

CTV BUILDING

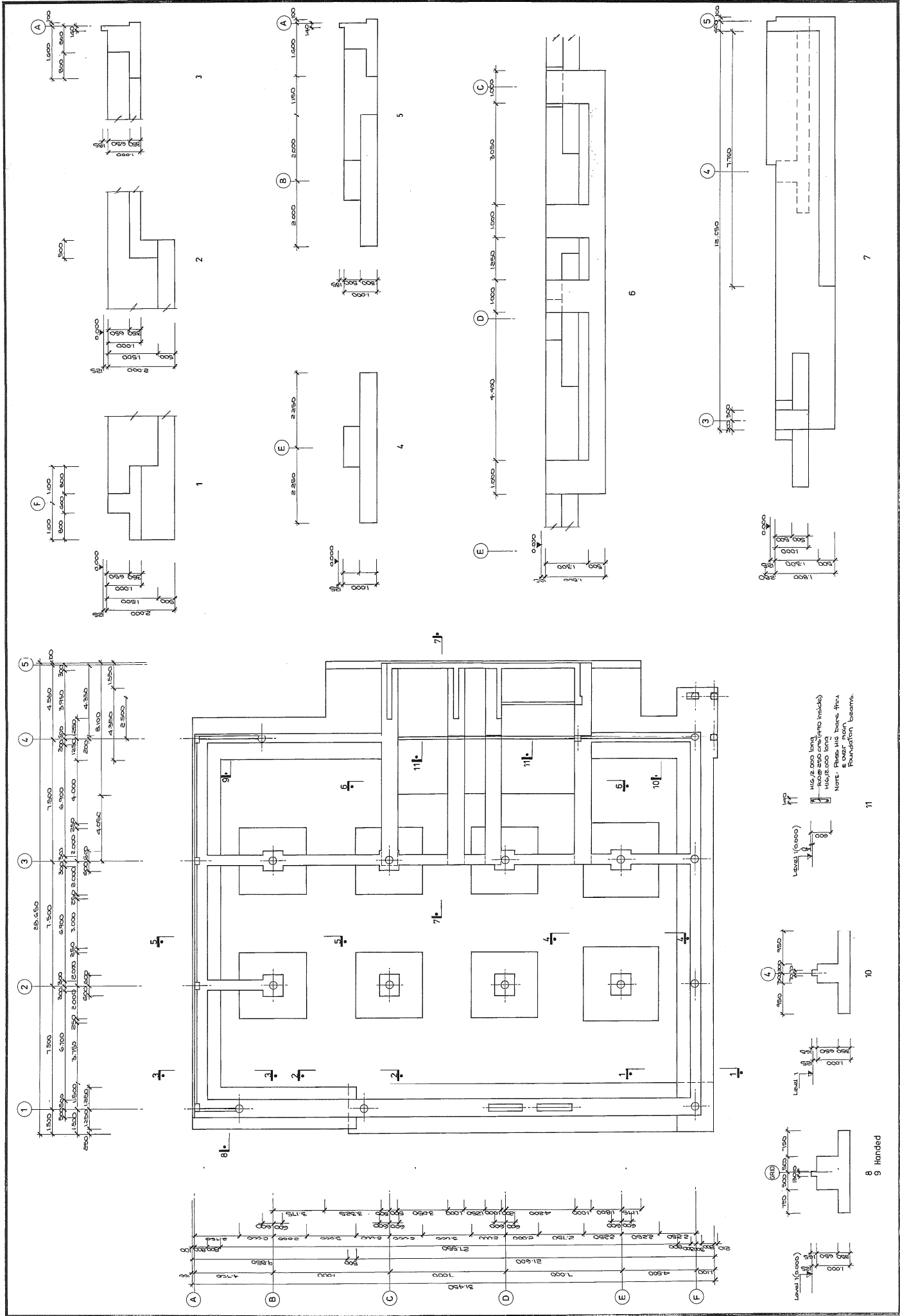
CTV BUILDING COLLAPSE INVESTIGATION
FOR DEPARTMENT OF BUILDING AND HOUSING



Appendix L

Structural Drawings

CTV Building
249 Madras Street
Christchurch



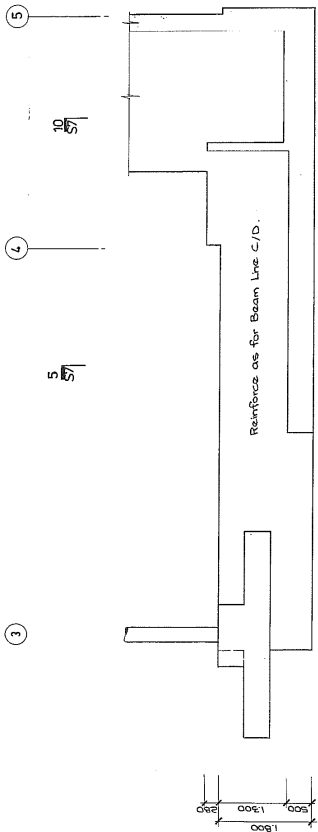
11/2 inch long
 11/2 inch long
 11/2 inch long
 Note: Place the base first
 & over main
 foundation beams.

8 Handed

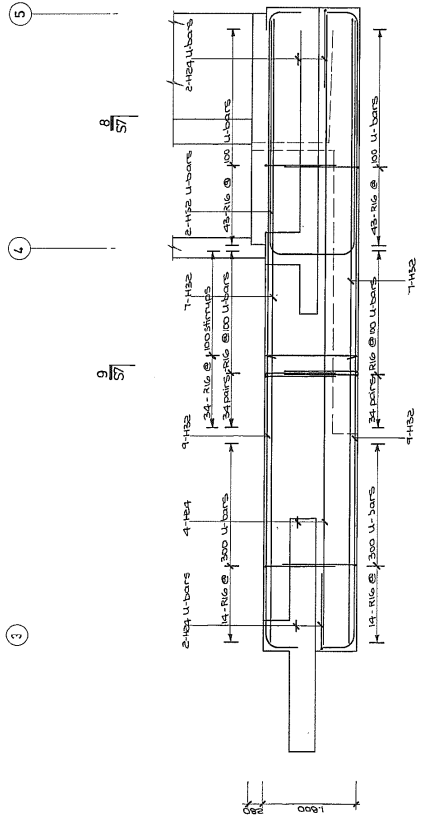
10

11

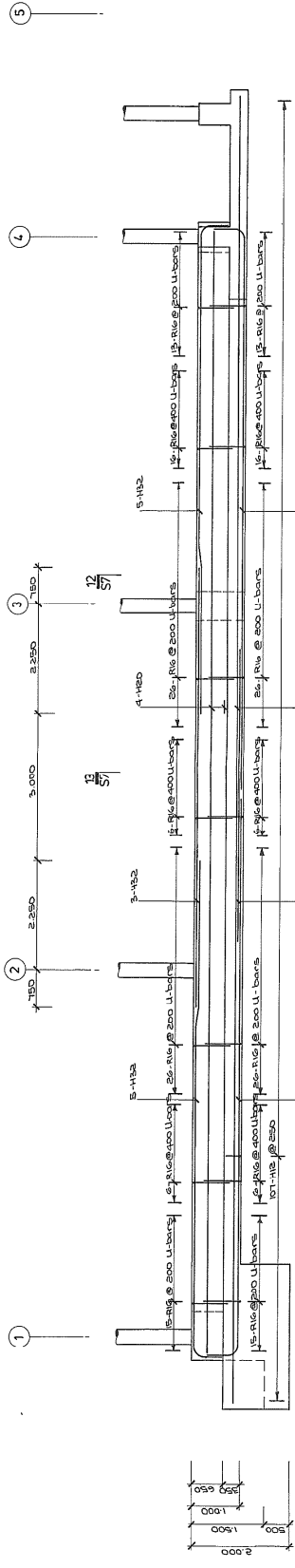
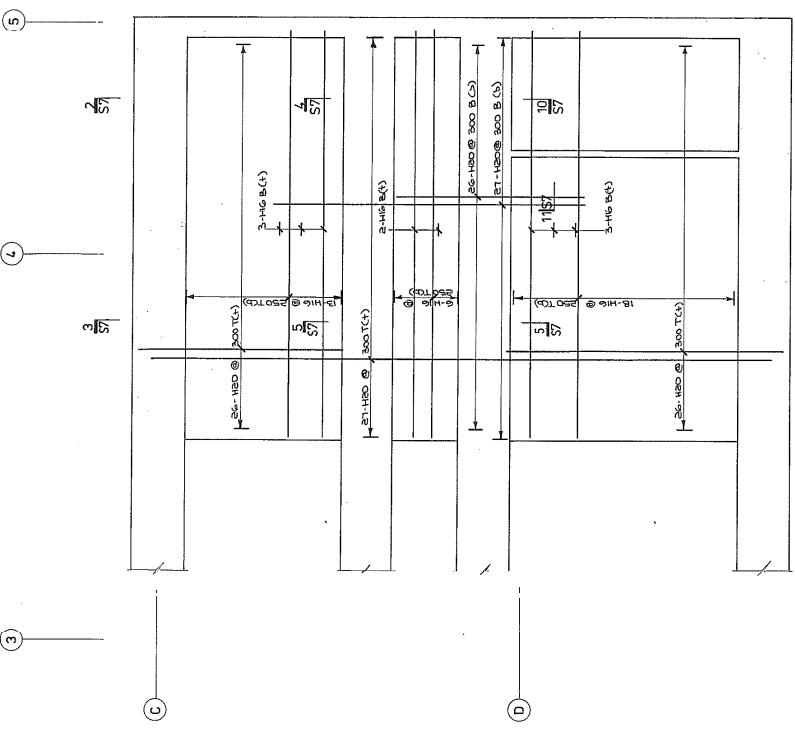
Notes
 Allow to cast into foundations
 for 24 hrs. before
 clean on bottom and
 blockwork all other on day 5/11.



FOUNDATION BEAM D/E

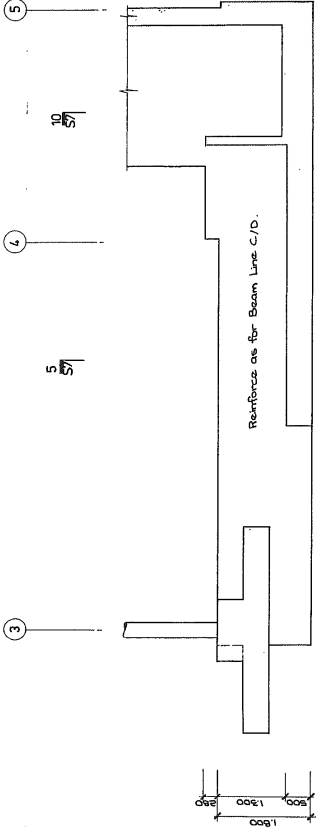


FOUNDATION SLAB

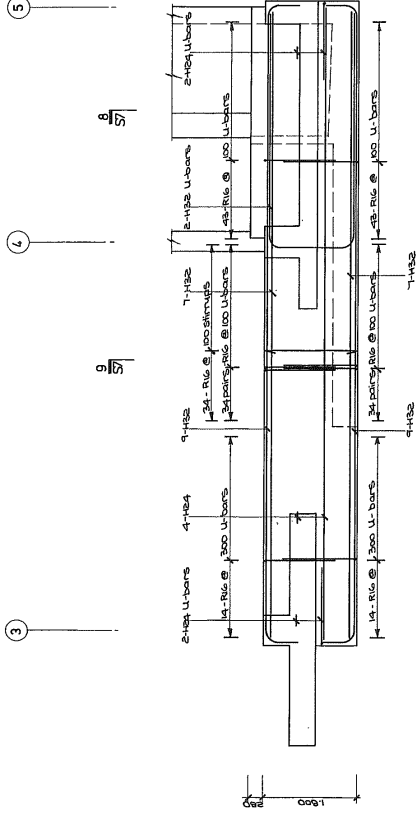


FOUNDATION BEAM F

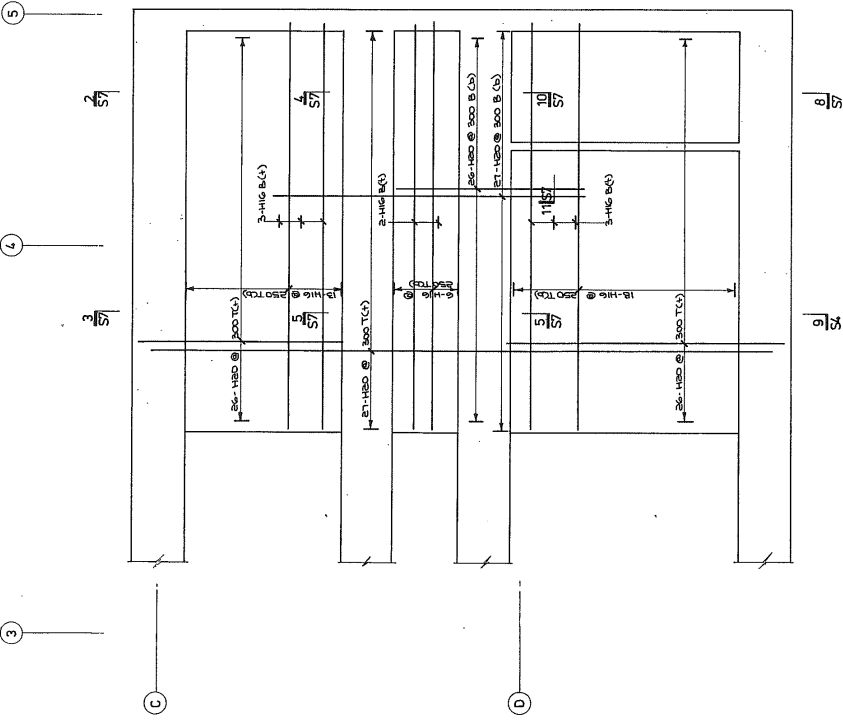
Note
 Allow to cast into foundations
 all stirrups for columns & walls
 shown on drawings. Stirrups and
 development stirrups on long end.



