

## GENERAL NOTES

- CHECK ALL DIMENSIONS ON THESE DRAWINGS WITH ALL OTHER DRAWINGS, INCLUDING BUT NOT LIMITED TO ARCHITECTURAL, MECHANICAL, OR ELECTRICAL. CONSULTANTS REPORT ANY INCONSISTENCIES TO THE ARCHITECT OR ENGINEER PRIOR TO COMMENCING THE WORK. DO NOT SCALE THE DRAWINGS.
- THE DESIGN LIVE LOADS ARE INDICATED ON THE DRAWINGS. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
- THE COMPLETED STRUCTURE IS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING, SHORING AND ANY OTHER TEMPORARY OR PERMANENT MEASURES AS REQUIRED DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY SUPPORT OF EXISTING OR ADJACENT STRUCTURES AS REQUIRED. ALL BRACING AND SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONSTRUCTION FEATURES NOT FULLY SHOWN ARE COMPARABLE TO SIMILAR CONSTRUCTION DETAILS.
- REFER TO OTHER CONSULTANTS' DRAWINGS FOR DETAILS OF OPENINGS, FITS, CHAMFERS, DEPRESSIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS.
- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST ONTARIO BUILDING CODE, LATEST APPLICABLE REGULATIONS, AND GOOD CONSTRUCTION PRACTICES.
- THE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS AND SPECIFICATIONS.
- CLARIFY ANY QUERIES WITH THE ENGINEER REGARDING THE INTERPRETATION OF THE DRAWINGS, PRIOR TO THE COMMENCEMENT OF ANY WORK.

## MASONRY NOTES

- ALL STRUCTURAL ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA STANDARD 304.1. ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CSA STANDARD A37.1. ALL MASONRY CONNECTORS, REINFORCING AND TIEING SHALL BE IN ACCORDANCE WITH CSA A37.1. ALL MORTAR AND GROUT SHALL BE IN ACCORDANCE WITH A37.1.
- ALL CONCRETE BLOCKS SHALL BE NORMAL WEIGHT TYPE H/15/L/M UNLESS OTHERWISE NOTED. PROVIDE TYPE S FOR UNDERGROUND AND TYPE N FOR NON-LOAD-BEARING.
- VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 6000mm. REFER TO ARCHITECTURAL DRAWING FOR DETAILS AND LOCATIONS.
- 15M LVL OPENINGS WITH 2-15M BARS.
- GROUT SHALL CONSIST OF ONE PART PORTLAND CEMENT, THREE PARTS SAND (MAXIMUM AGGREGATE SIZE SHALL BE 15mm) WITH WATER TO PROVIDE A MINIMUM TOWNS COMPRESSION STRENGTH AT 28 DAYS. SLUMP SHALL BE 200mm TO 250mm.
- ALL CELLS CONTAINING REINFORCING SHALL BE GROUTED SOLID. TWO BLOCK COURSES BELOW BEARING PLATES SHALL BE GROUTED SOLID.
- THE MASONRY SHALL BE CONSTRUCTED IDENTIFY WITH MAXIMUM LITS OF 1200 PER DAY. DO NOT TOOTH AND BOND OR STACK BLOCK MASONRY. RAKE BACK SIDES OF UNFINISHED WALLS.
- ALL MORTAR JOINTS SHALL BE TOOLED (CONCAVE) TO A MINIMUM RED JOINT OF 6mm IS REQUIRED FOR THE STARTING COURSE TO A MAXIMUM OF 20mm. THE RED JOINTS SHALL BE 15mm.
- PROVIDE VERTICAL AND HORIZONTAL REINFORCING AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS:
  - 140 CONCRETE BLOCK - HEAVY DUTY TRUSS TYPE HORIZONTAL REINFORCING EVERY SECOND COURSE.
  - 190 CONCRETE BLOCK - 15M VERTICAL AT 800 O.C. & HEAVY DUTY TRUSS TYPE HORIZONTAL REINFORCING EVERY SECOND COURSE.
- THE HORIZONTAL REINFORCING AT EXTERIOR WALLS SHALL BE GALVANIZED. DO NOT EXTEND HORIZONTAL REINFORCING THROUGH CONTROL JOINTS UNLESS OTHERWISE NOTED.
- PROVIDE A STEEL LINTEL OVER ALL OPENINGS OR RECESSES INCLUDING OPENINGS FOR MECHANICAL AND ELECTRICAL COMPONENTS. ALL EXTERIOR LINTELS TO BE NOT UP GALVANIZED.
- BUILD THE MASONRY SOLID AROUND ALL BEAM, LINTEL AND JOIST POCKETS. INSTALL BEARING PLATES AT THE SPECIFIED ELEVATION AND GROUT THE PLATE INTO THE WALL A MINIMUM OF 400mm.
- PROVIDE TEMPORARY BRACING AS REQUIRED TO SUPPORT THE MASONRY WALLS IN CONSTRUCTION. PROTECT THE MASONRY WALLS FROM THE ELEMENTS AT ALL TIMES EXCEPT DURING CONSTRUCTION PROGRESS.

## STRUCTURAL STEEL NOTES

- ALL STRUCTURAL STEEL ELEMENTS, INCLUDING DESIGN OF ELEMENTS AND CONNECTIONS SHALL BE IN ACCORDANCE WITH CAN/CSA S16.
- ALL STRUCTURAL STEEL SHALL CONFORM TO CSA G40.21 (500W) EXCEPT W SECTIONS AND PLATES G40.21 (500W). HSS MEMBERS G40.21 (500W) CLASS C OR ASTM A500 GRADE C. ANCHOR BOLTS ASTM A307. COLD FORMED SECTIONS ASTM A570 GRADE 50SW, UNLESS OTHERWISE NOTED. ALL SECTIONS SHALL BE PRIME PAINTED WITH THE SURFACE PREPARATION AND PAINTING PROCEDURES IN ACCORDANCE WITH CAN/CSA A16.1.
- ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA W57. THE STEEL FABRICATOR SHALL BE FULLY QUALIFIED UNDER THE REQUIREMENTS BY THE CANADIAN WELDING BUREAU IN CONFORMANCE WITH CAN/CSA W57.1.
- DESIGN ALL MOMENT AND SHEAR CONNECTIONS FOR THE FULL CAPACITY OF THE SMALLER MEMBER IN THE CONNECTION UNLESS OTHERWISE NOTED.
- PROVIDE MINIMUM BEARING LENGTH OF STEEL MEMBERS AS FOLLOWS:
  - ON MASONRY - 150mm
  - ON STEEL - 300mm
- THE BASE PLATE AND BEARING PLATE GROUT SHALL BE OF THE CEMENTITIOUS NON-SHINK TYPE.
- FULLY WELD THE BASE PLATE TO THE COLUMN TO DEVELOP THE ANCHOR BOLTS. PROVIDE GAP PLATES ON ALL COLUMNS. PROVIDE 6mm GAP PLATES ON ALL COLUMNS.
- PROVIDE MINIMUM 175x10x175 BEARING PLATES FOR ALL STRUCTURAL STEEL 1/4" 2-100 ANCHORS UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE TIGHTENED WITH A SUITABLE TORQUE WRENCH IN ACCORDANCE WITH CSA S16.
- ALL STEEL EXPOSED TO THE EXTERIOR TO BE HOT DIP GALVANIZED.
- ERECT STRUCTURAL STEEL IN ACCORDANCE WITH CSA S16 AND IN CONFORMANCE WITH THE APPROVED SHOP DRAWINGS.

## METAL DECK NOTES

- ALL WELDING OF DECK AND ASSOCIATED COMPONENTS SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA A89. THE STEEL FABRICATOR AND INSTALLER SHALL BE FULLY QUALIFIED UNDER THE REQUIREMENTS OF THE CANADIAN WELDING BUREAU (CWB) IN CONFORMANCE WITH CAN/CSA W57.1.
- ALL DECK SHALL BE DESIGNED TO RESIST THE LOADS NOTED ON THE DRAWINGS IN ACCORDANCE WITH PART 4 OF THE LATEST ONTARIO BUILDING CODE. DECK AND FASTENING SHALL HAVE ADEQUATE CAPACITY TO SUPPORT THE DESIGN GRAVITY AND DIAPHRAGM LOADS AS NOTED ON THE DRAWINGS.
- DECK SHALL BE EITHER 38mm (1 1/2") OR 76mm (3") DEEP IN ACCORDANCE WITH CSA S136 AND SHALL BE FABRICATED FROM ASTM A653 SS OR GRADE 230 GALVANIZED STEEL WITH A 2775 GALVANAL OR Z275 GALVANIZED ZINC COATING. THE MINIMUM NOMINAL STEEL CORE THICKNESS SHALL BE 0.76mm (22 ga).
- DECK SHALL BE FASTENED TO THE SUPPORTING STRUCTURE WITH 20mm ARC SPOT WELDS AT NOT LESS THAN 300mm (12") O.C. (3x4x) AT SUPPORTS AND NOT LESS THAN 150mm (6") O.C. (3x7) WITHIN 3m (10'-0") OF THE NEAREST BUILDING EDGE. SIDELAPS SHALL BE CLINCHED AT 60mm (2-1/4") O.C. ALL WELDS SHALL BE TOUCHED UP WITH PRIMER. MECHANICAL FASTENERS MAY ONLY BE USED WITH THE PERMISSION OF THE ENGINEER.
- THE STEEL DECK CONTRACTOR SHALL REINFORCE THE DECK FOR ROOF OPENINGS FROM 150mm (6") TO 450mm (18") WIDE AND FOR FLOOR OPENINGS FROM 150mm (6") TO 300mm (12") WIDE WITH LIGHT GAUGE METAL ANGLES (MIN. 76 GA).

## LIGHT GAUGE STEEL FRAMING NOTES

### GENERAL

- THESE NOTES APPLY TO THE STEEL FRAMING COMPONENT OF THE EXTERIOR WALL SYSTEM ONLY.
- THE DESIGN WIND LOADING IS 1.2kN/m<sup>2</sup> (25 PSF) DETERMINED BY O.B.C. REQUIREMENTS AND CAN-S136. DEFLECTION IS LIMITED TO 1/260.
- THE DESIGN OF FRAMING SYSTEM IS BASED ON PUBLISHED STUD SECTION PROPERTIES BY BAILEY METAL PRODUCTS LIMITED.

### MATERIAL

- THE MINIMUM BASE METAL THICKNESS FOR ALL METAL WALL COMPONENTS, INCLUDING COATINGS ARE NOTED ON THE DRAWINGS.
- STEEL MEETS THE REQUIREMENTS OF A574M A653/A653M SS GRADE 23 (230) FOR 1.2mm MATERIAL THICKNESS, AND SS GRADE 50 (50) CLASS 1 FOR 1.52mm MATERIAL AND THICKER.
- GALVANIZING TO BE HOT-DIP PROCESS, G80 (Z275).

### ERECTOR

- METHOD OF CONSTRUCTION SHALL BE BY STICK BUILDING ON SITE.
- CONNECTIONS SHALL BE ACCOMMODATED BY SELF DRILLING SCREWS AND OTHER FASTENERS AS SHOWN ON THESE DRAWINGS. EXCAVATION BEYOND JOINED MATERIALS SHALL BE NOT LESS THAN THREE EXPOSED THREADS. ALL CONNECTIONS USED IN ASSEMBLIES SHALL BE OF CORROSION RESISTANT MATERIAL COMPATIBLE WITH GALVANIZED COATINGS WITH A MINIMUM COATING THICKNESS OF 0.035mm ZINC OF GALVALUM PLATES. NO BLOCK CONNECTORS WILL BE ACCEPTED. SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER.
- SCREWS COVERED BY SHEATHING MATERIALS SHALL HAVE LOW PROFILE HEADS.
- WIRE TIEING IS NOT PERMITTED IN STRUCTURAL APPLICATIONS.
- CUTTING OF STEEL FRAMING MEMBERS SHALL BE BY SAW OR SHEAR. NO TORSION OR MANUAL CUTTING IS PERMITTED.
- SPACING OF STUDS OR TRUSS IS NOT PERMITTED EXCEPT AS NOTED ON DRAWINGS.

