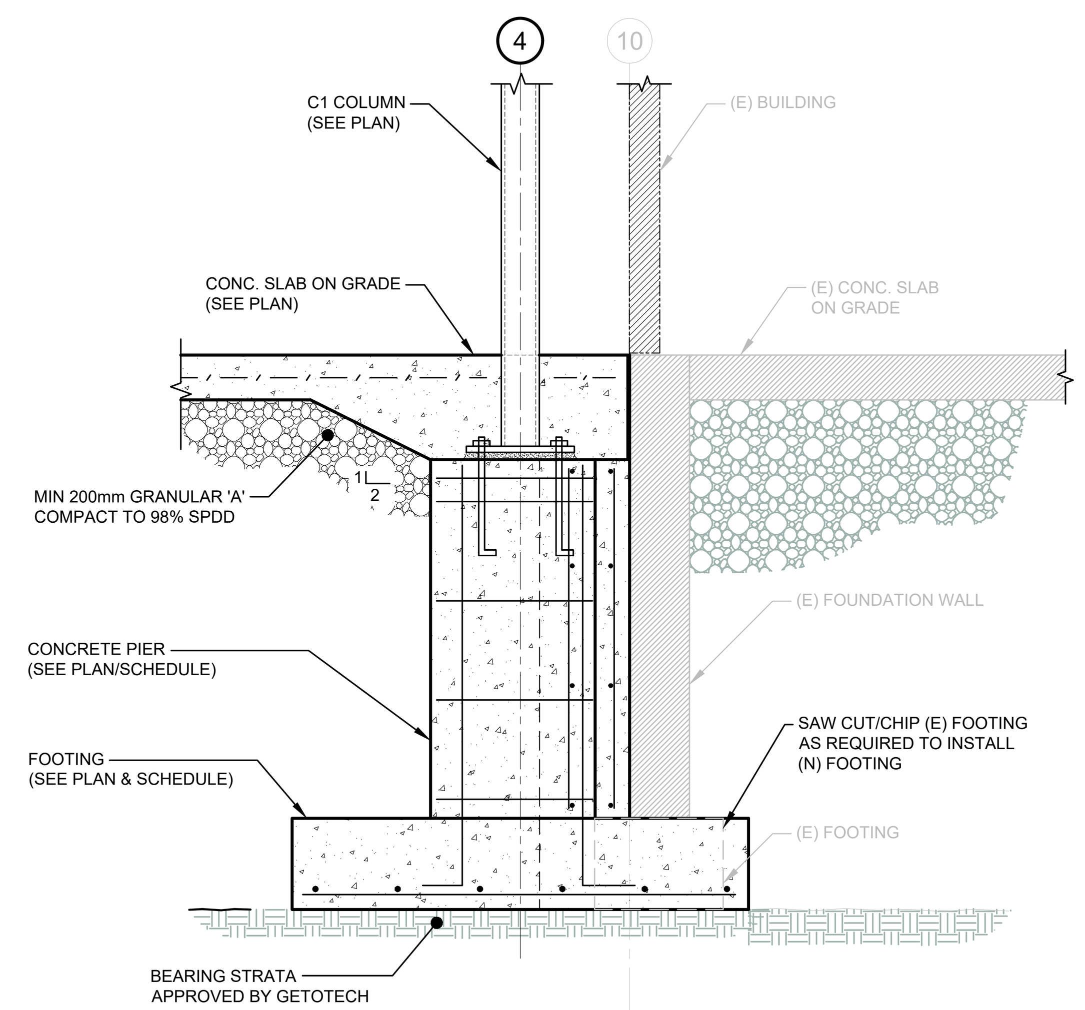
2023-03-22 2:16:34 PM



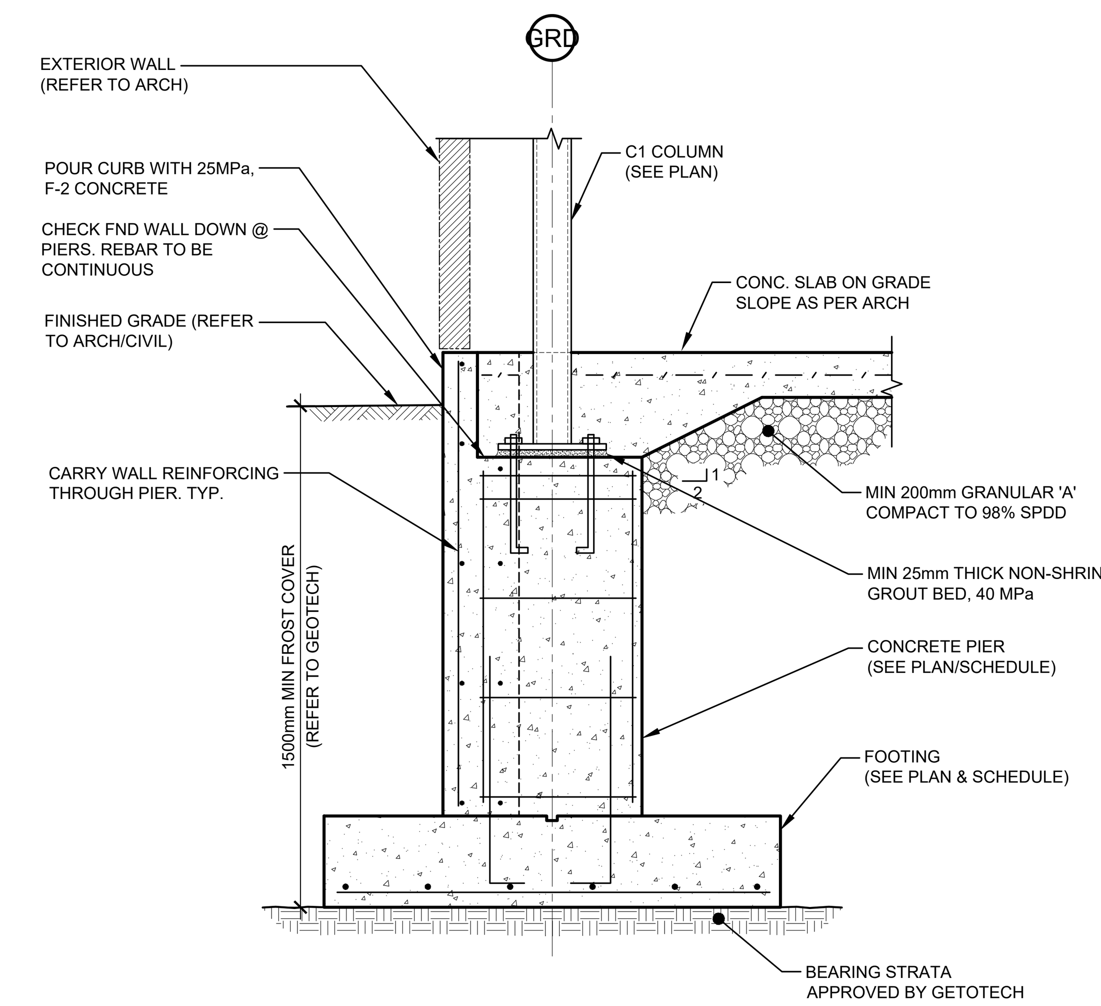
4
S200
SECTION: TYPICAL ROOF JOIST AT EXISTING (JOIST PARRALLEL)
SCALE 1:20



3
S200
SECTION: TYPICAL ROOF JOIST AT EXISTING (JOIST PERPENDICULAR)
SCALE 1:20



2
S200
SECTION: PIER AT EXISTING FOUNDATION
SCALE 1:20



1
S200
SECTION: TYPICAL PIER AT FOUNDATION WALL
SCALE 1:20

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD

N

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A. NEVIN
2024/12/20
PROVINCE OF ONTARIO