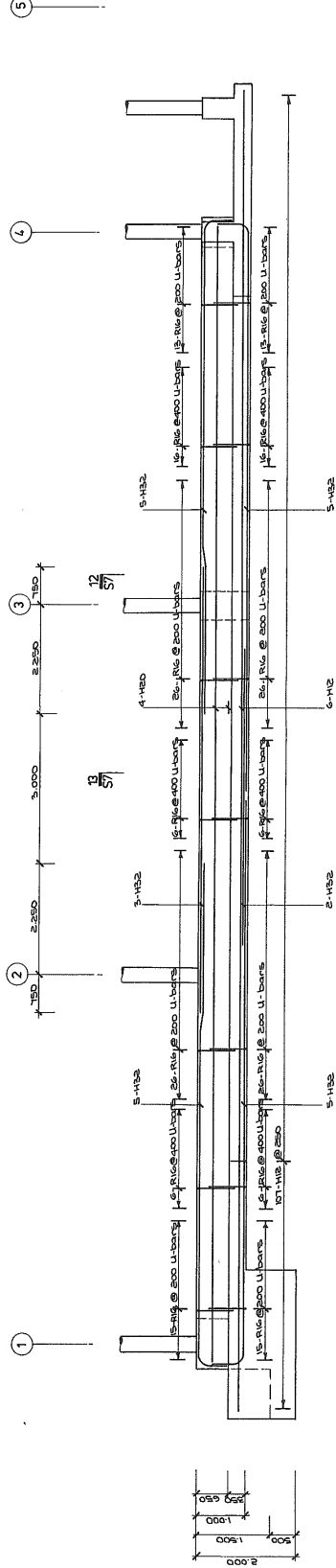
FOUNDATION BEAM LINE D



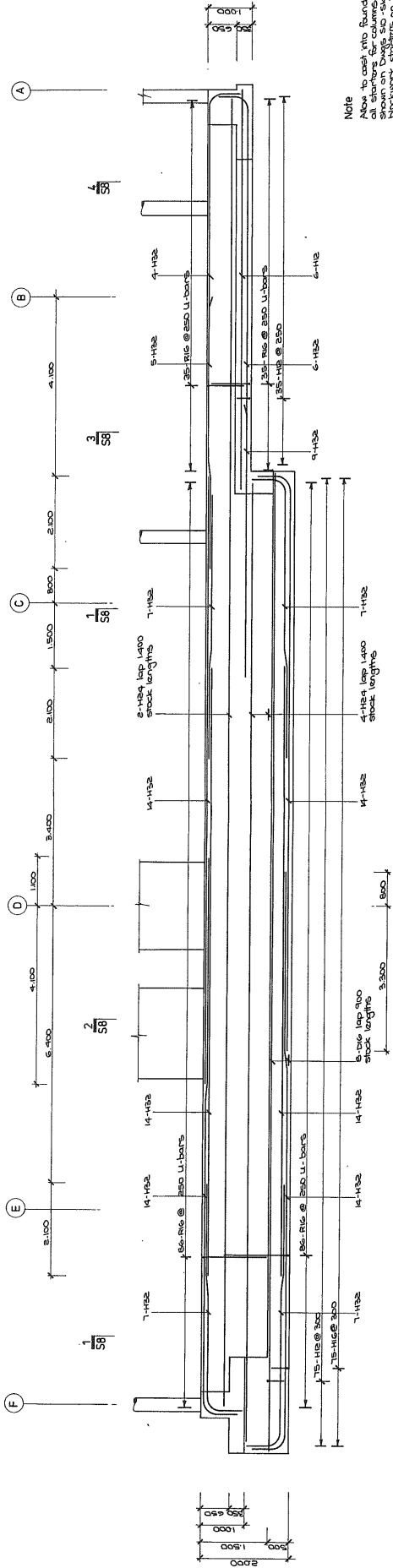
FOUNDATION BEAM LINE D/E



FOUNDATION SLAB

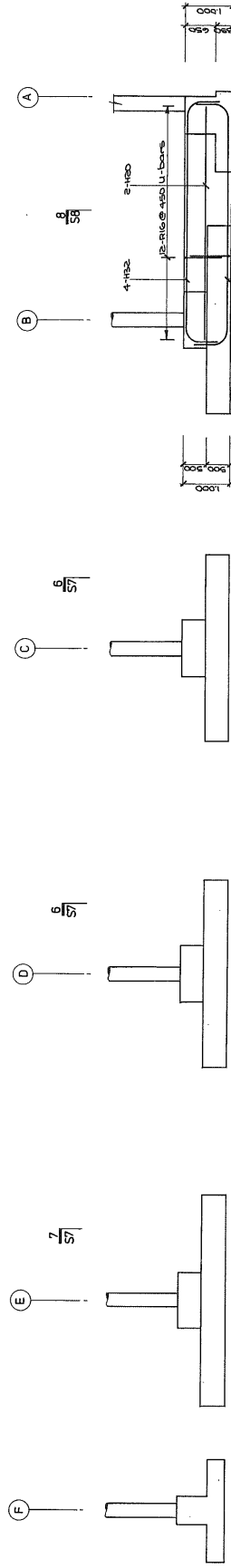


FOUNDATION BEAM LINE F



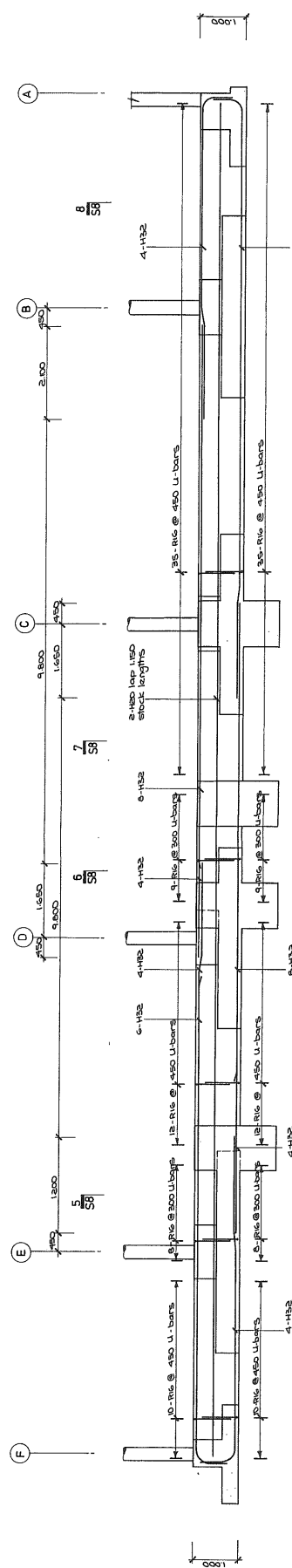
FOUNDATION BEAM LINE 1

NOTE
 Above the cast into foundations
 and below the concrete slabs
 shown on Drawings S4 and
 blockwork slabs on Draw S5.

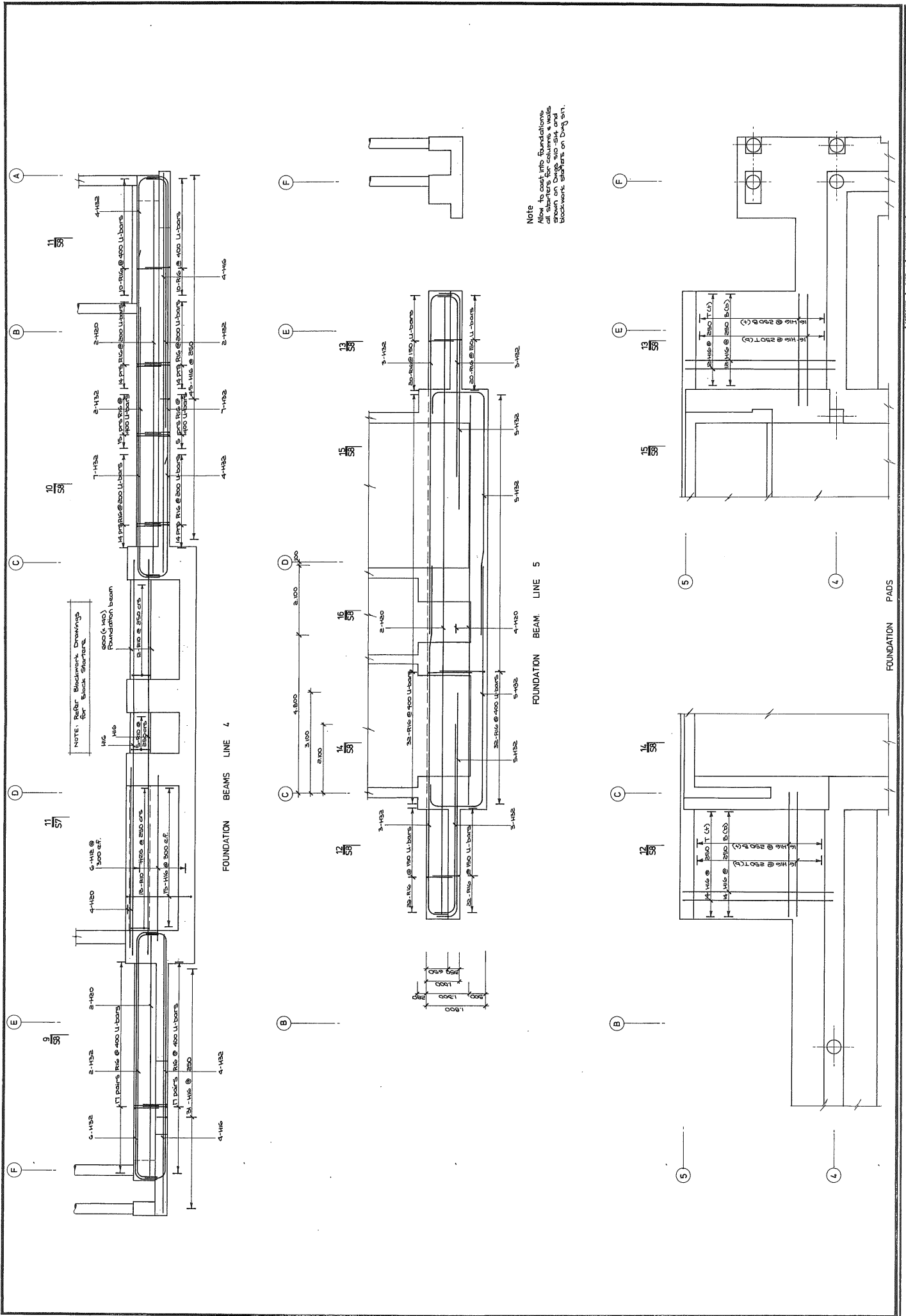


FOUNDATIONS LINE 2

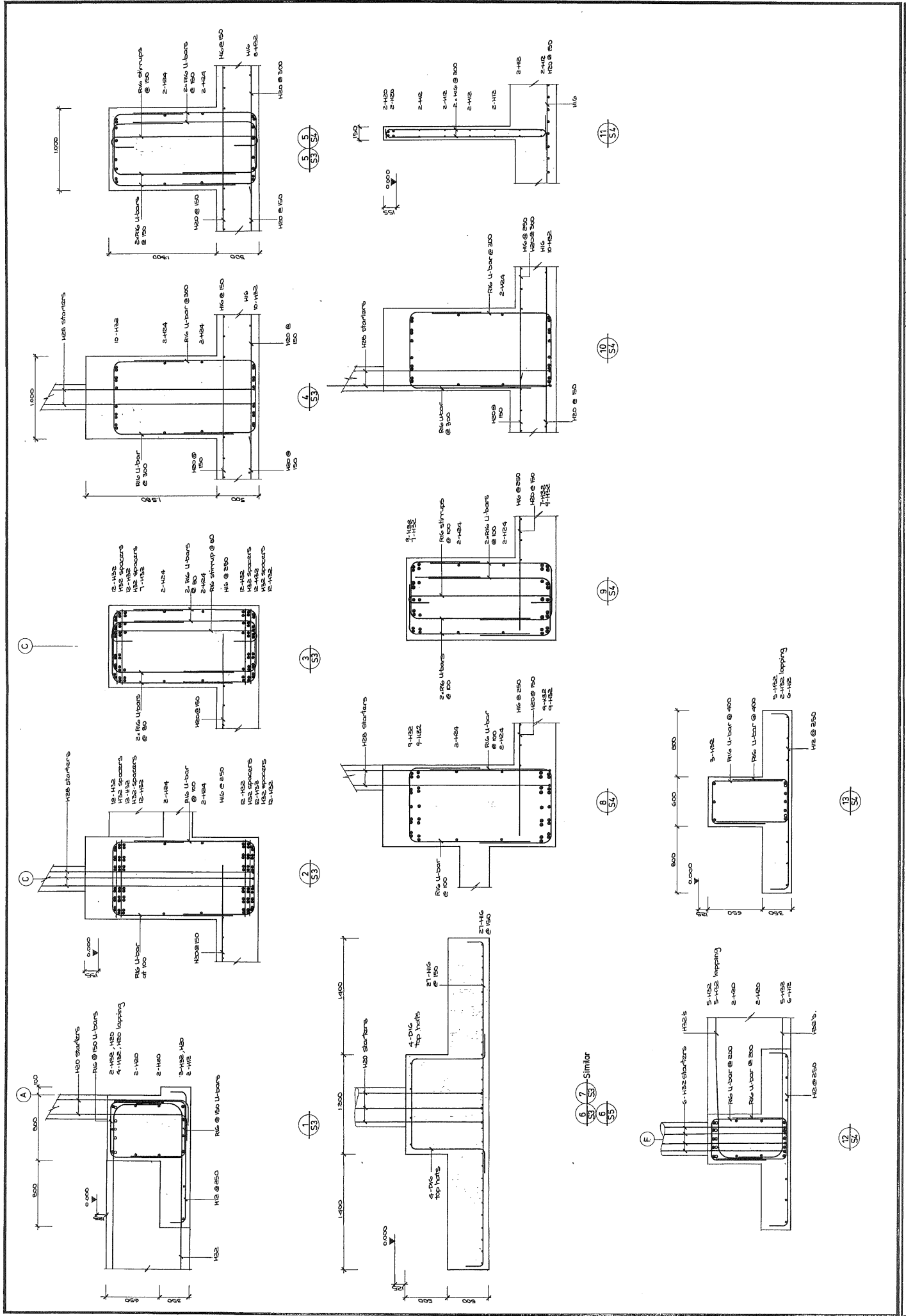
FOUNDATION BEAM LINE 2

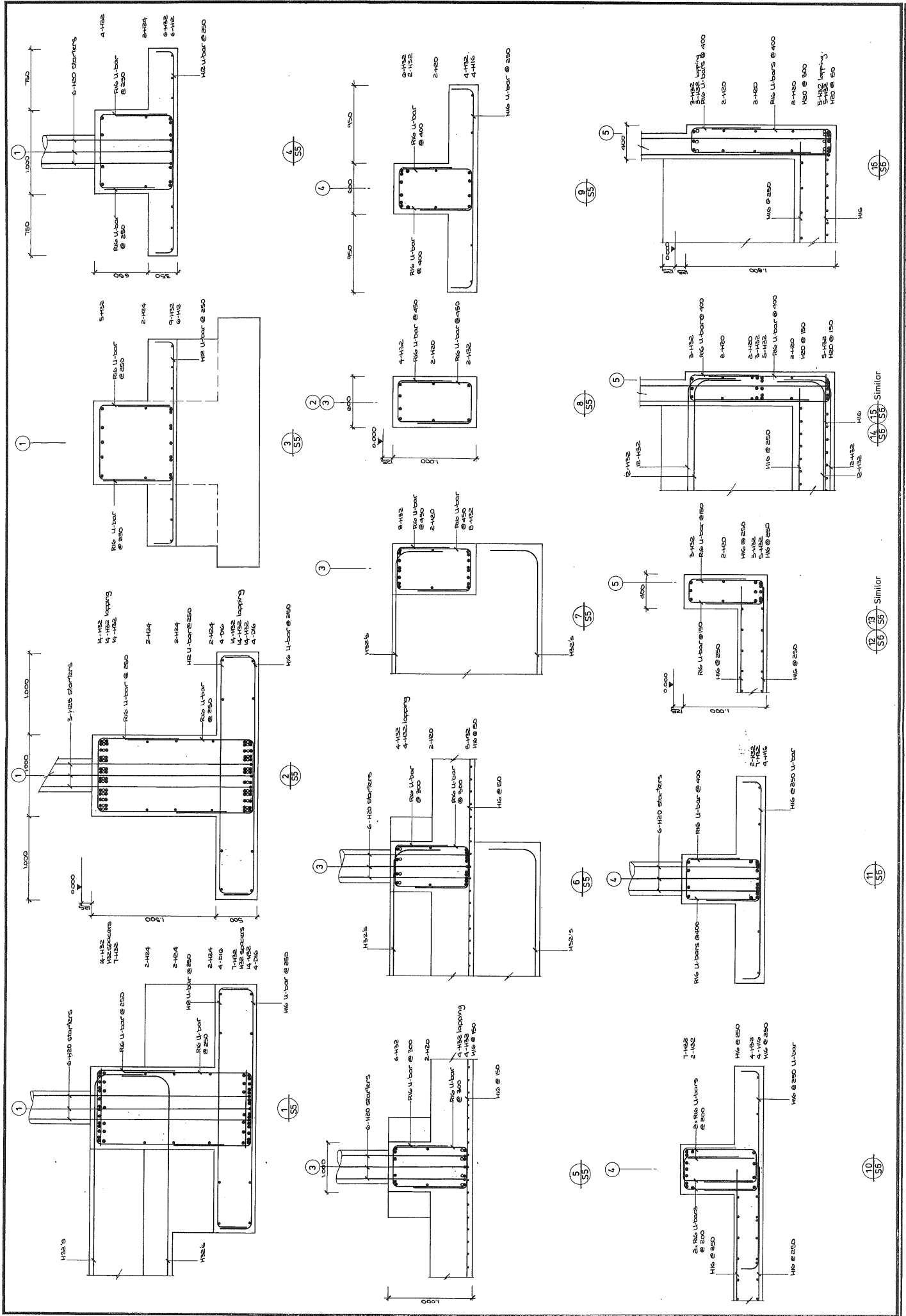


FOUNDATION BEAM LINE 3



NOTE
 Allow to cast into foundations
 all starters for columns & walls.
 Reinforcement for columns & walls
 to be shown on separate
 drawings on DWG 017.