- BRACING SHALL BE OF SIZE SPACING AND TYPE SHOWN ON THE DRAWINGS AND SHALL BE INSTALLED SO AS TO PROVIDE RESISTANCE TO WIND AND BENDING AND ROTATION OF STUDS. PROVIDE BRACING AT 1200mm C/C MAXIMUM.
- BRACING SHALL BE PROVIDED AND LEFT IN PLACE UNTIL WORK IS PERMANENTLY STABILIZED.
- STUDS SHALL BE SET INTO TOP AND BOTTOM TRACKS WITH A GAP BETWEEN THE END OF THE STUD AND WEB OF THE TRACK NOT TO EXCEED 3mm.
- HORIZONTAL ALIGNMENT (LEVELNESS) OF WALLS SHALL BE WITHIN 1/1000 OF THE SPAN.
- BRACING SHALL BE DESIGNED TO RESIST THE LOADS NOTED ON THE DRAWINGS IN ACCORDANCE WITH PART 4 OF THE LATEST ONTARIO BUILDING CODE. DECK AND FASTENING SHALL HAVE ADEQUATE CAPACITY TO SUPPORT THE DESIGN GRAVITY AND DIAPHRAGM LOADS AS NOTED ON THE DRAWINGS.

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## SHORING NOTES

- ALL FRAMES AND SHORING JACKS TO BE PLUMB AND LEVEL.
- SHORING JACKS TO BE DESIGNED BY THE SUPPLIER FOR THE LOADS AND HEIGHTS SHOWN, INCLUDING BRACING.
- MAX. EXTENSION OF SOWERACKS WILL BE 400mm UNLESS NOTED.
- SCAFFOLDING SHALL BE ERECTED IN ACCORDANCE TO C.S.A. CODE 5206.1.
- SHORING TO REMAIN IN PLACE UNTIL BEAM AND ALL BRACING IS COMPLETELY INSTALLED.
- CONTRACTOR TO PREPARE AND SUBMIT FULL SHORING DRAWINGS FOR APPROVAL. FOR ALL TEMPORARY SUPPORTS, PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER, PRIOR TO ANY REMOVALS.

### ADDITIONAL NOTES

- PROVIDE TEMPORARY SHORING TO STRUCTURE ABOVE PRIOR TO ANY REMOVALS.
- EXISTING FRAMING SHOWN IS ASSUMED BASED ON SITE REVIEW AND EXISTING DRAWINGS REFERENCED IN NOTES BELOW. CONTRACTOR TO EXPOSE EXISTING STRUCTURE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

## SUBMITTALS

- SUBMIT FOR REVIEW BY THE CONSULTANT, DETAILED SHOP DRAWINGS FOR ALL STRUCTURAL WORK INCLUDING, BUT NOT LIMITED TO: CONCRETE FORMWORK, CONCRETE MIX DESIGN, REINFORCING STEEL, STRUCTURAL STEEL, COLD-FORMED STEEL, STUD AND TEMPORARY SHORING.
- THE SCALE OF THE DRAWINGS SHALL BE SUCH THAT THE DETAILS OF THE STRUCTURAL WORK ARE CLEARLY SHOWN, AND IN NO CASE SMALLER THAN 3/4"=1'-0" (1:50).
- THE STRUCTURAL DRAWINGS SHALL NOT BE REPRODUCED, IN WHOLE OR IN PART, FOR USE AS SHOP DRAWINGS.
- EACH DRAWING SUBMITTED FOR CONCRETE FORMWORK, STRUCTURAL STEEL, COLD-FORMED STEEL, STUD AND TEMPORARY SHORING SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- CONTRACTOR SHALL ALLOW FOR A 5 WORKING DAY TURN AROUND TIME FOR THE ENGINEER TO REVIEW THE SHOP DRAWINGS.

## CALCULATIONS

- SUBMIT CALCULATIONS, BEARING THE SEAL AND SIGNATURE OF PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO, FOR STRUCTURAL WORK, IF REQUESTED BY THE CONSULTANT.

## CONCRETE NOTES

- ALL STRUCTURAL CONCRETE ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH CSA STANDARD CAN/CSA A23.1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH CSA STANDARD CAN/CSA A23.1.
- MINIMUM CONCRETE STRENGTH AT 28 DAYS SHALL BE:
  - FOOTINGS - 25 MPa TYPE N
  - FOUNDATION WALLS - 25 MPa TYPE F2
  - SLAB ON GRADE - 25 MPa TYPE N
  - TORING - 25 MPa TYPE NSLUMP SHALL BE 3" ± 1".
- AGGREGATE SHALL BE 3/4" MAXIMUM.
  - PROVIDE CRYSTALLINE WATERPROOFING ADMIXTURE AT ELEVATOR PITS. AN EXTERMINATION TO BE 68 ± 18 WHEN EXPOSED TO EXTERIOR. CONTRACTOR TO SUBMIT CONCRETE MIX DESIGN FOR REVIEW.
- THE REINFORCED REINFORCING STEEL SHALL CONFORM TO CSA STANDARD G40.18M-09 GRADE 500F FOR STRUTLIPS AND TIES AND GRADE 400F FOR ALL OTHER REINFORCING. UNLESS OTHERWISE NOTED THE REINFORCING LAP LENGTH SHALL BE CLASS B IF IN SPLICES. ALL REINFORCING HOOKS AND BENDS SHALL BE IN ACCORDANCE WITH A23.1.
- WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH CSA G30.5. ALL MESH SHALL BE CHAINED PRIOR TO THE CONCRETE POUR. LIFTING OF THE MESH DURING THE CONCRETE POUR WILL NOT BE PERMITTED. ALL SPLICES SHALL BE A MINIMUM OF TWO CROSSWISE SPACINGS PLUS 2".
- THE REINFORCING COVER FOR CONCRETE SHALL BE:
  - 3" FOR CONCRETE AGAINST EARTH
  - 1" FOR FORMED CONCRETE EXPOSED TO EARTH OR WEATHER WHERE THE REINFORCING BAR IS 15M OR SMALLER
  - 2" FOR INTERIOR CONCRETE, ALL CHAIRS, BOLSTERS, SPACERS AND BAR SUPPORTS SHALL BE IN ACCORDANCE WITH A23.1.
  - 1" FOR INTERIOR CONCRETE, ALL CHAIRS, BOLSTERS, SPACERS AND BAR SUPPORTS SHALL BE IN ACCORDANCE WITH A23.1.
- FOOTINGS SHALL BEAR ON NATIVE UNDISTURBED SOIL OR ENGINEERED FILL WITH A MINIMUM BEARING RESISTANCE OF:
  - 3000 psf (ULS)
  - 4000 psf (ULS)THE CONTRACTOR SHALL VERIFY THE CAPACITY PRIOR TO PLACEMENT OF CONCRETE.
- THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATION OR STEP DOWN FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN 1 IN A RUN OF 10. STEP DOWN SHALL BE 2'-0".

- KEEP EXCAVATIONS DRY BEFORE CONCRETE IS PLACED. REMOVE ALL MOIST DIRT, SOIL OR WATER PRIOR TO PLACING CONCRETE. PROVIDE A 3" MUD MAT FOR ALL FOOTINGS BELOW THE WATER TABLE.
- ALL FOOTINGS SHALL BE CENTERED ON THE WALL UNLESS OTHERWISE NOTED.
- THE FOOTING DESIGN IS BASED ON INFORMATION AVAILABLE AT THE TIME OF DESIGN. THE FOOTING DESIGN MAY BE ALTERED DURING CONSTRUCTION, IF THE SITE CONDITIONS WARRANT, BUT ONLY WITH THE EXPRESS PERMISSION OF THE ENGINEER.
- PROTECT ALL FOOTINGS, WALLS AND SLABS AGAINST FROST ACTION DURING CONSTRUCTION. ALL EXTERIOR FOOTINGS SHALL FOUNDATION BELOW THE FROST LINE, MINIMUM 2'-0" BELOW GRADE.
- DO NOT BACKFILL AGAINST WALLS RETAINING EARTH UNTIL THE ELEMENTS PROVIDING LATERAL SUPPORT ARE COMPLETELY PLACED BACKFILL IN A MANNER WHERE THE ELEVATION DIFFERENCE ON EITHER SIDE OF THE WALL IS NO GREATER THAN 1'-6". PROVIDE TEMPORARY SHORING AS REQUIRED.
- SLAB-ON-GRADE GRADE CONSTRUCTION SHALL BE CAPABLE OF SUPPORTING 500 lb/ft<sup>2</sup> WITHOUT RELATIVE SETTLEMENT.
- CONSTRUCT CONCRETE WALLS WITHOUT CONTROL JOINTS, UNLESS OTHERWISE NOTED. PROVIDE CHANGES AND BEANS POCKETS IN THE INTERIOR FACE OF THE WALL AS REQUIRED.
- PROVIDE DOUELS TO WALLS AND COLUMNS TO SUIT THE REINFORCING IN THE WALL OR COLUMN ABOVE.
- ALL ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MTLT HIT-HYDRO (OR APPROVED EQUAL) PROCEDURES.
- PROVIDE DEMATERING AS REQUIRED FOR NEW FOUNDATIONS.

## LOADING STANDARDS

- ONTARIO BUILDING CODE, 2024, PART 4: STRUCTURAL DESIGN
- CAN/CSA-A23.1-19, DESIGN OF CONCRETE STRUCTURES
- CAN/CSA-A23.4-16, DESIGN OF PRECAST CONCRETE STRUCTURES
- CAN/CSA-A23.1-19, MASONRY DESIGN FOR BUILDINGS
- CAN/CSA-S16-19, LIMIT STATES DESIGN OF STEEL STRUCTURES
- CAN/CSA-S16-16, DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS
- CAN/CSA-086-19, ENGINEERING DESIGN IN WOOD

## NEW ROOF LOADS

- ROOFING - 0.35 kPa
- INSULATION & PROTECTION BOARD - 0.16 kPa
- DECK - 0.10 kPa
- FRAMING - 0.14 kPa
- MESH & ELECTRICAL - 0.25 kPa
- CEILING - 0.20 kPa
- TOTAL - 1.30 kPa

## NEW FLOOR LOADS

- 127 COMPOSITE DECK - 2.50 kPa
- MISC. MESH & ELECTRICAL - 0.35 kPa
- FLOORING - 0.25 kPa
- CEILING - 0.20 kPa
- FRAMING - 0.15 kPa
- TOTAL - 3.45 kPa

## FLOOR LOADS

- CLASSROOM - 2.4 kPa (50 PSF)
- CORRIDORS - 4.8 kPa (100 PSF)
- STAIRS AND EXITS - 4.8 kPa (100 PSF)
- WASHROOMS - 4.8 kPa (100 PSF)

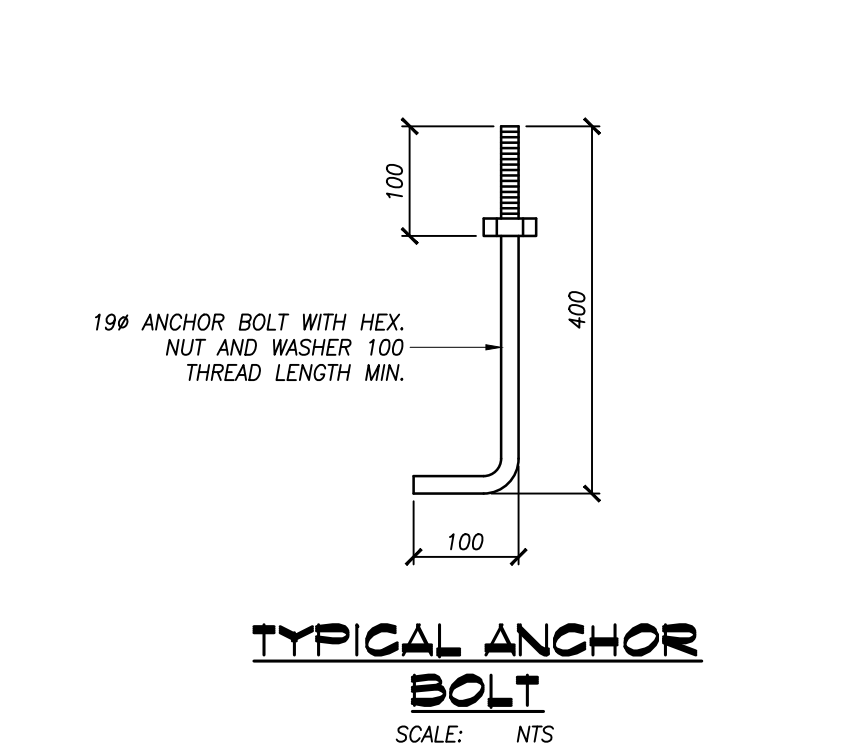
## SEISMIC SWAY BRACING

- FOR WALLS & MAIN STRUCTURAL MEMBERS
- FOR SMALL ELEMENTS INCLUDING CLADDING
- FOR INTERNAL PRESSURES
- BUILDING INTERNAL PRESSURE CATEGORY 2, PER 4.1.7.2

