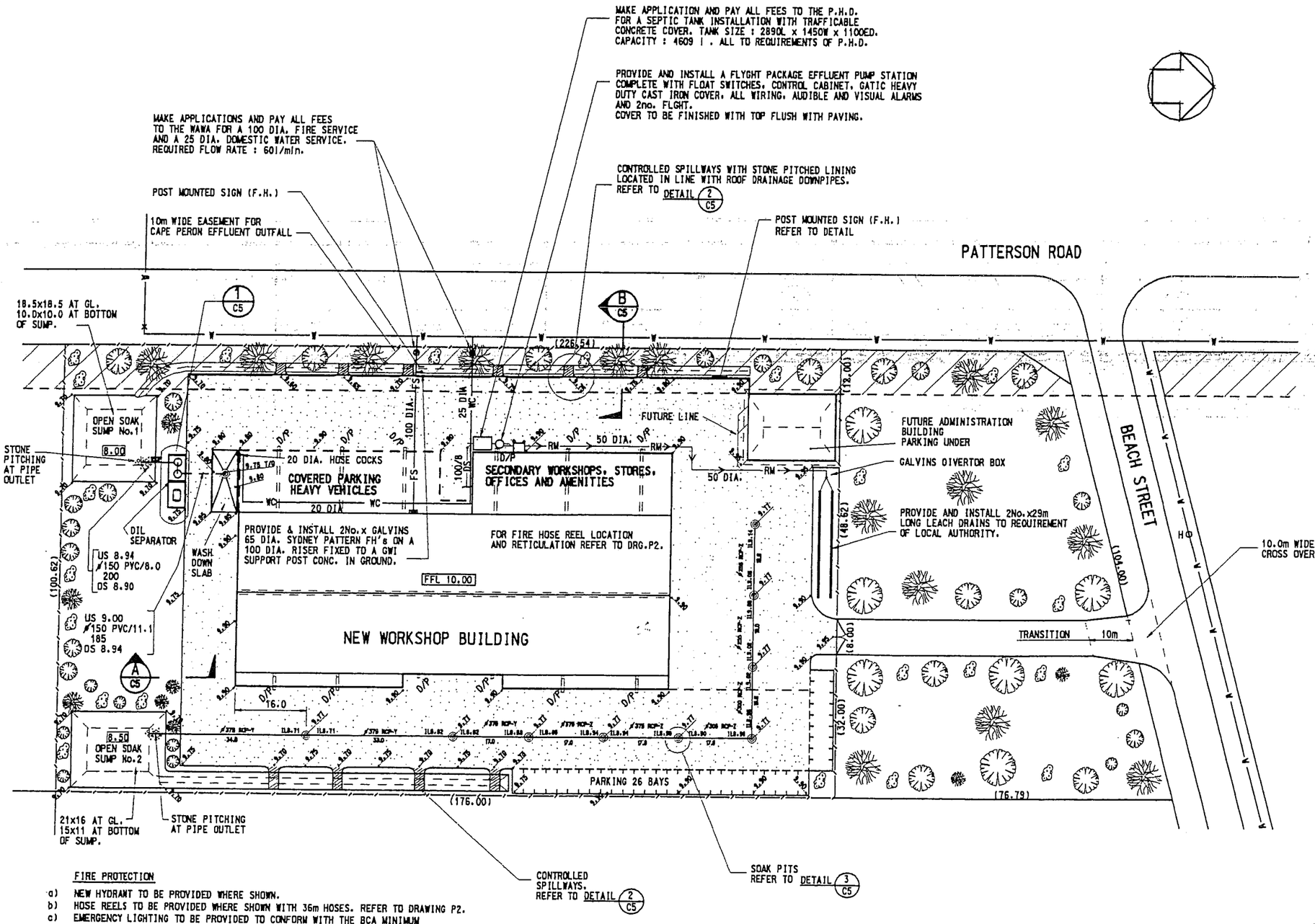
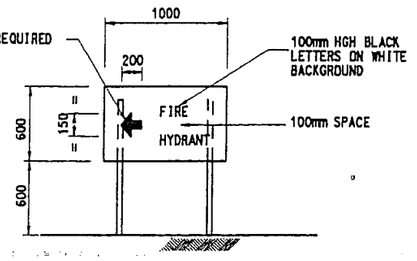
Revisions	Descriptions	By	Dates
1	ISSUED FOR PLANNING APPROVAL	MD	20-12-94
A	ISSUED FOR CONSTRUCTION	MD	28-12-94
B	MINOR CHANGES	MD	16-02-95





POST MOUNTED SIGN (F.H.)

LEGEND

- WC — COLD WATER SERVICE
- WH — HOT WATER SERVICE
- FS — FIRE SERVICE
- H — EXIST. WATER SERVICE WITH FIRE HYDRANT
- DS — SOIL DRAIN
- RM — RISING MAIN

ø375 RCP-Y - CLASS Y REINFORCED CONRETE PIPE
ø375 RCP-Z - CLASS Z REINFORCED CONRETE PIPE

D/P - ROOF DRAINAGE DOWNPIPE

3.50 - DESIGN FINISHED SURFACE LEVEL

REFERENCE DRAWINGS:

P2 - FIRE AND PLUMBING SERVICES LAYOUT
P3 - WATER SERVICES LAYOUT
C5 - CONCRETE & MISCELLANEDUS DETAILS

FIRE PROTECTION

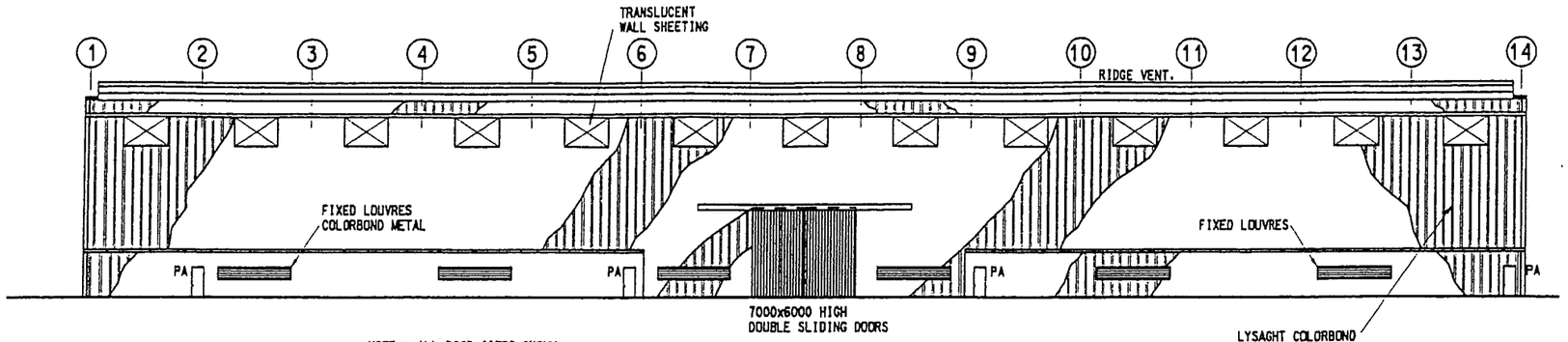
a) NEW HYDRANT TO BE PROVIDED WHERE SHOWN.
b) HOSE REELS TO BE PROVIDED WHERE SHOWN WITH 36m HOSES. REFER TO DRAWING P2.
c) EMERGENCY LIGHTING TO BE PROVIDED TO CONFORM WITH THE BCA MINIMUM REQUIREMENTS. LOCATED WHERE SHOWN ON DRAWING A2.
d) EXIT SIGNAGE (SELF ILLUMINATED) TO BE PROVIDED OVER ALL P.A. DOORS.
e) MANUAL "BREAK GLASS" ALARMS TO BE FITTED AND POSITIONEDED ADJACENT TO ALL P.A. DOORS. ALARMS TO BE SET OFF LOUD AUDIABLE SIREN WHEN ACTIVATED.
f) SUITABLE APPLICABLE FIRE EXTINGUISHERS TO BE STRATEGICALLY POSITIONED THROUGHOUT THE WORKSHOP TO SATISFY THE REQUIREMENTS OF THE WAFBB. NUMBER, TYPE AND POSITIONS TO BE DETERMINED AFTER COMPLETION OF THE WORKSHOP.
g) SMOKE CONTROL TO BE BY NATURAL VENTILATION TO RIDGE VENT.

ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle Western Australia 6160
PO Box 582, Fremantle
Telephone (09) 4305681
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WATER, SEWER AND DRAINAGE PLAN

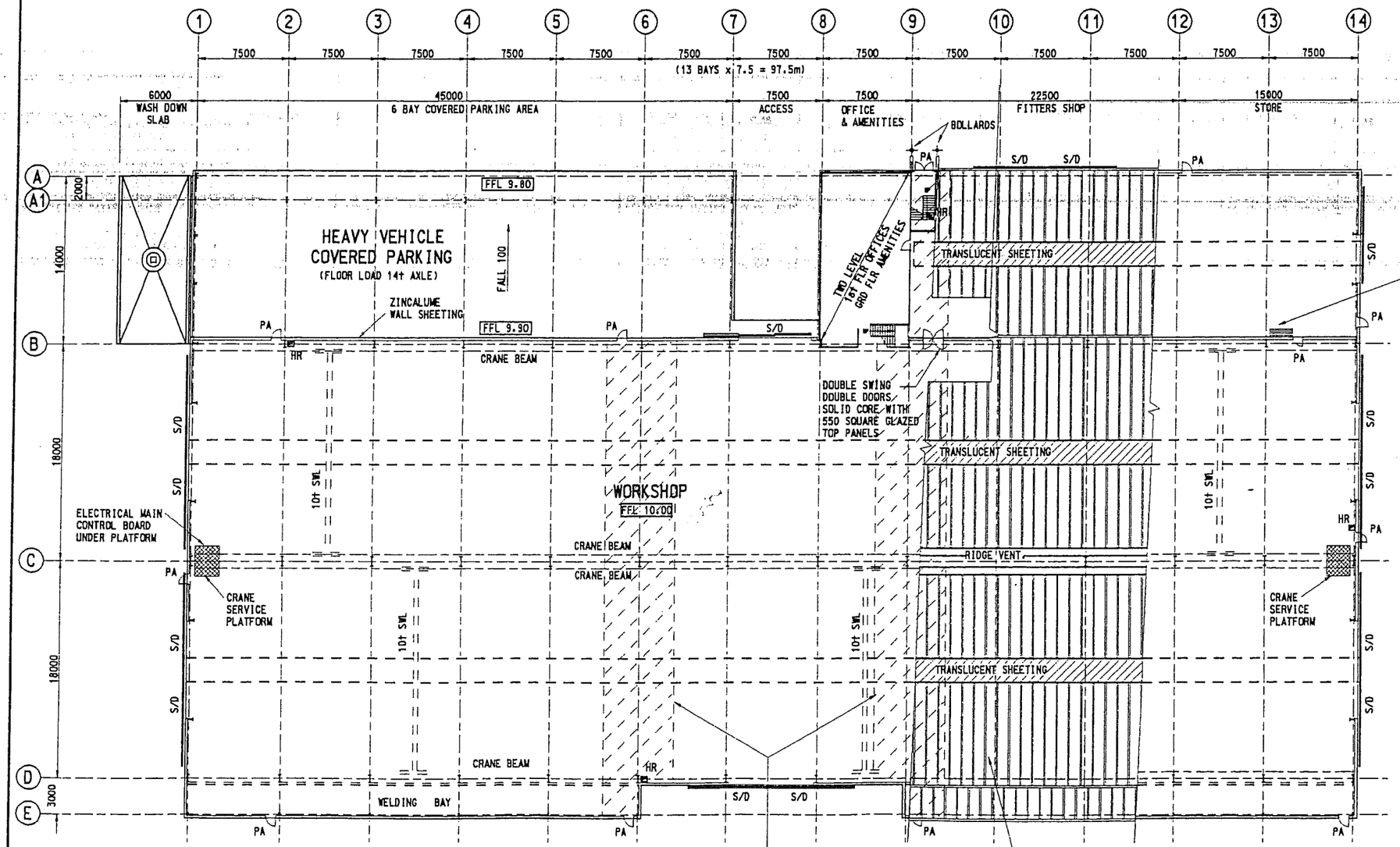
Drawn	JK & ST	Approved	
Dated	17-6-94	Project No	94080
Chkd	JFS	Drawing No	Rev
Scale	1:500	P1	B

Revision	Description	By	Date
1	ISSUED FOR PLANNING APPROVAL	S.T.	18-7-94
2	MINOR AMENDMENTS	S.T.	19-7-94
3	MINOR AMENDMENTS	S.T.	11-11-94
A	ISSUED FOR CONSTRUCTION	M.D.	30-11-94
B	MINOR AMENDMENTS	M.D.	21-02-95



EAST ELEVATION
1:200

NOTE : ALL DOOR SIZES SHOWN ARE CLEAR OPENINGS



PLAN
1:200

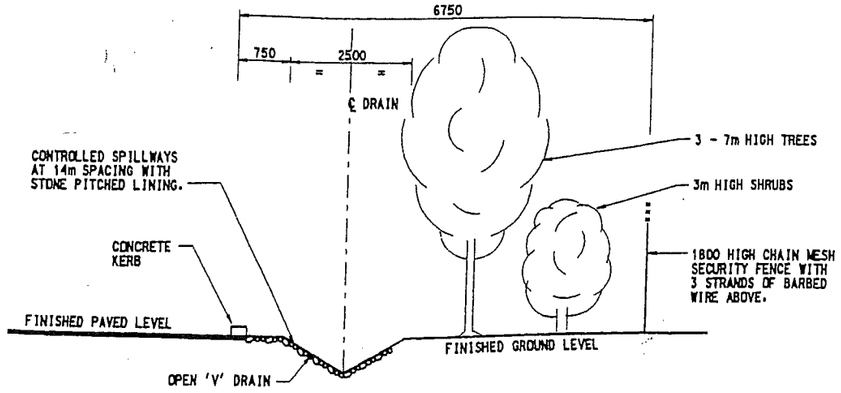
AREAS	sqm
MAIN WORKSHOP	3510
WELDING BAY	225
FITTERS SHOP	315
STORE	210
1st FLOOR OFFICE	100
TOTAL	4360

1:400

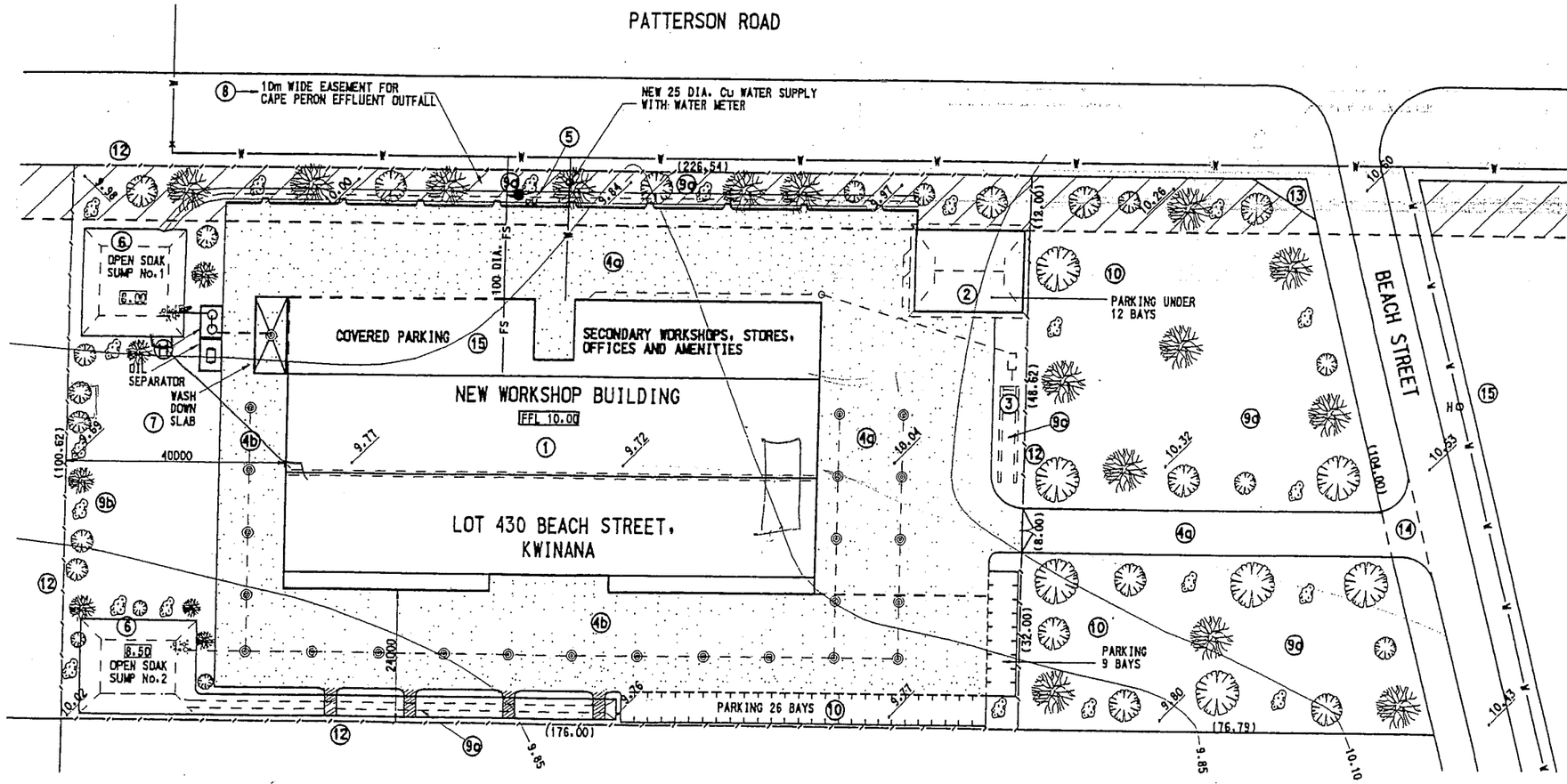
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle PO Box 582, Fremantle Western Australia 6160
Telephone (09) 4305481 Facsimile (09) 4305517
ACS Consulting Chartered Engineers

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
W/SHOP BUILDING PLAN & ELEVATION

Drawn: JK & ST		Approved:	
Date: 17-6-94		Project No: 94080	
Chkd: JFS		Drawing No: A2	Rev: B
Scale: 1:200			



TYPICAL SECTION THRU 'V' DRAIN



FIRE PROTECTION

a) NEW HYDRANT TO BE PROVIDED WHERE SHOWN.
b) HOSE REELS TO BE PROVIDED WHERE SHOWN WITH 36m HOSES. (REFER DRG P2)
c) EMERGENCY LIGHTING TO BE PROVIDED TO CONFORM WITH THE B.C.A. MINIMUM REQUIREMENTS LOCATED WHERE SHOWN ON DRAWING A2.
d) EXIT SIGNAGE (SELF ILLUMINATED) TO BE PROVIDED OVER ALL P.A. DOORS.
e) MANUAL "BREAK GLASS" ALARMS TO BE FITTED AND POSITIONED ADJACENT TO ALL P.A. DOORS. ALARMS TO SET OFF LOUD AUDIABLE SIREN WHEN ACTIVATED.
f) SUITABLE APPLICABLE FIRE EXTINGUISHERS TO BE STRATEGICALLY POSITIONED THROUGHOUT THE WORKSHOP TO SATISFY THE REQUIREMENTS OF THE WAFBB. NUMBER, TYPE AND POSITIONS TO BE DETERMINED AFTER COMPLETION OF THE WORKSHOP.
g) SMOKE CONTROL TO BE BY NATURAL VENTILATION TO RIDGE VENT.

Revision	Description	By	Date
1	ISSUED FOR PLANNING APPROVAL	S.T.	18-7-94
2	MINOR AMENDMENTS	S.T.	19-7-94
3	MINOR AMENDMENTS	S.T.	11-11-94
A	ISSUED FOR CONSTRUCTION	M.D.	30-11-94
B	MINOR AMENDMENTS	M.D.	21-02-95

LEGEND:

1. WORKSHOP BUILDING: 97.5 x 53 O/A WIDE x 12.2m HIGH AT EAVES. COLORBOND. PROFILE FORMED METAL CLADDING.
2. ADMINISTRATION BUILDING: 21 x 15m O/A WIDE x 5.6m HIGH AT EAVES. MASONRY EXTERNAL WITH COLORBOND, PROFILE FORMED METAL ROOF AND COVERED PARKING UNDER FIRST FLOOR.
3. SEPTIC TANK AND LEACH DRAINS FOR SEWERAGE DISPOSAL. DESIGNED TO SERVICE MAXIMUM 40 PERSONNEL.
4. a) - THICKLIFT 40MM. HOTMIX OVER 200mm CRUSHED LIMESTONE
   b) - 2 COAT SEAL
   SEALED PAVED AREAS WITH FALLS TO STORM WATER SOAK PITS AND SUMPS AS REQUIRED TO CONTAIN ALL STORM WATER ON SITE.
5. OPEN CUT V-DRAIN FOR STORM WATER COLLECTION AND SOAK AWAY. CONCRETE EDGE KERB ALONG FULL LENGTH OF PAVEMENT WITH OUTLETS TO SPILLWAYS.
6. OPEN STORM WATER SOAKAWAY SUMP AS REQUIRED FOR EXCESS STORM WATER OVERFLOW.
7. LAY DOWN AREA
8. 10m WIDE WAWA EASEMENT FOR CAPE PERON EFFLUENT OUTFALL RISING MAIN.
9. LANDSCAPED AREA:
   a) 3.5m WIDE SCREEN LANDSCAPING ALONG FULL LENGTH OF EASEMENT AND
   b) 3m WIDE SCREEN LANDSCAPING ALONG FULL LENGTH OF REAR (SOUTH) BOUNDARY :- SELECTED SHRUBS TO 3m HIGH ALONG PROPERTY BOUNDARY WITH SELECTED TREES TO 7m BEHIND TO PROVIDE SHIELDING FROM PATTERSON ROAD
   c) SELECTED NATIVE SHRUBS
   d) SELECTED NATIVE SHRUBS AND TREES IN ACCORDANCE WITH COUNCIL SUGGESTED GUIDE OF SUITABLE PLANTS.

   LANDSCAPED AREAS TO 9a, 9b AND 9c TO BE PROVIDED WITH TIME CONTROLLED TRICKLE RETICULATION.
10. PARKING:

WORKSHOP AREAS AND STORES	= 3971 sqm	
1 BAY / 100 sqm	= 40 BAYS	
OFFICE AREAS	= 334 sqm	
1 BAY / 50 sqm	= 7 BAYS	
TOTAL	47 BAYS	

11. 1500L DIESEL FUEL STORAGE TANK SET INTO CONCRETE BUND 6.0 x 4.0m
12. 1.8m HIGH SECURITY FENCE WITH 3 STRAND BARBED WIRE ALONG TOP AROUND BOUNDARY PERIMETER AND ACROSS FRONT SET BACK AS SHOWN.
13. FUTURE TRUNCATION TO COUNCIL REQUIREMENTS.
14. 8m WIDE CONCRETE CROSSOVERS TO COUNCIL REQUIREMENTS.
15. WATER SERVICE WITH FIRE HYDRANTS —●H— NEW
    —○H— EXIST.