E

D

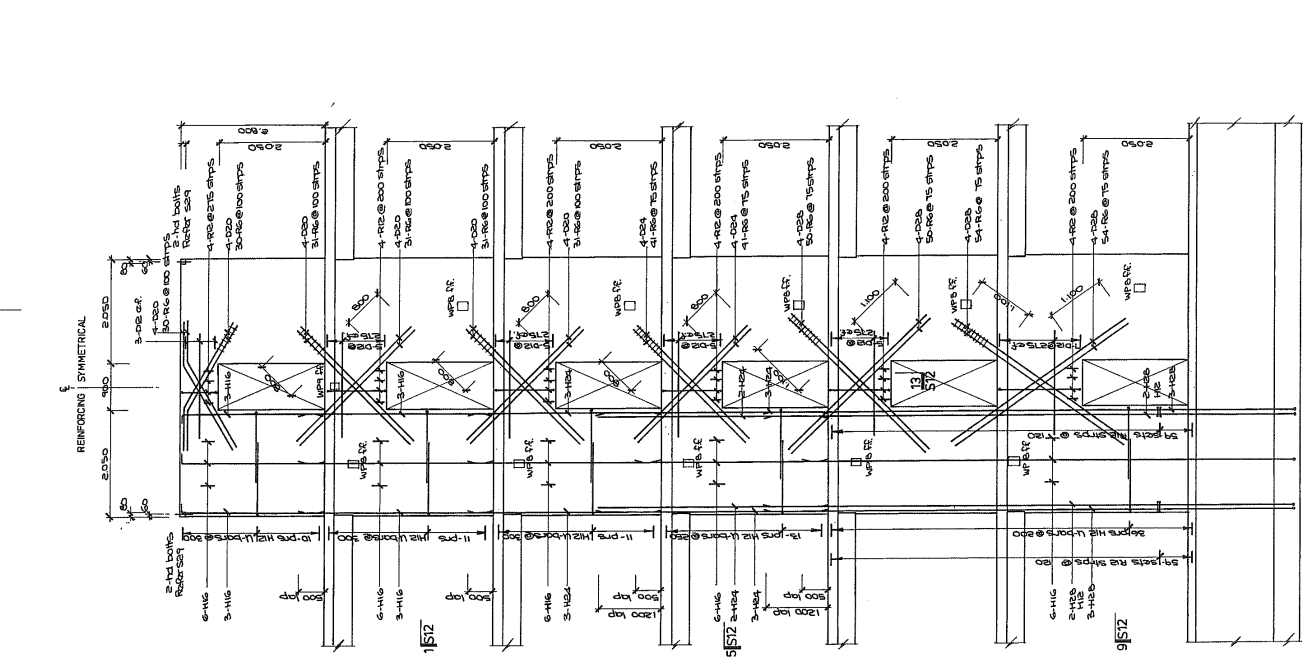
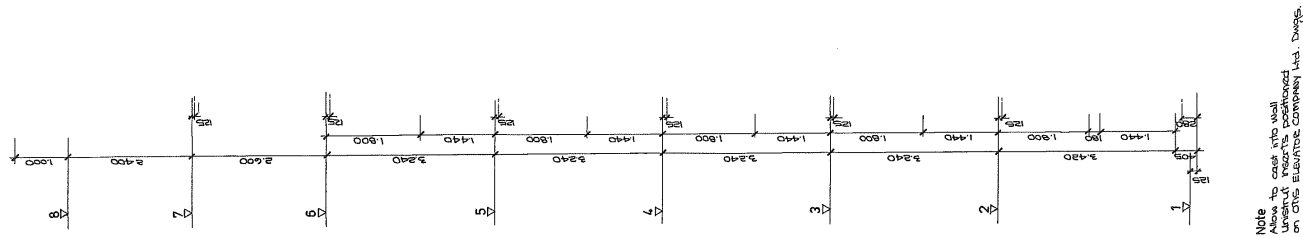
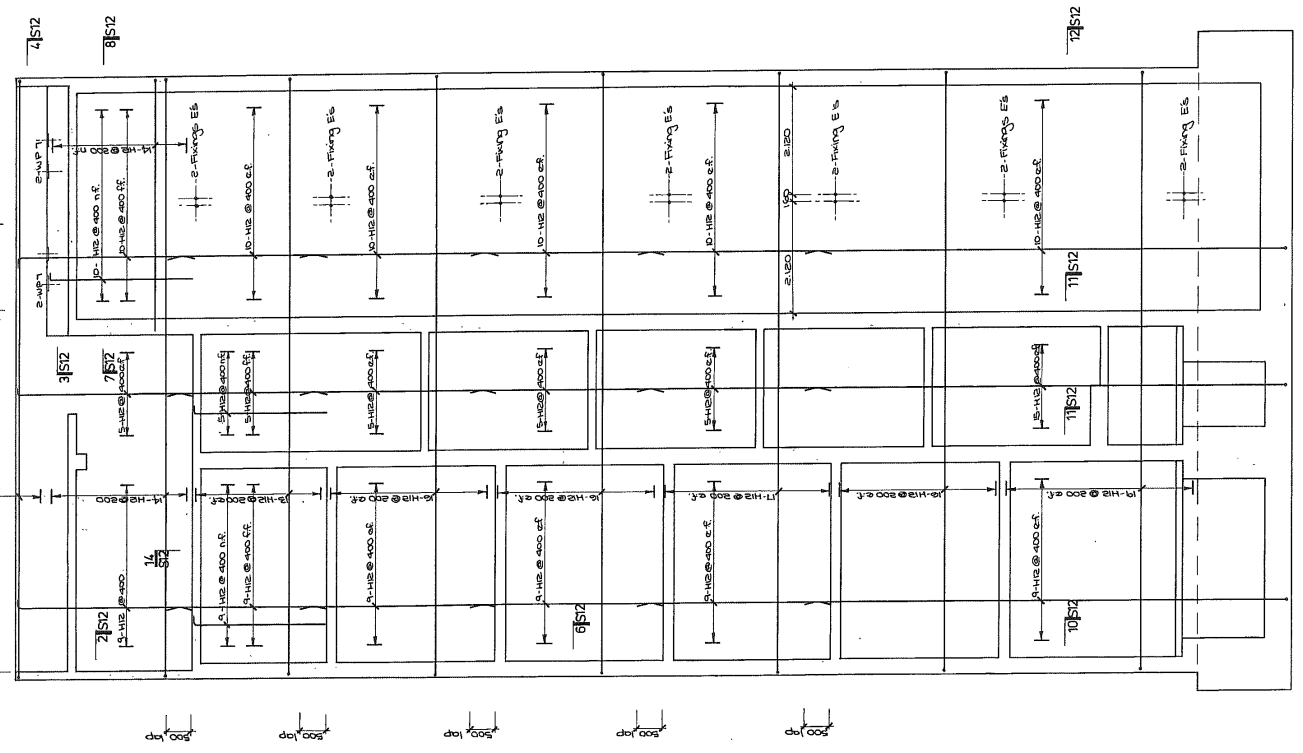
C

B

A

D

E

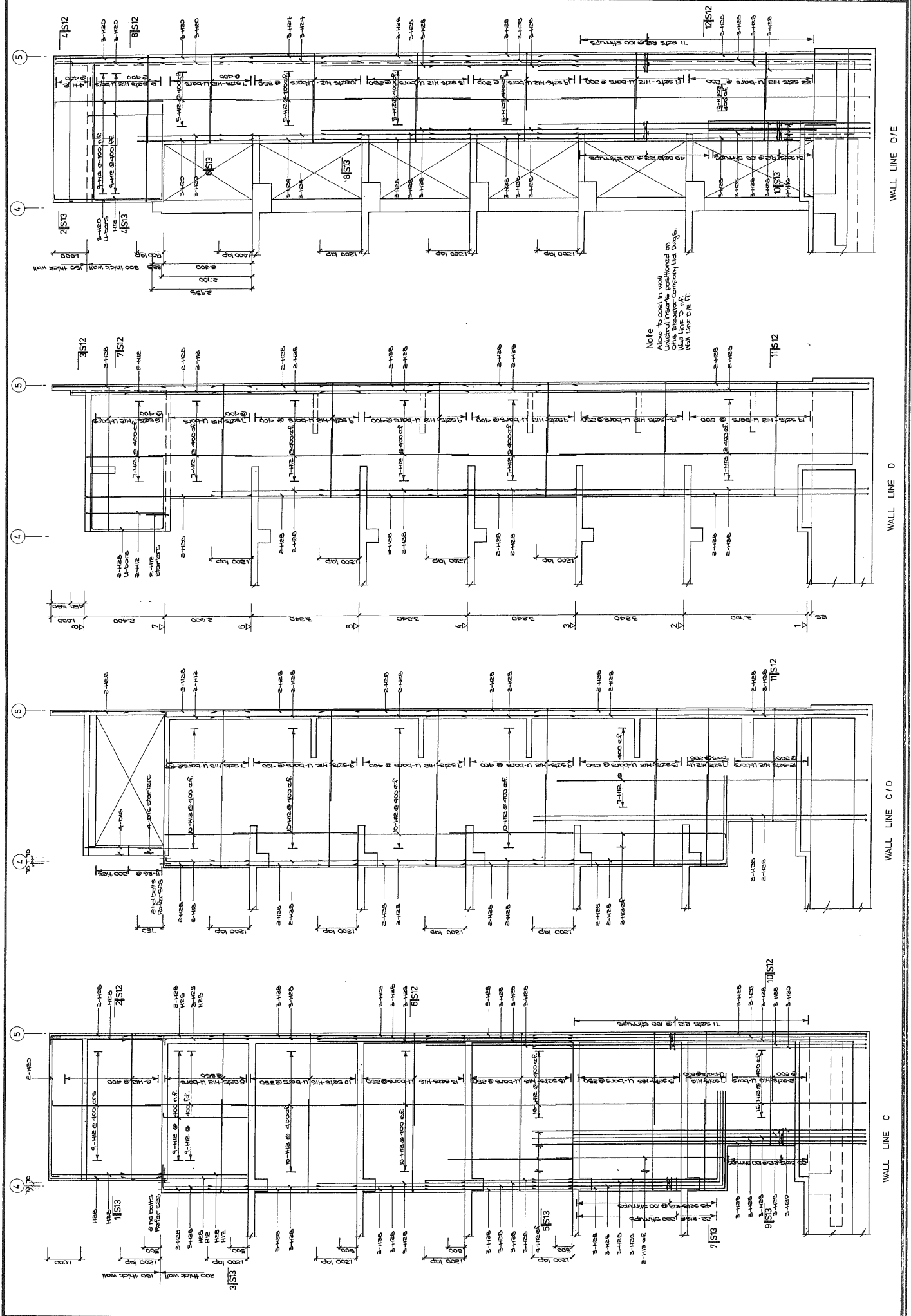


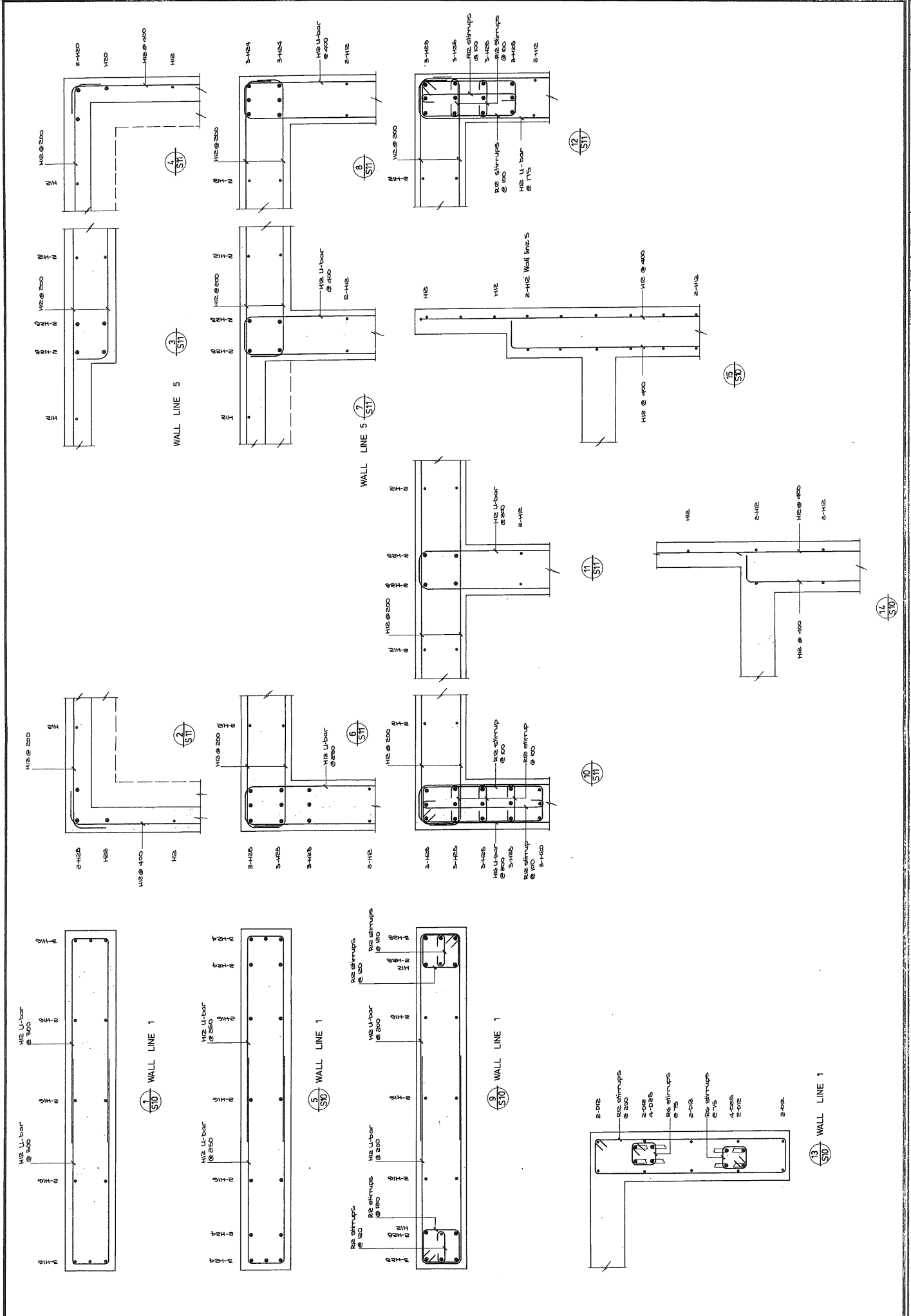
Note
 For details of section to
 W.P. & W.P. refer to
 DWG 552.