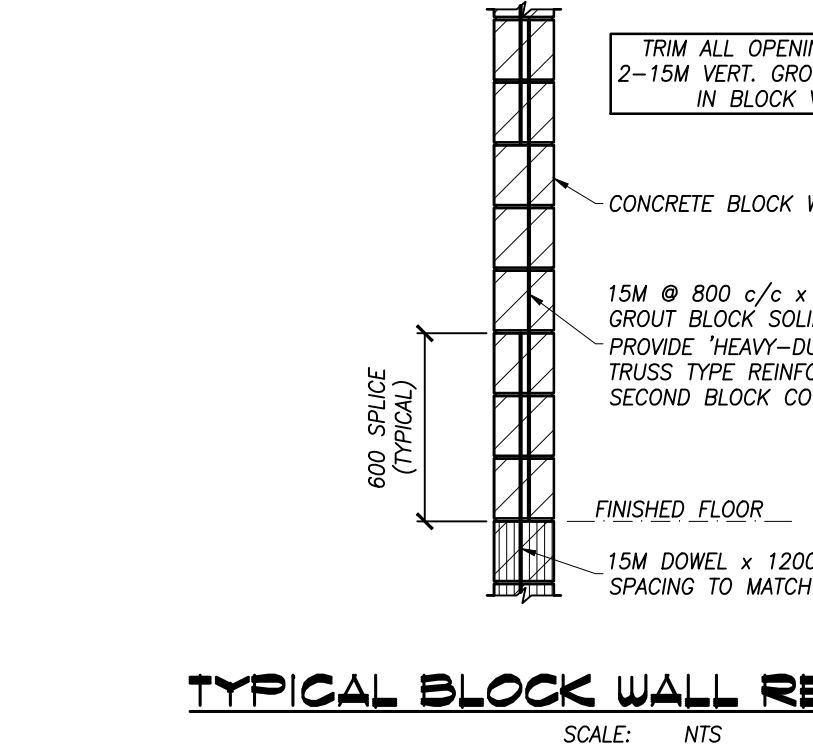
## TESTING AND INSPECTIONS

- THIRD-PARTY TESTING AND INSPECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS AND AS NOTED BELOW. TESTING AND INSPECTION REQUIREMENTS NOTED IN THE PROJECT SPECIFICATIONS SHALL SUPERSEDE THE FOLLOWING REQUIREMENTS.
- TESTING OF THE FOOTING SUBGRADE SHALL BE PROVIDED PRIOR TO ALL CONCRETE POURS TO ENSURE CONFORMANCE WITH THE BEARING CAPACITY NOTED IN THESE PLANS AND IN THE GEOTECHNICAL REPORT. KALUS ENGINEERING INC. SHALL BE NOTIFIED IMMEDIATELY IF EXCAVATIONS ARE REQUIRED TO EXTEND BELOW THE NOTED FOOTING ELEVATIONS.
- CONCRETE REINFORCING SHALL BE INSPECTED FOR CONFORMANCE TO THE STRUCTURAL DRAWINGS PRIOR TO EVERY CONCRETE POUR.
- COMPRESSION TESTING OF CONCRETE SHALL BE IN ACCORDANCE WITH CSA A23.1. A MINIMUM OF ONE STRENGTH TEST SHALL BE COMPLETED FOR EACH 100 m<sup>3</sup> OF CONCRETE PLACED AND A MINIMUM OF ONE TEST PER DAY SHALL BE COMPLETED FOR CONCRETE OF A SINGLE MIX DESIGN. TESTS SHALL CONSIST OF ONE SET OF FOUR CYLINDERS.
- THE COMPRESSION STRENGTH OF CONCRETE BLOCKS SHALL BE TESTED A MINIMUM OF ONCE PER FLOOR IN ACCORDANCE WITH CSA A16.1. A MINIMUM OF FIVE UNITS OF EACH SIZE OF CONCRETE BLOCK SHALL BE TESTED.
- MORTAR CURE COMPRESSIVE STRENGTH SHALL BE TESTED AT LEAST ONCE FOR EACH 500 m<sup>3</sup> OF MASONRY FOR A PROJECT HAVING MORE THAN 500 m<sup>3</sup> OF MASONRY AND ONCE FOR EACH 250 m<sup>3</sup> OF MASONRY FOR A PROJECT HAVING LESS THAN 500 m<sup>3</sup> OF MASONRY. FOUR SAMPLES SHALL BE TAKEN FOR EACH TEST.
- GROUT COMPRESSIVE STRENGTH SHALL BE TESTED AT LEAST ONCE FOR EACH 20 m<sup>3</sup> OF GROUT FOR A PROJECT HAVING MORE THAN 20 m<sup>3</sup> OF GROUT AND ONCE FOR EACH 10 m<sup>3</sup> OF GROUT FOR A PROJECT HAVING LESS THAN 20 m<sup>3</sup> OF GROUT. FOUR SAMPLES SHALL BE TAKEN FOR EACH TEST.
- STRUCTURAL STEEL INSPECTIONS AND TESTING SHALL BE AS FOLLOWS:
- INSPECTIONS SHALL BE PERFORMED BY A FIRM CERTIFIED TO CSA W178.1, EXCEPT THAT VISUAL INSPECTION MAY ALSO BE PERFORMED BY PERSONS CERTIFIED TO LEVEL 2 OR 3 OF CSA W178.1.
- INSPECTIONS SHALL VERIFY THAT THE ERECTORS ARE COMB CERTIFIED.

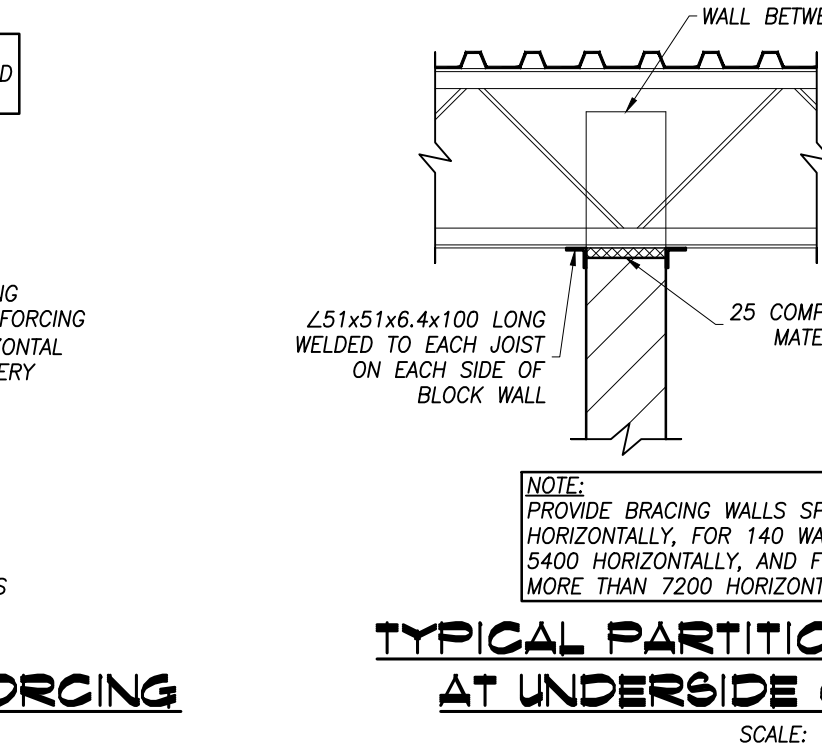
- CONNECTIONS SHALL BE INSPECTED FOR CONFORMANCE TO THE ENGINEERED DESIGN DETAILS.
- BOLTED CONNECTIONS SHALL BE INSPECTED IN ACCORDANCE WITH CSA S16. VERIFICATION OF CONNECTION FIT-UP AND BOLT TENSION SHALL BE PROVIDED.
- WELDED CONNECTIONS SHALL BE INSPECTED IN ACCORDANCE WITH CSA S16 AND CSA W57. VISUAL INSPECTIONS SHALL BE PROVIDED TO ENSURE PROPER CONNECTION FIT-UP AND REVIEW OF COMPLETED WELDS.
- INSPECTION FREQUENCY SHALL BE A MINIMUM OF ONCE PER FLOOR OR ONCE PER ERECTION PHASE.
- METAL DECK THICKNESS, COATING GRADE, SPOT WELDS, MECHANICAL FASTENERS, AND DRAWING SHALL BE INSPECTED BY A CERTIFIED INSPECTOR AT LEAST ONCE PER LEVEL.



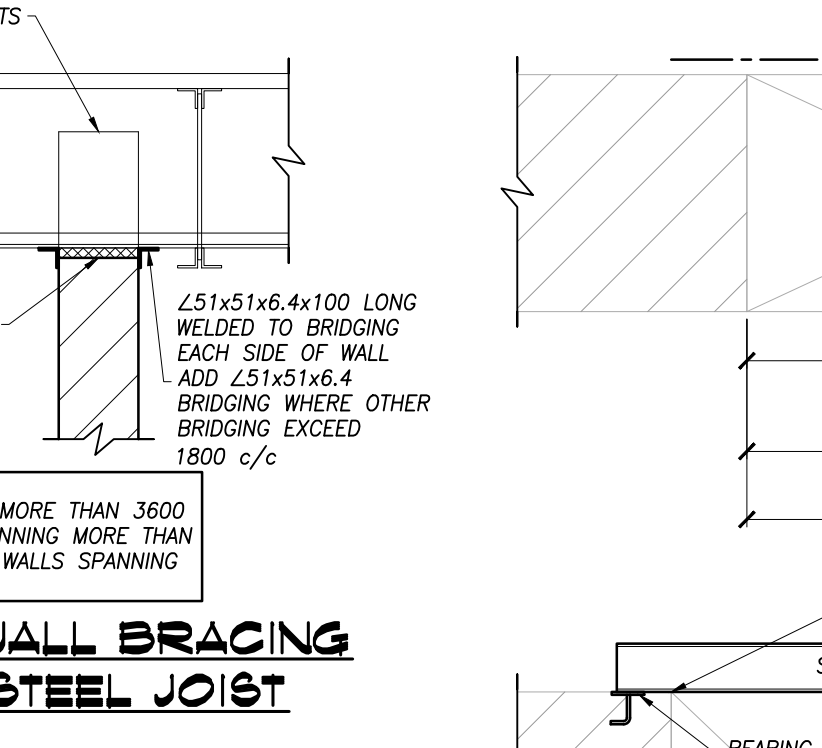
TYPICAL ANCHOR BOLT  
SCALE: NTS



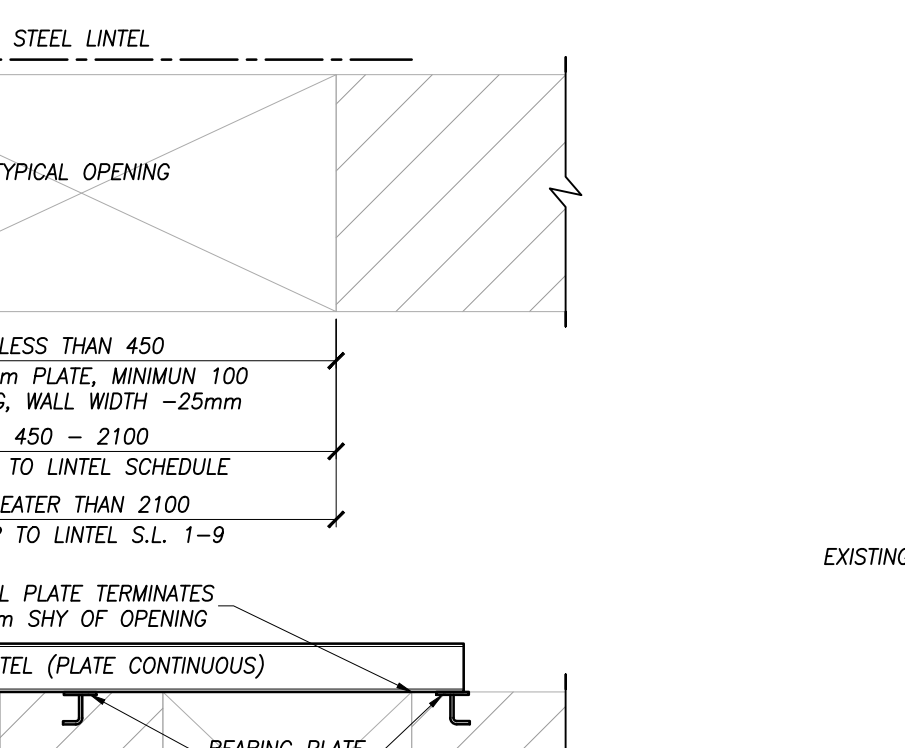
TYPICAL BLOCK WALL REINFORCING  
SCALE: NTS