FLOOR AREAS - REFER (1:200) PLANS

- MAIN WORKSHOP BUILDING	- 3510 sqm
- WELDING BAY	- 225 sqm
- FITTERS' SHOP	- 315 sqm
- STORE (W/S)	- 210 sqm
- OFFICE (W/S)	- 100 sqm
- AMENITIES (W/S)	- 100 sqm
- ADMINISTRATION OFFICE	- 234 sqm
AMENITIES (ADMIN)	- 48 sqm
STORE (ADMIN)	- 26 sqm

MAXIMUM No. OF EMPLOYEES - 40 PERSONNEL
NORMAL No. OF EMPLOYEES - 30 PERSONNEL

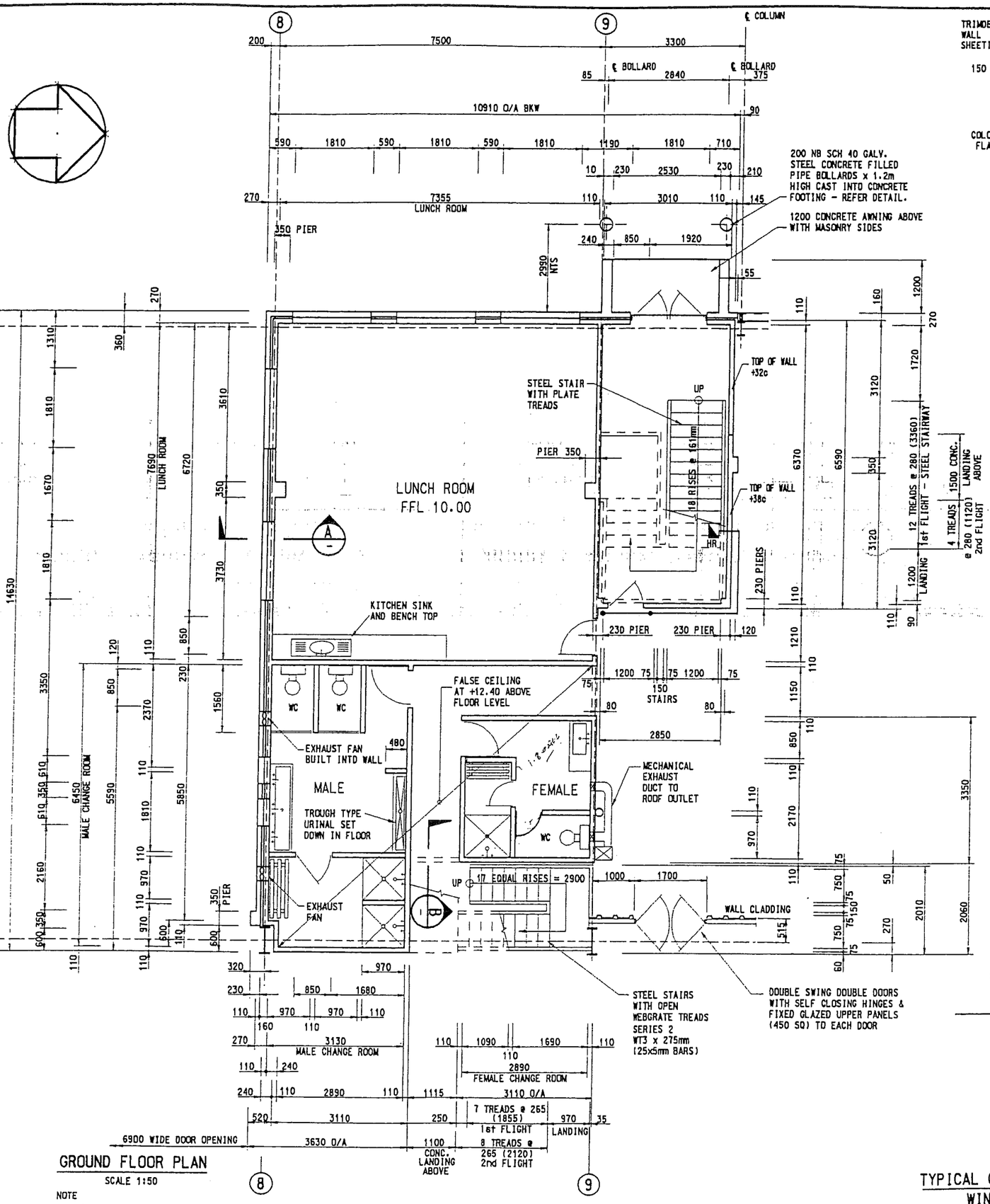
9.83 EXISTING SPOT LEVELS.

ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle PO Box 682, Fremantle Western Australia 6160
Telephone (09) 4305481 Facsimile (09) 4305617

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
SITE PLAN

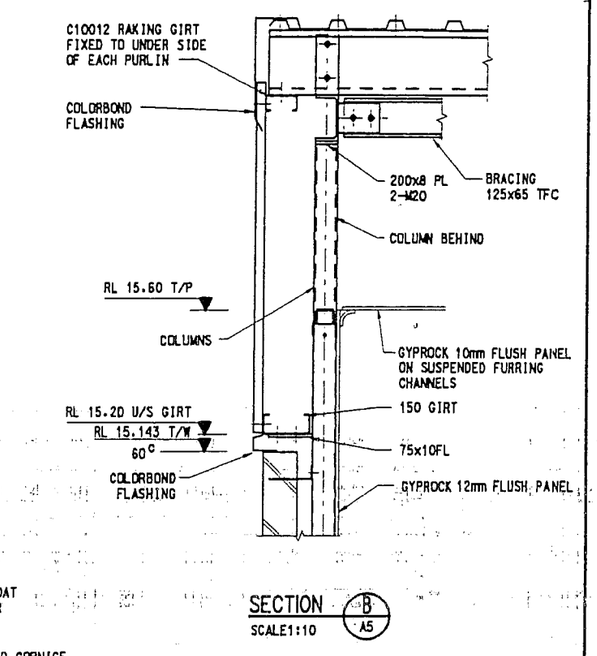
Drawn	JK & ST	Approved	
Date	17-6-94	Project No	94080
Chkd	JFS	Drawing No	Rev
Scale	1:500	A1	B

Revisions	Description	By	Dated
A	ISSUED FOR CONSTRUCTION	W.D.	30-11-94
B	MINOR CHANGES	W.D.	07-12-94
C	CEILING SHOWN, BOLLARDS	W.D.	09-02-95

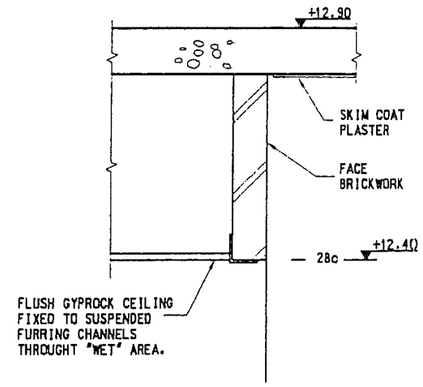


GROUND FLOOR PLAN
SCALE 1:50

NOTE
1. ALL PIERS TO BE FULLY BONDED AND BUILT INTEGRALLY WITH ADJACENT WALLS.
2. INTERNAL WALLS IN TOILET AREAS TO DADO HEIGHT TO 1800mm.



SECTION B-B
SCALE1:10



SECTION B-B
SCALE1:10

SECTION A-A
SCALE1:10

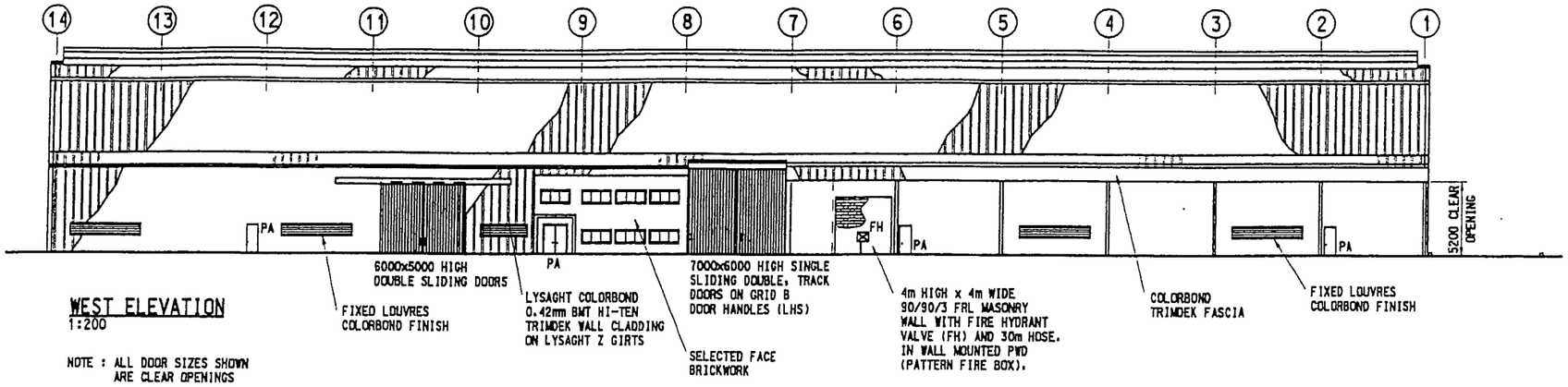
TYPICAL GROUND AND FIRST FLOOR WINDOW SILL DETAILS

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle Telephone (09) 4305481
PO Box 682, Fremantle Facsimile (09) 4305577
Western Australia 6160
ACS Consulting Chartered Engineers
94080-A4

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
OFFICE GROUND FLOOR - PLAN AND DETAILS

Drawn: S.TSALLIS		Approved:	
Date: 16-8-94		Project No: 94080	
Check: JFS		Drawing No: A4	Rev: C
Scale: AS SHOWN			

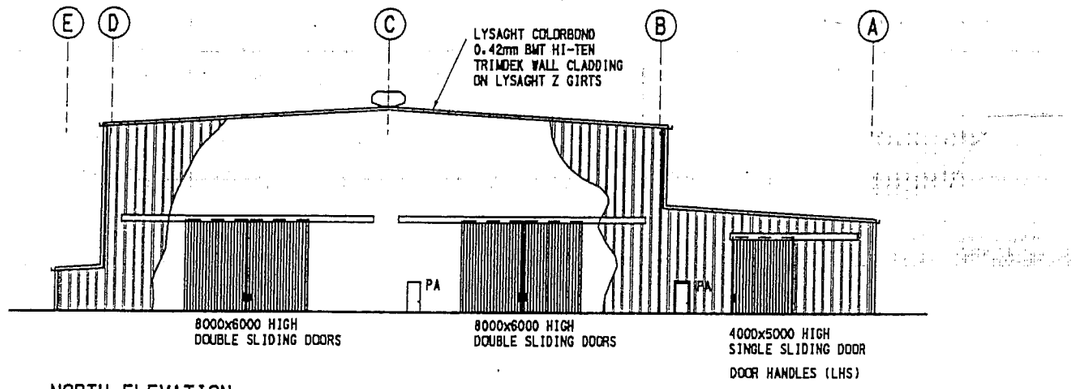
Revision	Description	By	Date
1	ISSUED FOR PLANNING APPROVAL	S.T.	18-7-94
A	ISSUED FOR CONSTRUCTION	M.D.	29-11-94



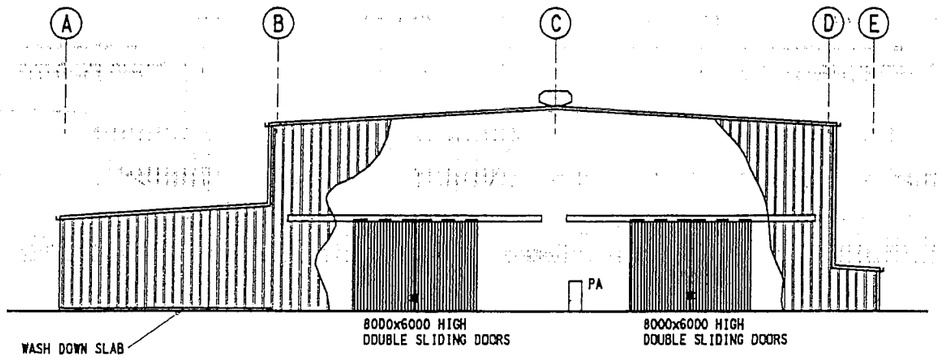
WEST ELEVATION
1:200

NOTE : ALL DOOR SIZES SHOWN ARE CLEAR OPENINGS

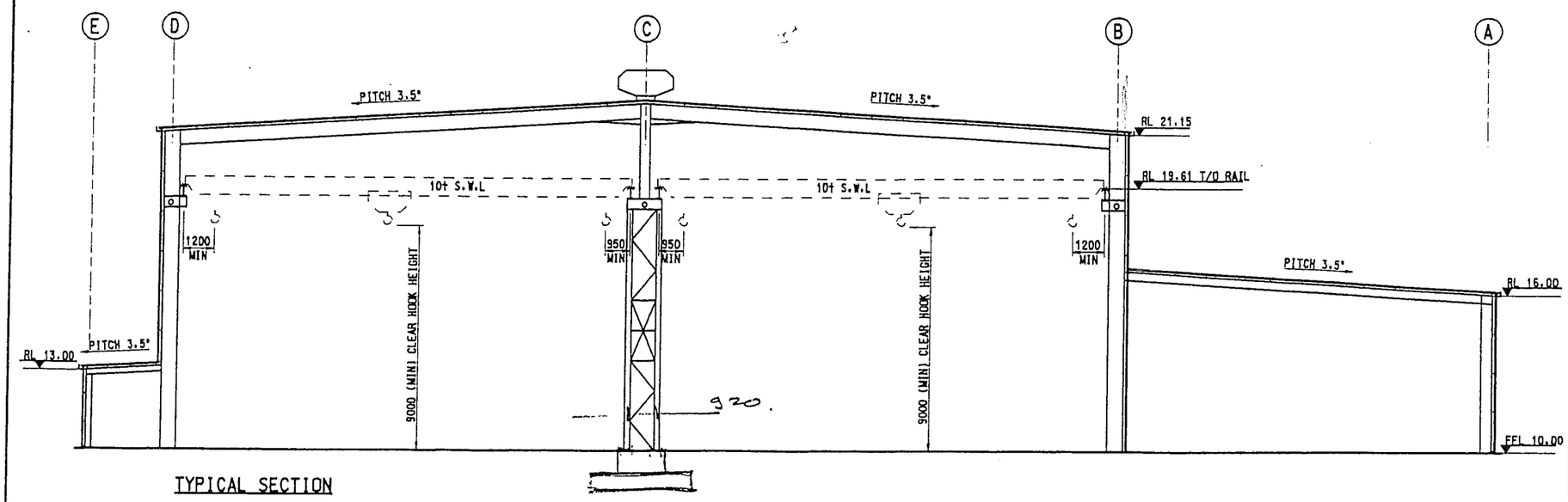
DOOR HANDLES LOCATED ON CENTRAL MULLIONS EXCEPT WHERE SHOWN OTHERWISE



NORTH ELEVATION



SOUTH ELEVATION



TYPICAL SECTION

CRANE SPECIFICATION - 4 REQUIRED

MINIMUM HOOK APPROACH DISTANCES AND CLEARANCE HEIGHT - AS SHOWN

S.W.L.	- 10.000 kg
LIFTING SPEED	- 4/0.66 m/min
CROSS TRAVEL TROLLEY SPEED	- 20/2 m/min
LONG TRAVEL /CRANE SPEED	- 40/2 m/min
MAX BUFFER FORCE	- 30.0 KN

ACS Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

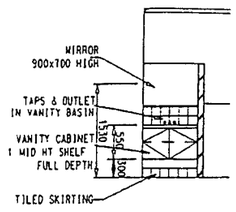
201 High Street, Fremantle
PO Box 652, Fremantle
Western Australia 6160

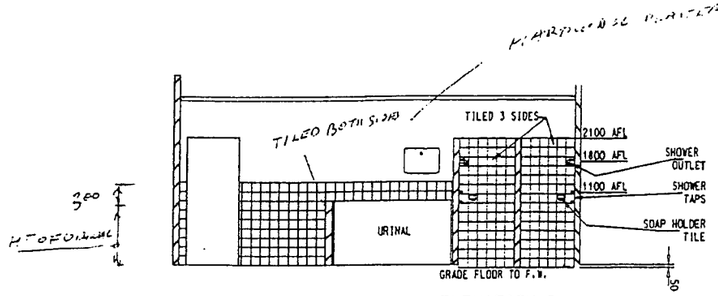
Telephone (09) 4305481
Facsimile (09) 4305617

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
W/SHOP BUILDING SECTION & ELEVATIONS

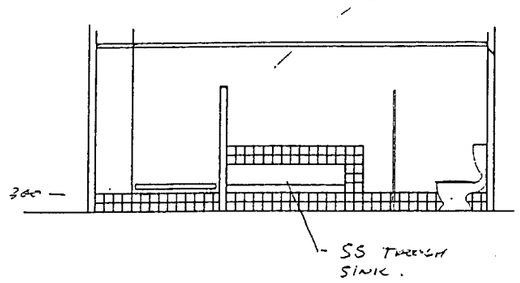
Drawn	JK & ST
Date	17-6-94
Check	JFS
Scale	1:100, 1:200
Approved	
Project No.	94080
Drawing No.	A3
Rev'd	A

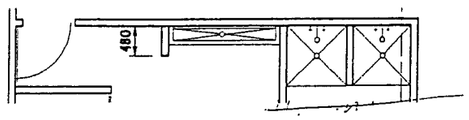
Revision	Description	By	Date

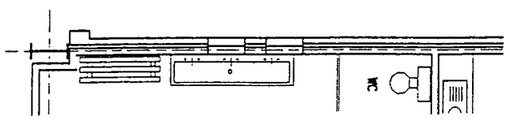


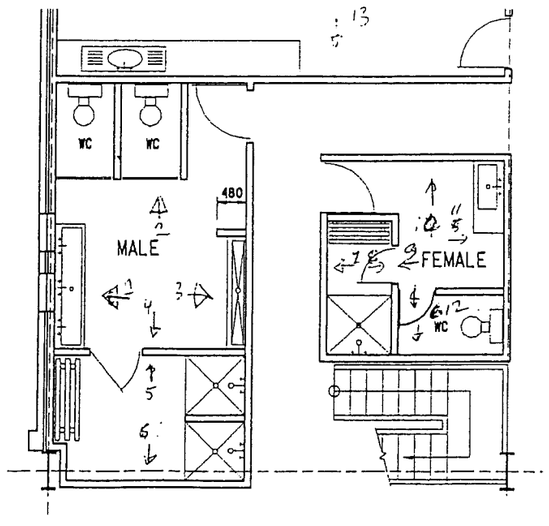


ELEVATION 2









CHECK PRINT

CHECKED	DATE

- 3 NOV 1994

ACS Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd
94080-A6

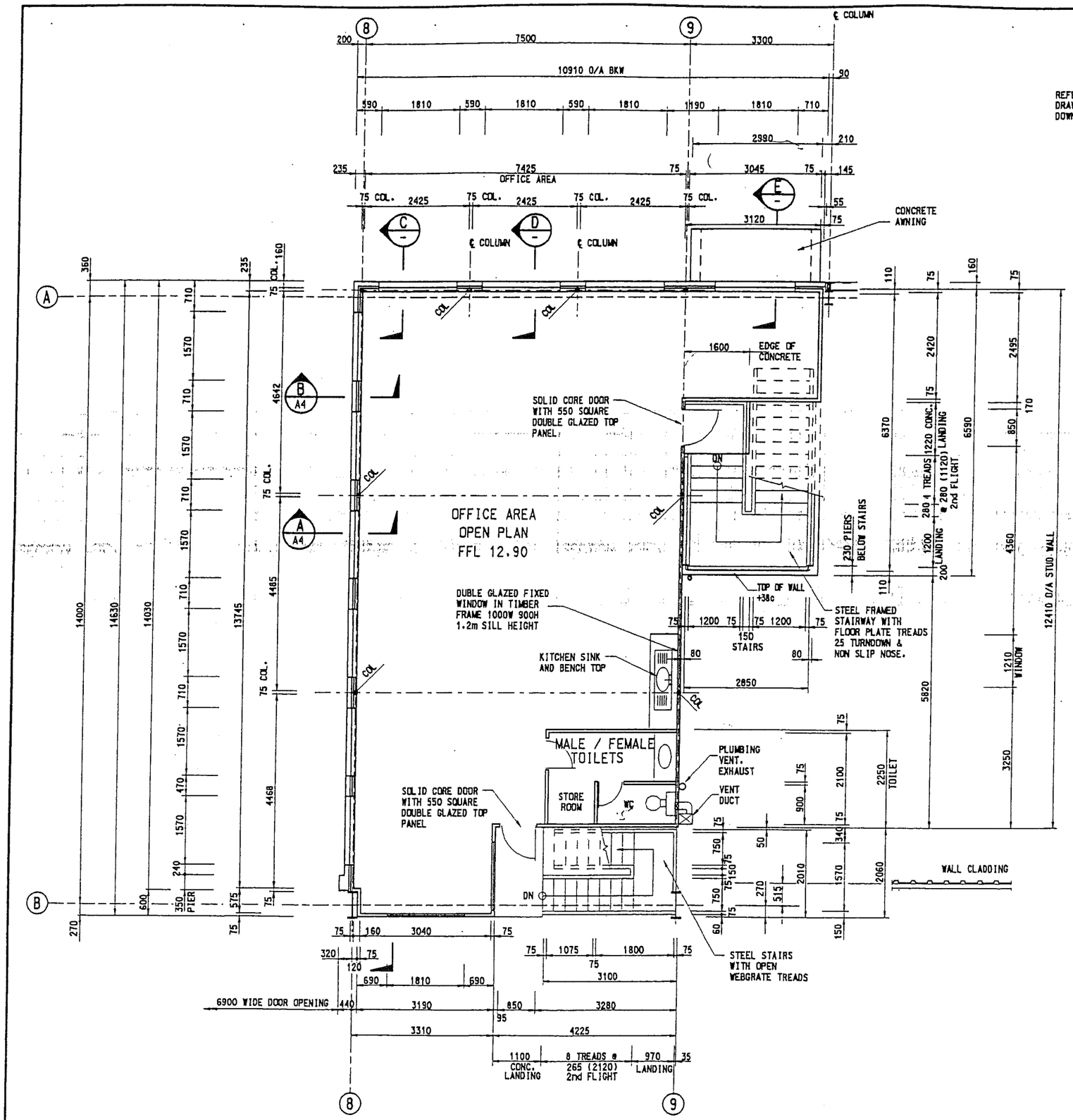
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160

Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD. WORKSHOP AND OFFICES FACILITIES ARCHITECTUAL PLAN DETAILS SHEET 1 OF 3	Drawn: S.TSALLIS	Approved:	
	Date: 15-8-94	Project no: 94080	
	Check: JFS.	Drawing no: A6	Rev: 1
	Scale: 1:10 .		