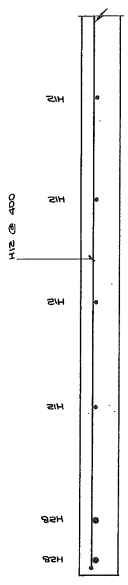
Note
 Allow to cast into wall
 unless the inserts positioned
 on ONE ELEVATION COMPANY Ltd. DWG.

WALL . LINE 1

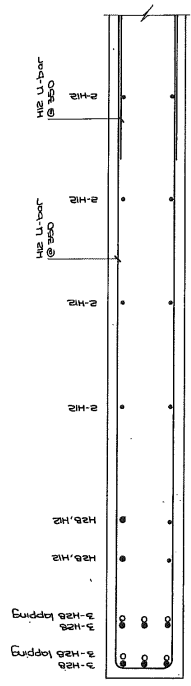
WALL LINE 5



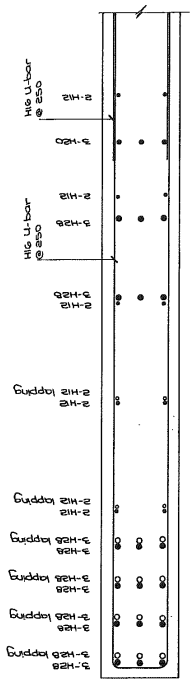




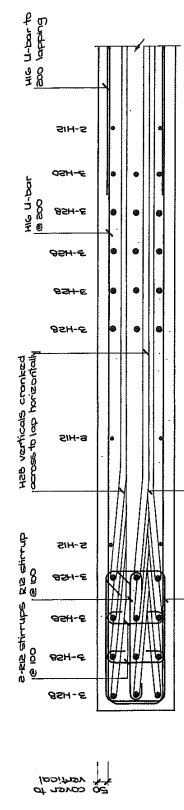
1
ST1



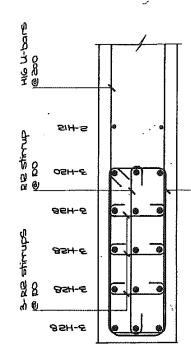
2
ST1



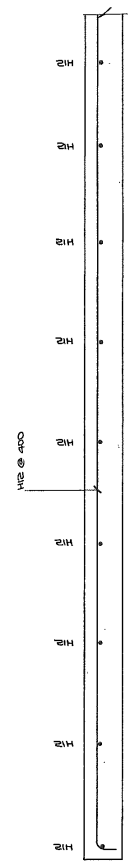
3
ST1



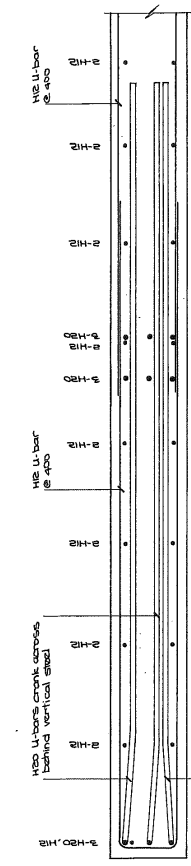
4
ST1



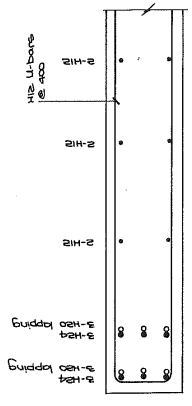
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ST1



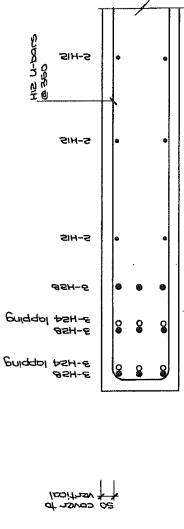
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ST1



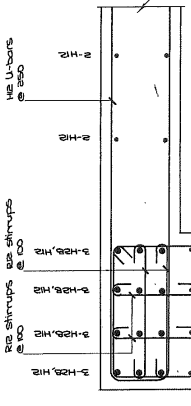
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ST1



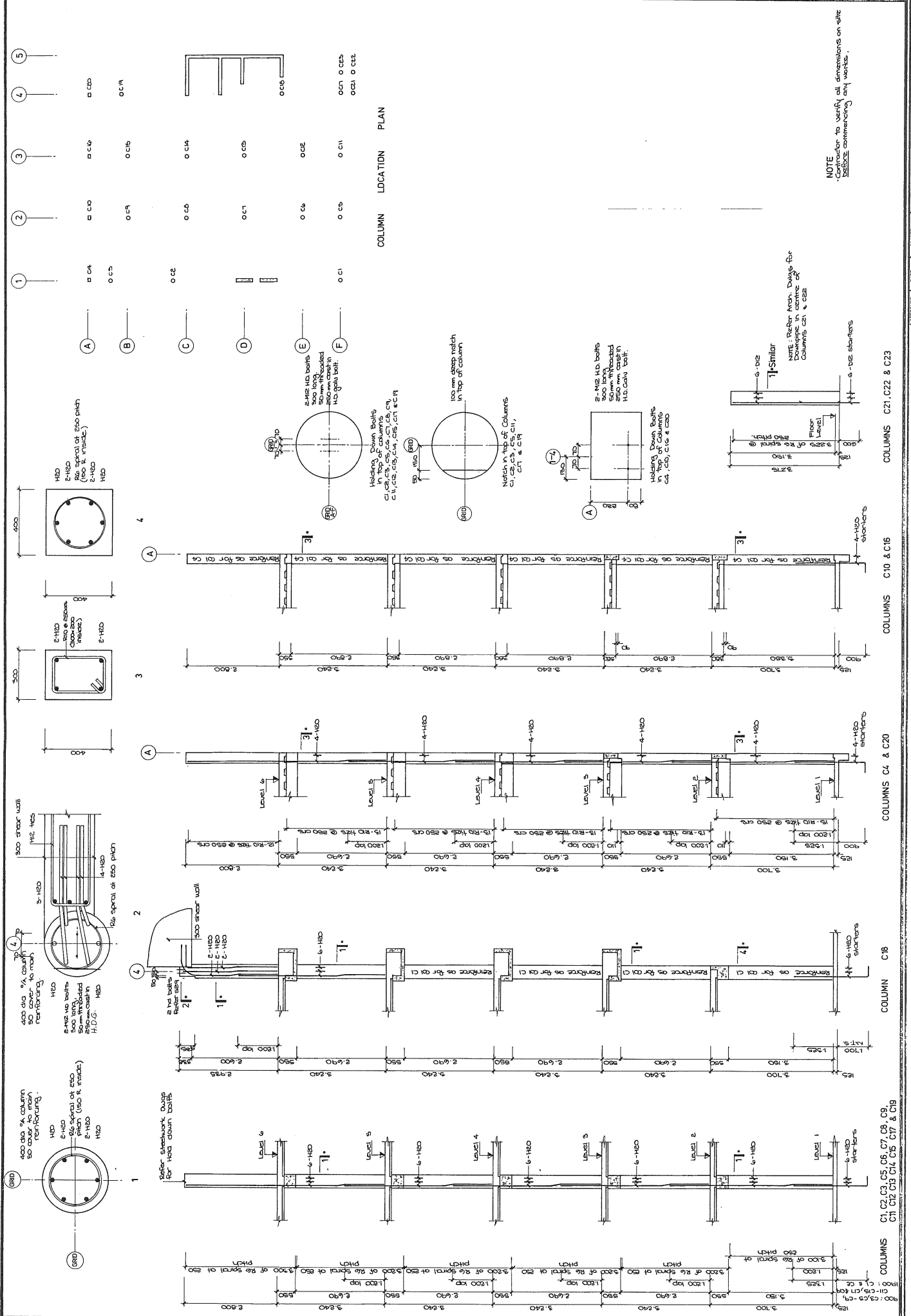
6
ST1



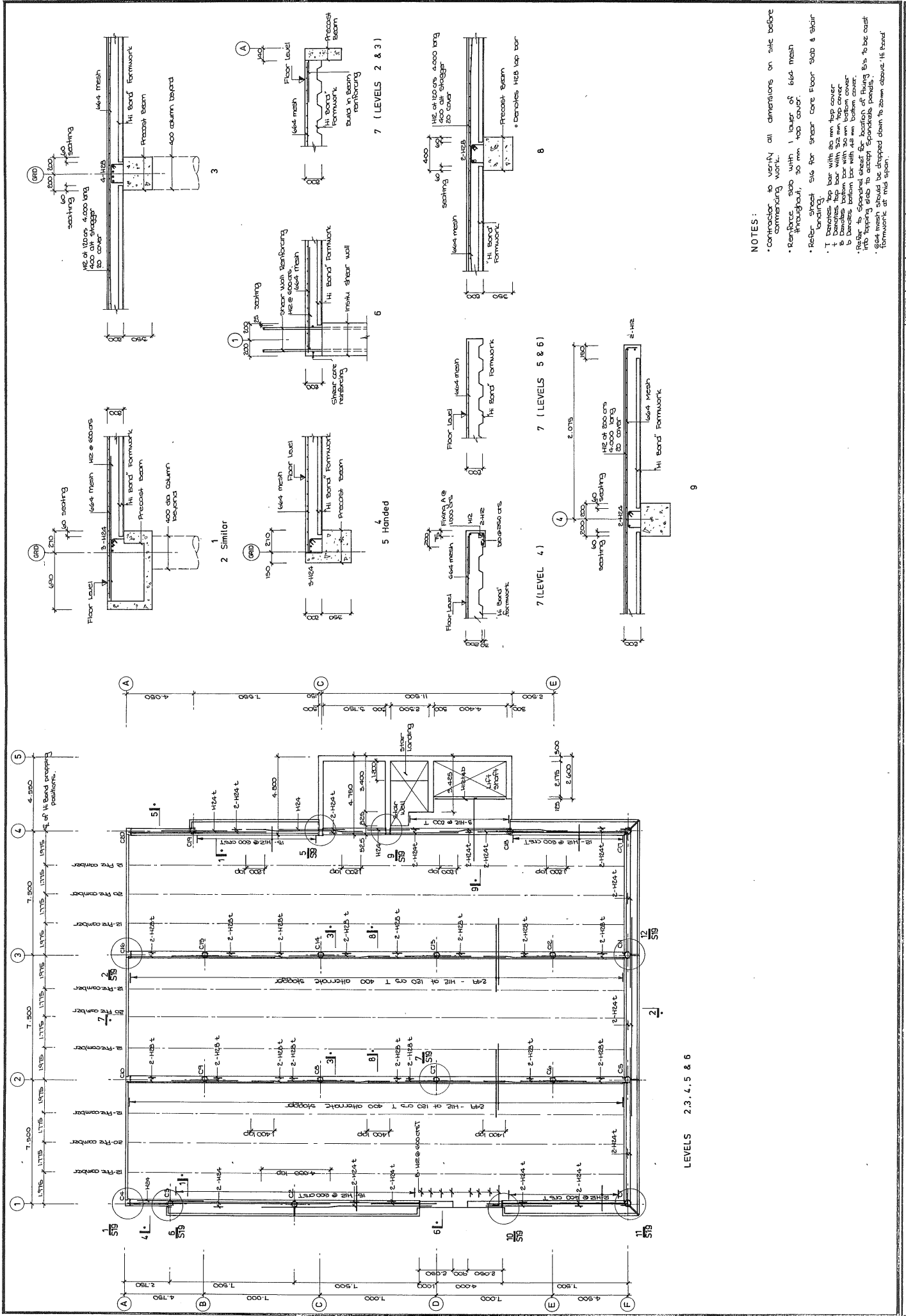
8
ST1



10
ST1

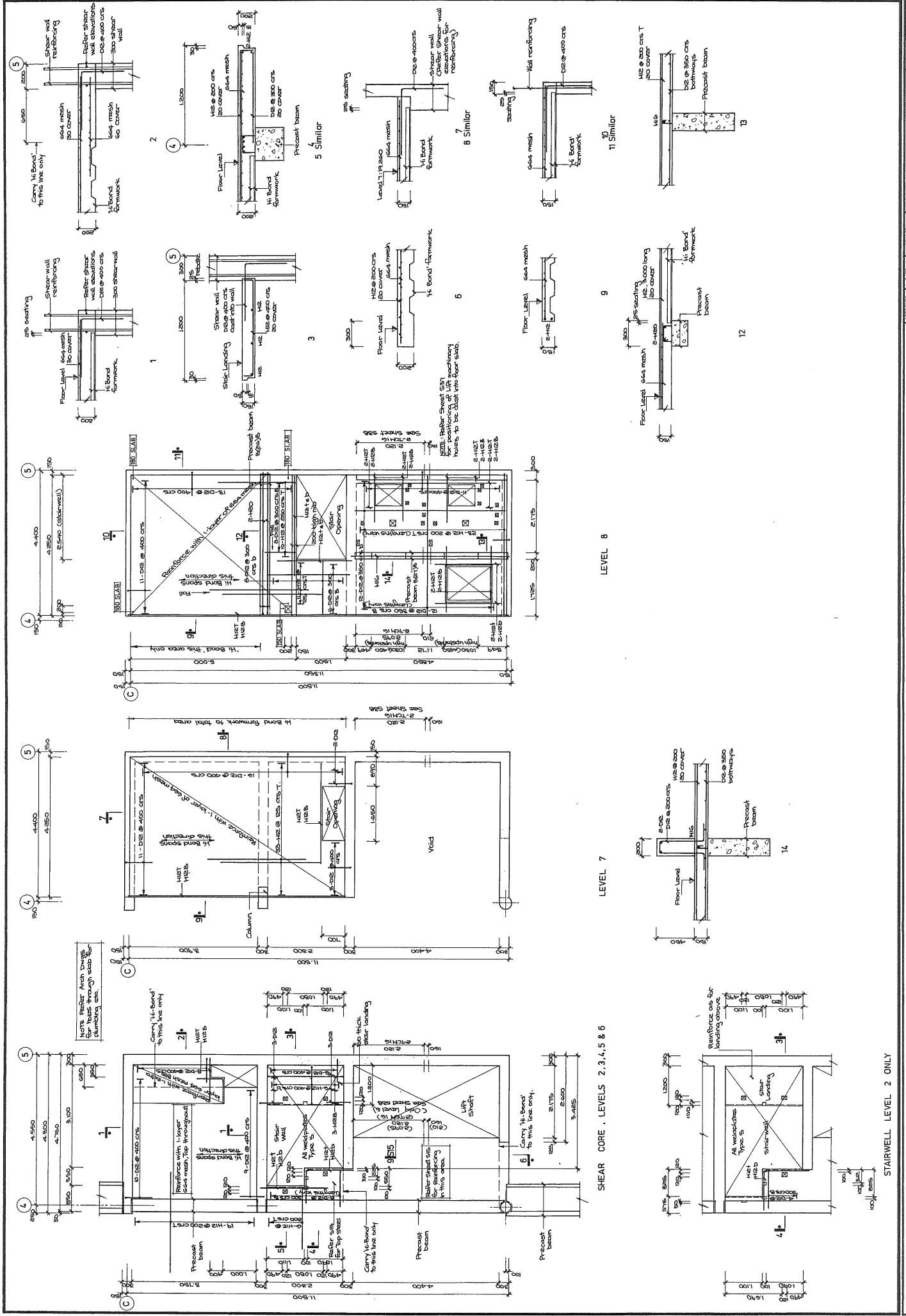


NOTE
 - Contractor to verify all dimensions on site
 - BEFORE commencing any works.