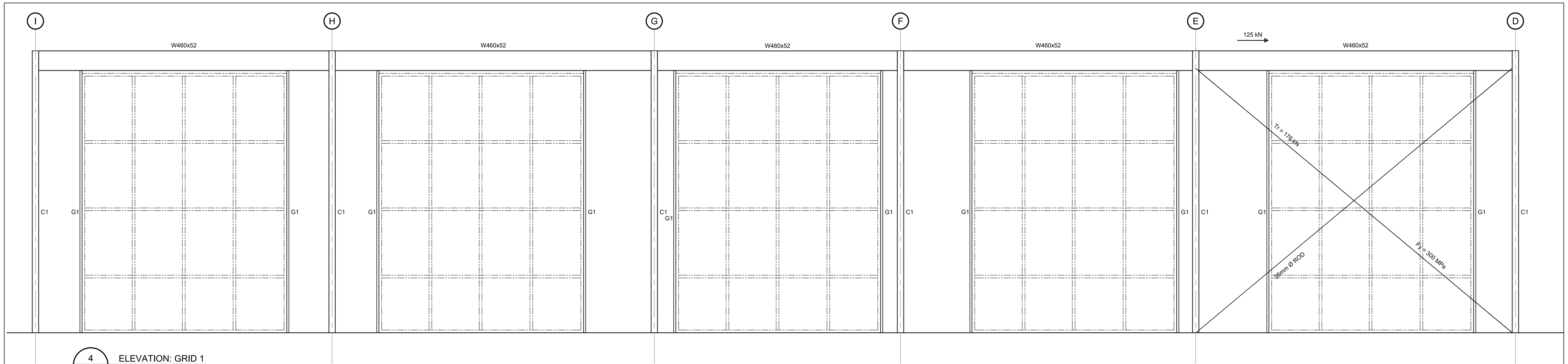
BPA

PROJECT
Mercedez-Benz
Star Motors of Ottawa
EXPANSION
400 West Hunt Club Rd,
Ottawa, Ontario