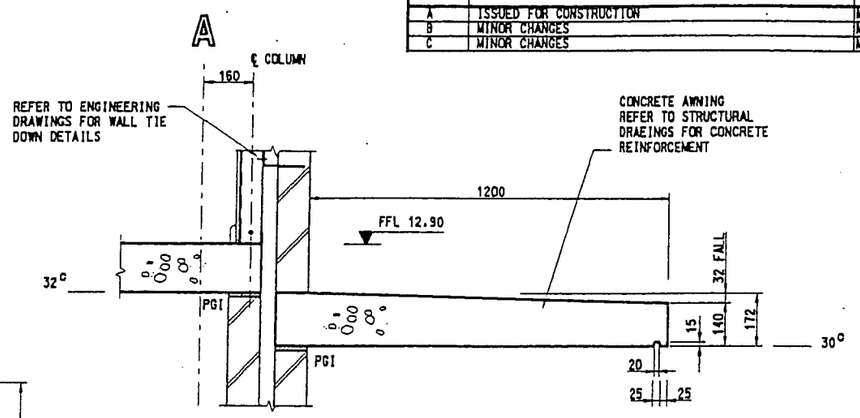
R/ - WALL ELEVATIONS / AMENITIES

Revisions	Descriptions	Dyt	Dated
A	ISSUED FOR CONSTRUCTION	M.D.	30-11-94
B	MINOR CHANGES	M.D.	06-12-94
C	MINOR CHANGES	M.D.	10-02-95



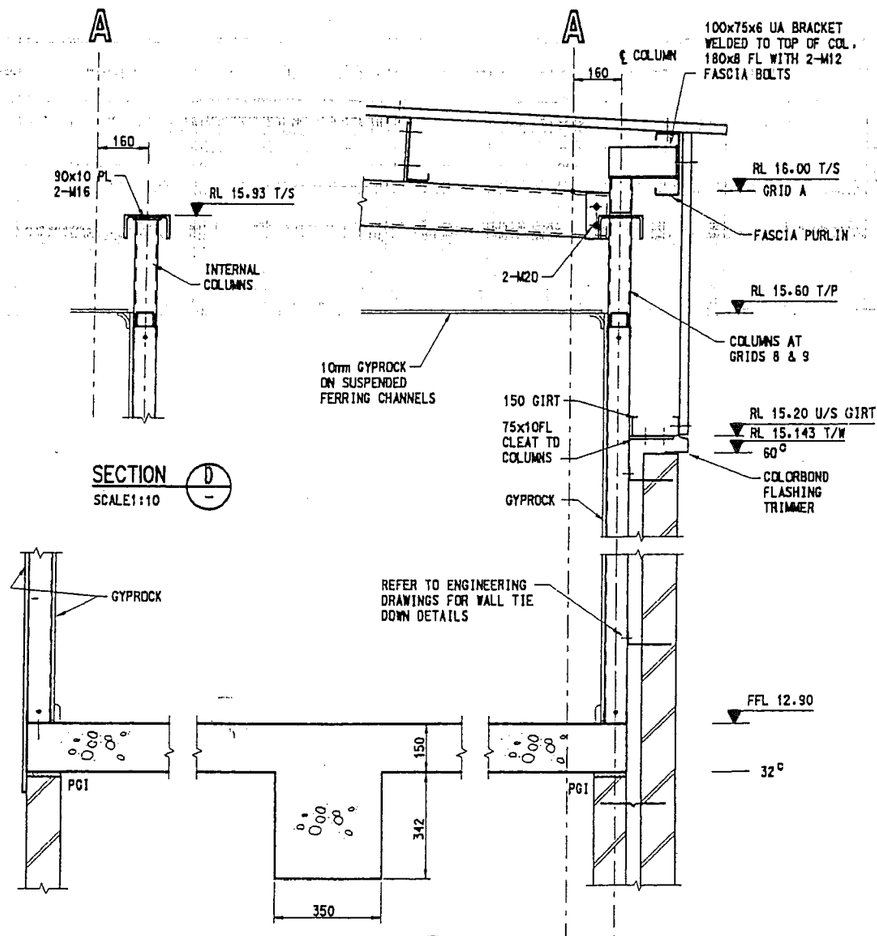
FIRST FLOOR PLAN

SCALE1:50



SECTION E

SCALE1:10



SECTION D

SCALE1:10

SECTION C

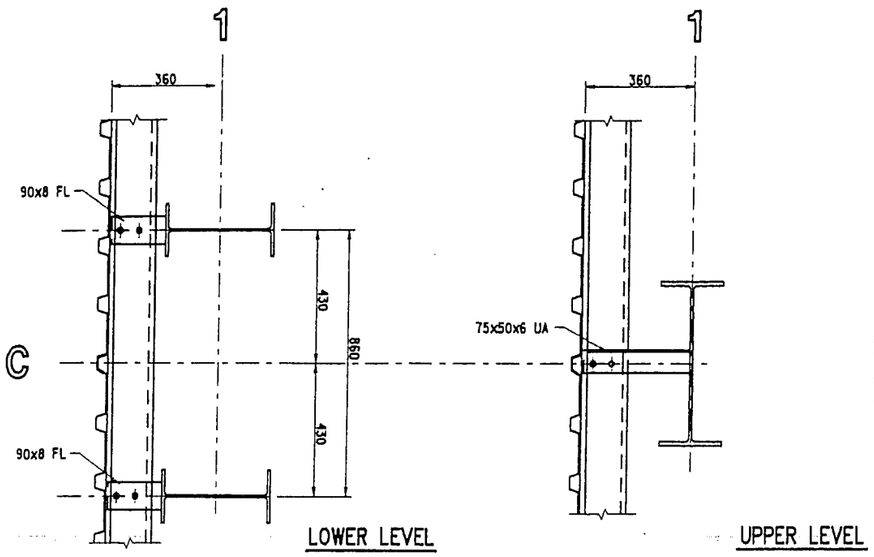
SCALE1:10

Australian Civil and Structural Pty Ltd
94080-A5
201 High Street, Fremantle PO Box 652, Fremantle Western Australia 6160
Telephone (09) 4305481 Facsimile (09) 4305577

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
OFFICE FIRST FLOOR - PLAN AND DETAILS

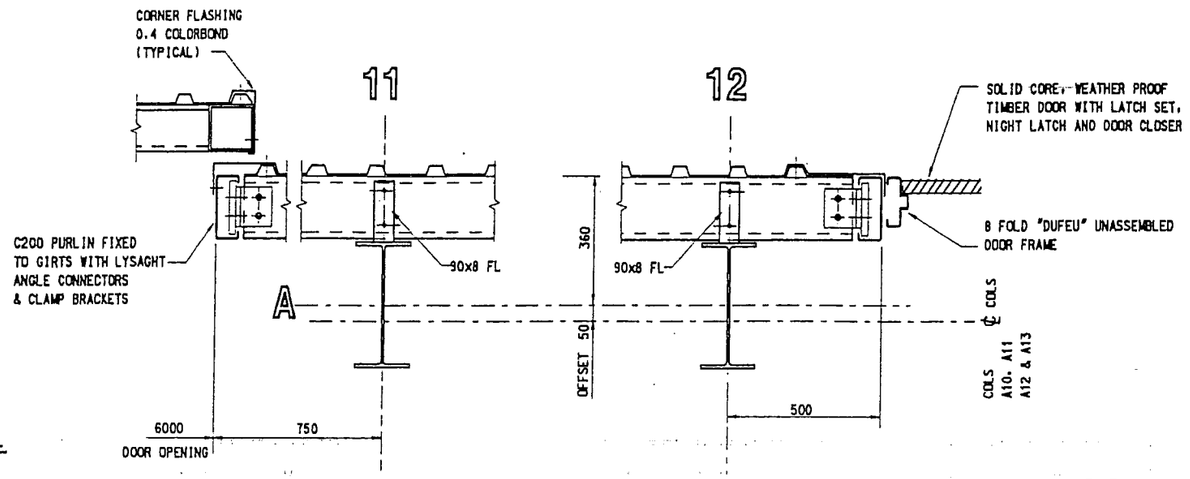
Drawn	S.TSALLIS	Approved	
Date	16-8-94	Project No	94080
Chkd	JFS	Drawing No	A5
Scale	AS SHOWN	Rev	C

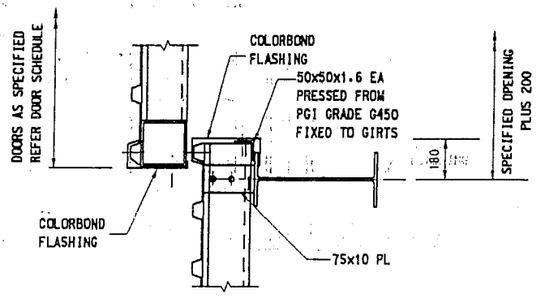
Revisions	Descriptions	Byt	Dated
A	ISSUED FOR CONSTRUCTION		M.D.30-11-94
B	MINOR CHANGES		M.D.06-12-94



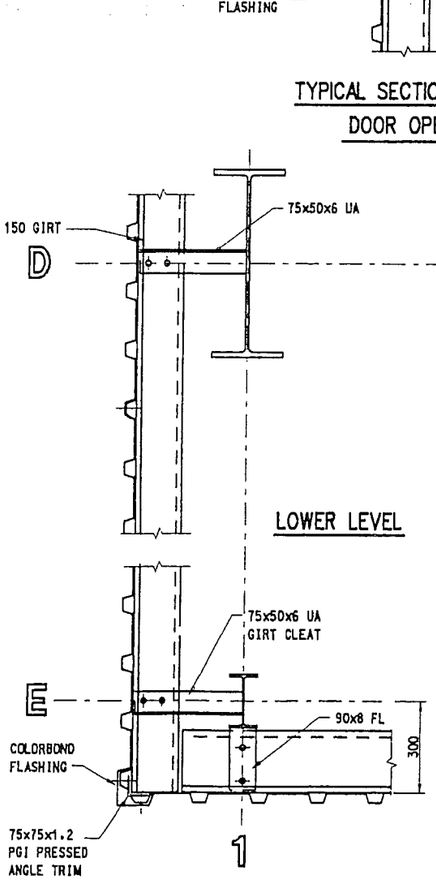
LOWER LEVEL

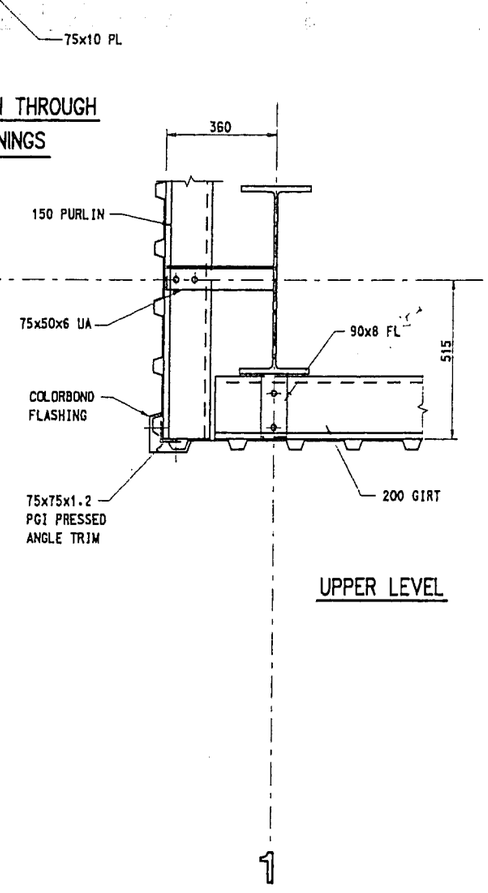
UPPER LEVEL

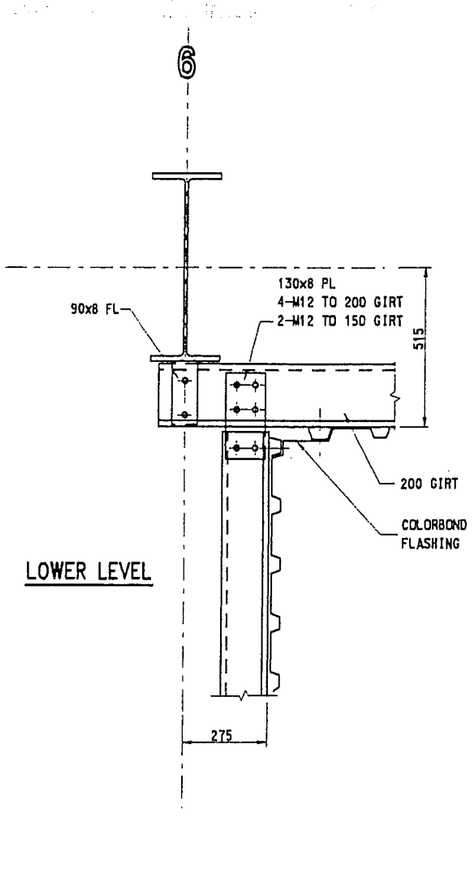


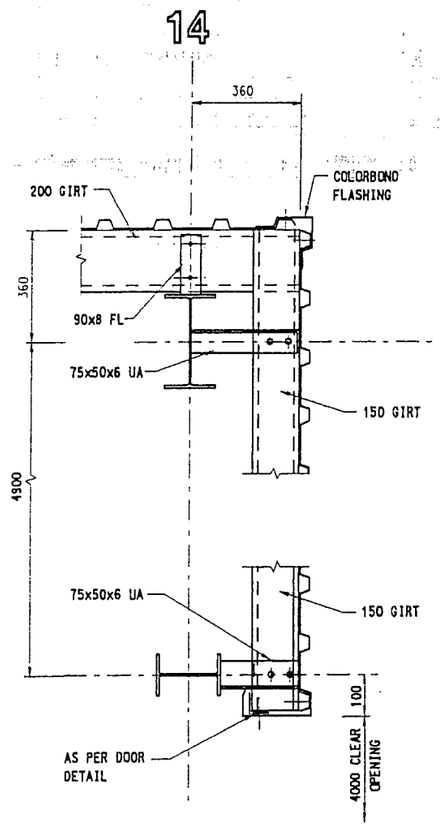


TYPICAL SECTION THROUGH
DOOR OPENINGS









ACS
Consulting Chartered Engineers

Australian Civil and
Structural Pty Ltd

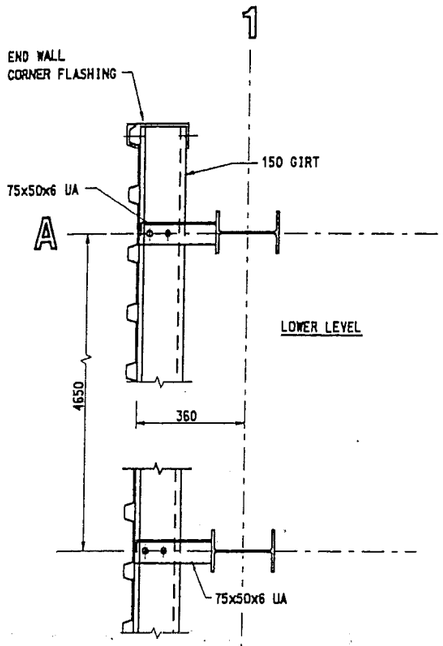
201 High Street, Fremantle
PO Box 662, Fremantle
Western Australia 6160

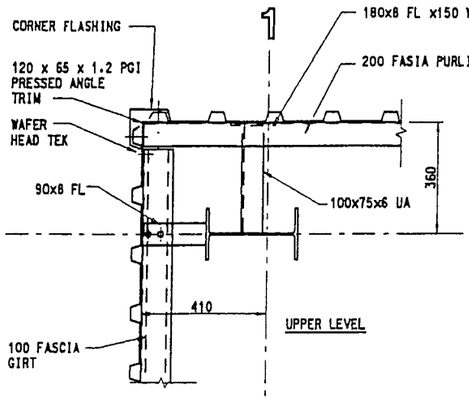
Telephone (09) 4305481
Facsimile (09) 4305517

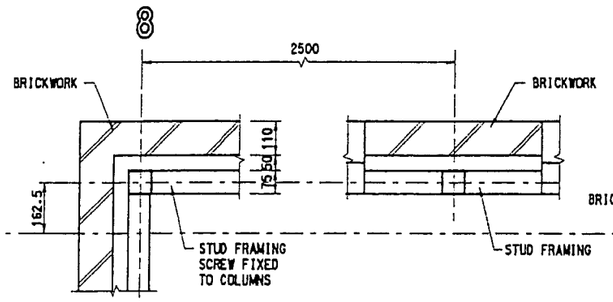
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
ARCHITECTUAL PLAN DETAILS SHEET 2 OF 2

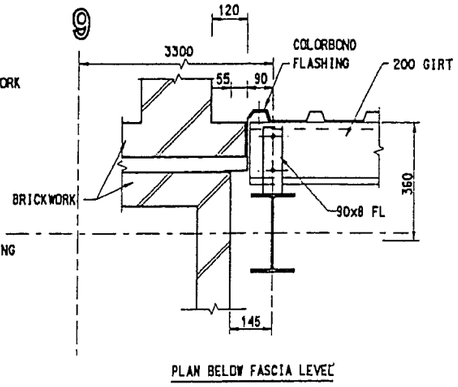
Drawn: S.TSALLIS		Approved:	
Date: 15-8-94		Project No: 94080	
Chkd: JFS		Drawing No: A8	Rev: B
Scale: 1:10			

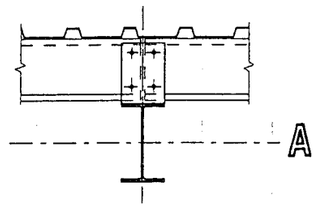
Revisions	Descriptions	By:	Dated
A	ISSUED FOR CONSTRUCTION	M.D.	30-11-94
B	MINOR CHANGES	M.D.	6-12-94

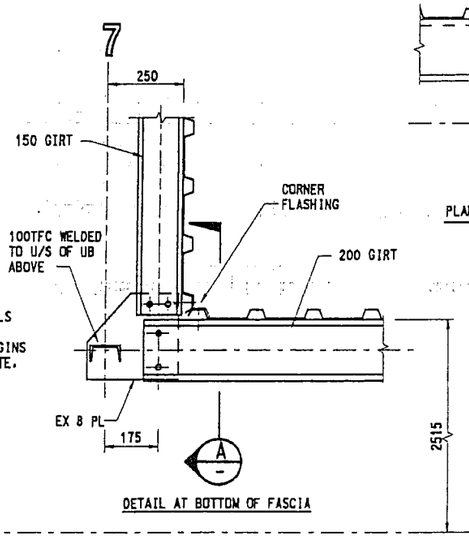


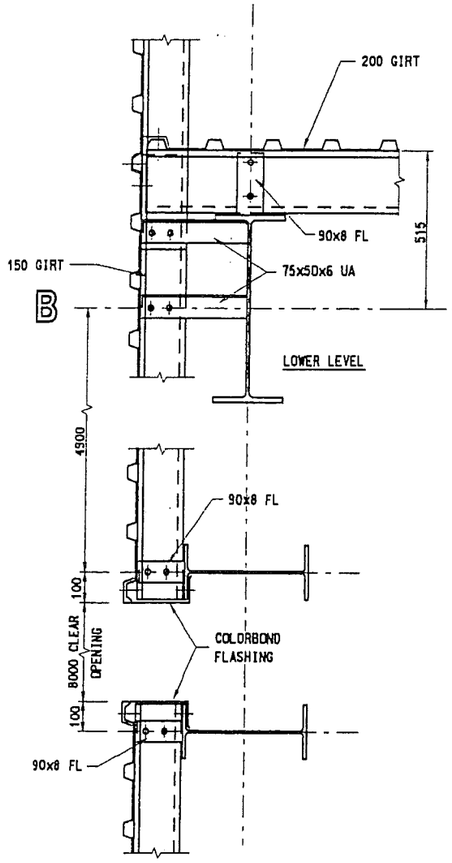


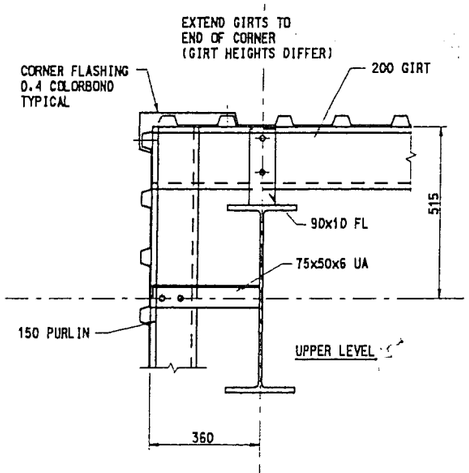


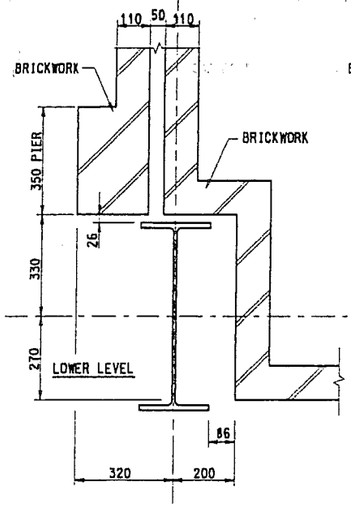


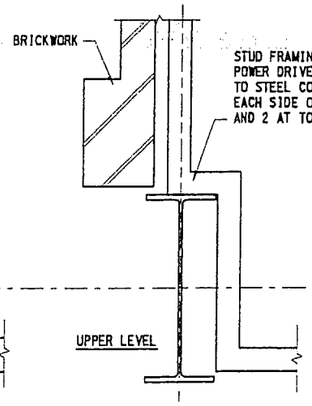


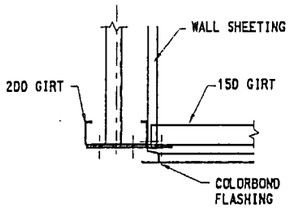










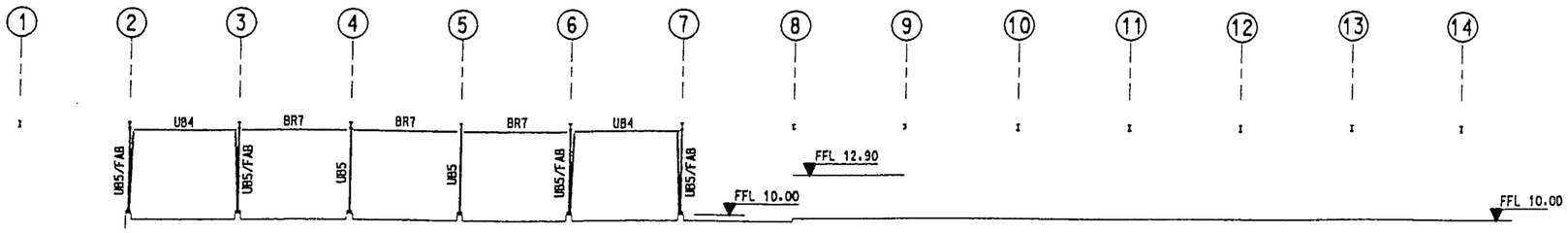


SECTION A

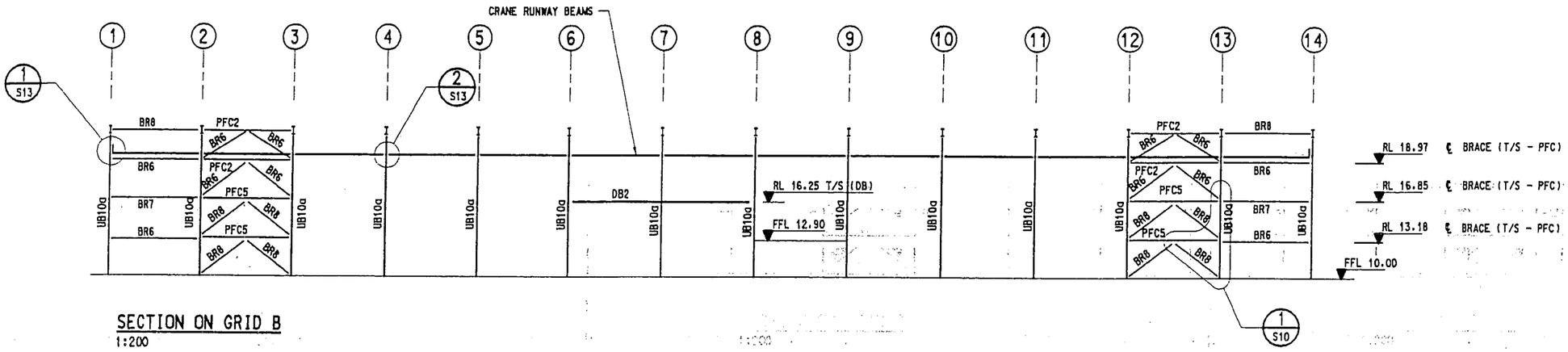
Australian Civil and Structural Pty Ltd
94080-A7
201 High Street, Fremantle
PO Box 662, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD. WORKSHOP AND OFFICES FACILITIES ARCHITECTUAL PLAN DETAILS SHEET 1 OF 2	Drawn: S.TSALLIS	Approved:	
	Date: 15-8-94	Project No:	94080
	Chkd: JFS	Drawing No:	Rev:
	Scale: 1:10	A7	B

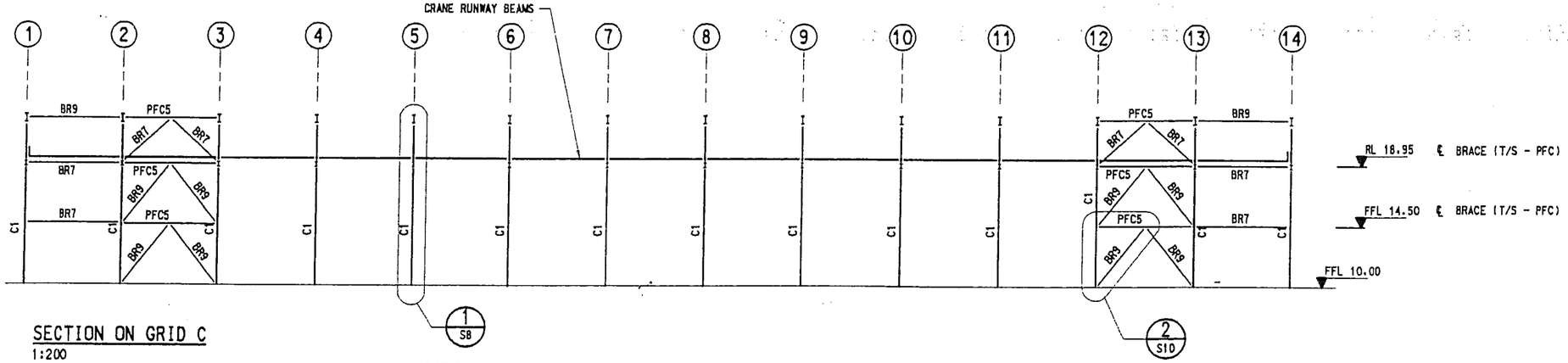
Revision	Description	By	Dated
A	ISSUED FOR CONSTRUCTION		W.D.30-11-94
B	MINOR CHANGES		W.D.12-12-94



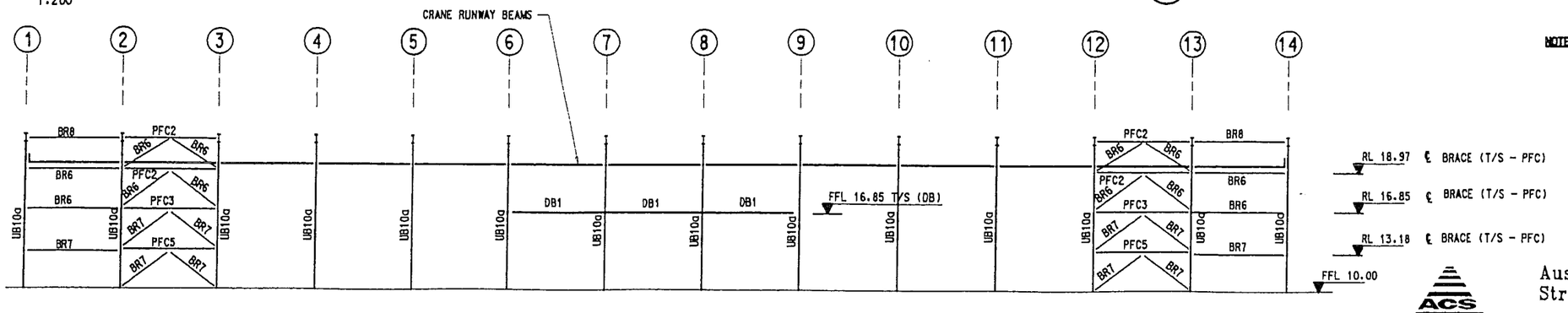
SECTION ON GRID A1
1:200



SECTION ON GRID B
1:200



SECTION ON GRID C
1:200



SECTION ON GRID D
1:200

NOTE : FOR FLY BRACING TO COLUMN FLANGES REFER TO GIRT DRAWINGS.