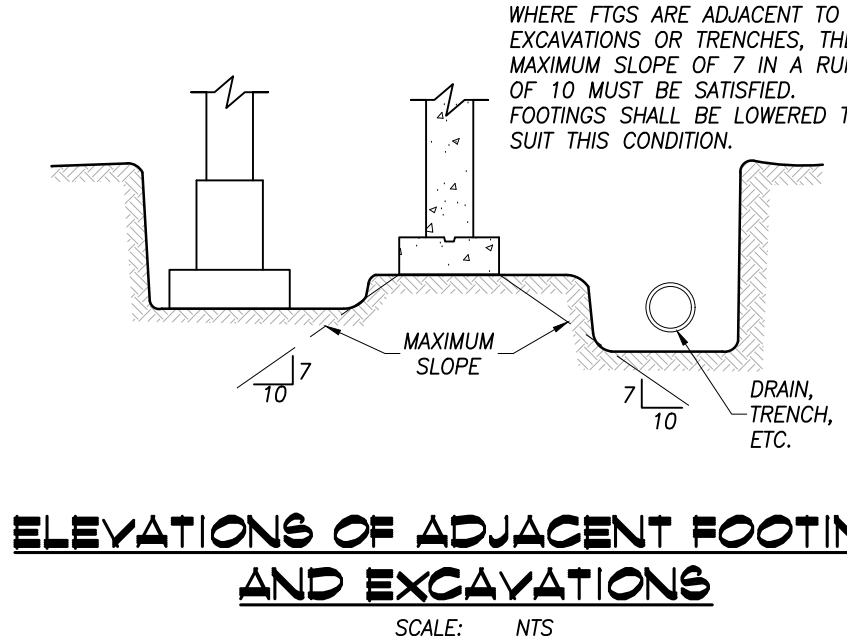
TYPICAL PARTITION WALL BRACING AT UNDERSIDE OF STEEL JOIST  
SCALE: NTS



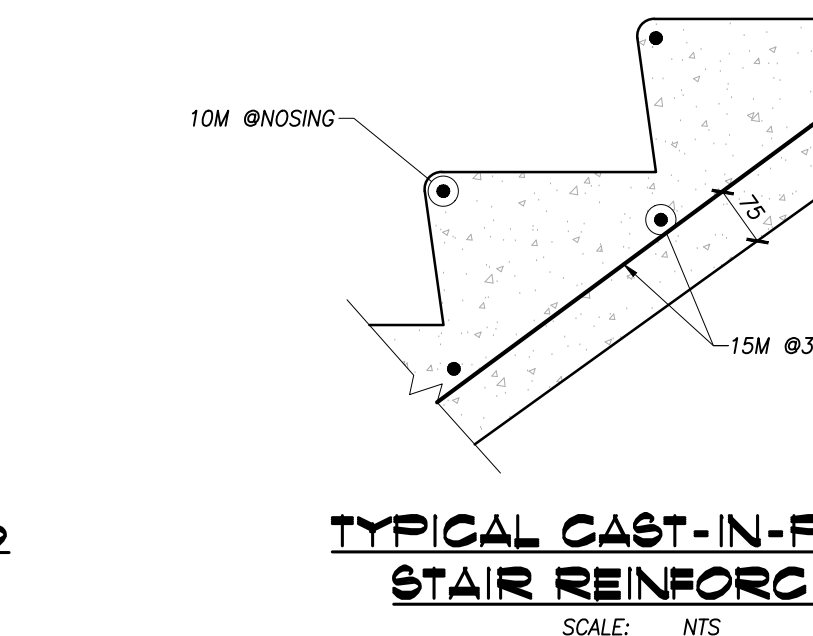
TYPICAL STEEL LINTEL DETAIL  
SCALE: NTS



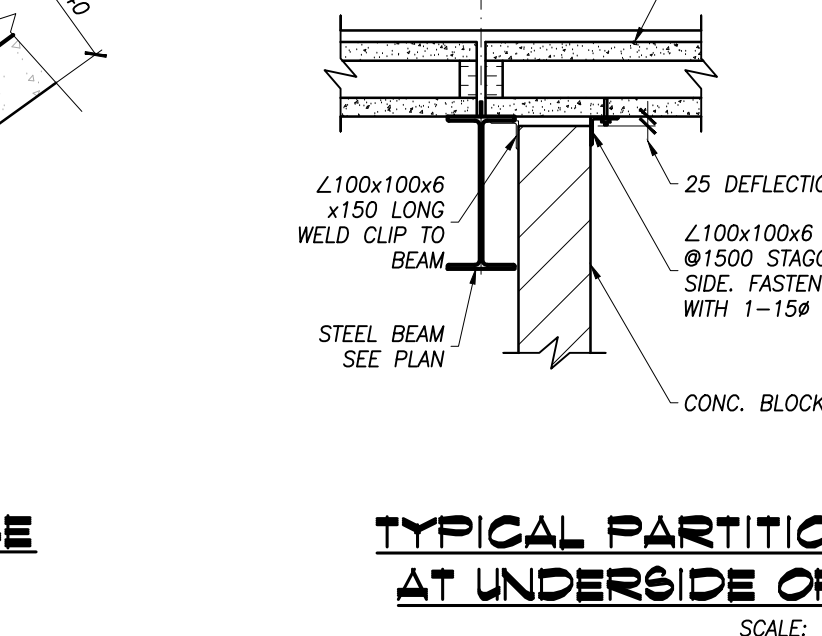
TYPICAL UNDERPINNING DETAIL  
SCALE: NTS



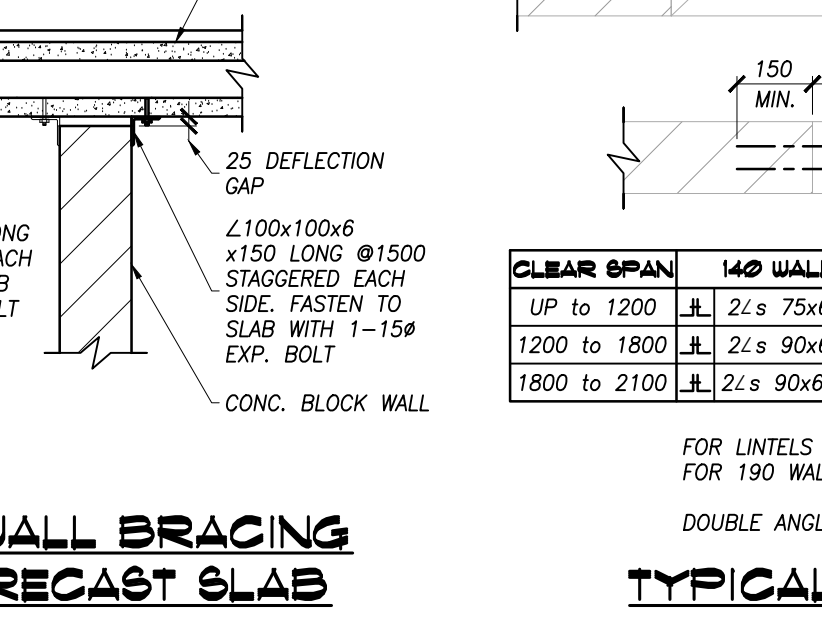
ELEVATIONS OF ADJACENT FOOTINGS AND EXCAVATIONS  
SCALE: NTS



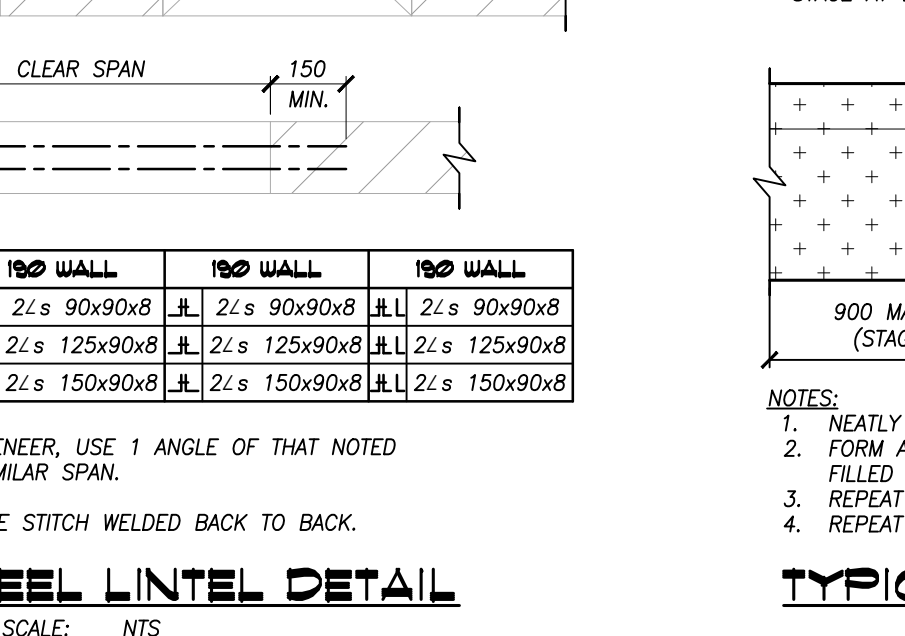
TYPICAL CAST-IN-PLACE STAIR REINFORCING  
SCALE: NTS



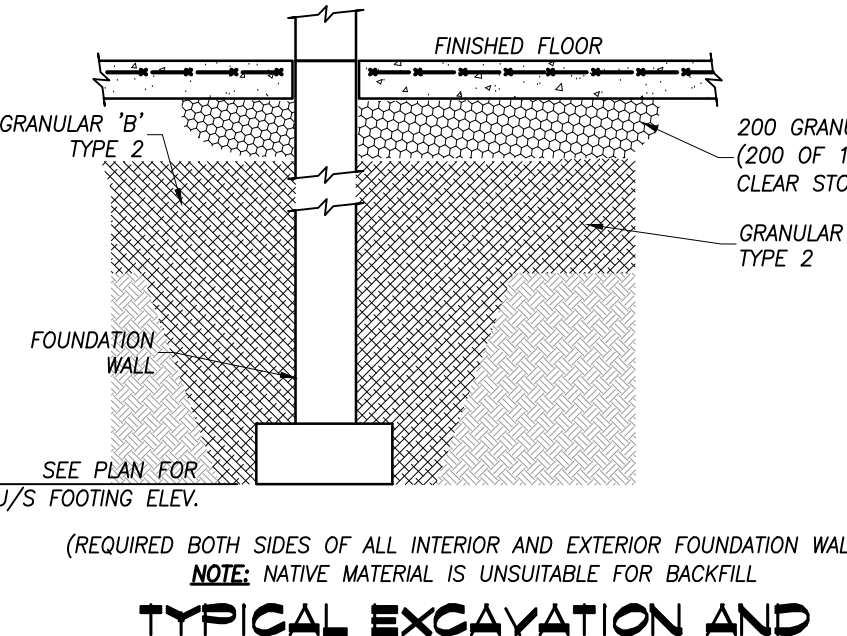
TYPICAL PARTITION WALL BRACING AT UNDERSIDE OF PRECAST SLAB  
SCALE: NTS



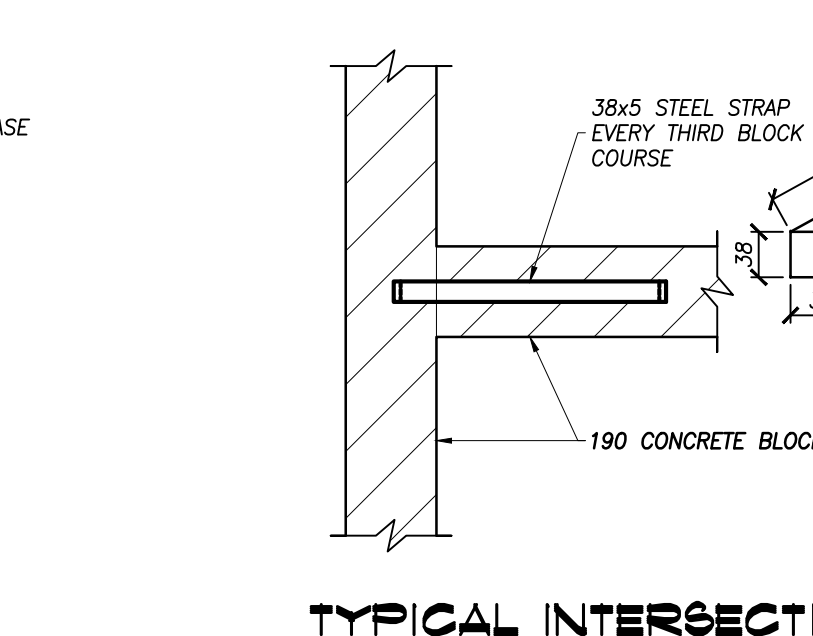
TYPICAL STEEL LINTEL DETAIL  
SCALE: NTS