LEVELS 2, 3, 4, 5 & 6

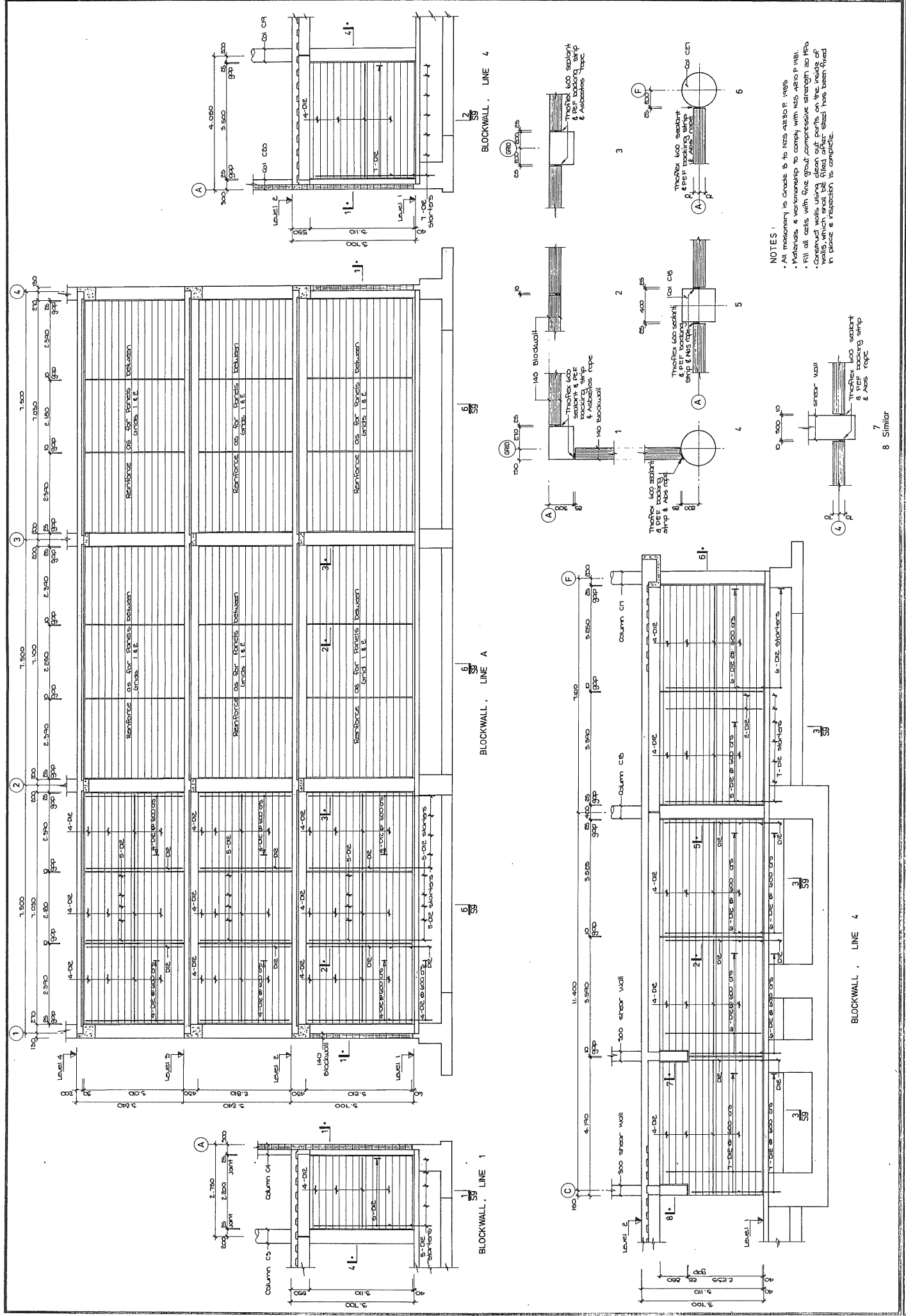
- NOTES :
- * Contractor to verify all dimensions on site before commencing work.
 - * Reinforce slab with 1 layer of 1664 mesh throughout, 30 mm top cover.
 - * Refer sheet S16 for inner core floor slab & stair.
 - * Top concrete top bar with 20 mm top cover.
 - * Bottom bar with 30 mm bottom cover.
 - * Bottom bar with 40 mm bottom cover.
 - * Refer to Structural Drawing for location of fixing bars to be cast into tapping slab to accept floor slab panels.
 - * 664 mesh should be dropped down to 20mm above HI Bond formwork at mid span.



SHEAR CORE, LEVELS 2, 3, 4, 5 & 6

LEVEL 8

STAIRWELL LEVEL 2 ONLY

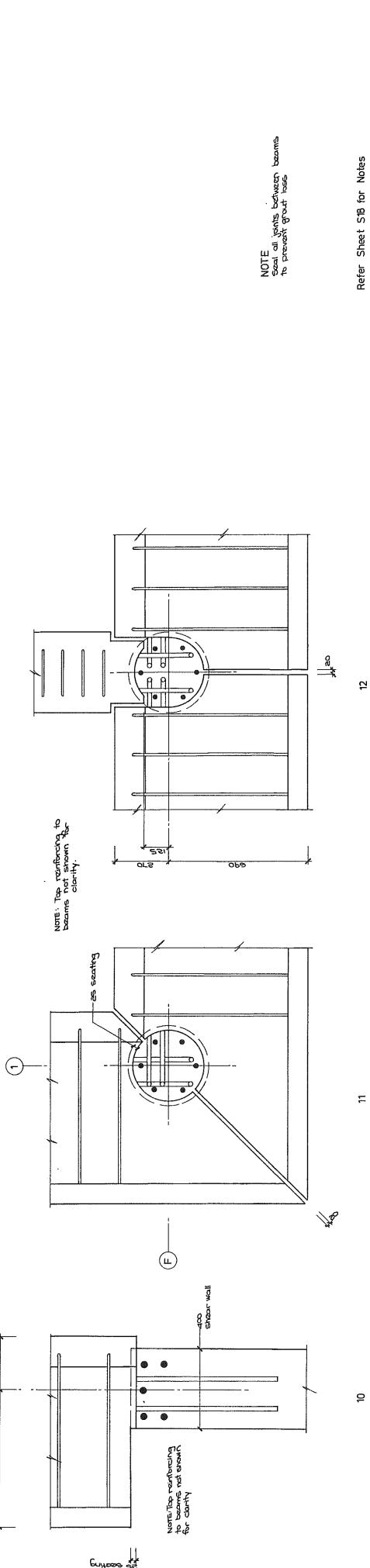
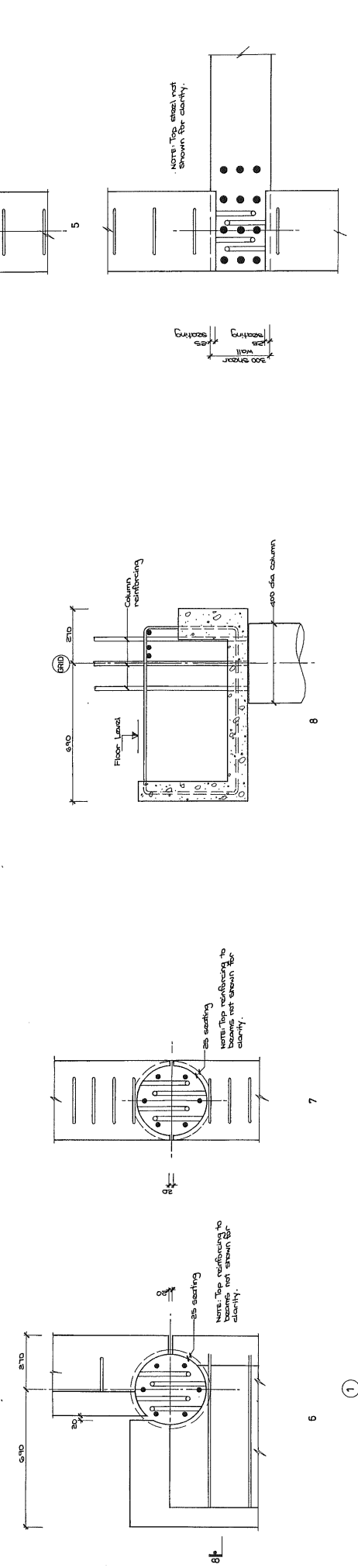
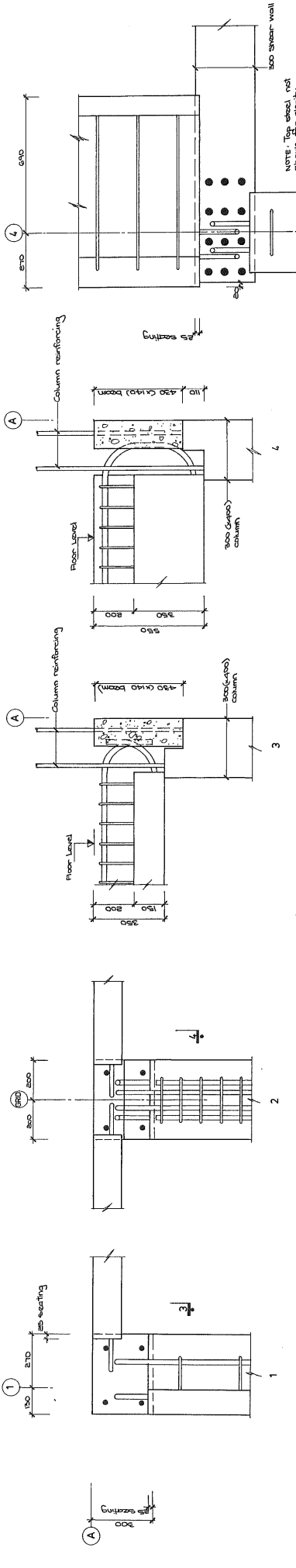


BLOCKWALL, LINE A

BLOCKWALL, LINE 4

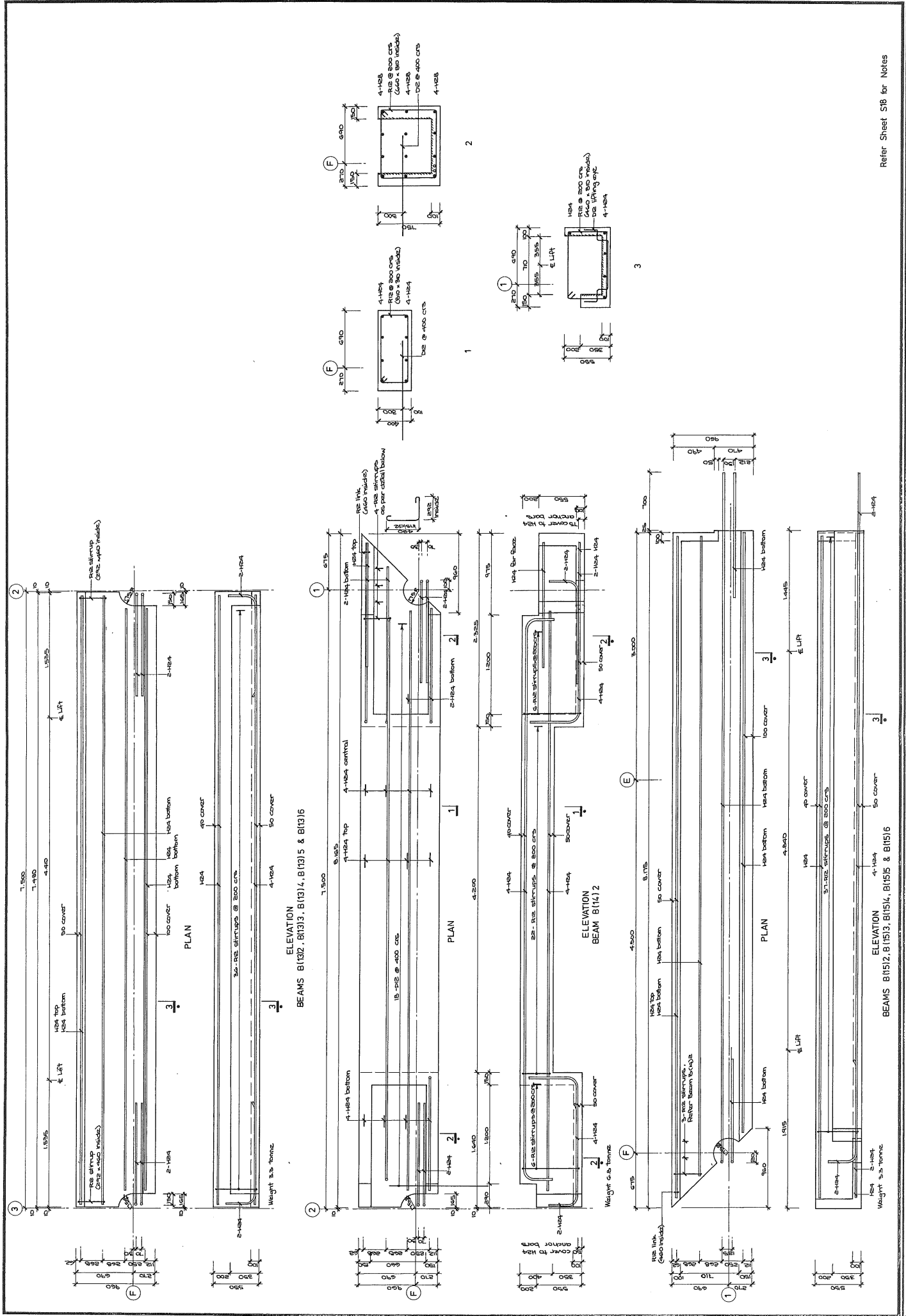
BLOCKWALL, LINE 1

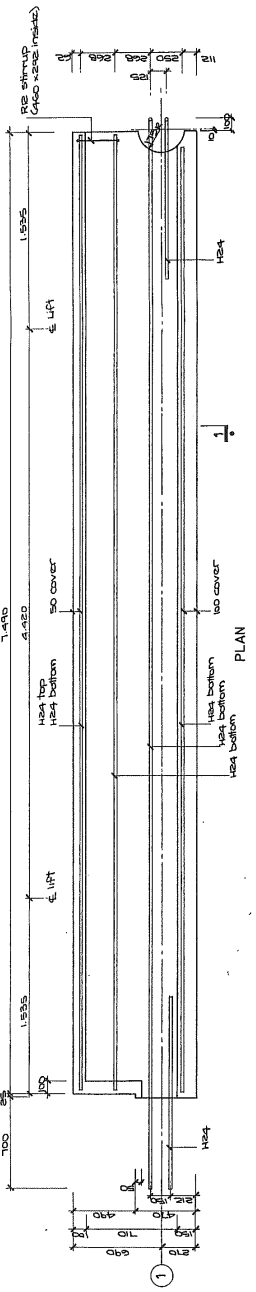
- NOTES:
- All masonry to Grade B to NZS 4930 P. 1985
 - Materials & workmanship to comply with NZS 4930 P. 1985.
 - Fill all cells with fine gravel compressive strength 20 MPa.
 - Construct walls using clean cut joints on the inside of walls, which shall be filled after each course has been fixed in place & inspection is complete.