ACS Consulting Chartered Engineers

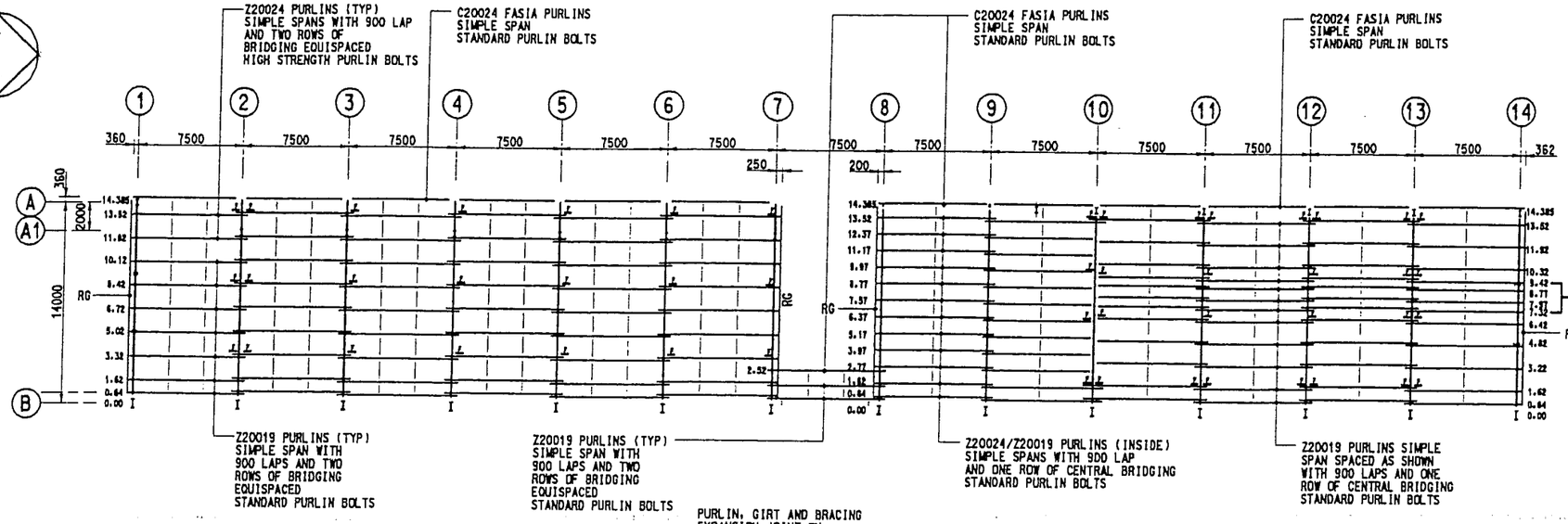
Australian Civil and Structural Pty Ltd

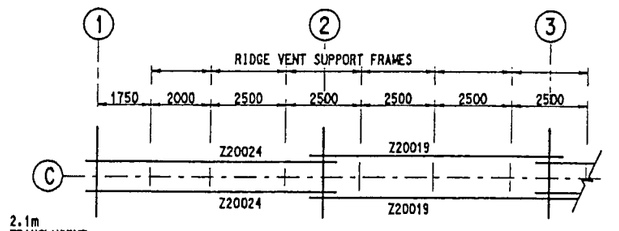
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160

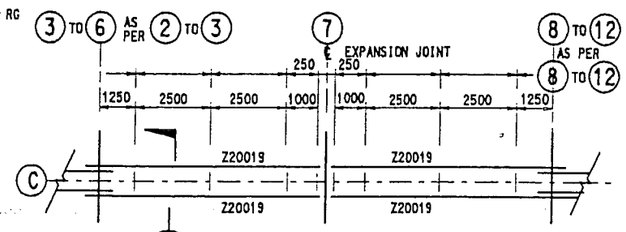
Telephone (09) 4305481
Facsimile (09) 4305517

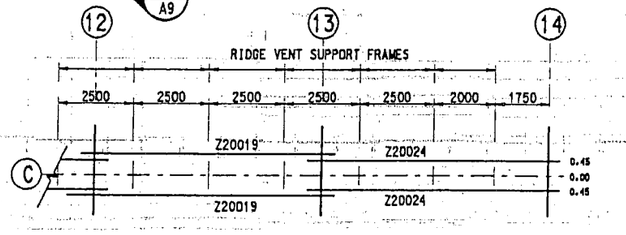
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn: S.TSALLIS	Approved:	
WORKSHOP AND OFFICES FACILITIES	Date: 19-6-94	Project No: 94080	
STEELWORK SECTIONS ON GRIDS A1, B, C & D	Chkd: JFS	Drawing No: S2	Rev: B
	Scale: 1:200		

Revision	Description	By	Date
A	ISSED FOR CONSTRUCTION	J.K.	28.11.94

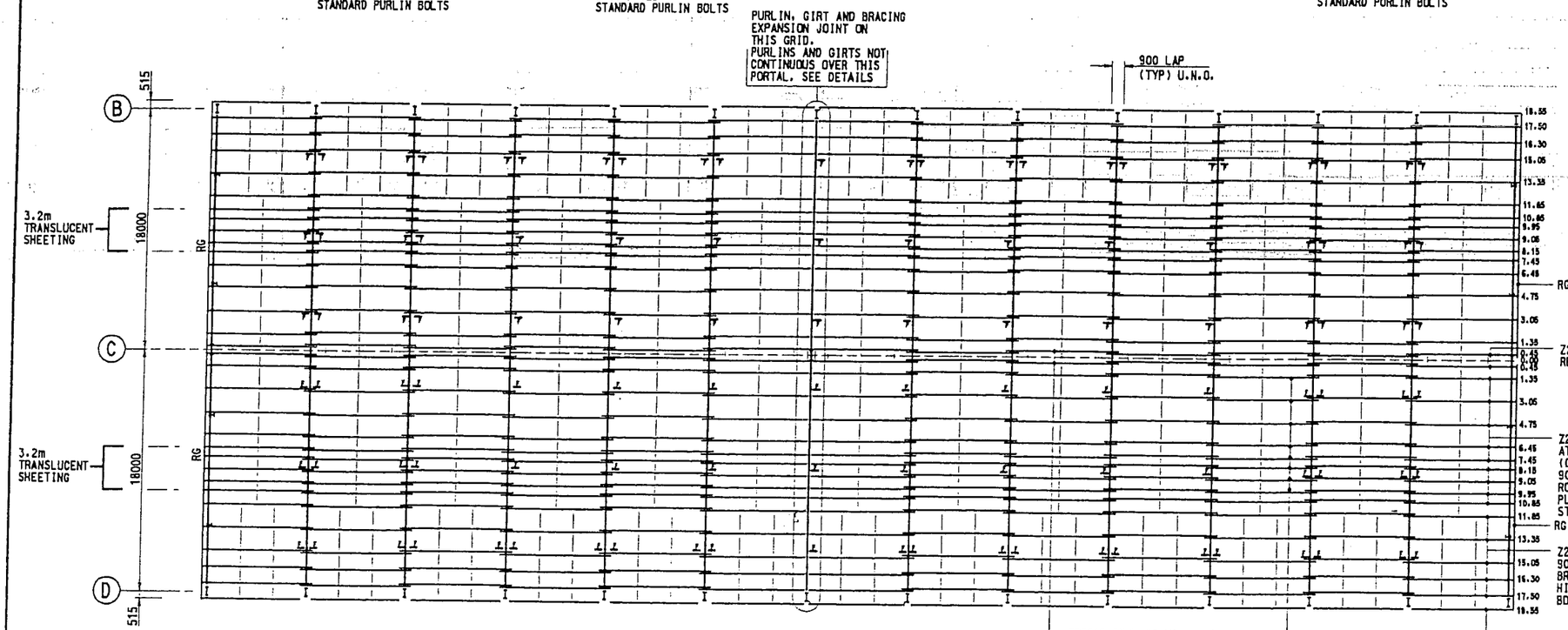




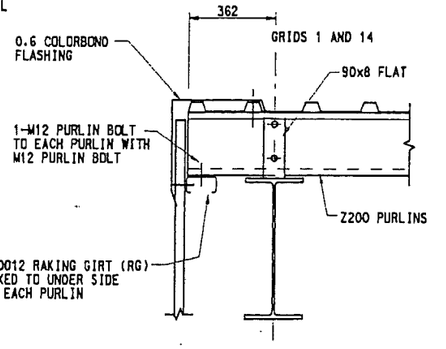




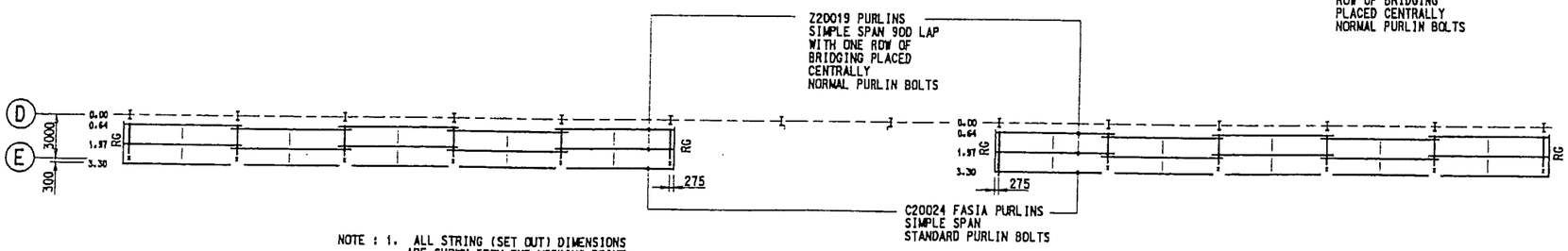
RIDGE VENT, PURLIN SUPPORT AND FRAME SPACING



MAIN ROOF - PURLINS TYPICAL BOTH SIDES OF RIDGE (SPACED AS NOTED)



TYPICAL END PURLIN DETAIL



NOTE : 1. ALL STRING (SET OUT) DIMENSIONS ARE SHOWN FROM THE WORKING POINT TO THE PURLIN FACE ALONG THE SLOPE OF THE RAFTER.

2. FLY BRACE TO RAFTERS SHOWN 'F'

ACS Consulting Chartered Engineers

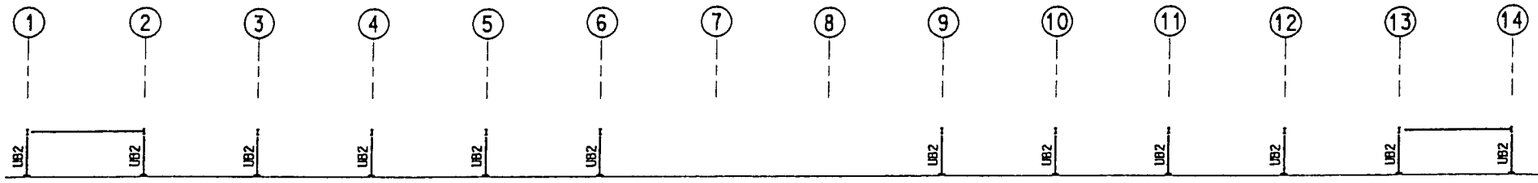
Australian Civil and Structural Pty Ltd

201 High Street, Fremantle PO Box 682, Fremantle Western Australia 6160

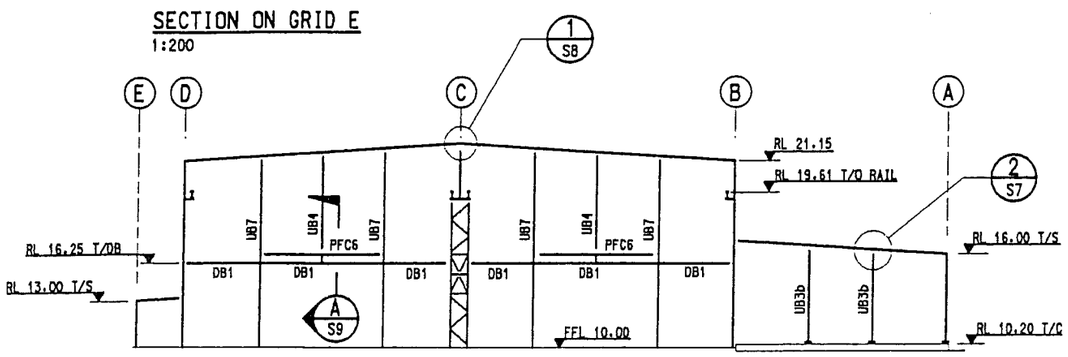
Telephone (09) 4305481 Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn: S.TSALLIS	Approved:	
WORKSHOP AND OFFICES FACILITIES	Dated: 20-6-94	Project no: 94080	
PURLIN ARRANGEMENT	Check: JFS	Drawing no: S4	Rev: X.
	Scale: 1:200		

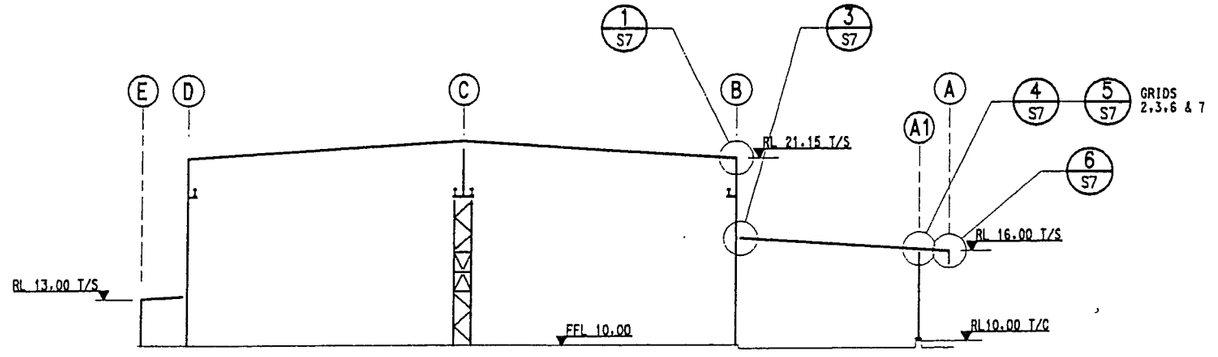
Revision	Description	Dr'n	Date
A	ISSUED FOR CONSTRUCTION	J.K.	28.11.94
B	MINOR CHANGES	M.D.	12.12.94
C	SECTIONS AND DETAILS ADDED	M.D.	21.02.95



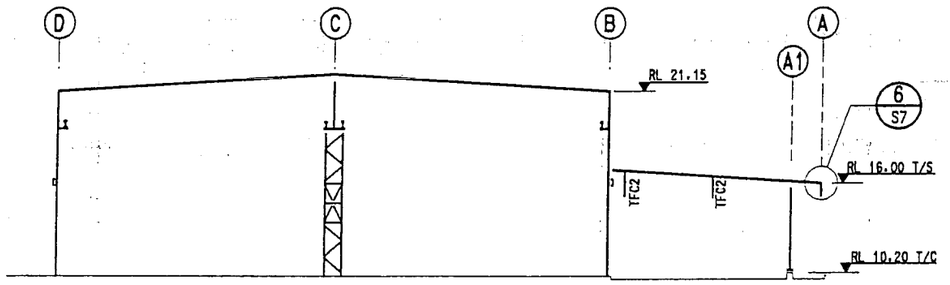
SECTION ON GRID E
1:200



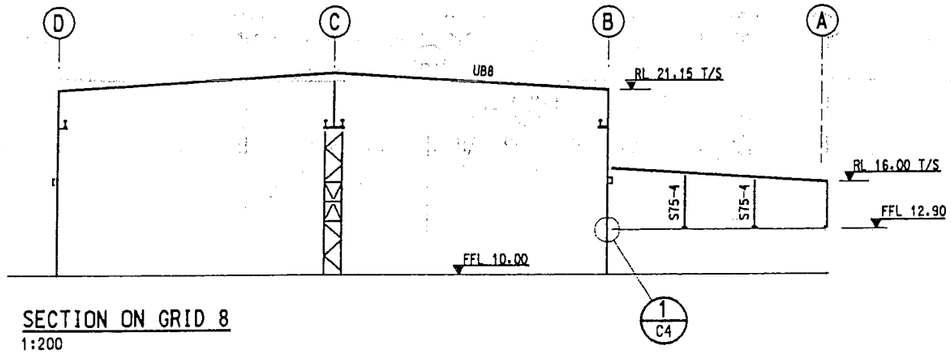
SECTION ON GRID 2 (GRIDS 3,4,5 & 6 SIMILAR
1:200



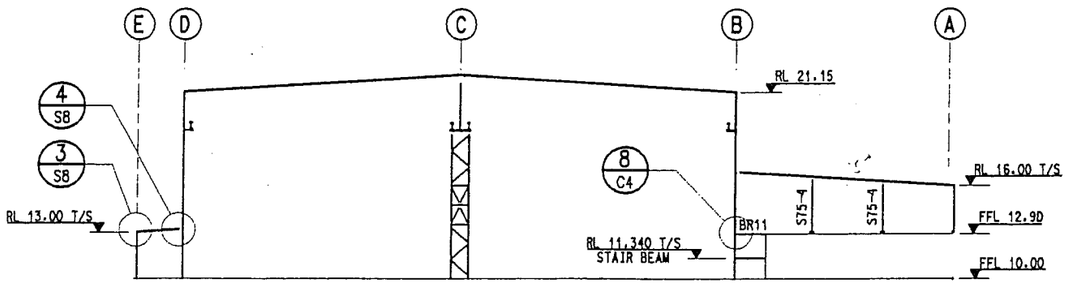
SECTION ON GRID 1
1:200



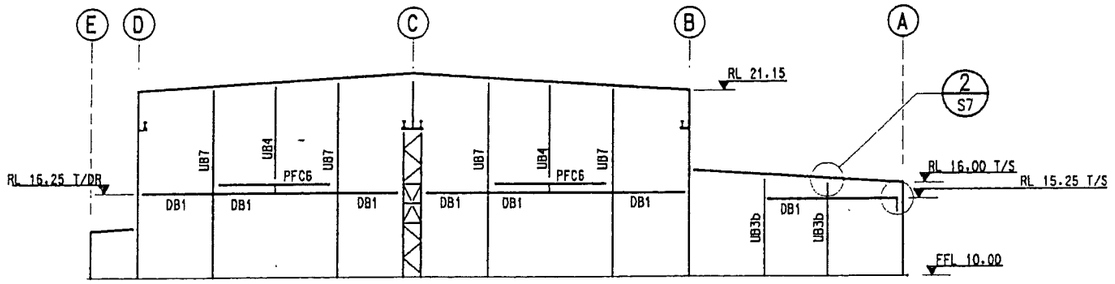
SECTION ON GRID 8
1:200



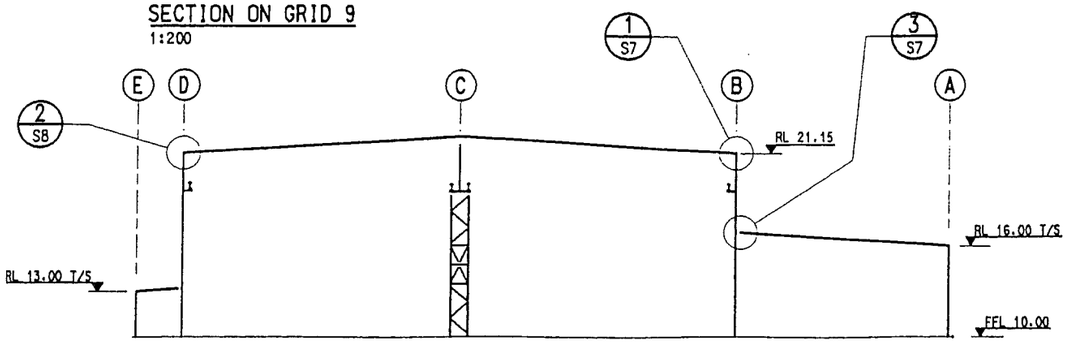
SECTION ON GRID 7
1:200



SECTION ON GRID 14
1:200



SECTION ON GRID 9
1:200



SECTION ON GRID 10 (GRIDS 11,12 & 13 SIMILAR)
1:200

NOTE:
FOR FLY BRACES TO COLUMNS
REFER GIRT DRAWINGS

ACS Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

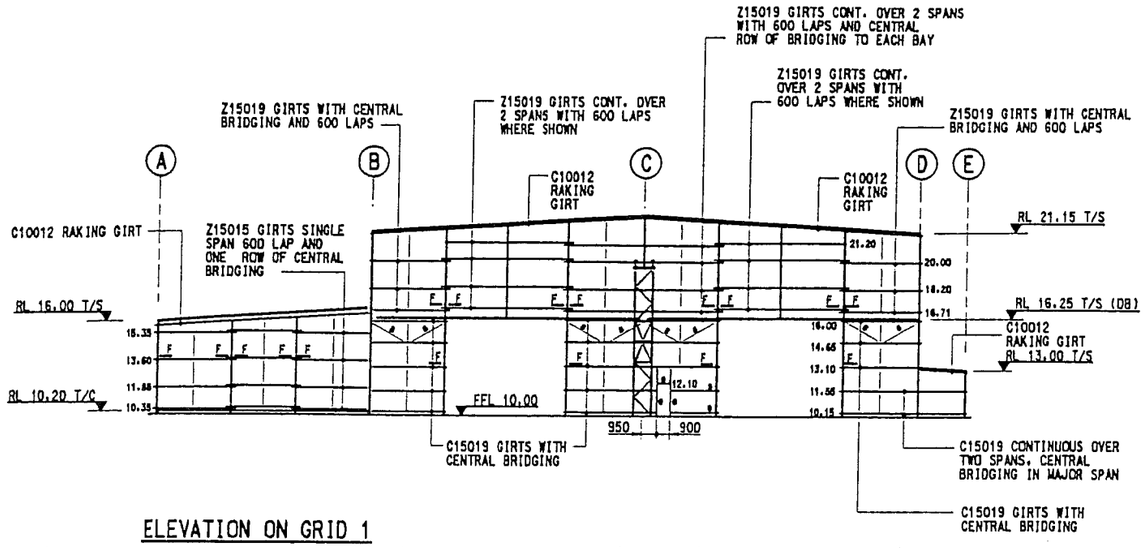
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160

Telephone (09) 4305481
Facsimile (09) 4305537

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
STEELWORK SECTIONS ON GRIDS E & 1 TO 14(INCL)