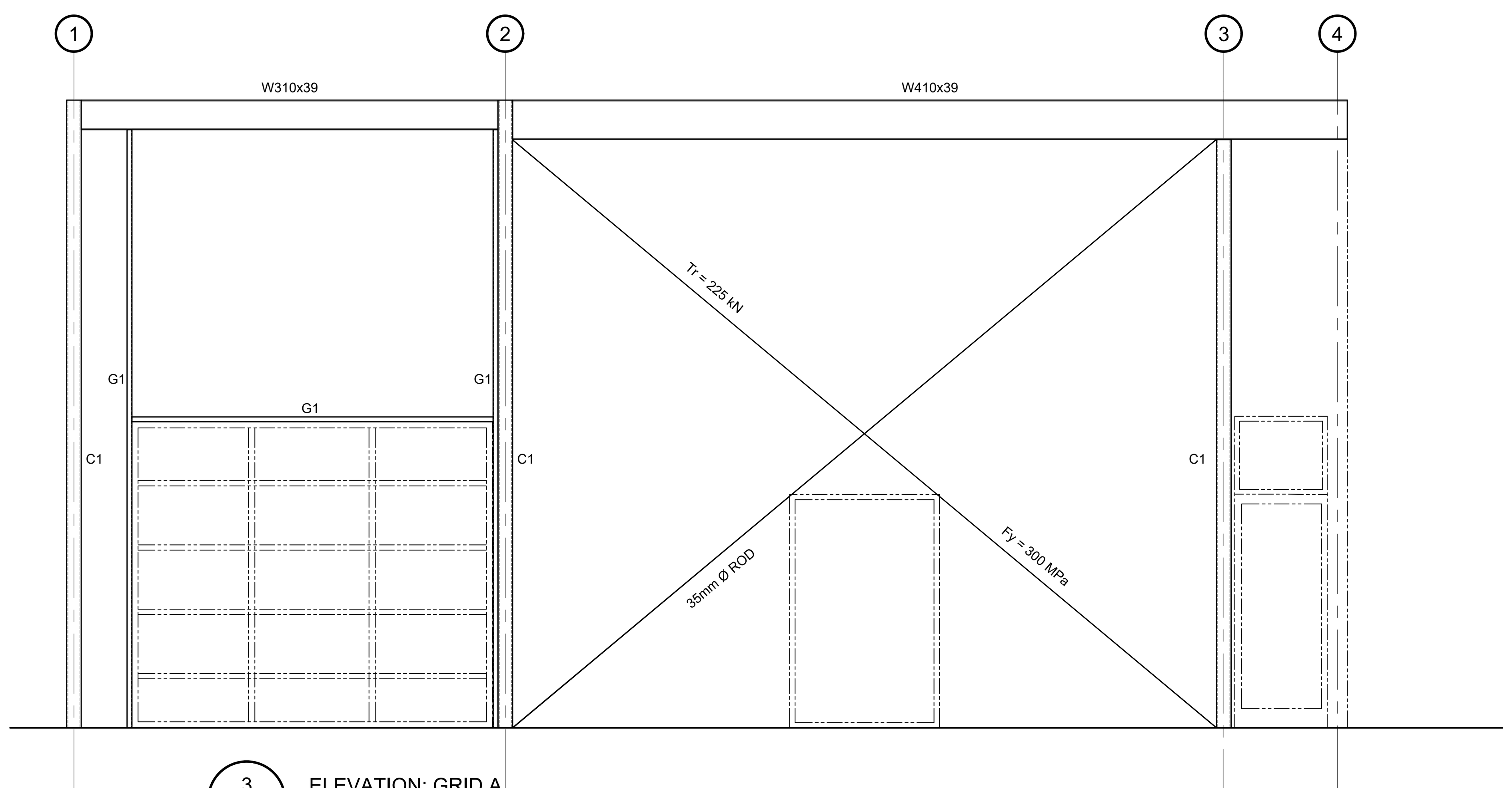
DRAWING
SECTIONS

DRAWN:	A.D	DRAWING No.
DESIGNED:	R.N	S200
DATE:	DEC. 2024	
SCALE:	NTS	
PROJECT No:	23-0083	

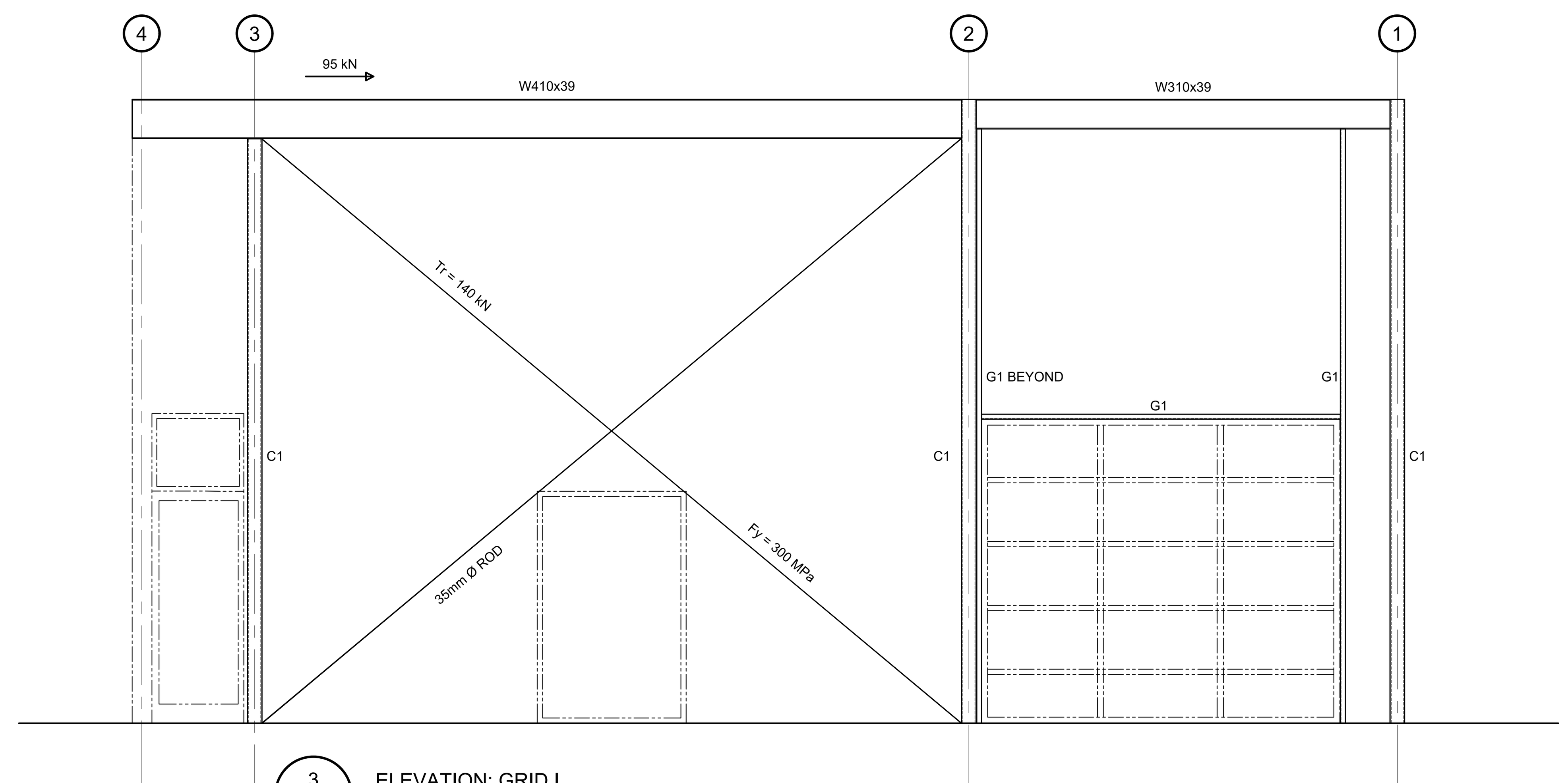
2023-03-22 2:16:34 PM



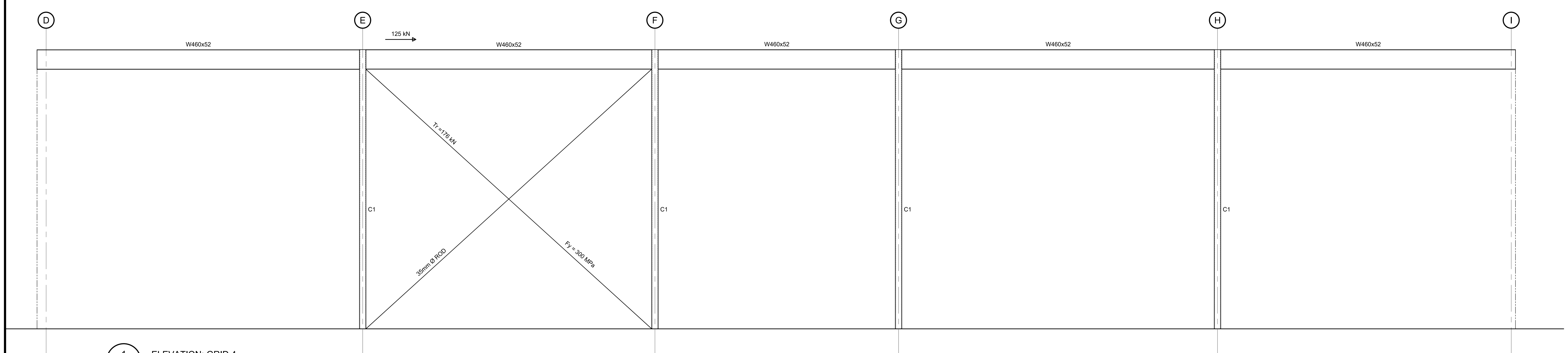
4 S300 ELEVATION: GRID 1
1:50



3 S300 ELEVATION: GRID A
1:50



3 S300 ELEVATION: GRID I
1:50



1 S300 ELEVATION: GRID 4
1:50

GENERAL NOTES

G1: HSS 178x178x8mm
- BEARING PLATE @ FND WALL
- 200x300x12.7mm c/w 2-1/2" Ø KLBIII STANDARD EMBEDMENT H.D.G.

No.	DATE	REVISIONS	BY
1	DEC 20,2024	ISSUED FOR PERMIT	AD

NORD

N

STAMP

LICENSED PROFESSIONAL ENGINEER
R.A. NEVIN
2024/12/20
PROVINCE OF ONTARIO

BPA

PROJECT Mercedez-Benz
Star Motors of Ottawa
EXPANSION

400 West Hunt Club Rd,
Ottawa, Ontario

DRAWING

BRACE FRAMES

DRAWN:	A.D	DRAWING No.
DESIGNED:	R.N	S300
DATE:	DEC. 2024	
SCALE:	NTS	
PROJECT No:	23-0083	