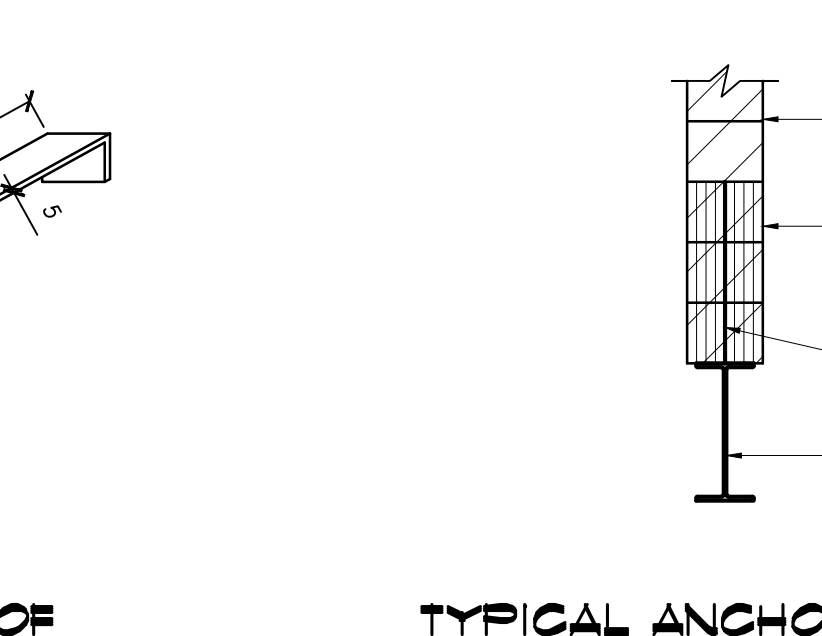
TYPICAL UNDERPINNING DETAIL  
SCALE: NTS