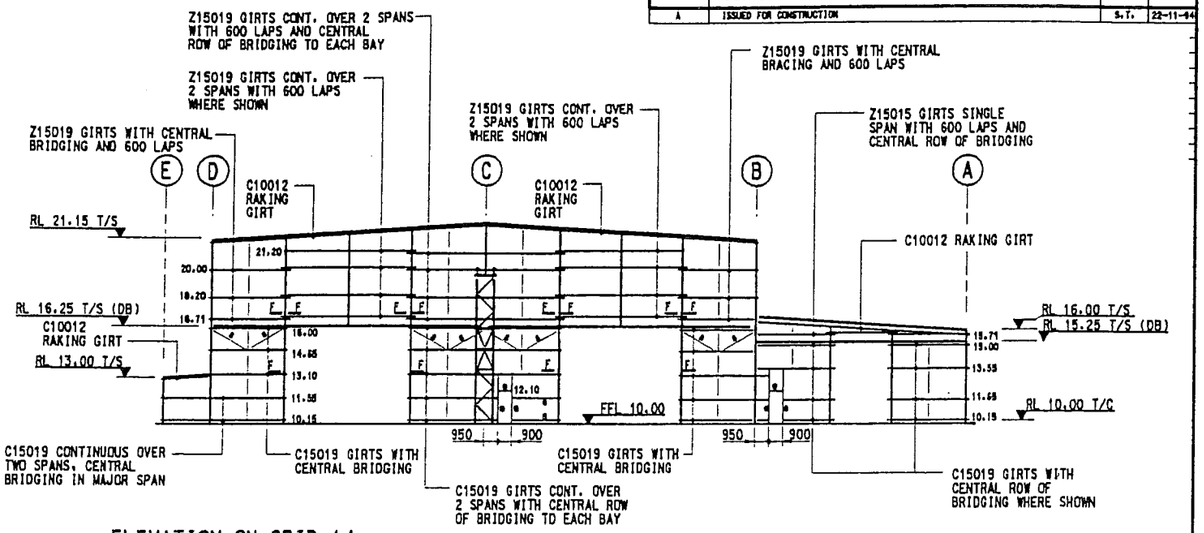
Drawn: S.TSALLIS	Approved:
Date: 19-6-94	Project No: 94080
Chkd: JFS	Drawing No: S3
Scale: 1:200	Rev: C

Revision	Description	By	Date
A	ISSUED FOR CONSTRUCTION	S.T.	22-11-94

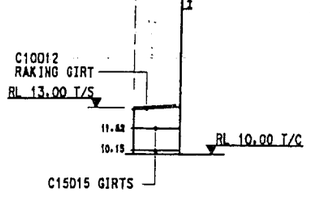


ELEVATION ON GRID 1

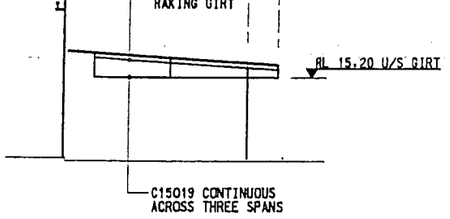
FOR GIRTS LEGEND REFER DRAWING S5



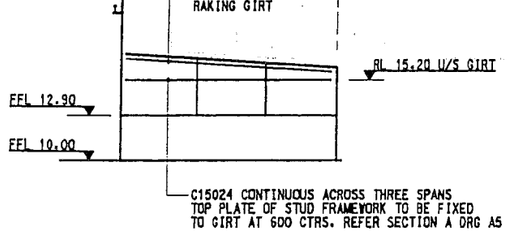
ELEVATION ON GRID 14



SECTION ON GRID 6
GRID 9 SIMILAR



SECTION ON GRID 7



SECTION ON GRID 8

NOTE: FLY BRACE TO COLUMN FLANGES SHOWN F

ACS Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

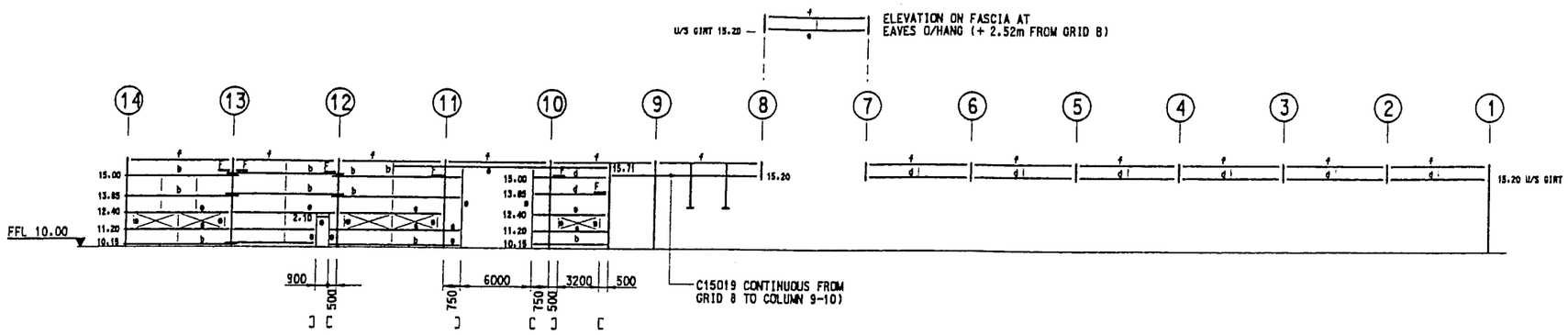
201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160

Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn: S.TSALLIS	Approved:	
WORKSHOP AND OFFICES FACILITIES	Date: 1-8-94	Project No: 94080	
GIRTS ARRANGEMENT - SHEET 2 OF 2	Chkd: JFS	Drawing No: S6	Rev: A
	Scale: 1:200		

14/12/94.

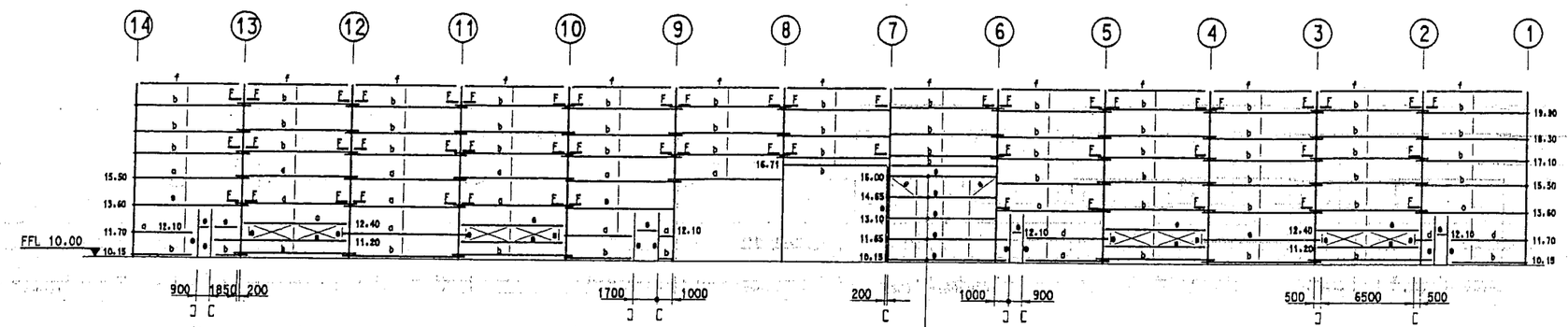
Revisions	Descriptions	By!	Dated
A	ISSUED FOR CONSTRUCTION	S.T.	22-11-94



ELEVATION ON GRID A

LEGEND

a - Z20015 GIRT
b - Z20019 GIRT
c - Z20024 GIRT
d - C20015 GIRT
e - C20019 GIRT
f - C20024 GIRT
s - 50x1.2 PGI STRAP
| - BRIDGING SECTION



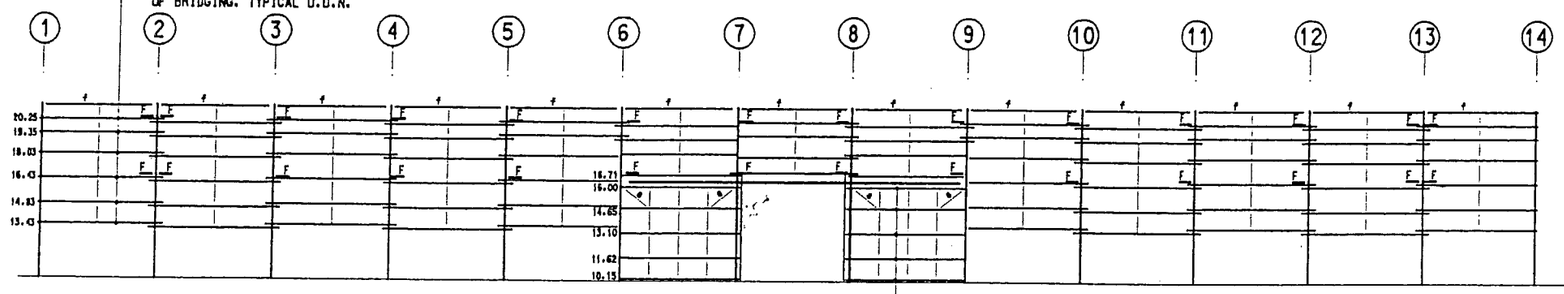
ELEVATION ON GRID B

C20019 GIRTS SINGLE SPAN WITH THREE ROWS OF BRIDGING EQUISPACED BETWEEN COLUMNS

TYPICAL TO ALL PA DOOR OPENINGS (U.O.N.)

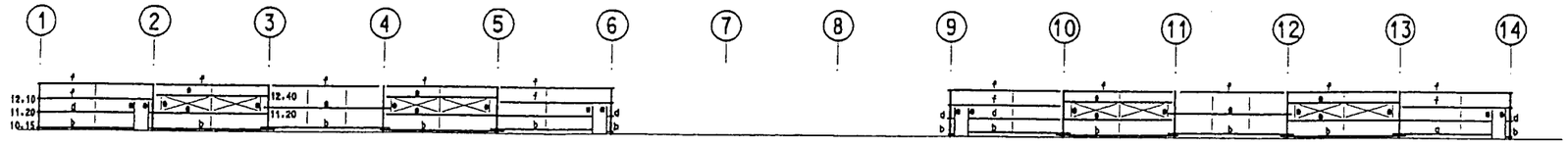
TYPICAL TO ALL FIXED LOUVRES (U.O.N.)

Z20019 GIRTS SIMPLE SPAN 900 LAP AND CENTRAL ROW OF BRIDGING. TYPICAL U.O.N.



ELEVATION ON GRID D

C20019 GIRTS SINGLE SPAN WITH THREE ROWS OF BRIDGING EQUISPACED BETWEEN COLUMNS

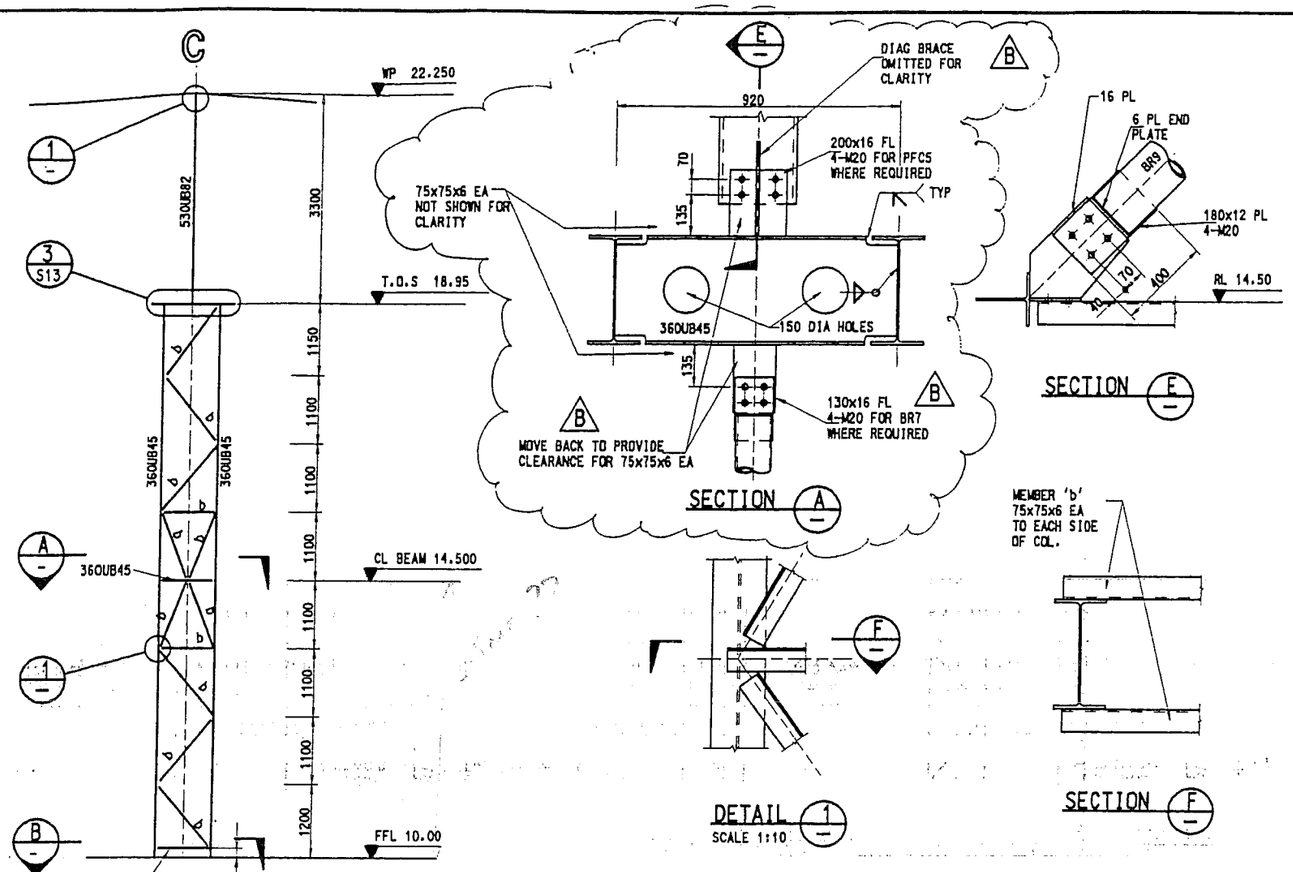


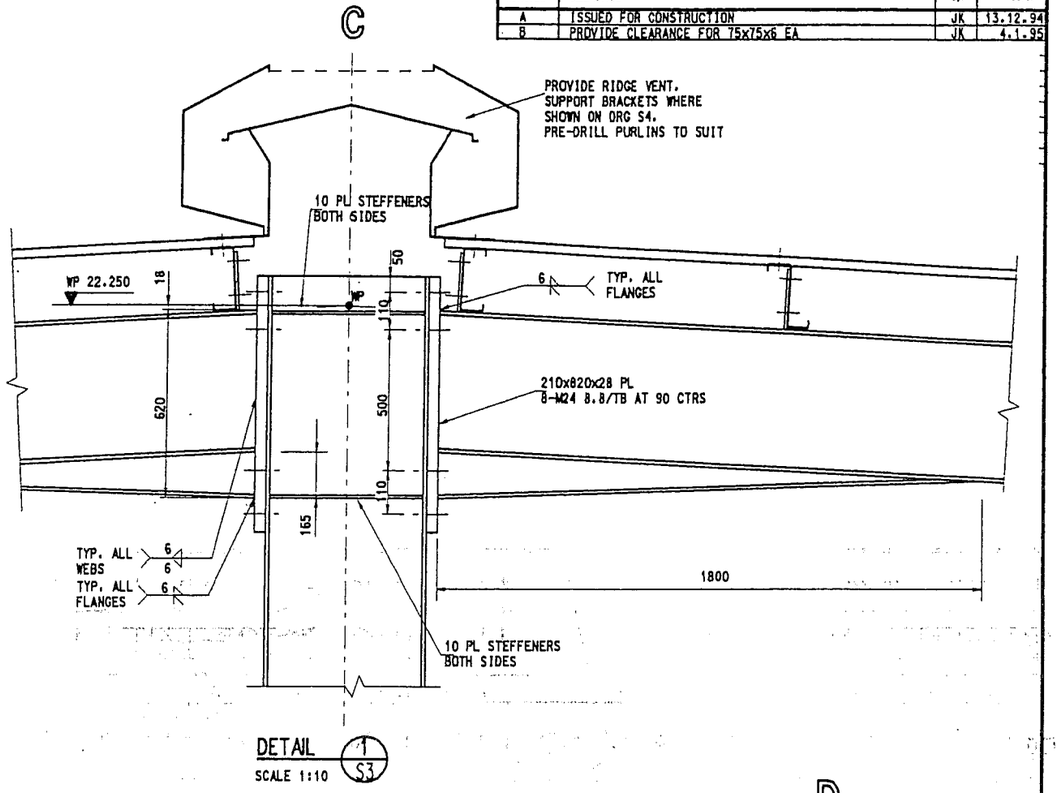
ELEVATION ON GRID E

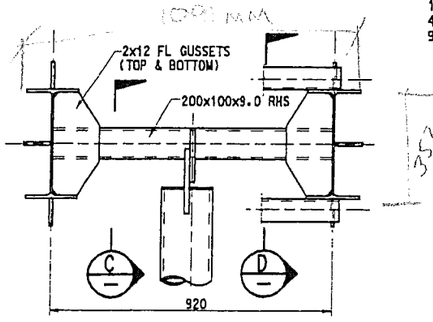
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle PO Box 682, Fremantle Western Australia 6160
Telephone (09) 4305181 Facsimile (09) 4305517

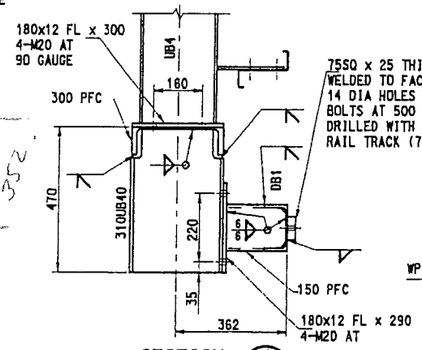
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn S.TSALLIS	Approved	
WORKSHOP AND OFFICES FACILITIES	Dated 1-8-94	Project No! 94080	
GIRTS ARRANGEMENT - SHEET 1 OF 2	Check JFS	Drawing No! S5	Rev! A
	Scale! 1:200		

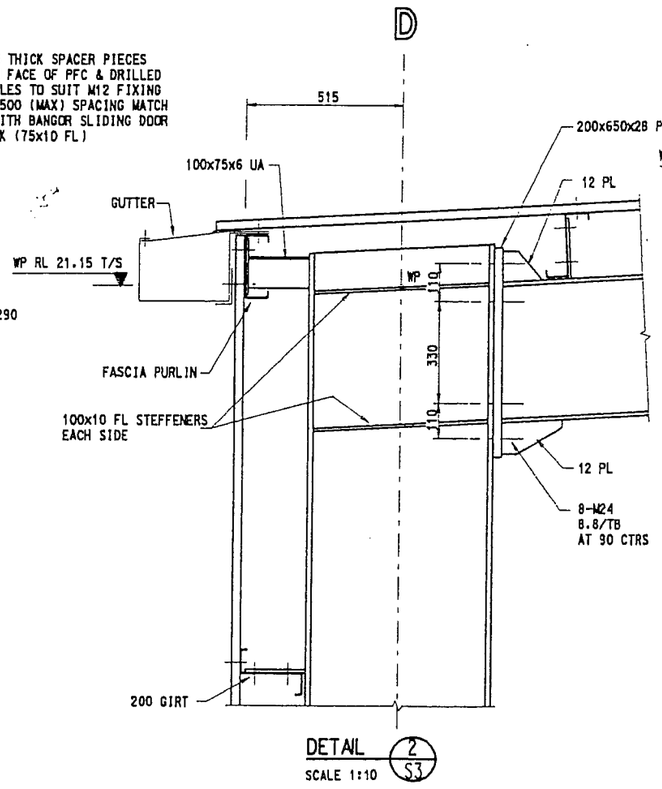
Revisions	Description	By:	Date:
A	ISSUED FOR CONSTRUCTION	JK	13.12.94
B	PROVIDE CLEARANCE FOR 75x75x6 EA	JK	4.1.95

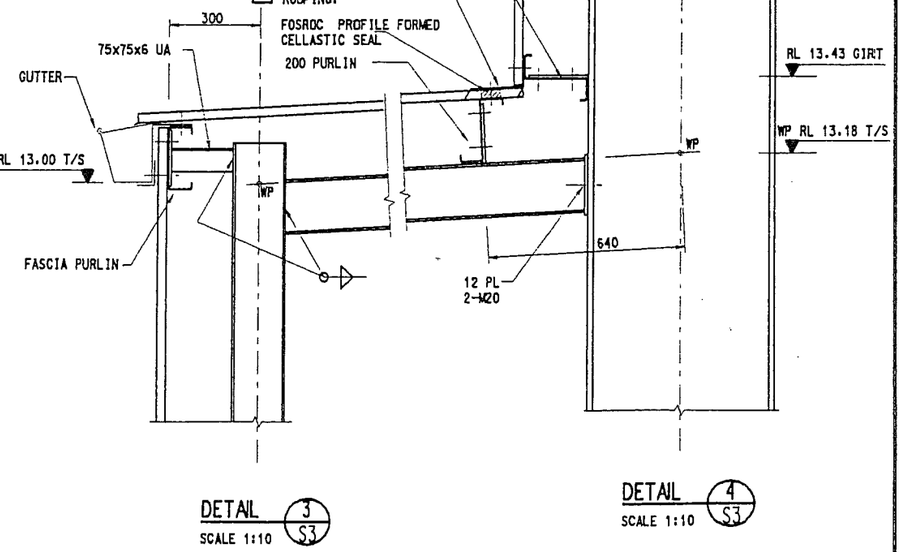


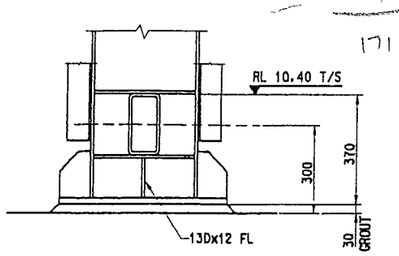


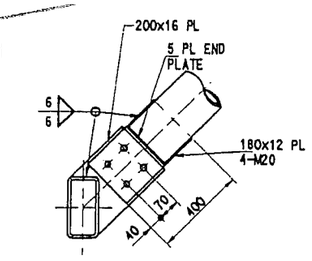








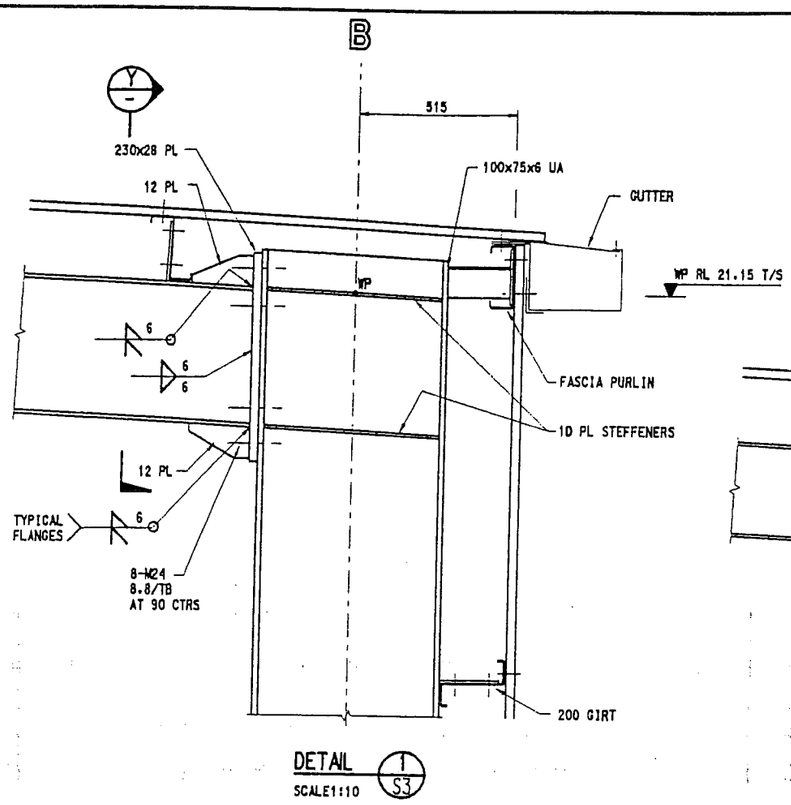




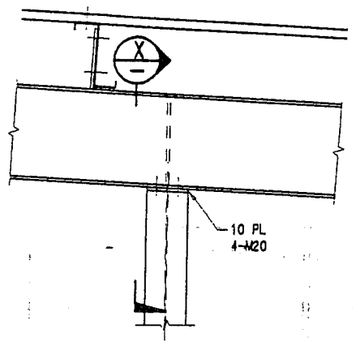
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle PO Box 662, Fremantle Western Australia 6160
Telephone (09) 4305481 Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD. WORKSHOP AND OFFICES FACILITIES WORKSHOP STEELWORK DETAILS SHT 2 OF 4	Drawn: JK	Approved:	
	Date: 18-8-94	Project No: 94080	
	Check: JFS	Drawing No: S8	Rev: B
	Scale: AS SHOWN		