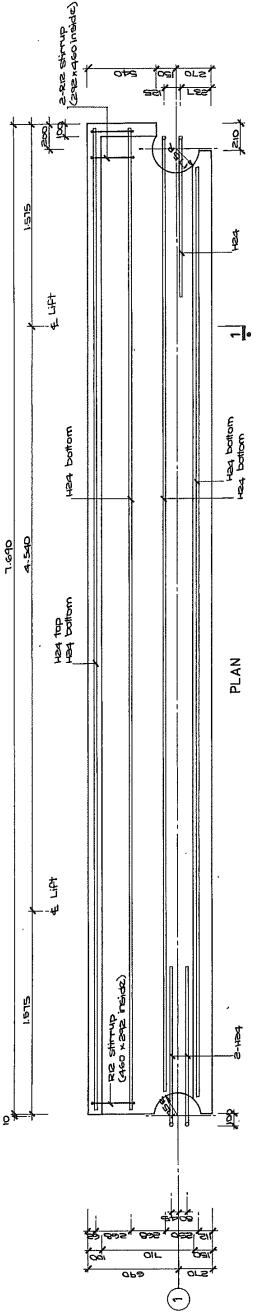
NOTE: Seal all joints between beams to prevent grout loss

Refer Sheet S18 for Notes

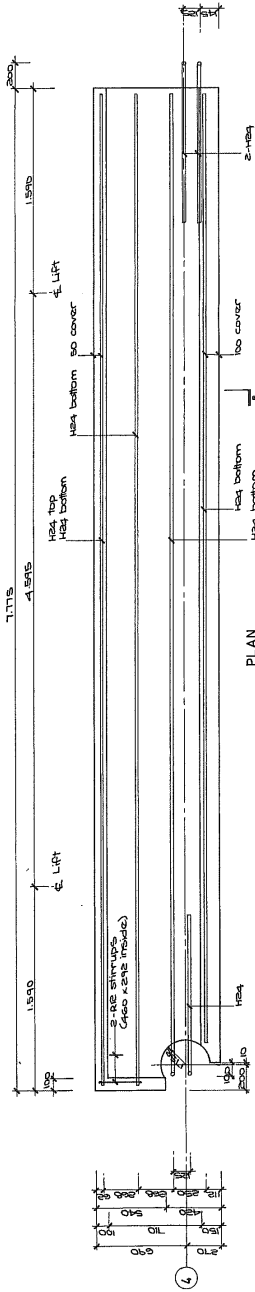




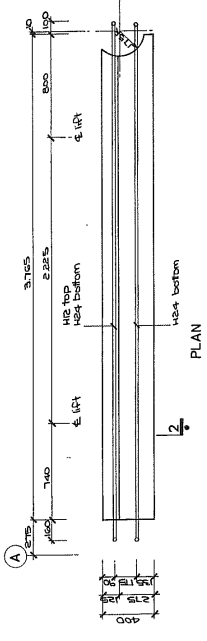
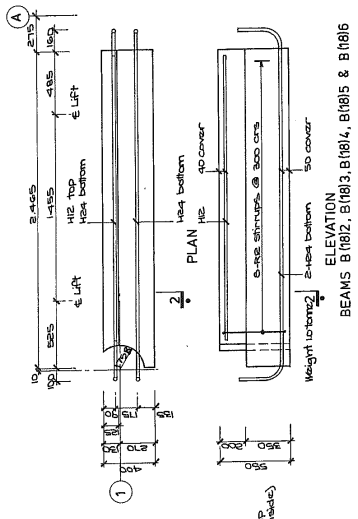
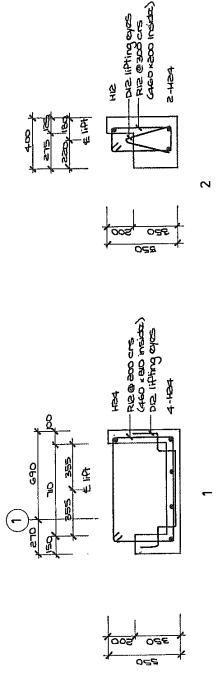
ELEVATION
BEAMS B(1612), B(1613), B(1614), B(1615) & B(1616)
Weight 3.3 tonne



ELEVATION
BEAMS B(172), B(173), B(174), B(175) & B(176)
Weight 3.4 tonne

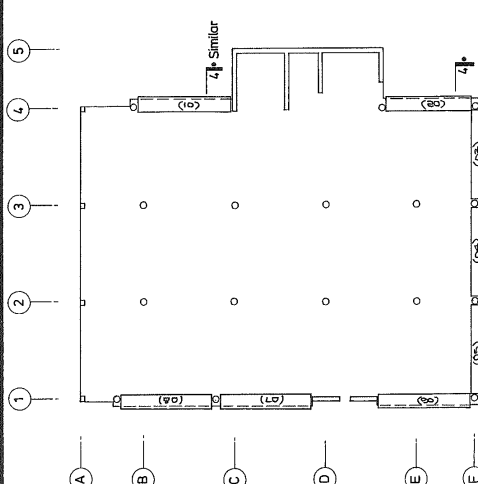


ELEVATION
BEAMS B(231), B(232), B(233), B(234), B(235) & B(236)
Weight 3.4 tonne



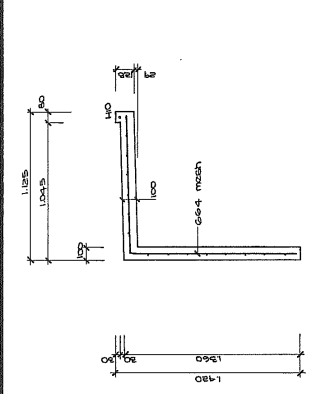
ELEVATION
BEAMS B(221), B(222), B(223), B(224), B(225) & B(226)
Weight 15 tonne

Refer Sheet S18 for Notes.

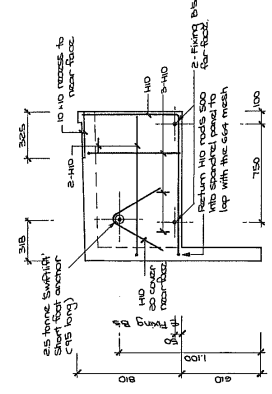


PRECAST SPANDREL LOCATION PLAN

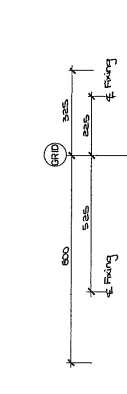
FLOOR	SPANDREL POSITION (Refer plan above)	(01)	(02)	(03)	(04)	(05)	(06)	(07)	(08)
LEVEL 1									
LEVEL 2									
LEVEL 3									
LEVEL 4									
LEVEL 5									
LEVEL 6									



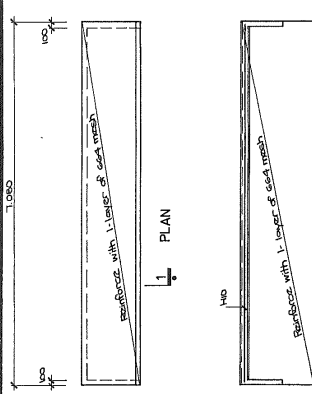
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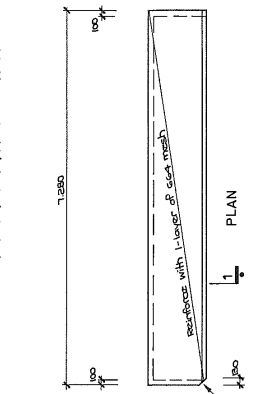
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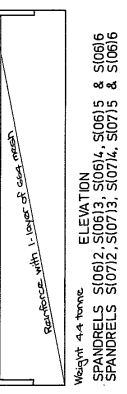
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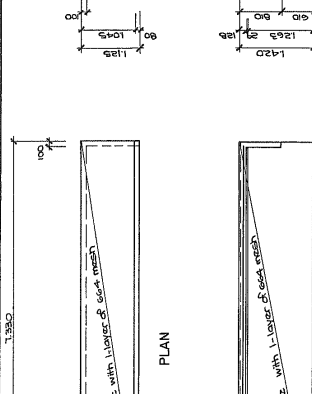
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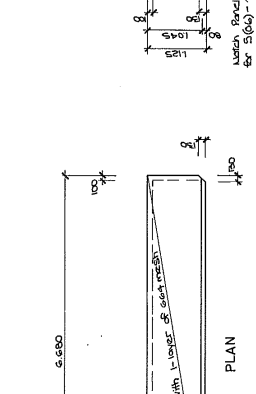
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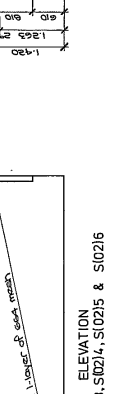
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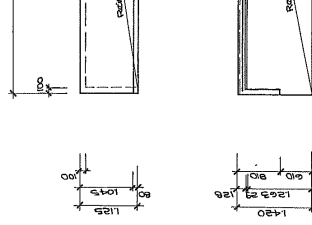
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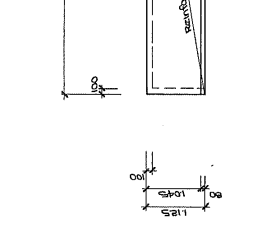
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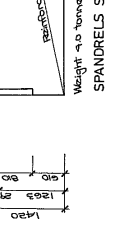
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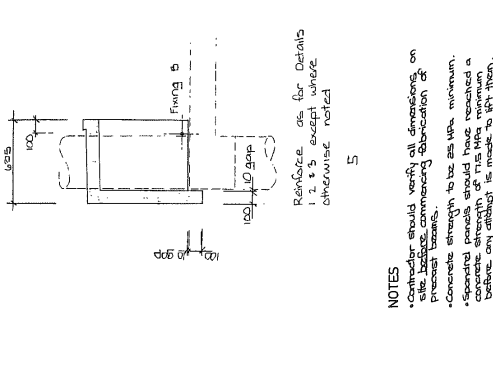
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11



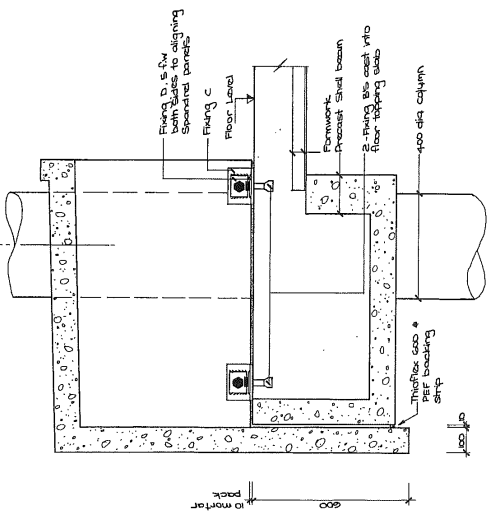
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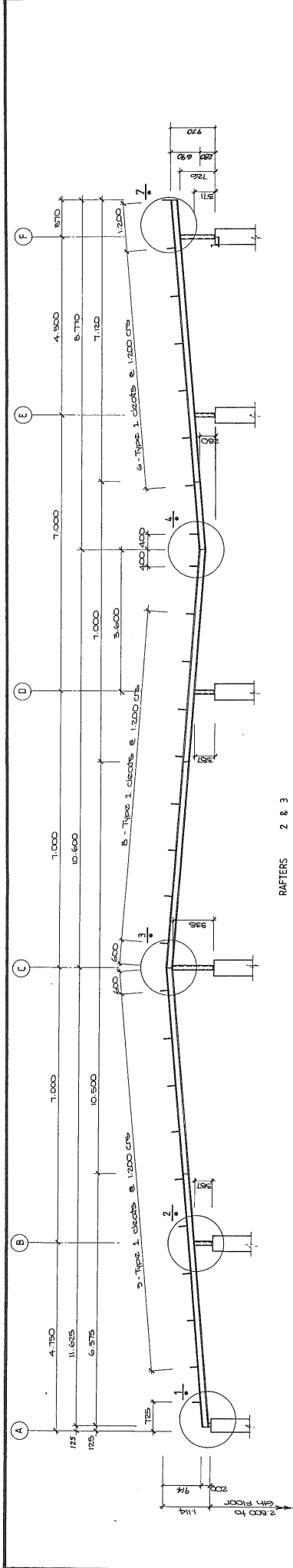
4 TYPICAL SPANDREL FIXING

NOTES
 • Contractor should verify all dimensions on site before commencing fabrication of precast beams.
 • Concrete strength to be as per minimum.
 • Spandrel panels should have required a minimum of 10% reinforcement in the beams and any surplus is to be left thereon.

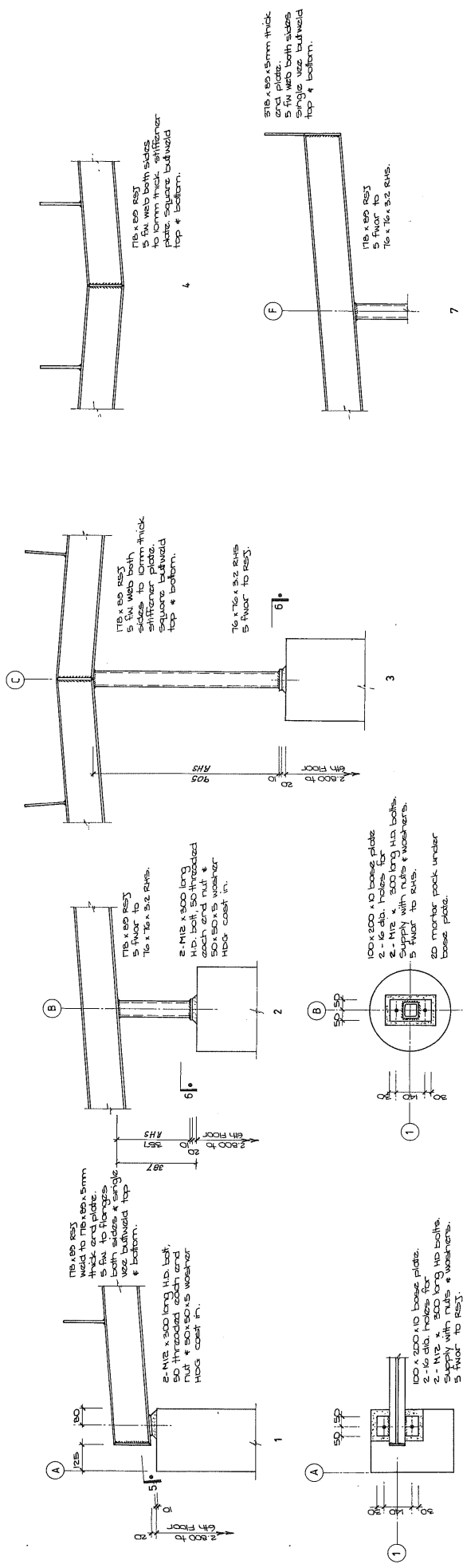
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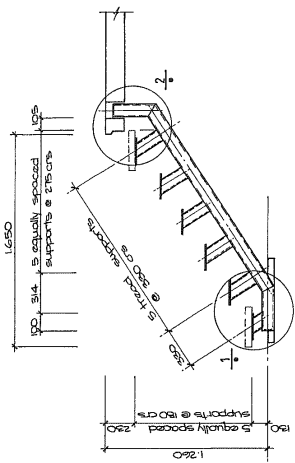
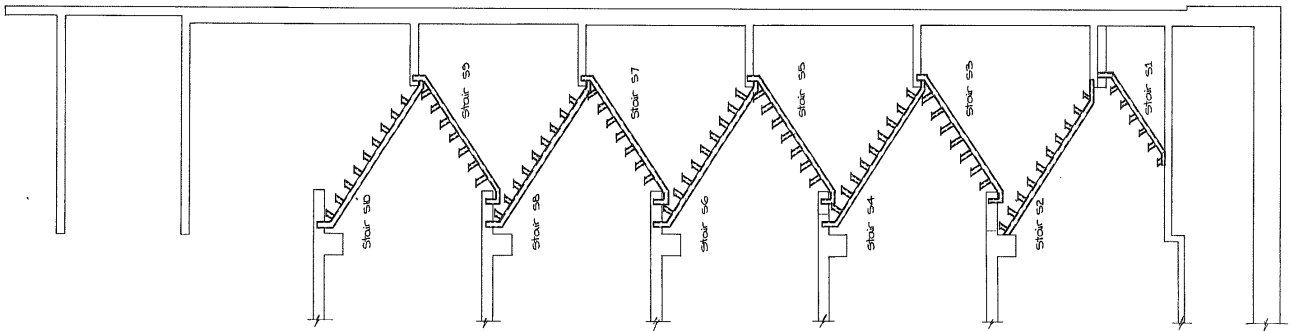
5 TYPICAL SPANDREL FIXING