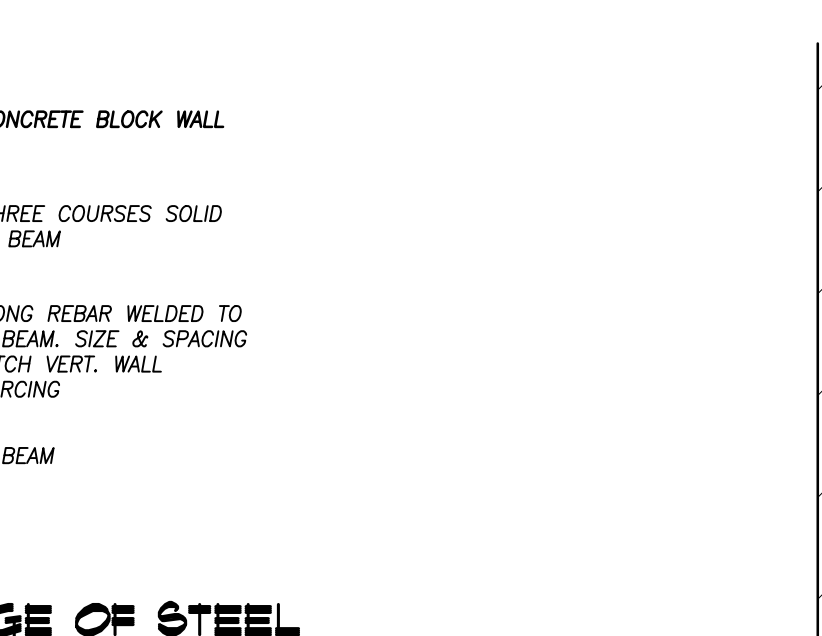
TYPICAL EXCAVATION AND BACKFILL AT FOUNDATION WALLS  
SCALE: NTS



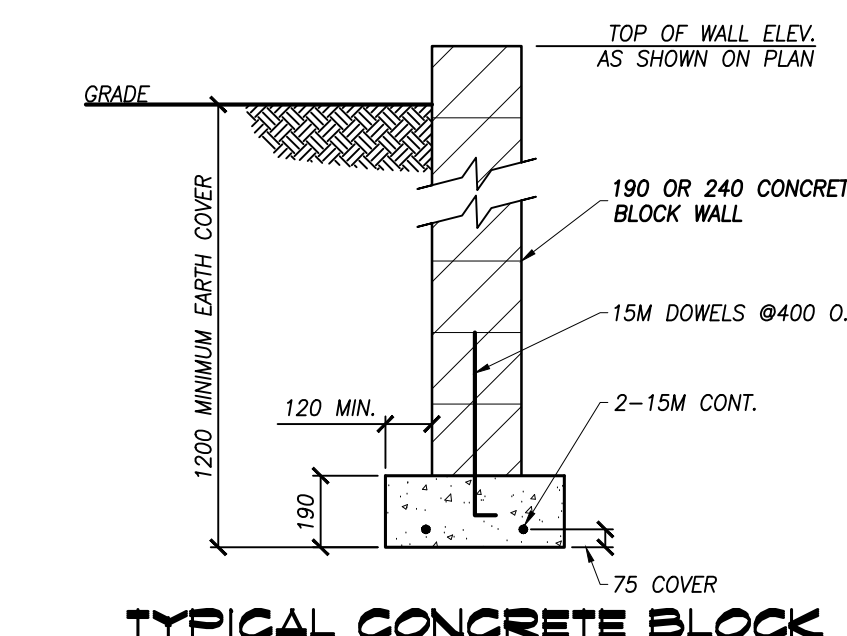
TYPICAL INTERSECTION OF CONCRETE BLOCK WALLS  
SCALE: NTS



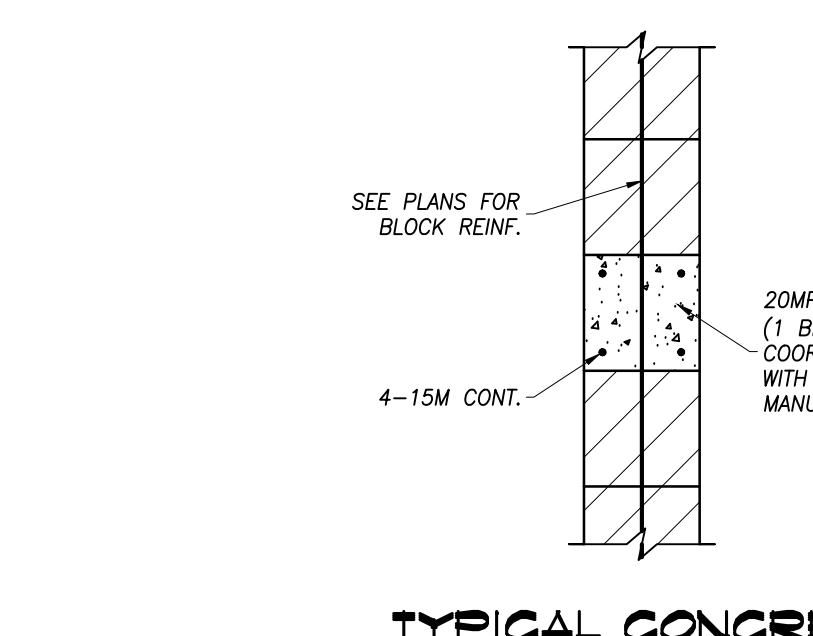
TYPICAL ANCHORAGE OF STEEL BEAM TO MASONRY WALL  
SCALE: NTS



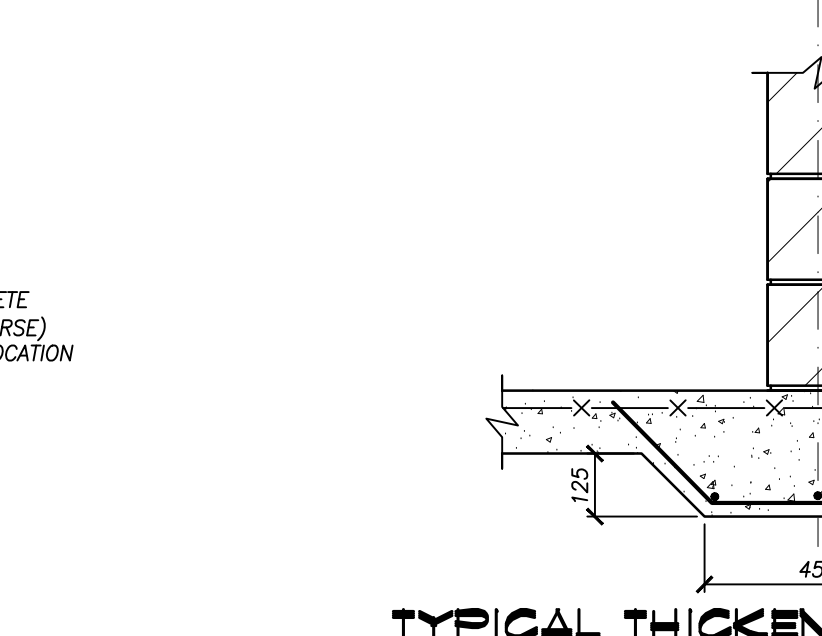
STEEL LINTEL & L  
SCALE: 1:10



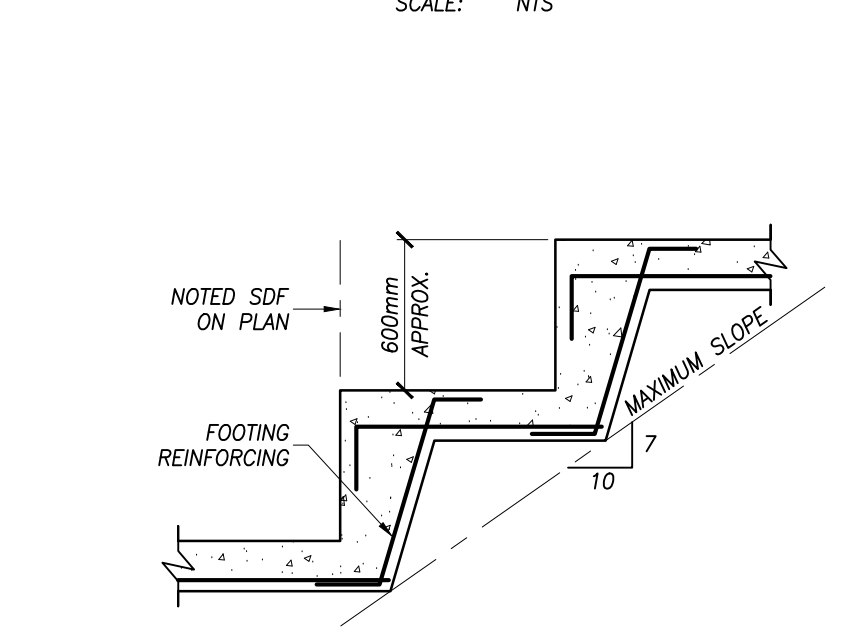
TYPICAL CONCRETE BLOCK STRIP FOOTING  
SCALE: NTS



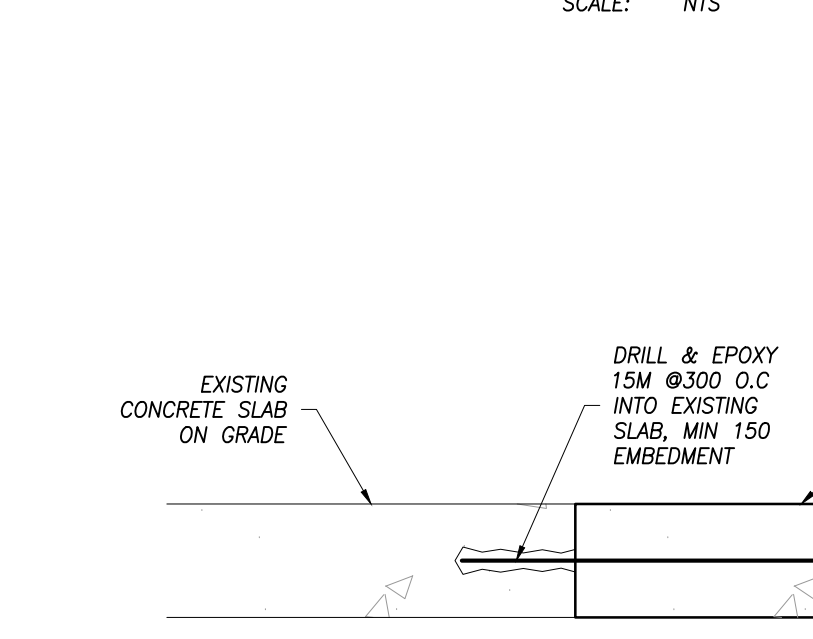
TYPICAL CONCRETE BOND BEAM  
SCALE: NTS



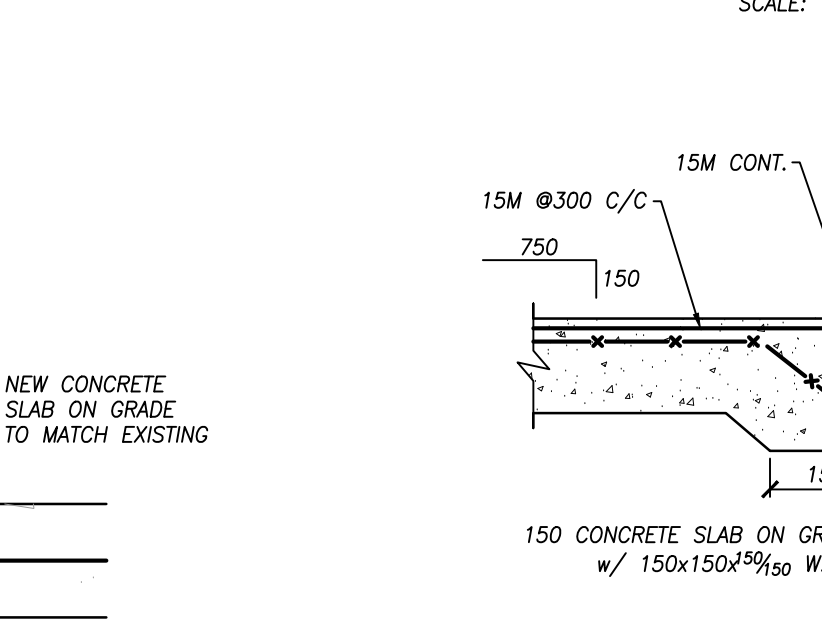