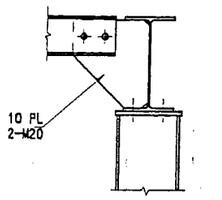
Revision	Descriptions	Byt	Dates
A	ISSUED FOR CONSTRUCTION	JK	13.12.94
B	NOTE AT RAFTER PENETRATION ADDED	MD	21.02.95



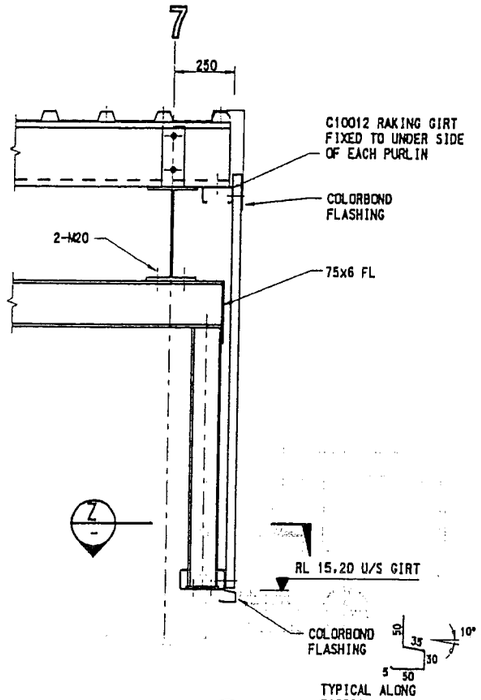
DETAIL 1 / S3
SCALE1:10



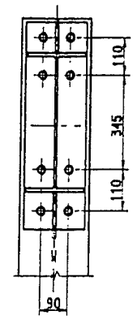
DETAIL 2 / S3
SCALE1:10



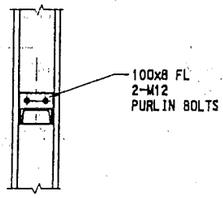
SECTION X
SCALE1:10



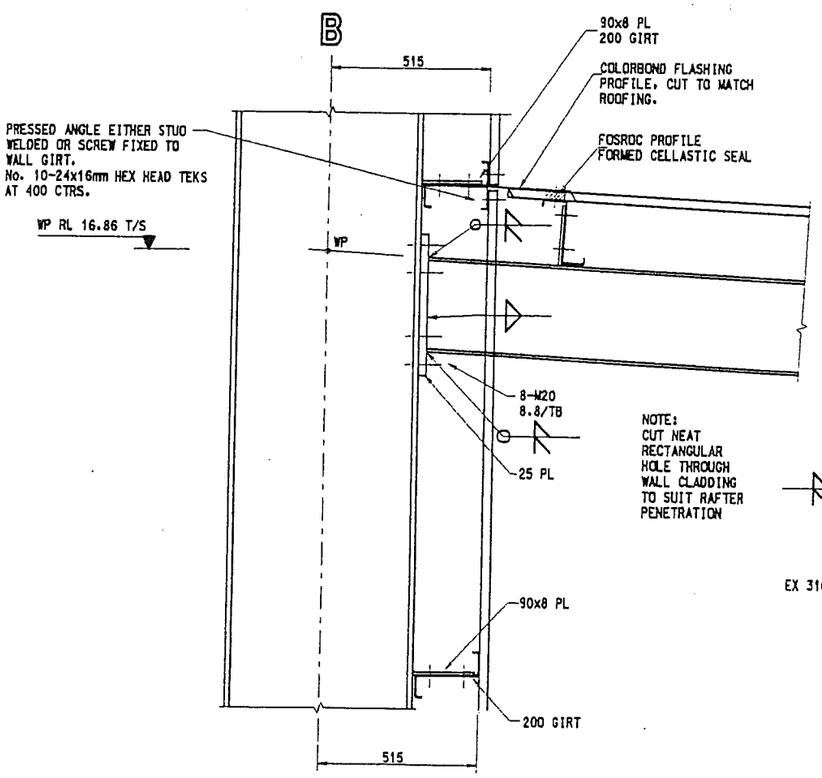
SECTION A
SCALE1:10



SECTION Y
SCALE1:10

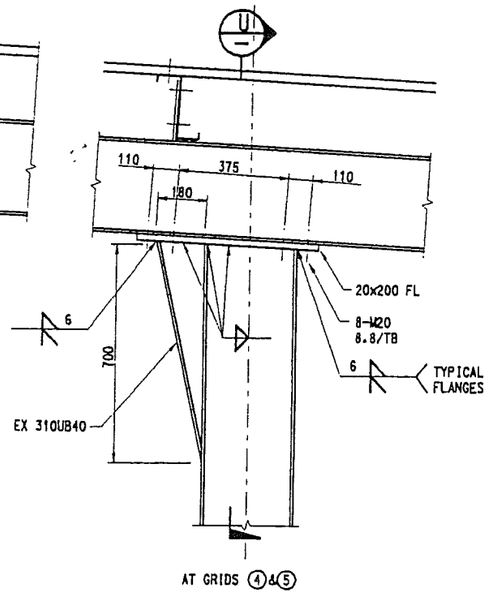


SECTION Z
SCALE1:10



DETAIL 3 / S3
SCALE1:10

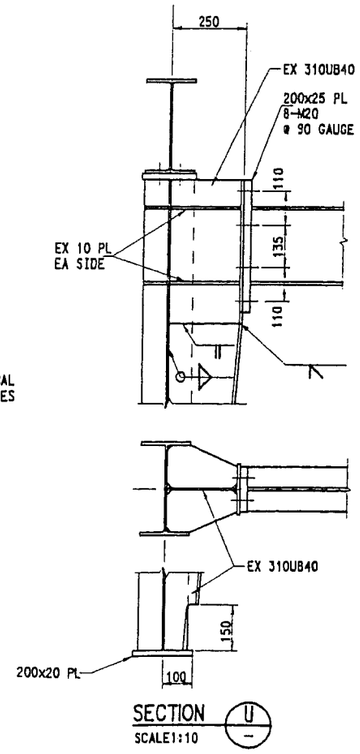
A1



DETAIL 4 / S3
SCALE1:10

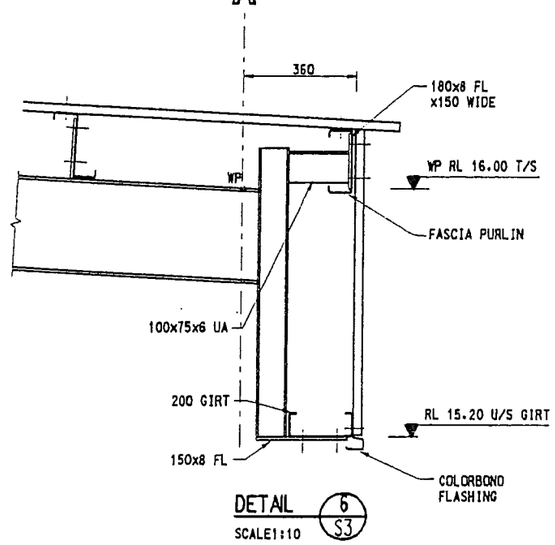
DETAIL 5 / S3
SIMILAR

2,3,6,7



SECTION U
SCALE1:10

A



DETAIL 6 / S3
SCALE1:10

ACS
Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160
Telephone (09) 430 5481
Facsimile (09) 430 5517

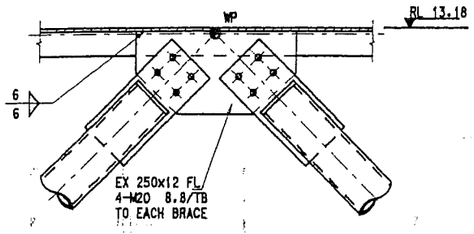
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WORKSHOP STEELWORK DETAILS SHT 1 OF 4

Drawn: S.TSALLIS		Approved:	
Date: 18-8-94		Project No: 94080	
Check: JFS			
Scale: AS SHOWN	Drawing No: S7	Rev: 8	

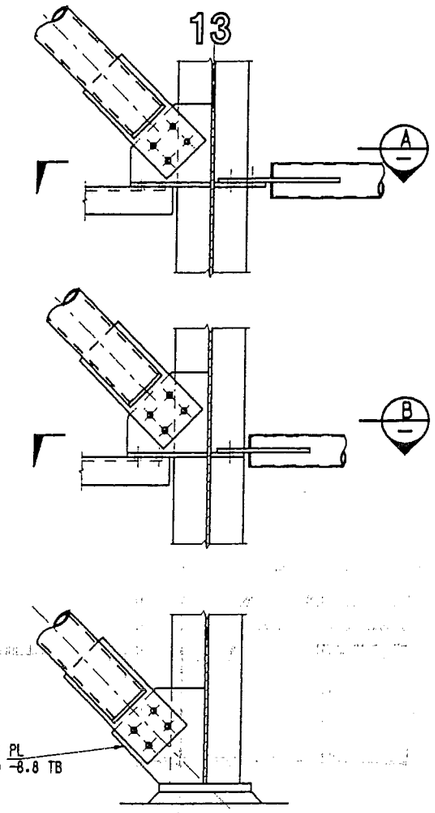
Revisions	Descriptions	Dyt	Dated
A	ISSUED FOR CONSTRUCTION	JK	13.12.94
B	DETAIL 10 ADDED	MO	10.01.95

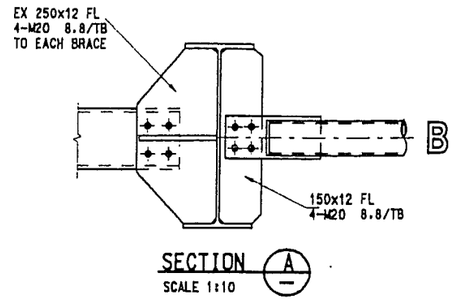
FOR END DETAILS TO CHS BRACING REFER DRG S9

RL 16.85

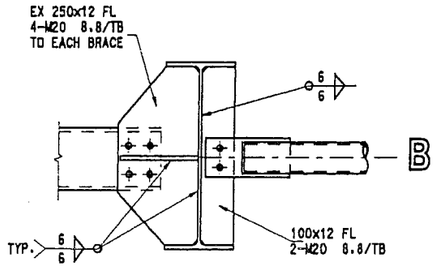


DETAIL 1 / S2
SCALE 1:10

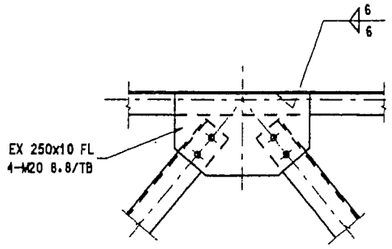


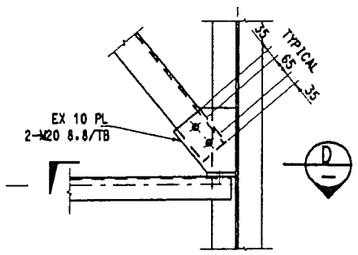


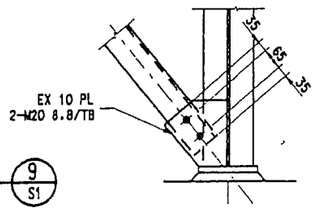
SECTION A
SCALE 1:10



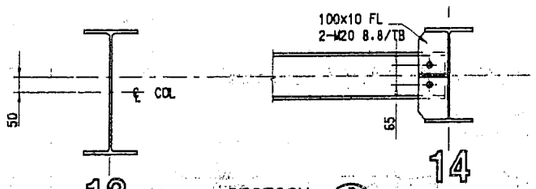
SECTION B
SCALE 1:10



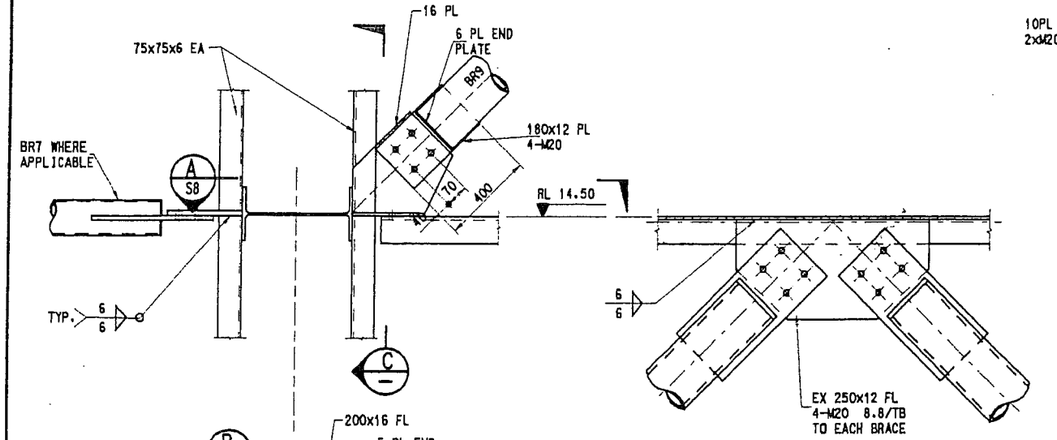


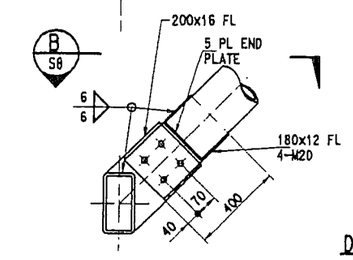


DETAIL 9 / S1
SCALE 1:10

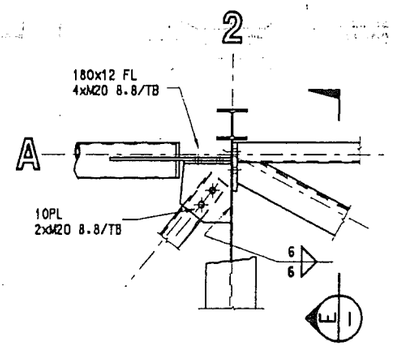


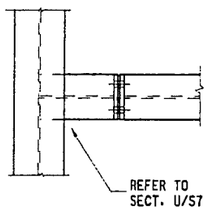
SECTION D
SCALE 1:10

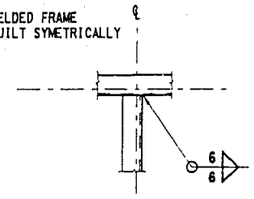


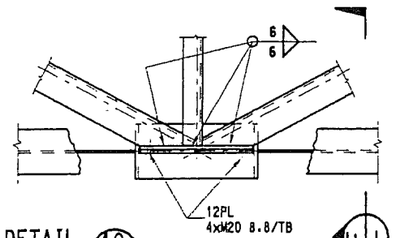


DETAIL 2 / S2
SCALE 1:10

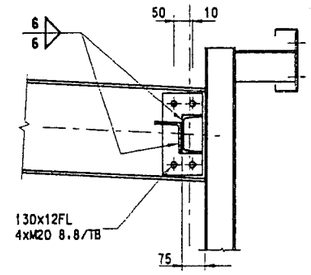




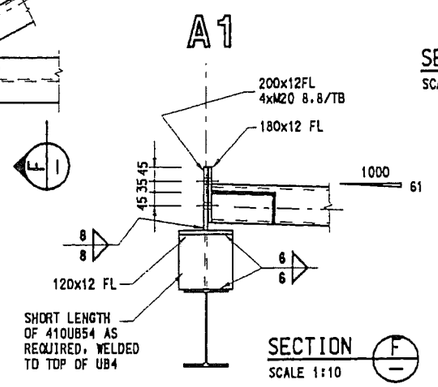




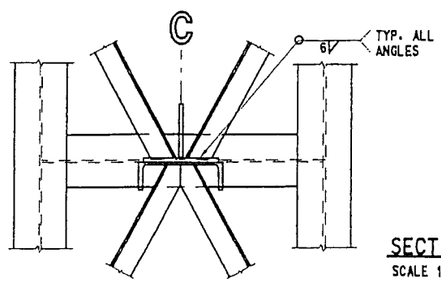
DETAIL 10 / S1
SCALE 1:10



SECTION E
SCALE 1:10



SECTION F
SCALE 1:10



SECTION C
SCALE 1:10

ACS
Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160

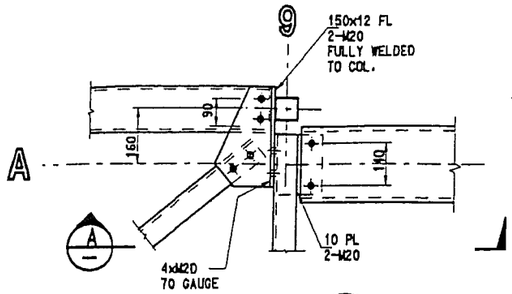
Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WORKSHOP STEELWORK DETAILS - SHT 4 OF 4

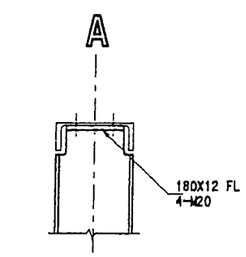
Drawn: JK		Approved:	
Dated: 4-1-95		Project No: 94080	
Check: JFS		Drawing No: S10	Rev: B
Scale: AS SHOWN			

16/11/95

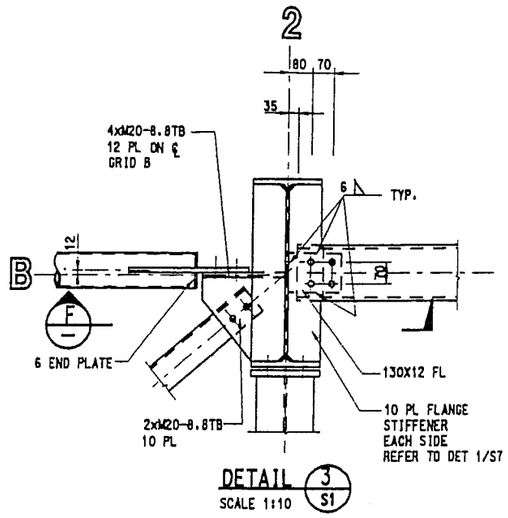
Revision	Description	By	Date
A	ISSUED FOR CONSTRUCTION	MD	15-12-94



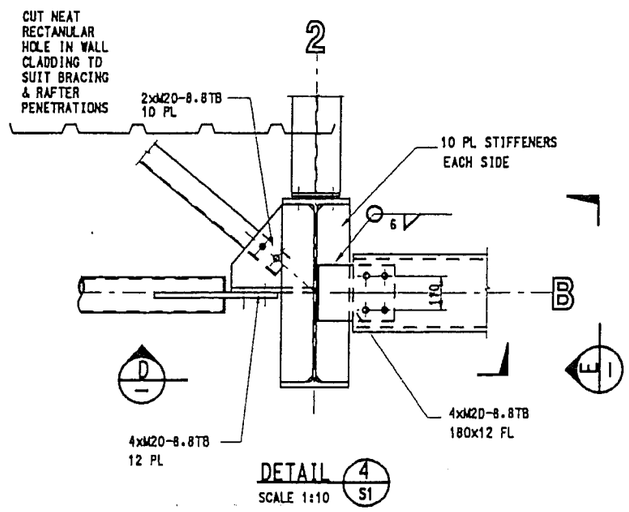
DETAIL 1 S1
SCALE 1:10



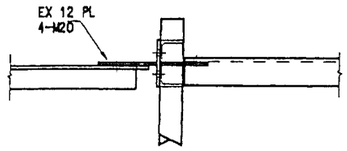
DETAIL 2 S1
SCALE 1:10



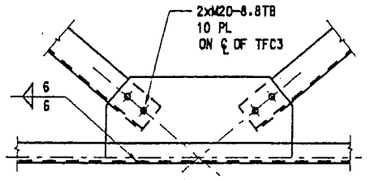
DETAIL 3 S1
SCALE 1:10



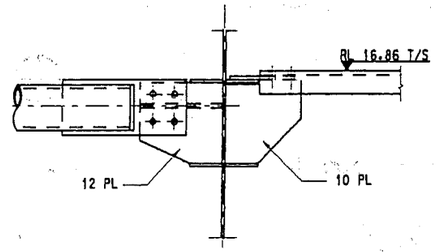
DETAIL 4 S1
SCALE 1:10



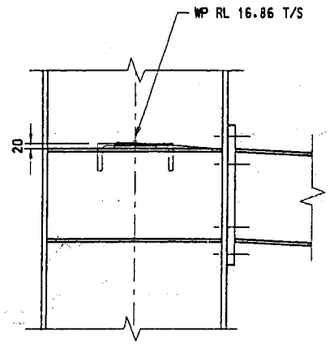
SECTION A
SCALE 1:10



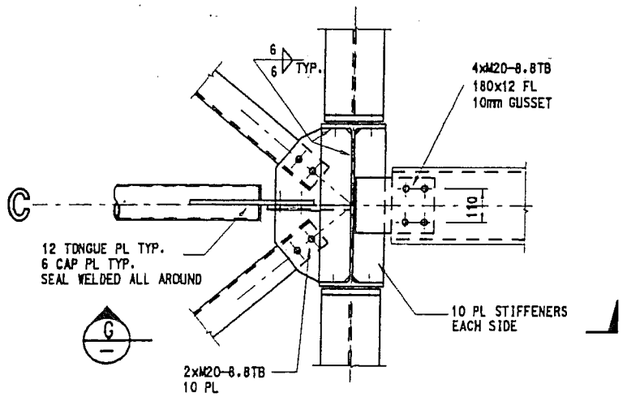
DETAIL 8 S1
SCALE 1:10



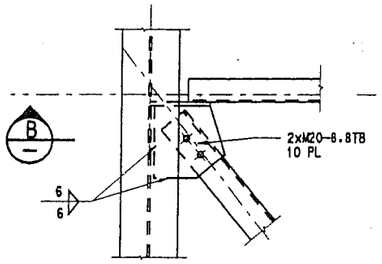
SECTION D
SCALE 1:10

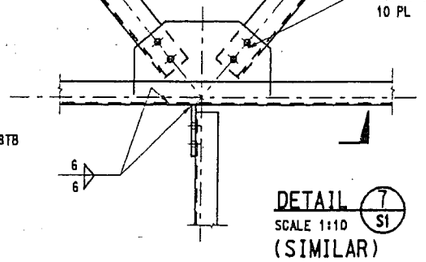


SECTION E
SCALE 1:10

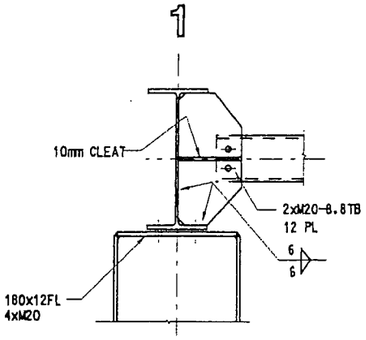


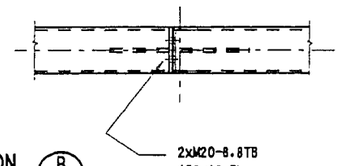
DETAIL 5 S1
SCALE 1:10



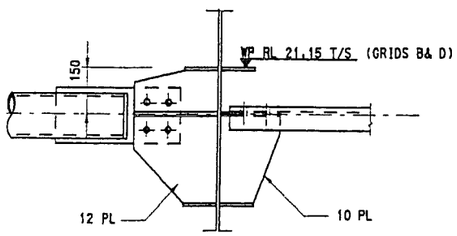


DETAIL 7 S1
SCALE 1:10
(SIMILAR)