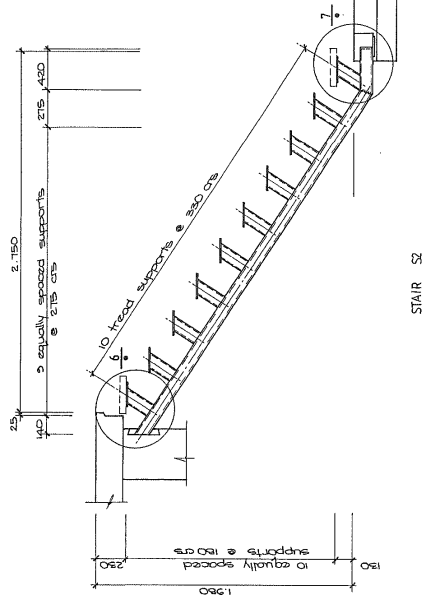
RAFTERS 2 & 3



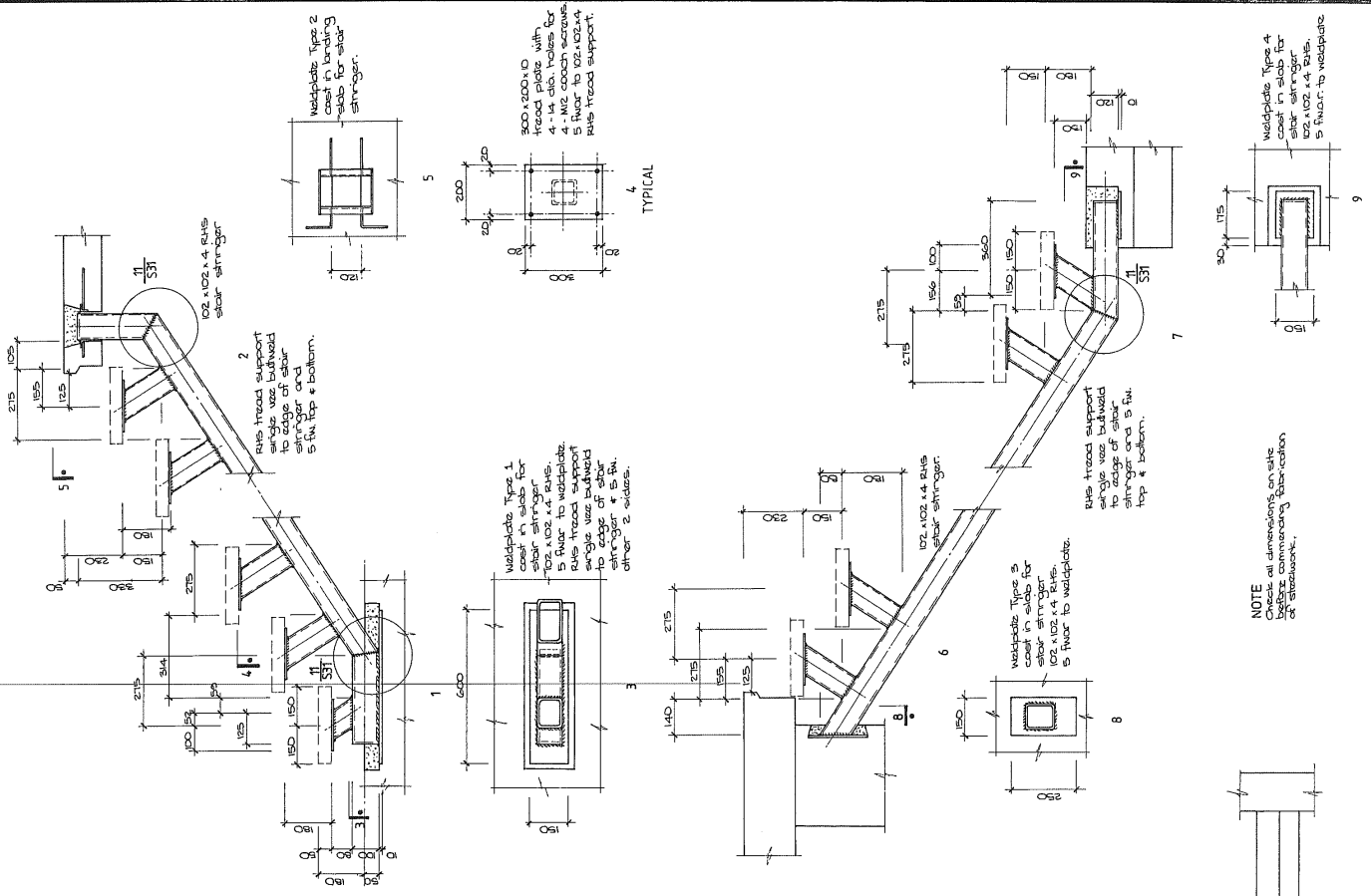
NOTE
All dimensions to be checked on site
before commencing fabrication of
steelwork.



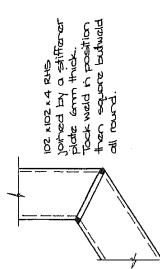
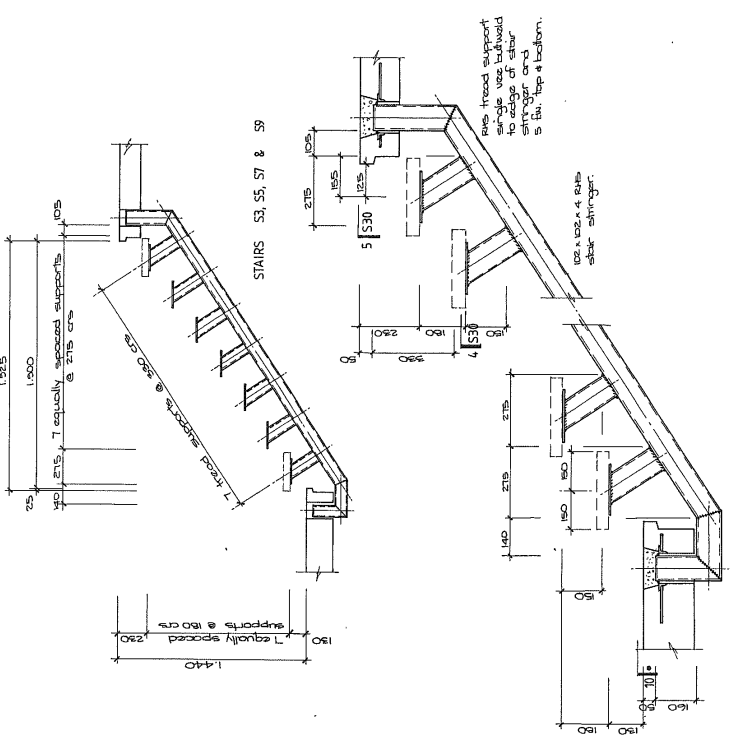
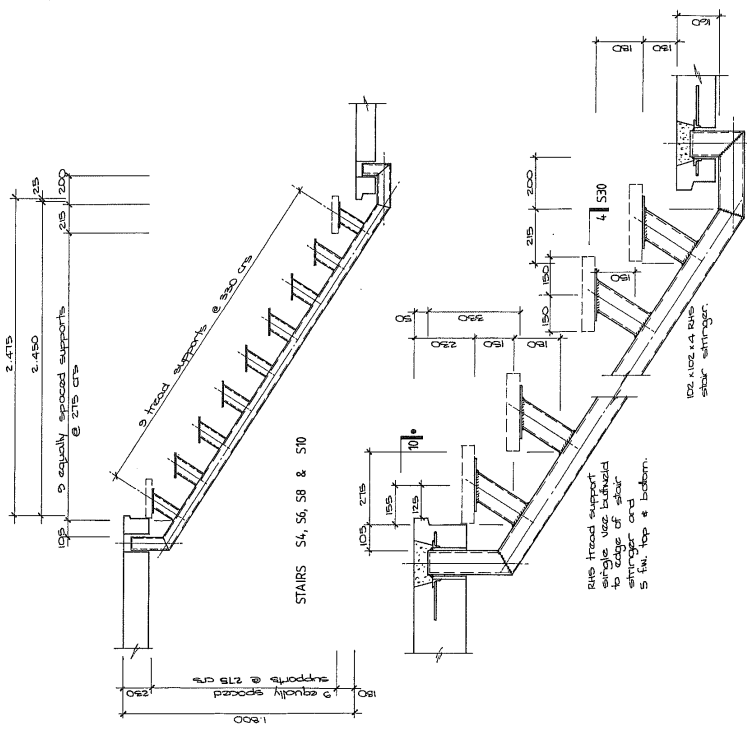
STAIR S1



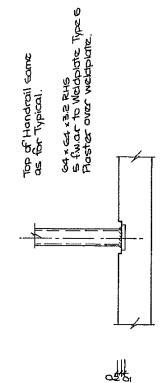
STAIR S2



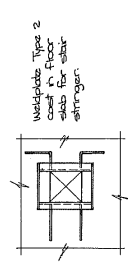
NOTE
Check all dimensions on site
before commencing fabrication
of stairwork.



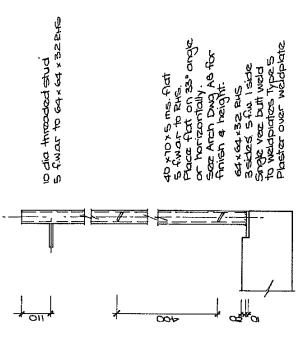
11



GROUND FLOOR HANDRAIL ONLY

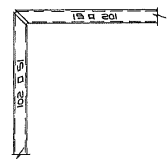
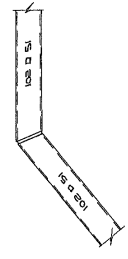


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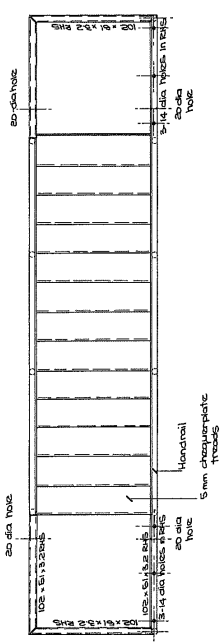
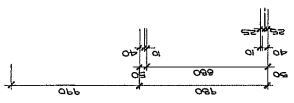
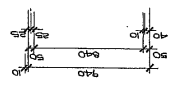
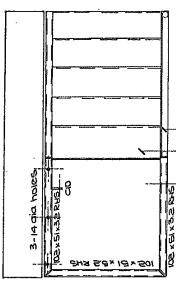
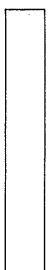
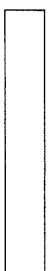
TYPICAL HANDRAIL at Landings & Slob

Notes:
 All wide sections between stiffener plates must have a 20 dia hole in underside before fabrication units are fabricated.

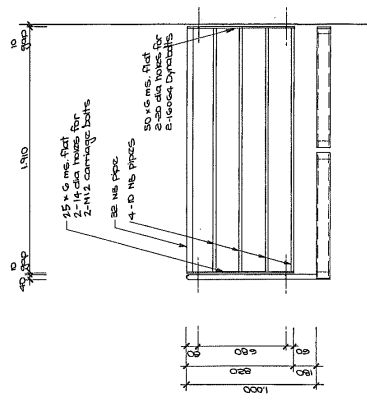


TYPICAL RHS JOINTS

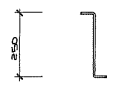
100 x 50 RHS members joined together in a square butt weld at round joint. The weld is positioned 15 mm from the square butt weld at round joint.



STAIR TREADS



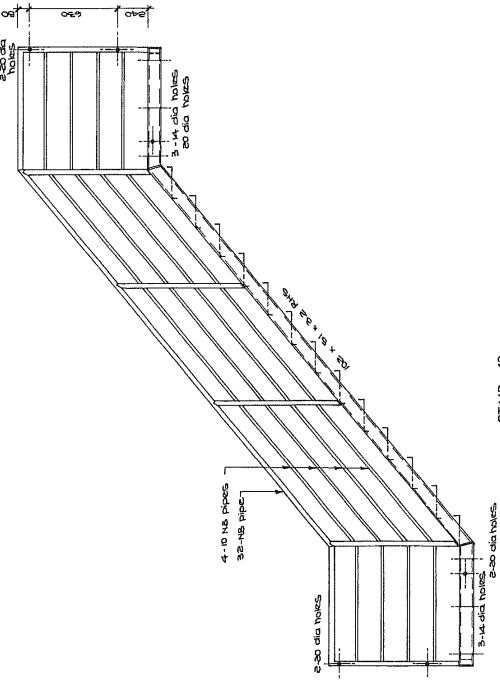
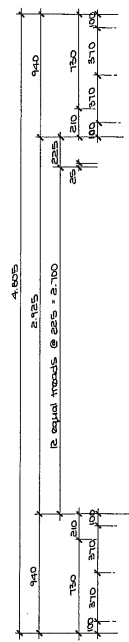
LANDING END HANDRAIL (10 off)



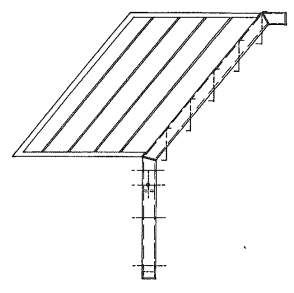
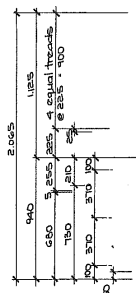
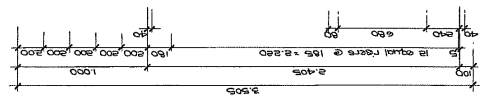
5mm chequerplate end hole 20 dia for 20 dia hole in plate 5mm from both sides of plate to saw

STAIR TREADS

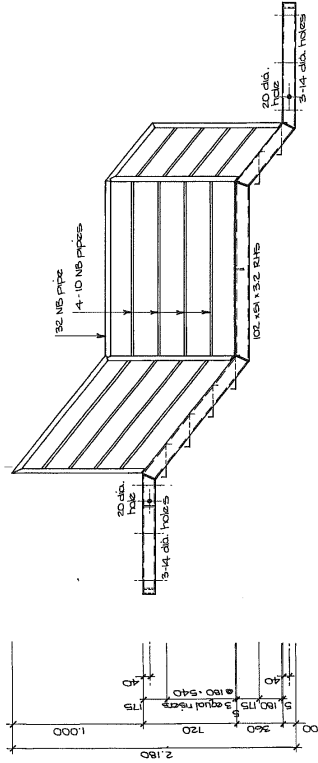
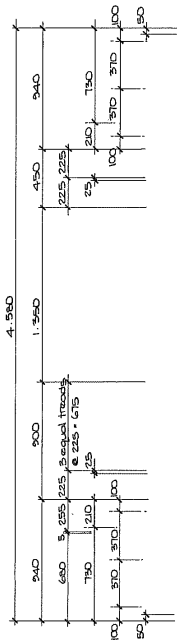
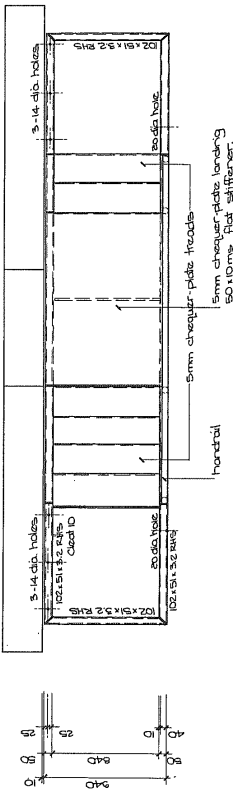
NOTE
 All dimensions are with reference to the centre of attachment.