TYPICAL THICKENING OF SLAB ON GRADE UNDER PARTITION WALLS  
SCALE: NTS



TYPICAL STEPPING OF WALL FOOTING DETAIL  
SCALE: NTS



TYPICAL SLAB REPAIR DETAIL  
SCALE: 1:10



TYPICAL DETAIL AT FLOOR DEPRESSION  
SCALE: NTS

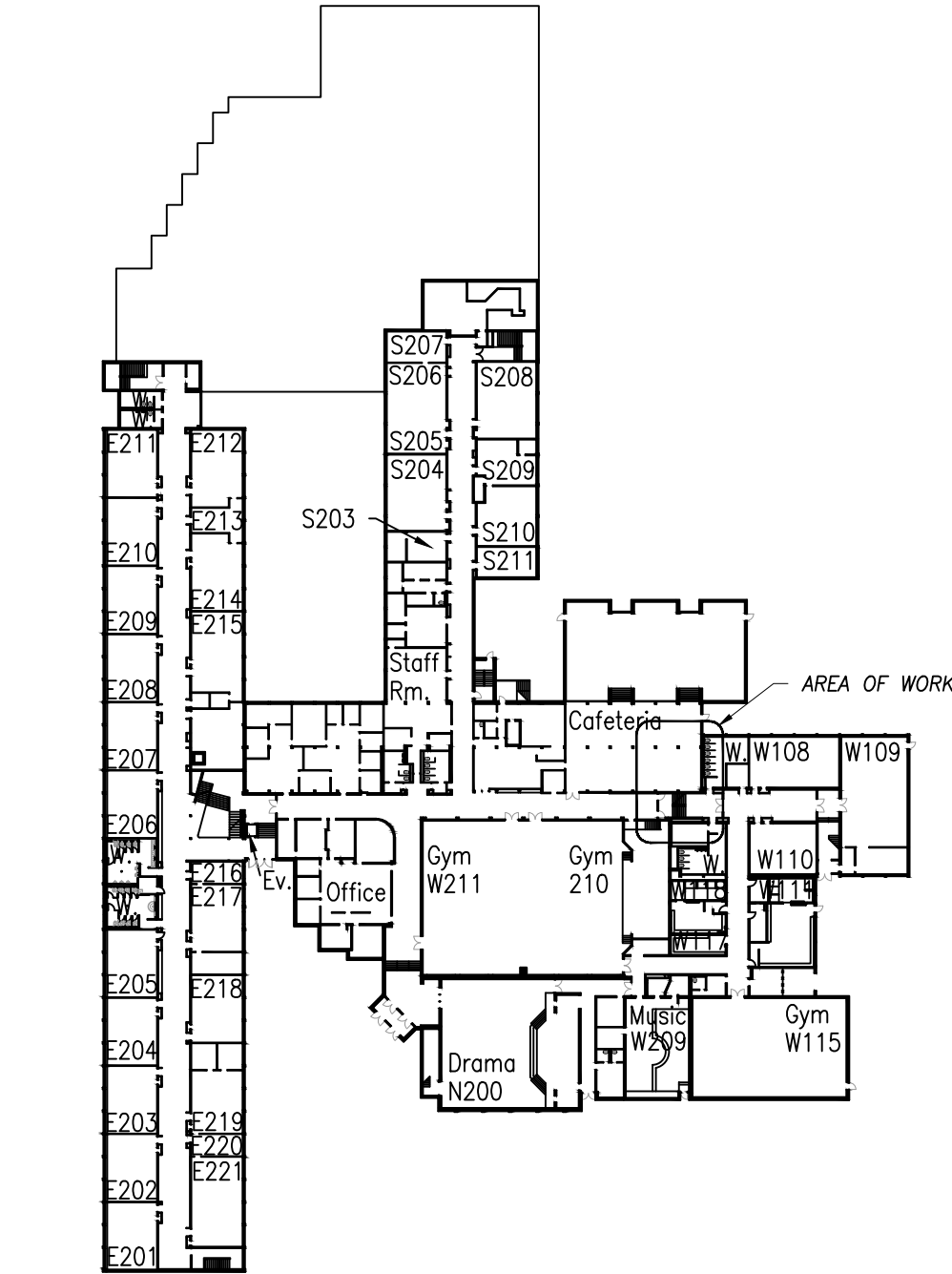




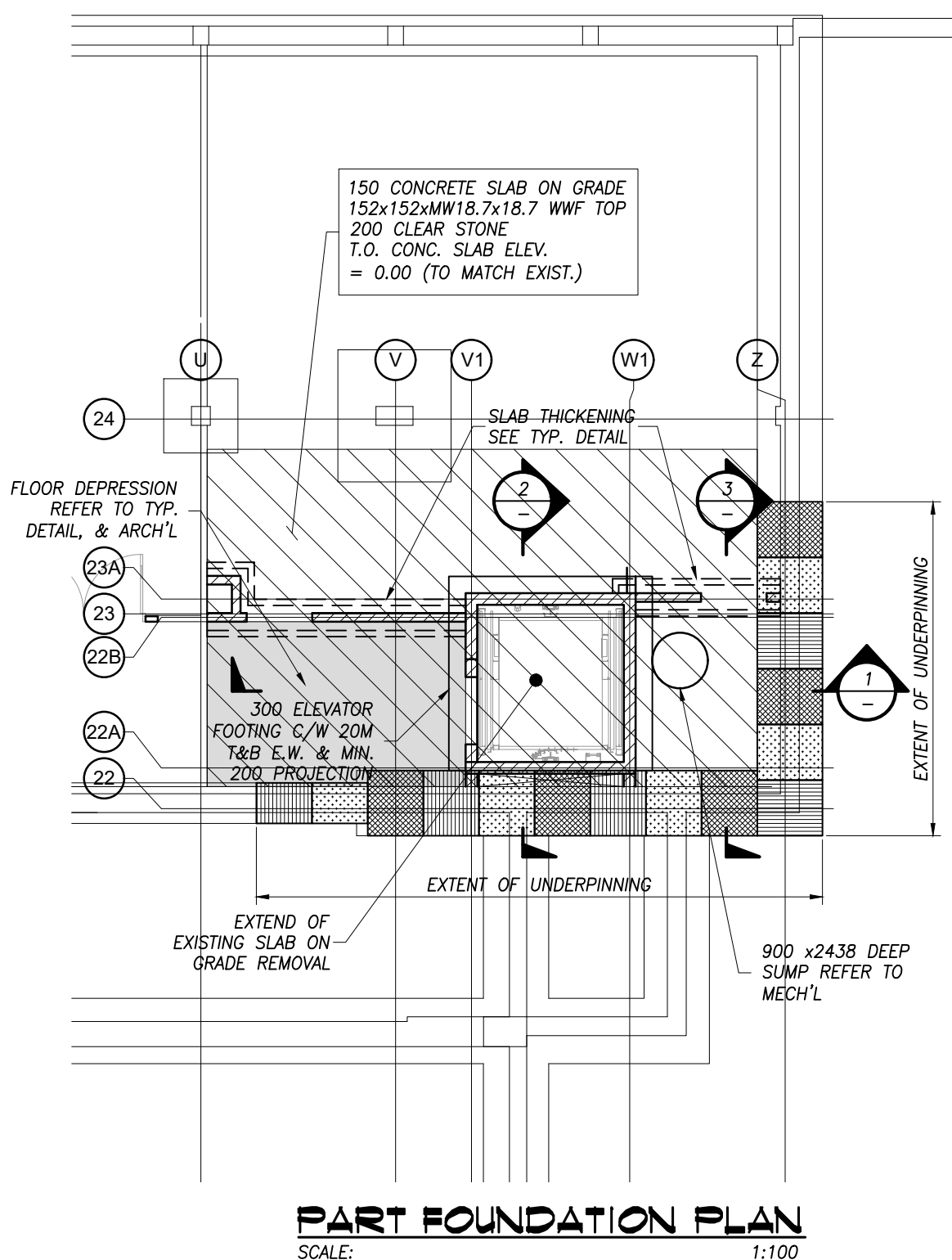




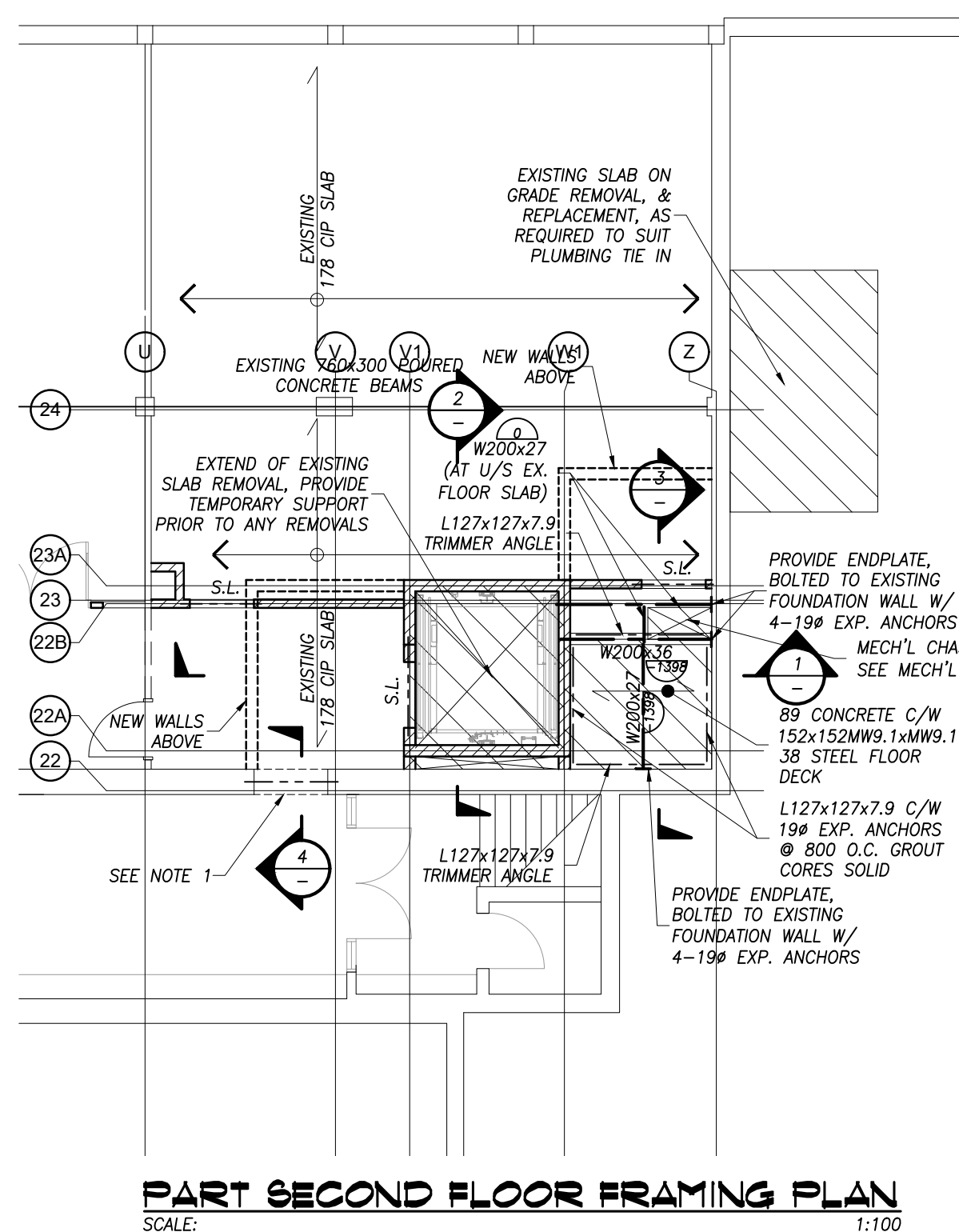




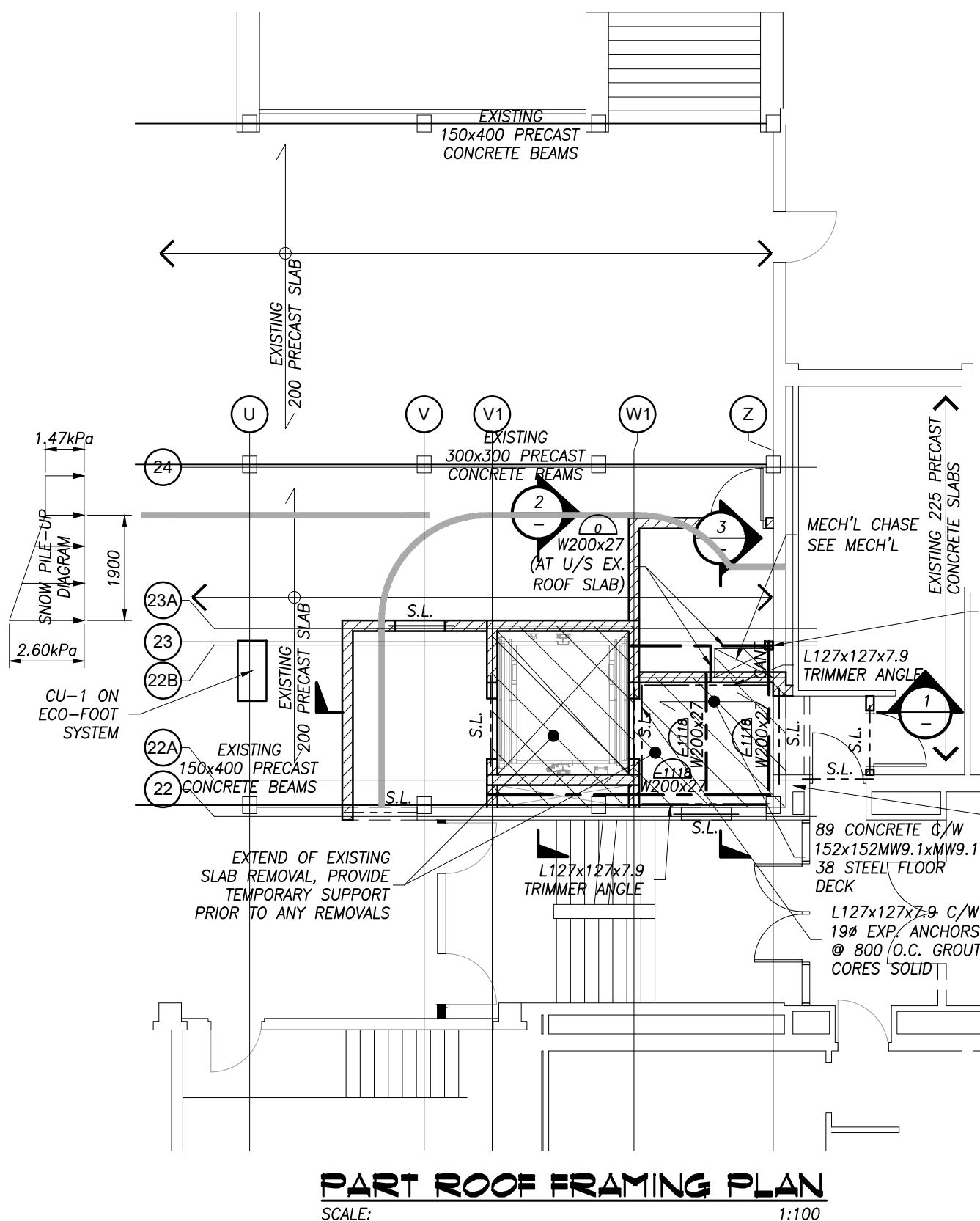
### KEY PLAN - GROUND FLOOR FRAMING



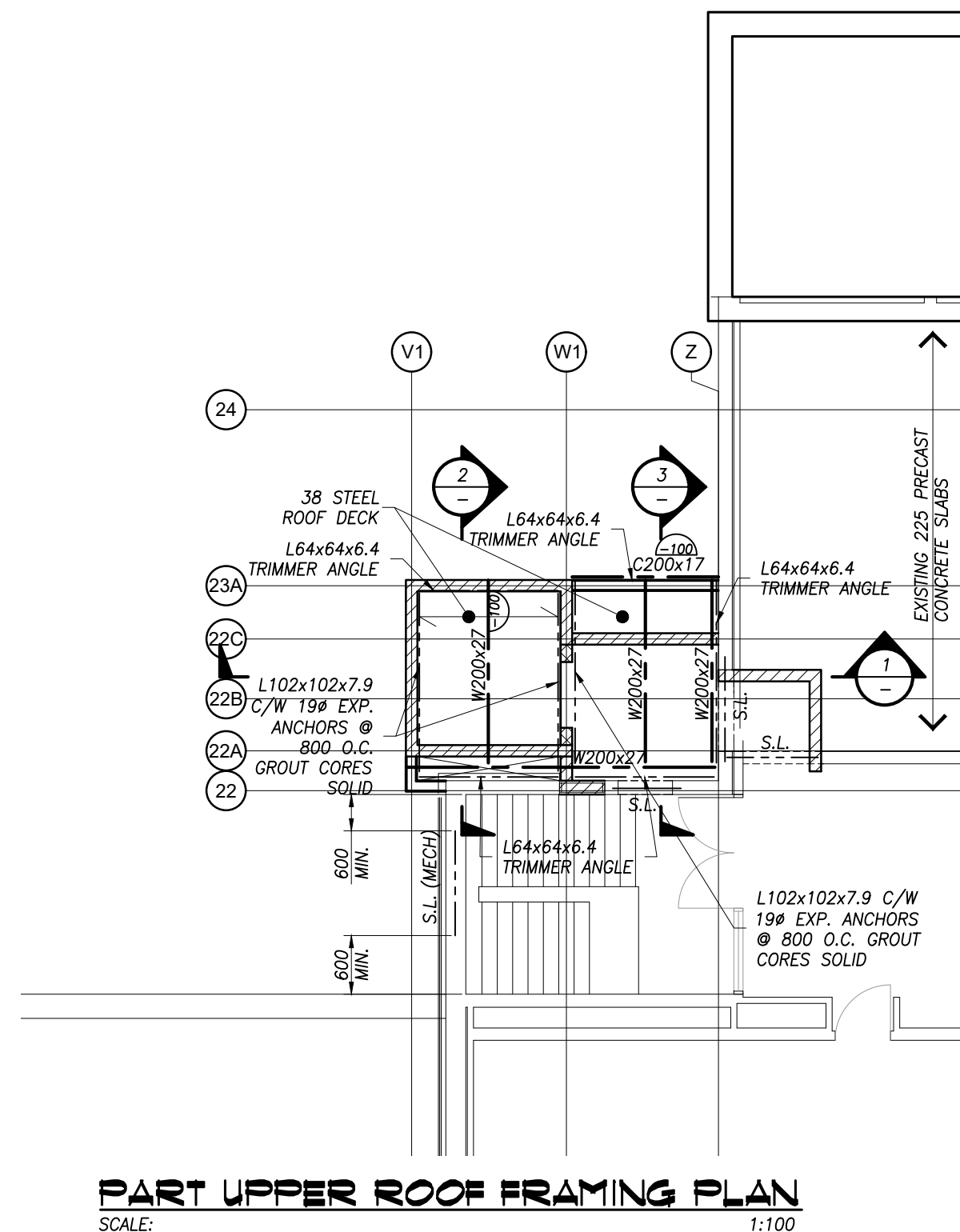
**PART FOUNDATION PLAN**  
SCALE: 1:100



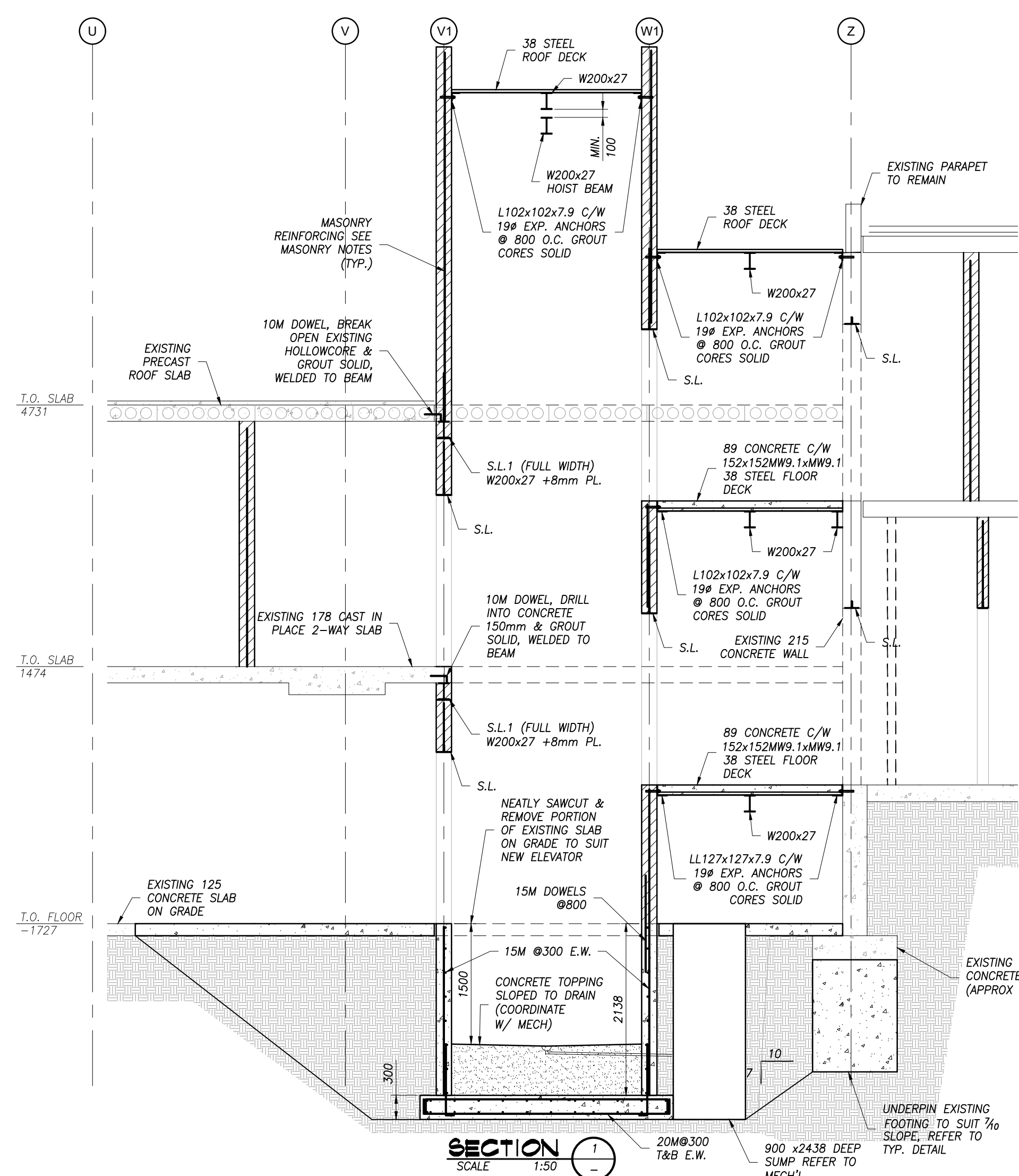
**PART SECOND FLOOR FRAMING PLAN**  
SCALE: 1:100