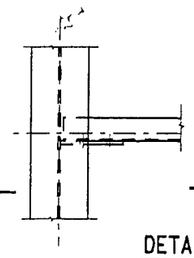


SECTION B
SCALE 1:10

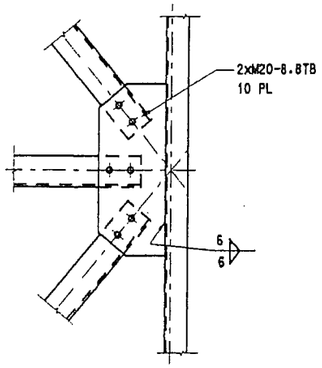


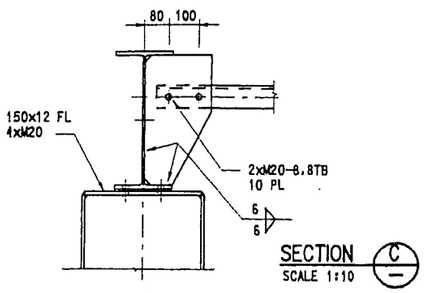
SECTION F
SCALE 1:10

SECTION G
SIMILAR

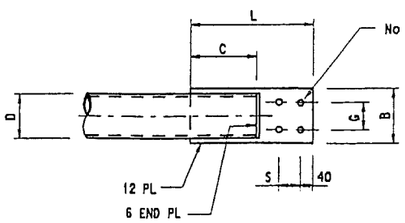


DETAIL 6 S1
SCALE 1:10





SECTION C
SCALE 1:10



C.H.S. BRACE - END DETAIL

D	L	B	C	N	G	S
102	250	130	150	2	70	-
114	350	170	185	4	70	70
140	375	180	210	4	90	70
168	400	180	230	4	90	70

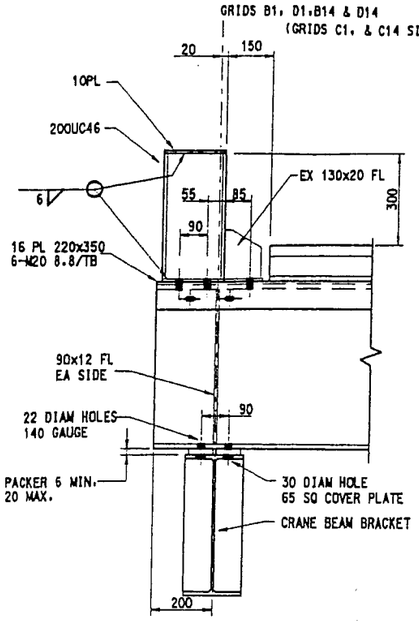
ACS
Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WORKSHOP STEELWORK DETAILS SHT 3 OF 4

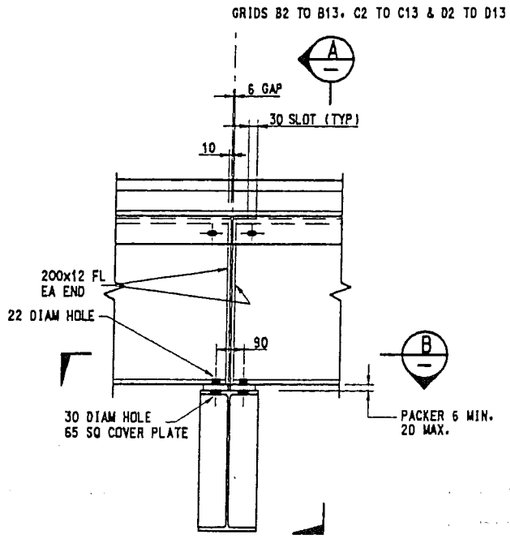
Drawn: JK		Approved:	
Date: 18-8-94		Project No: 94080	
Check: JFS			
Scale: AS SHOWN	Drawing No: S9	Rev: A	

12/12/94

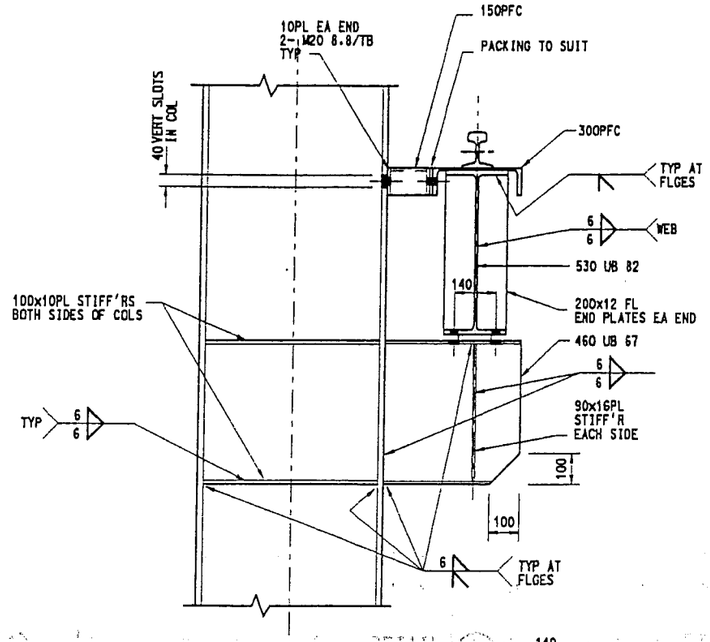
Revisions	Description	By	Date
A	ISSEUD FOR CONSTRUCTION	JK	7-12-94



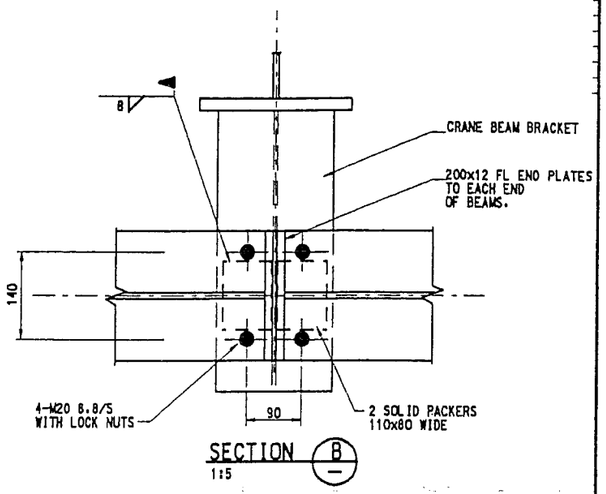
DETAIL 1 (S2)
1:10



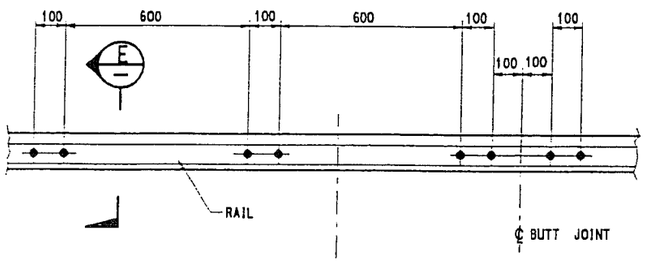
DETAIL 2 (S2)
1:10

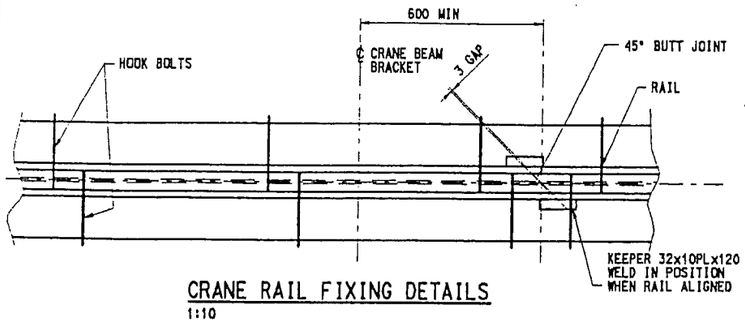


SECTION A
1:20

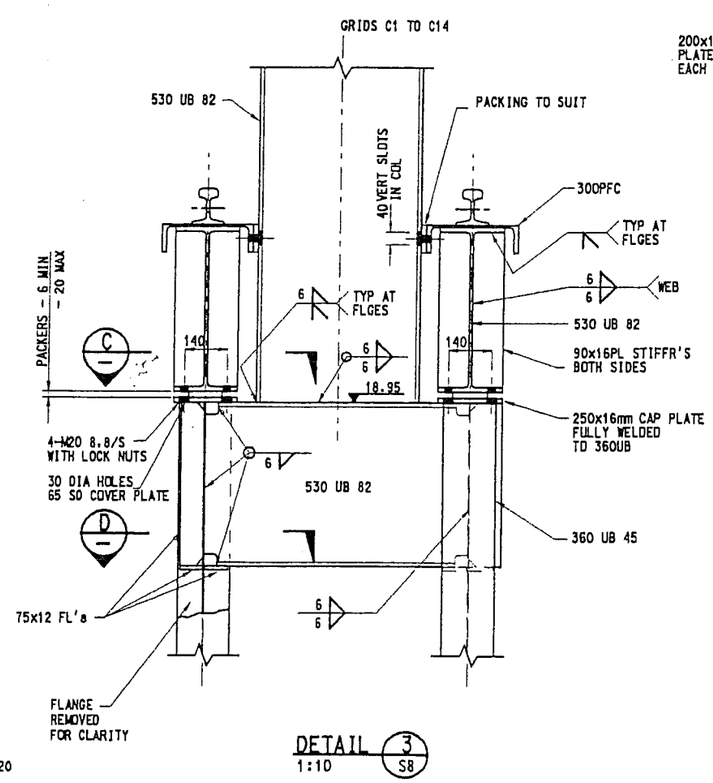


SECTION B
1:5

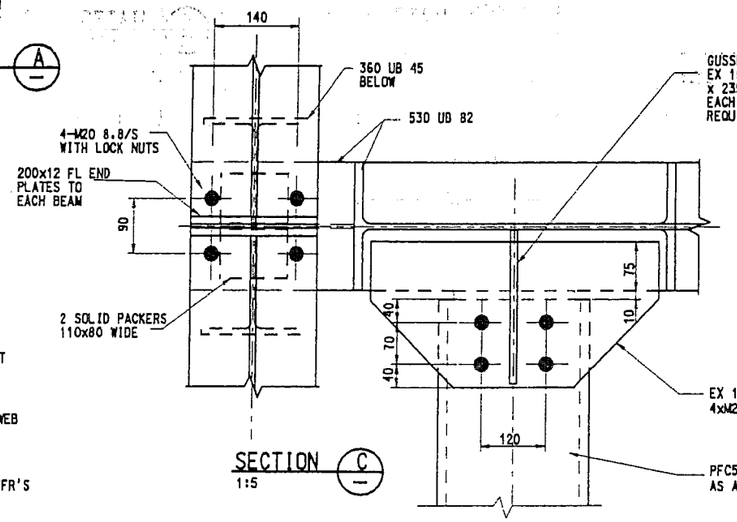




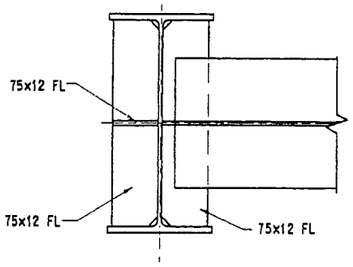
CRANE RAIL FIXING DETAILS
1:10



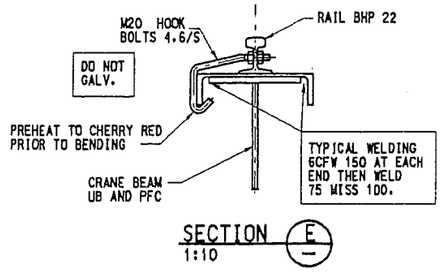
DETAIL 3 (S8)
1:10



SECTION C
1:5



SECTION D
1:5



SECTION E
1:10

ACS Consulting Chartered Engineers

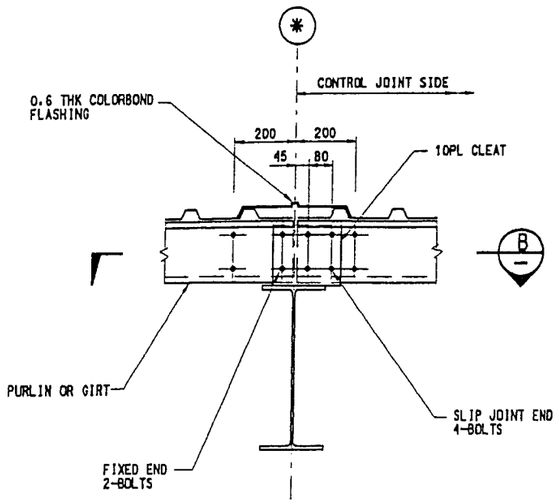
Australian Civil and Structural Pty Ltd
94080-S12

201 High Street, Fremantle
PO Box 882, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn: S. TSALLIS	Approved:	
WORKSHOP AND OFFICES FACILITIES	Date: 18-7-94	Project No:	94080
CRANE & RAIL ~~PLAN~~ DETAILS AND SECTIONS	Check: JFS	Drawing No:	S13
	Scale: AS SHOWN	Rev:	A

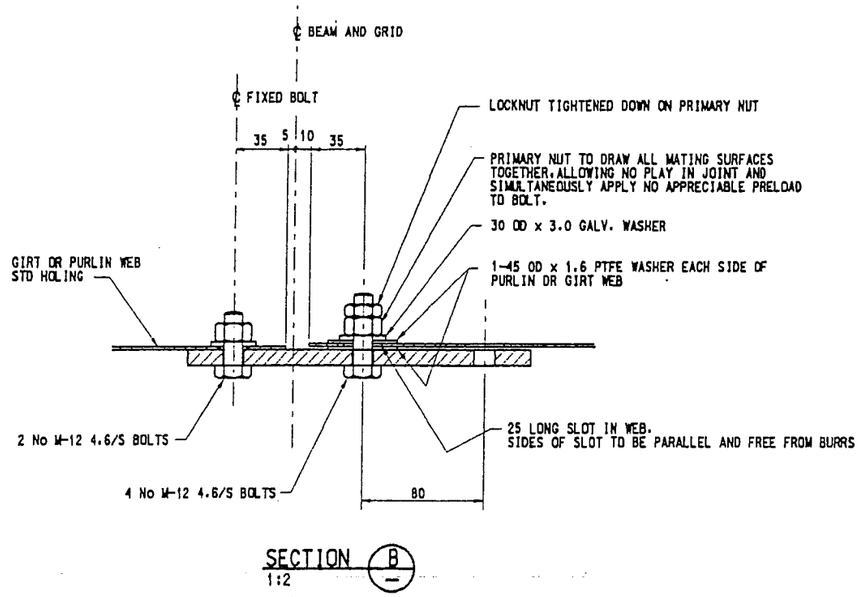
REVISED

Revisions	Descriptions	By:	Date:

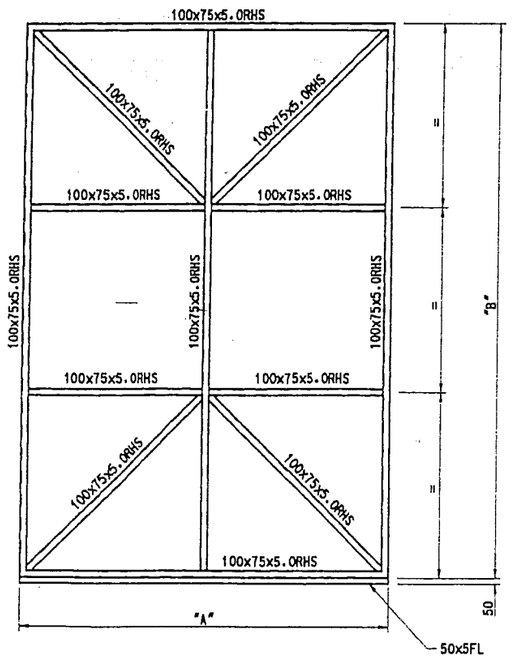


TYPICAL EXPANSION JOINT FOR GIRTS AND PURLINS

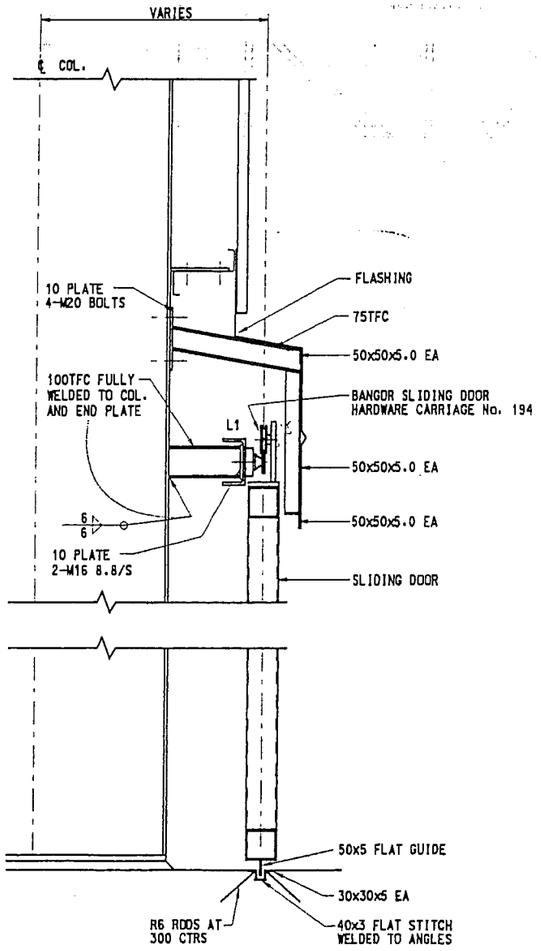
1:10



SECTION B
1:2



TYPICAL SLIDING DOOR DETAIL N.T.S.



SLIDING DOOR SCHEDULE

DOOR ITEM	WIDTH "A"	LENGTH "B"	No. OFF	REMARKS
SD1	4000	6000	8	STD DOUBLE S/D
SD2	3500	6000	2	STD DOUBLE S/D
SD3	3000	5000	2	STD DOUBLE S/D
SD4	4000	5000	1	SINGLE S/D
SD5	3500	6000	2	DOUBLE S/D (ONE WAY)

TO BE AMENDED
REF SKETCHES

CHECK PRINT

CHECKED	DATE
	6/12/94

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517
Consulting Chartered Engineers

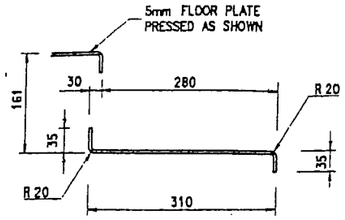
94080-S10

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WORKSHOP STEELWORK DETAILS SHT 4 OF 4

Drawn: S.TSALLIS	Approved:
Date: 18-7-94	Project No: 94080
Chkd: JFS	Drawing No: S403
Scale: AS SHOWN	Rev: 1

S11

Revision	Description	Byd	Dated
1	ISSUED FOR APPROVAL	MD	16-12-94
A	ISSUED FOR CONSTRUCTION	MD	30-12-94



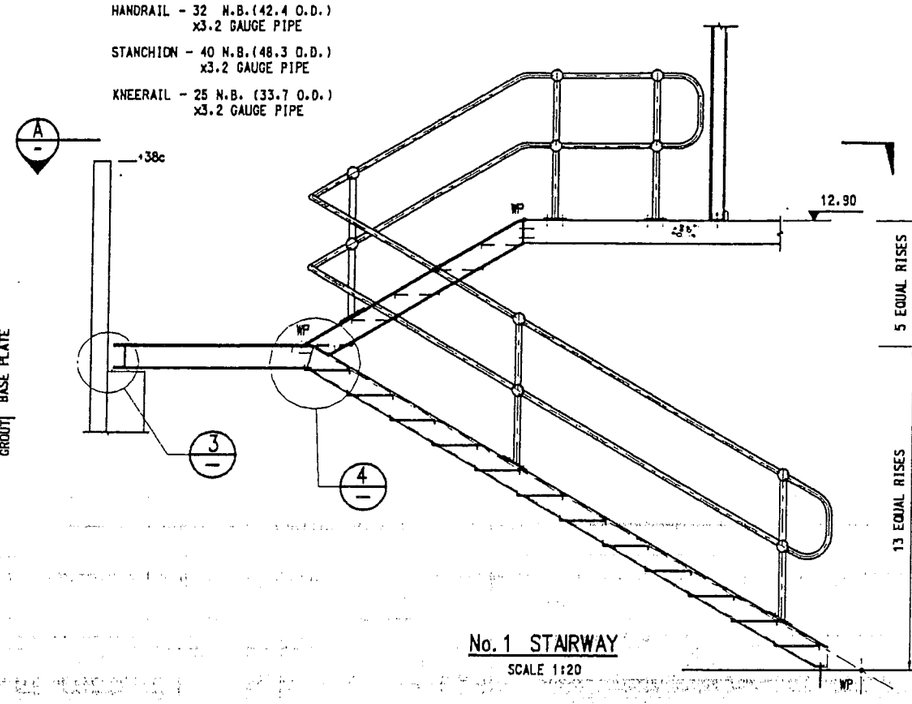
TREAD DETAIL
SCALE 1:5

HANDRAILS TO BE STANDARD MONOWILLS TYPE STANCHIONS AND RAILS.

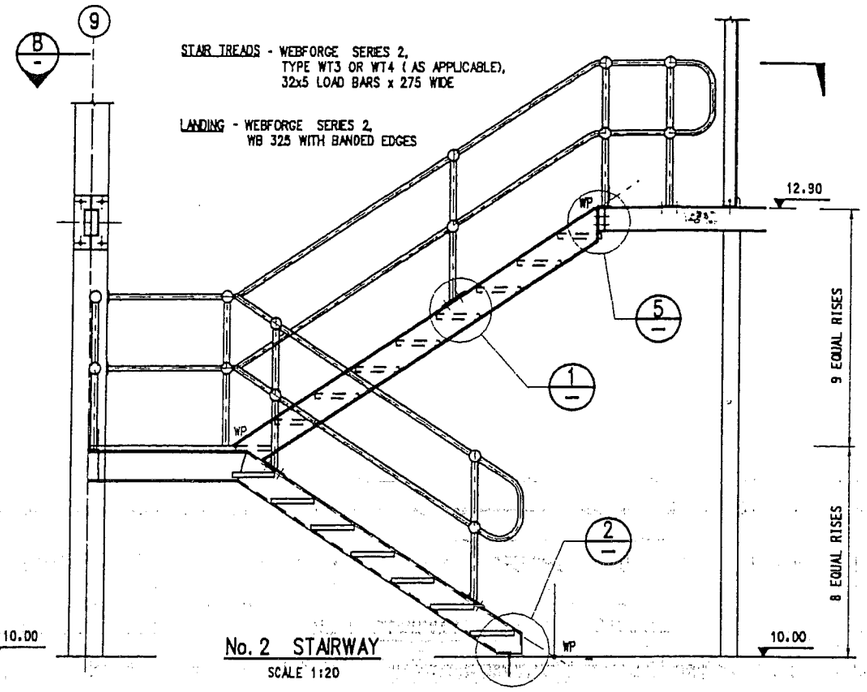
HANDRAIL - 32 N.B.(42.4 O.D.) x3.2 GAUGE PIPE

STANCHION - 40 N.B.(48.3 O.D.) x3.2 GAUGE PIPE

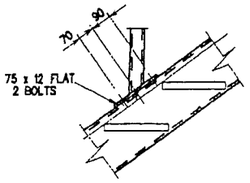
KNEERAIL - 25 N.B. (33.7 O.D.) x3.2 GAUGE PIPE



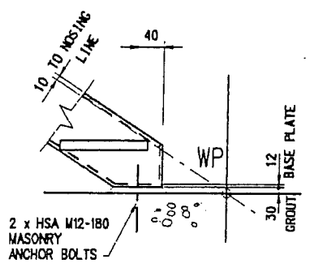
No.1 STAIRWAY
SCALE 1:20



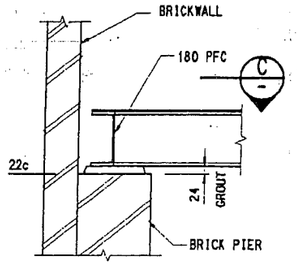
No.2 STAIRWAY
SCALE 1:20



DETAIL 1
SCALE 1:10



DETAIL 2
SCALE 1:10

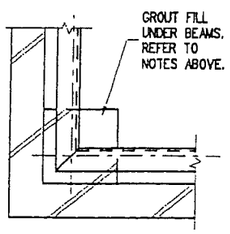


DETAIL 3
SCALE 1:10

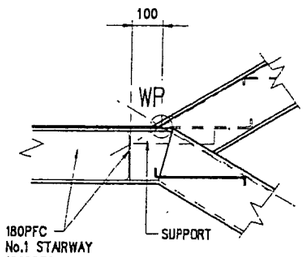
NOTE:

SET STRINGERS TO LEVEL, ADJUST TO CORRECT POSITION AND GROUT INTO PLACE USING "FOSROC" CONBEXTRA HF, HIGH FLOW, SHRINKAGE COMPENSATING GROUT (OR APPROVED EQUIVALENT) OF CONSISTENCY SO AS TO FLOW UNDER THE STRINGER FLANGES.