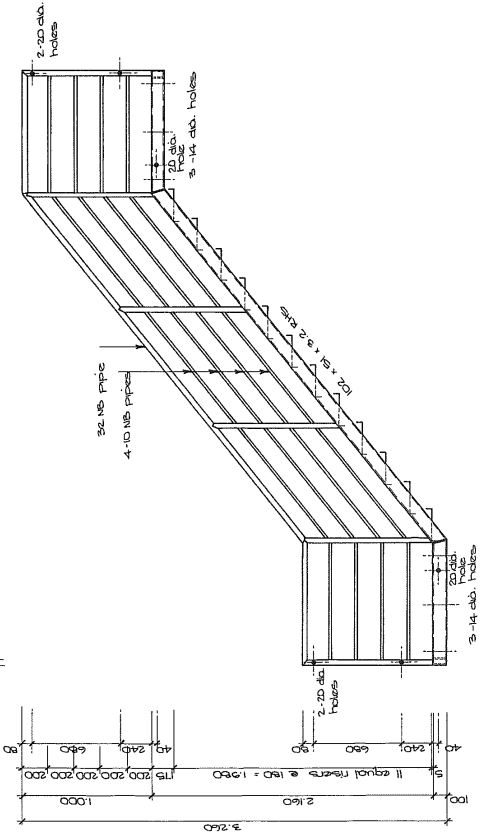
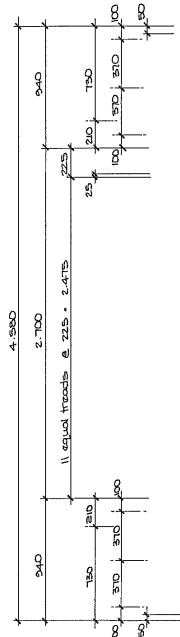
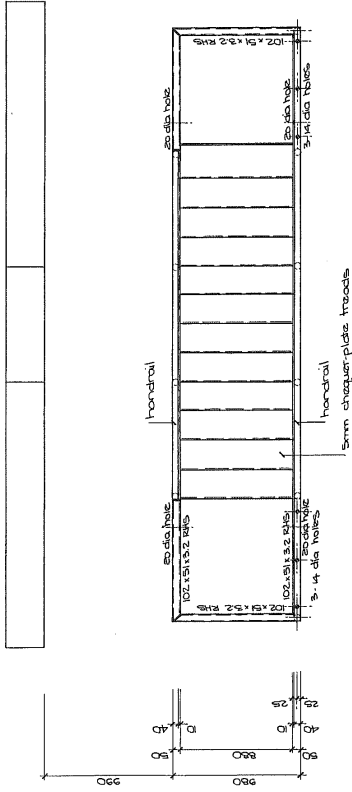
STAIR 12



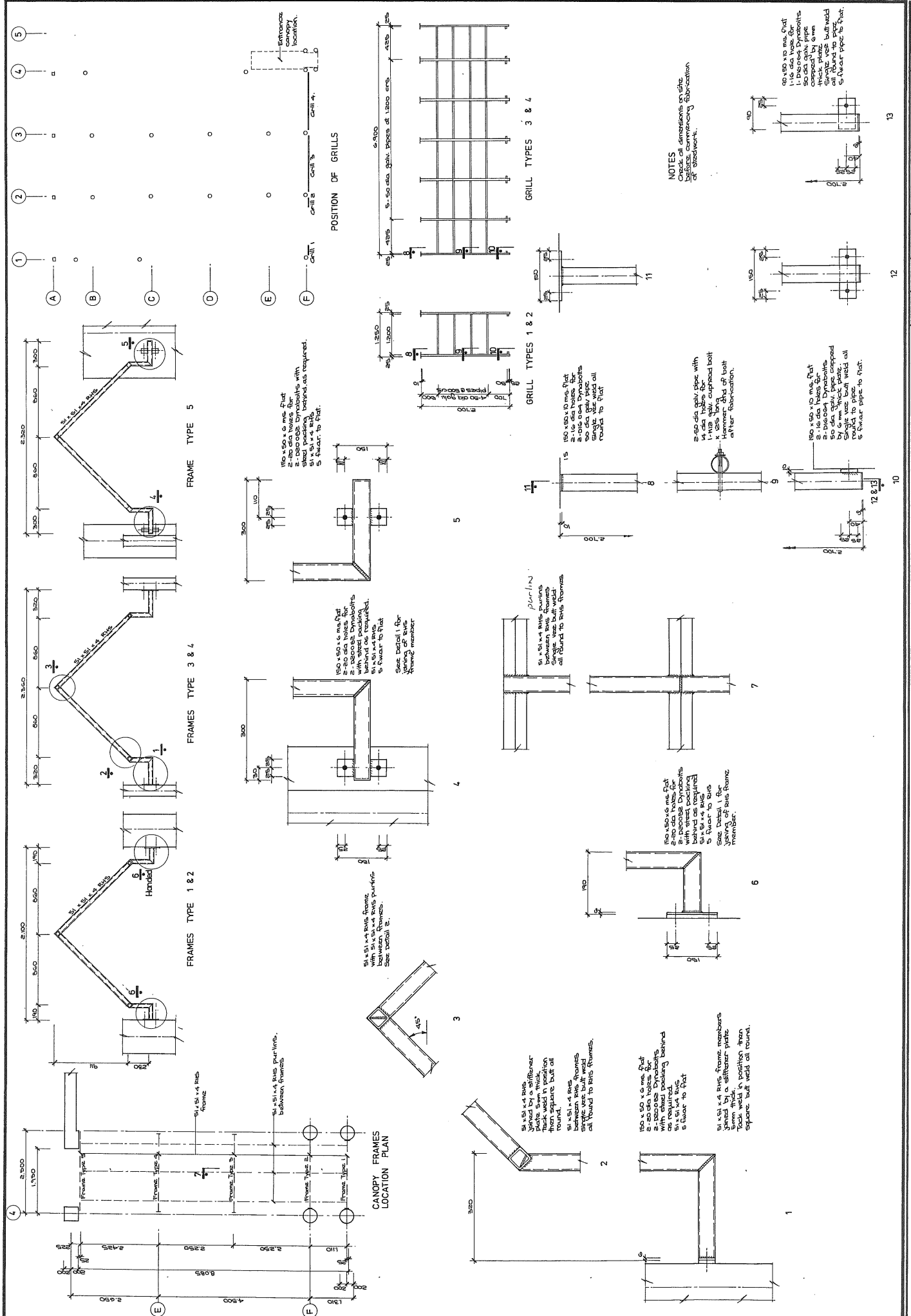
STAIR 511



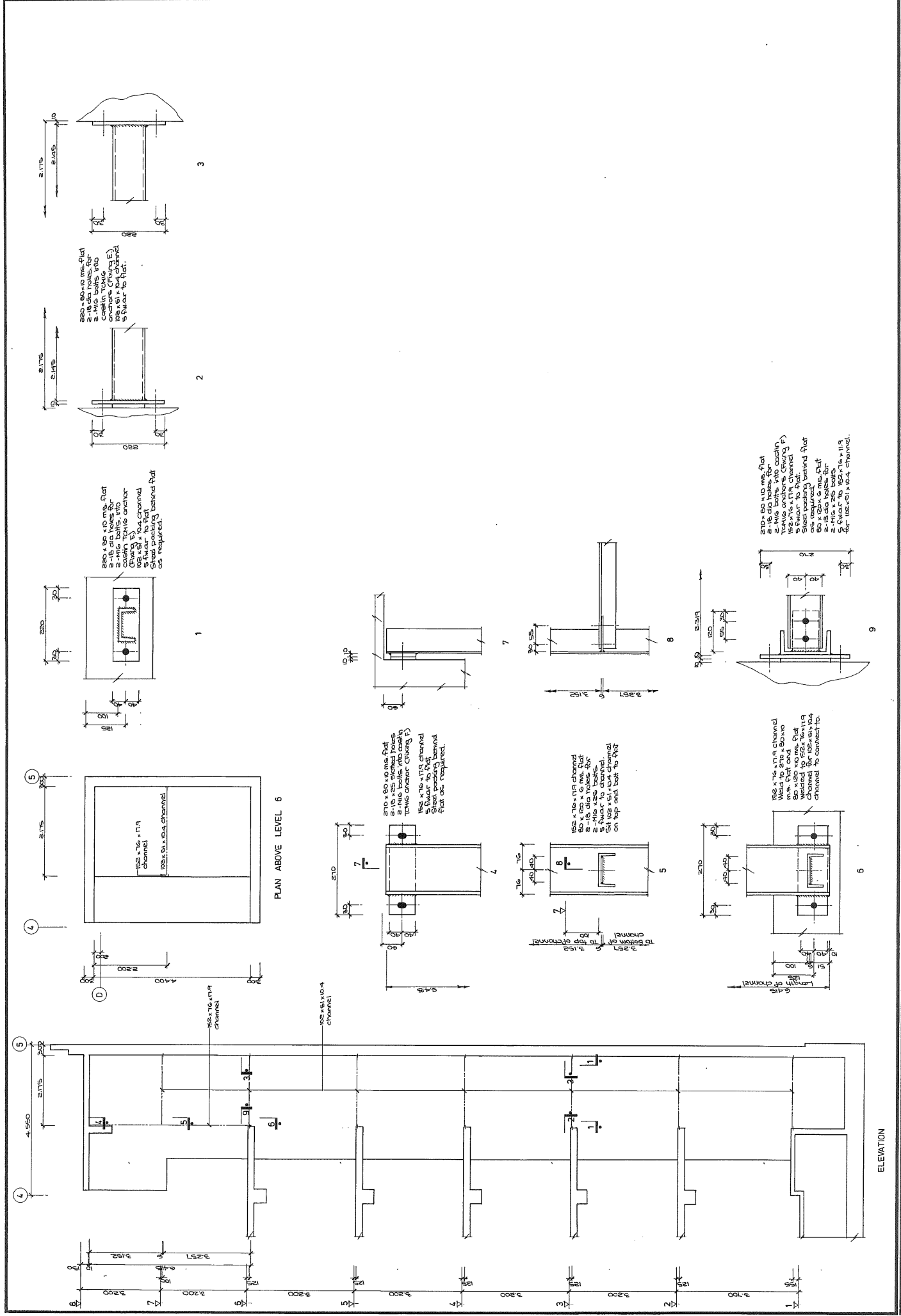
STAIR S15, S17 & S19

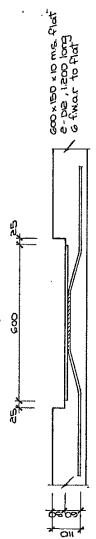


STAIR S14, S16, S18 & S20

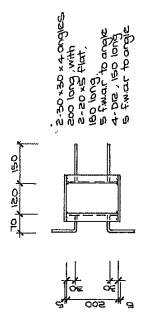


NOTES
 1. All dimensions are in mm.
 2. All dimensions are to the centerline of the member.

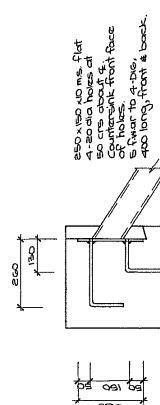




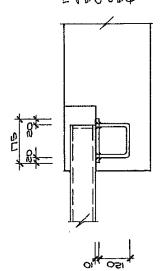
WELDPLATE TYPE 1
(1 off)



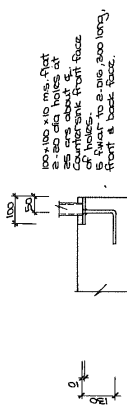
WELDPLATE TYPE 2
(17 off)



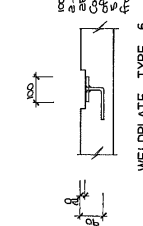
WELDPLATE TYPE 3
(1 off)



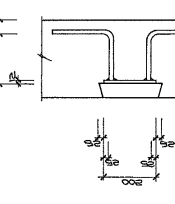
WELDPLATE TYPE 4
(1 off)



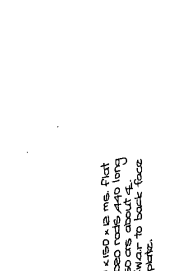
WELDPLATE TYPE 5
(20 off)



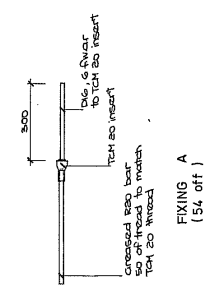
WELDPLATE TYPE 6
(1 off)



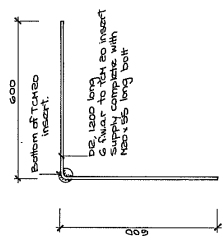
WELDPLATE TYPE 7
(8 off)



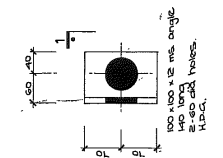
WELDPLATE TYPE 8
(10 off)



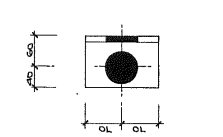
FIXING A
(54 off)



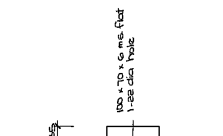
FIXING B
(232 off)



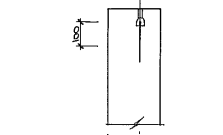
FIXING C
(116 off)



FIXING D
(232 off)



FIXING E
(12 off)



FIXING D
(2 off)

NOTES
 -All reinforcing bands to be hot bent
 -The welding of dissimilar metals requires appropriate rods & methods.