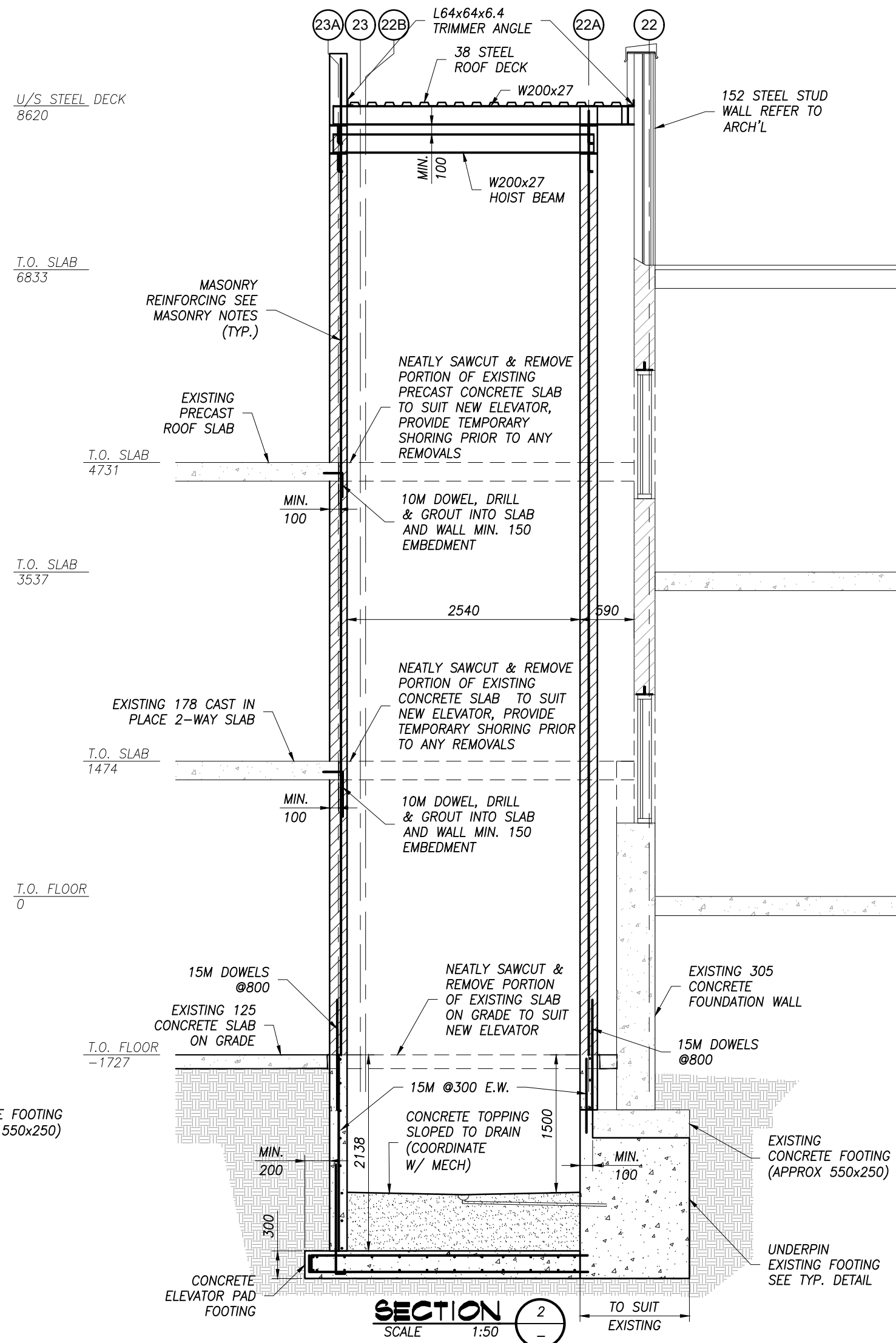
**PART ROOF FRAMING PLAN**  
SCALE: 1:100



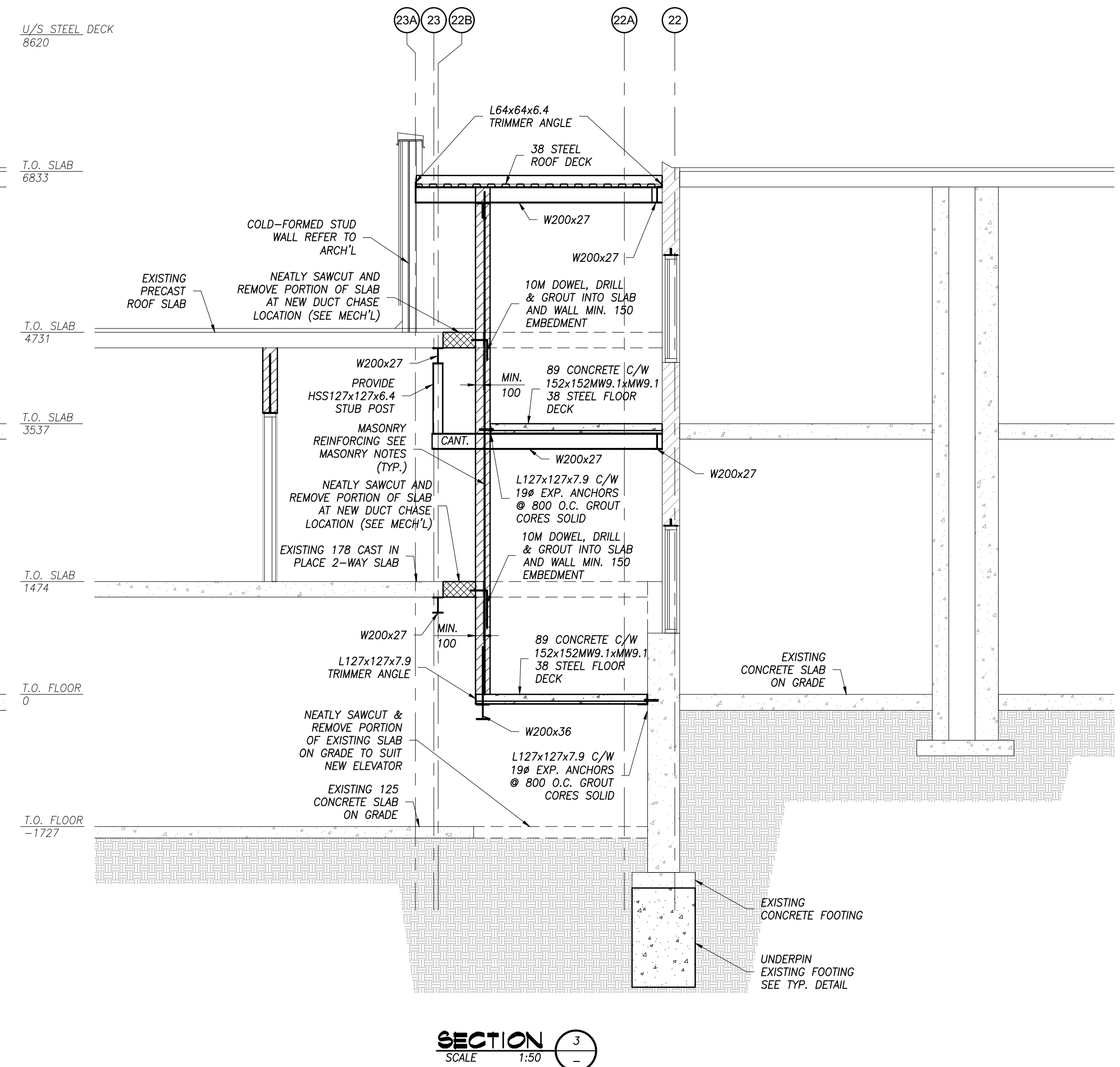
**PART UPPER ROOF FRAMING PLAN**  
SCALE: 1:100



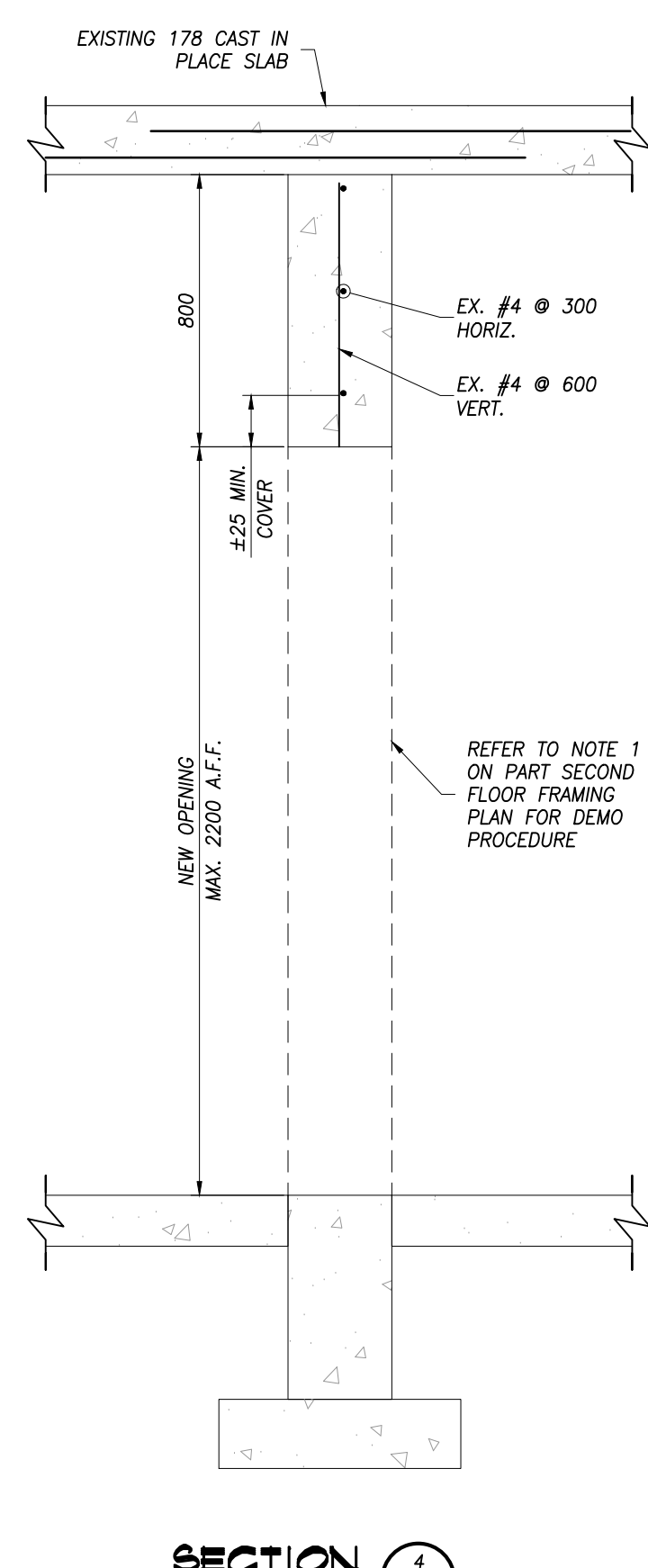
**SECTION**   
SCALE 1:50



**SECTION** 2  
SCALE 1:50



**SECTION** 3  
SCALE 1:50



SECTION 4

1. ALL FRAMES AND SHORING JACKS TO BE PLUMB AND LEVEL.
2. SHORING JACKS TO BE DESIGNED BY THE SUPPLIER FOR THE LOADS AND HEIGHTS SHOWN, INCLUDING BRACING.
3. MAX. EXTENSION OF SCREW JACKS WILL BE 400mm UNLESS NOTED.
4. SCAFFOLDING SHALL BE ERECTED IN ACCORDANCE TO C.S.A. CODE S269.1.
5. SHORING TO REMAIN IN PLACE UNTIL BEAM AND ALL BRACING IS

- PROVIDE TEMPORARY SHORING TO STRUCTURE ABOVE PRIOR TO ANY REMOVALS.
- EXISTING FRAMING SHOWN IS ASSUMED BASED ON SITE REVIEW AND EXISTING DRAWINGS REFERENCED IN NOTES BELOW. CONTRACTOR TO EXPOSE EXISTING STRUCTURE AND REPORT ANY DISCREPANCIES TO THE ENGINEER.

[illegible]

General Contractor shall check and verify all dimensions and report all errors and omissions to the Architect. Do not scale the drawings. Drawings shall not be used for construction purposes until issued by the Architect for construction.



Drawing Title:  
**EAST ELEVATOR  
DETAILS**

Scale:	AS NOTED	Date:	MARCH 2025
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Design by:	Checked by:
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Drawn by: \_\_\_\_\_

Job No. \_\_\_\_\_ Drawing No. \_\_\_\_\_

2215-C S300