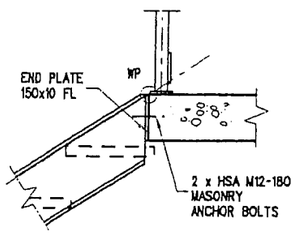
FORM UP AROUND THE BASE TO PROVIDE A WEIR. PLACE THE GROUT TO COMPLETELY FILL THE VOID UNDER THE STRINGER FLANGES, ALLOW INITIAL SET THEN REMOVE THE FORMWORK AND TROWEL OFF THE EDGES AT 45 DEGREES. STEEL PACKERS SHALL NOT BE LEFT UNDER COLUMN BASE PLATES.



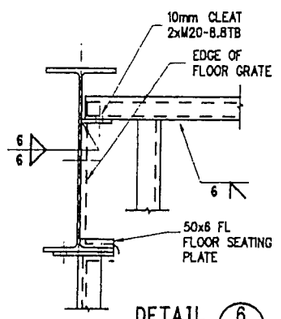
SECTION C
SCALE 1:10



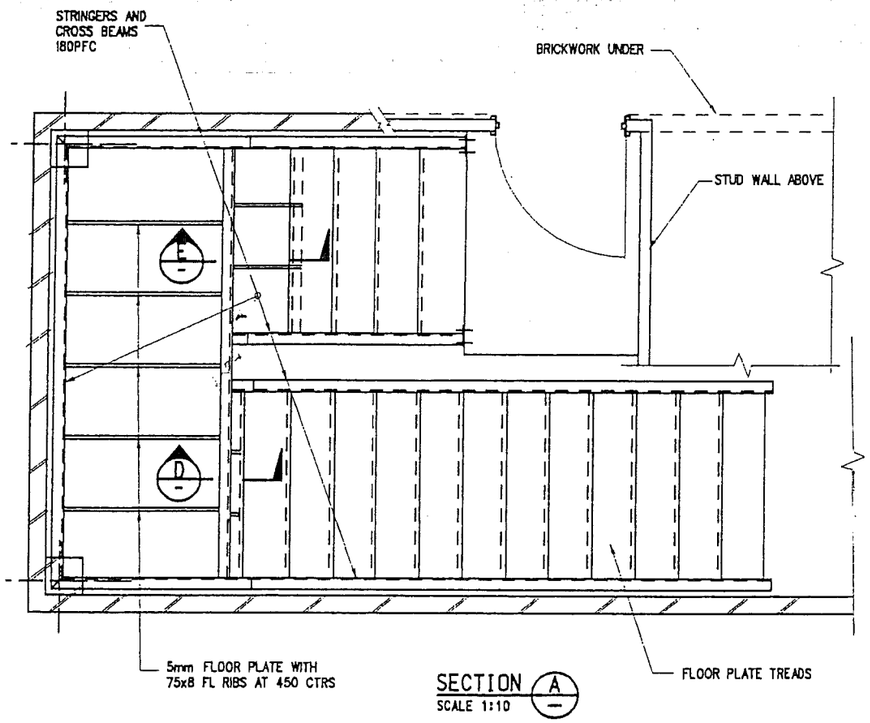
DETAIL 4
SCALE 1:10



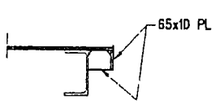
DETAIL 5
SCALE 1:10



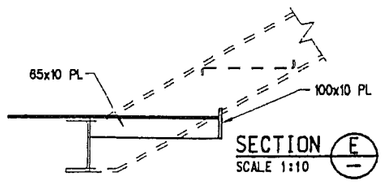
DETAIL 6
SCALE 1:10



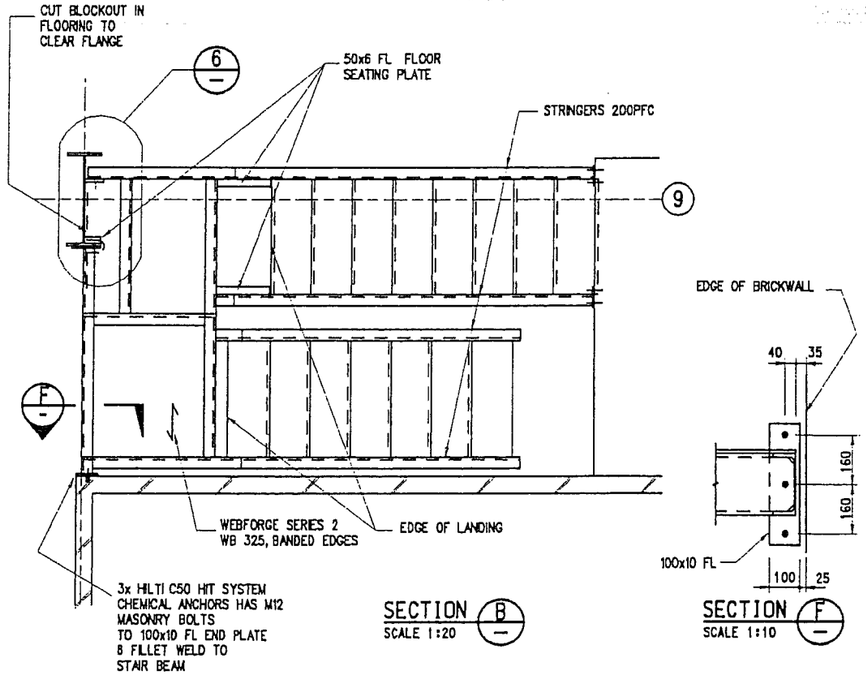
SECTION A
SCALE 1:10



SECTION D
SCALE 1:10



SECTION E
SCALE 1:10



SECTION B
SCALE 1:20

SECTION F
SCALE 1:10

NOTE:

FOR GENERAL ARRANGEMENT AND LAYOUT REFER TO DRAWINGS A4 AND A5

NOTE:
FLOOR PLATES AND HANDRAILS NOT SHOWN FOR CLARITY

ACS
Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

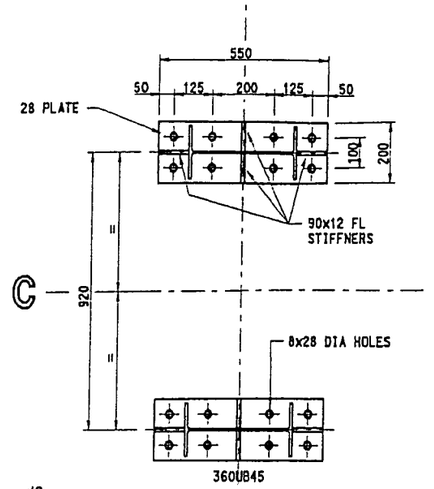
201 High Street, Fremantle
PO Box 882, Fremantle
Western Australia 6160

Telephone (09) 430 5481
Facsimile (09) 430 5517

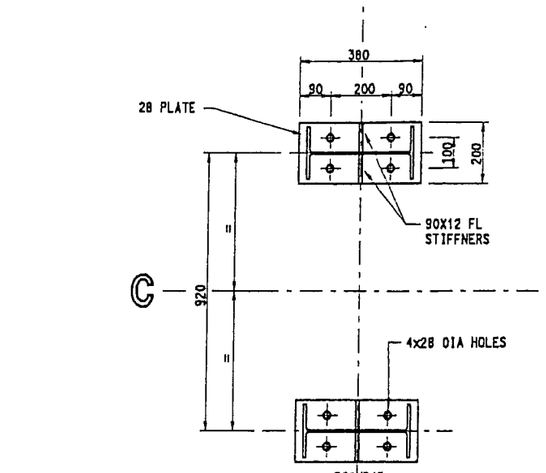
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
STAIRS AND PLATFORM SECTIONS & DETAILS

Drawn	S.TSALLIS	Approved	
Dated	18-8-94	Project No.	94080
Chkd	JFS	Drawing No.	515
Scale	AS SHOWN	Issue	A

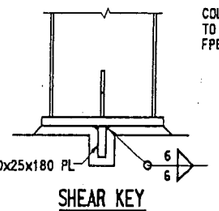
Revision	Description	By	Dated
1	ISSUED FOR APPROVAL	JK	16.12.94
A	ISSUED FOR CONSTRUCTION	MD	17.12.94



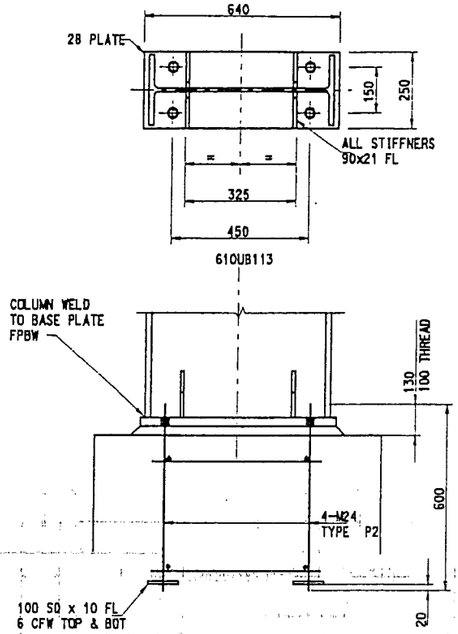
BASE PLATE DETAIL
FOR COLS AT GRIDS
C2,C3,C4,C5,C6,C7,C8,C9



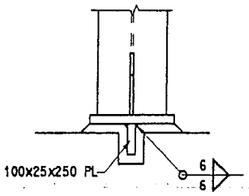
BASE PLATE DETAIL
FOR COLS AT GRIDS
C1,C10,C11,C12,C13,C14



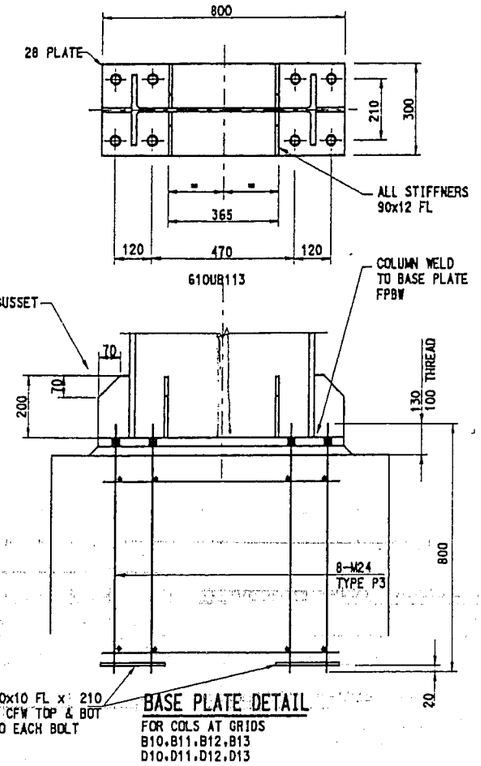
SHEAR KEY
TYPICAL FOR COLS
C2,C3,C12,C13



BASE PLATE DETAIL
FOR COLS AT GRIDS
B1,B2,B3,B4,B5,B6,B7,B8,B9,B14
D1,D2,D3,D4,D5,D6,D7,D8,D9,D14



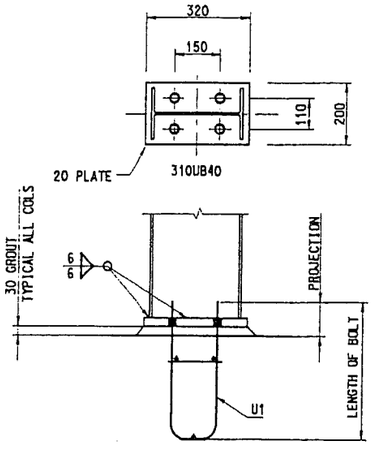
SHEAR KEY
TYPICAL FOR COLS
B2,B3,B12,B13
D2,D3,D12,D13



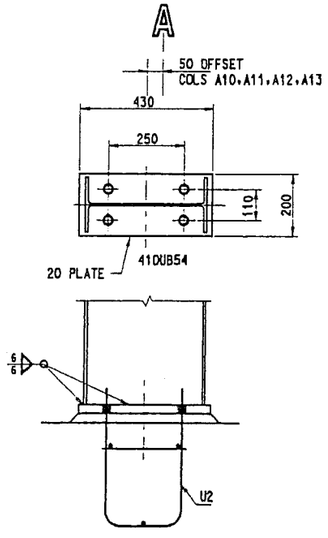
BASE PLATE DETAIL
FOR COLS AT GRIDS
B10,B11,B12,B13
D10,D11,D12,D13

'U'-BOLT SCHEDULE

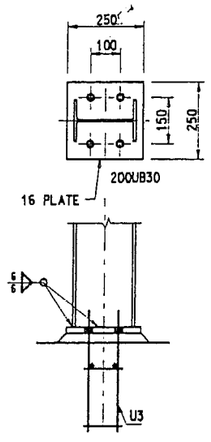
GROUP	SIZE- TYPE	BOLT CTRS	BOLT SPACING	TOTAL LENGTH	PROJECTED LENGTH	THREAD LENGTH
U1	M20-U	150	110	450	110	90
U2	M20-U	250	110	450	110	90
U3	M16-U	150	100	400	90	70
U4	M16-U	100	-	360	90	70
U5	M16-U	150	150	400	90	70
U6	M12-U	150	-	180	55	50



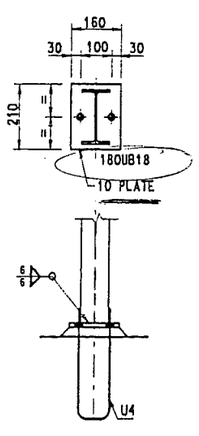
BASE PLATE DETAIL
FOR COLS AT GRIDS
A1-2,A1-3,A1-4,A1-5
A1-6,A1-7,A14



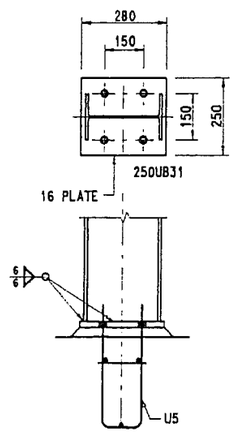
BASE PLATE DETAIL
FOR COLS AT GRIDS
A10,A11,A12,A13
Ba-1,Bb-1,Ca-1,Cb-1,
Ba-14,Bb-14,Ca-14,Cb-14



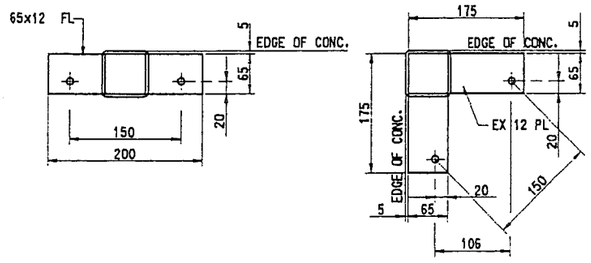
BASE PLATE DETAIL
FOR COLS AT GRIDS
A1,A2-1,A3-1,A2-14,A3-14

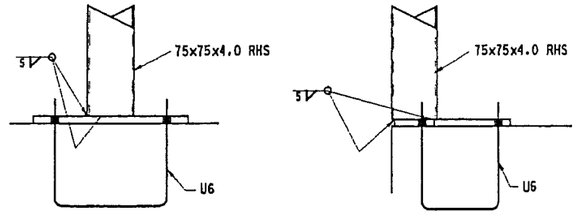


BASE PLATE DETAIL
FOR COLS AT GRIDS
E1,E2,E3,E4,E5,E6,
E9,E10,E11,E12,E13,E14



BASE PLATE DETAIL
FOR COLS AT GRIDS
A-9/10





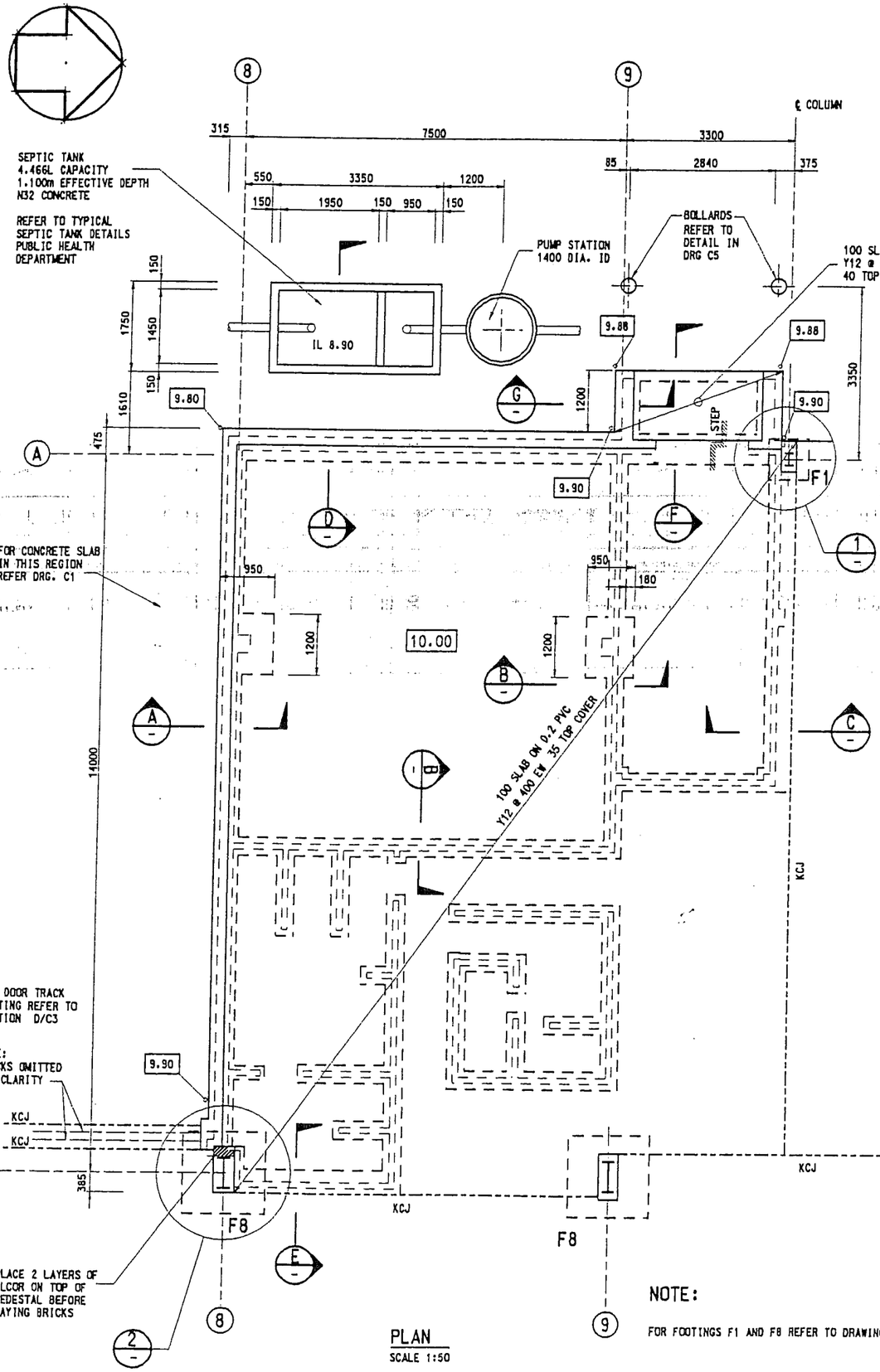
BASE PLATE DETAIL
FOR COLS AT FIRST FLOOR
LEVEL - OFFICE AREA

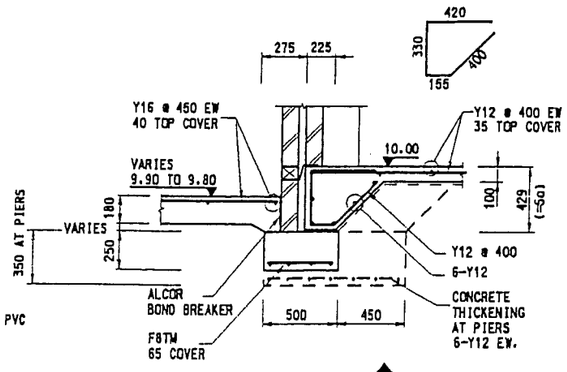
ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

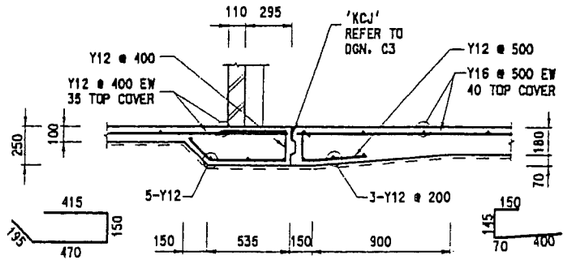
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
WORKSHOP STEELWORK DETAILS SHT 3 OF 4

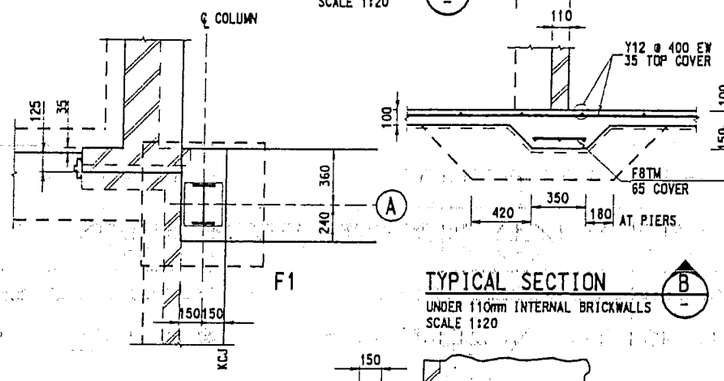
Drawn: JK	Dated: 16-12-94	Approved:	
Check: JFS		Project No: 94080	
Scale: AS SHOWN		Drawing No: S14	Rev: A

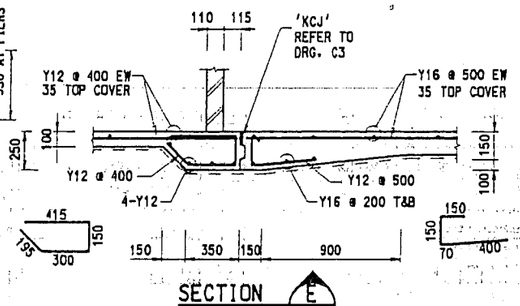
Revisions	Descriptions	Dyl	Dated
I	ISSUED FOR APPROVAL	MD	23-01-95
A	ISSUED FOR CONSTRUCTION	MD	21-02-95

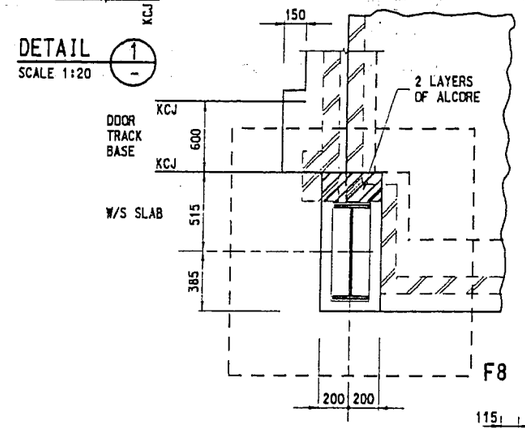


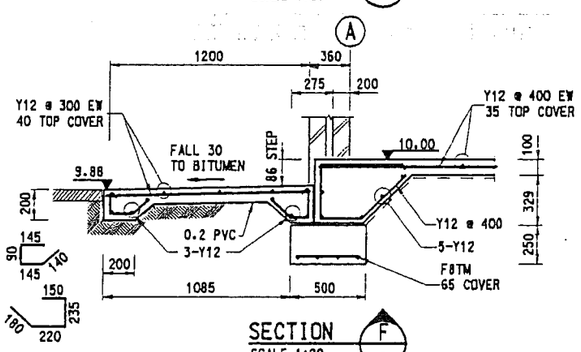


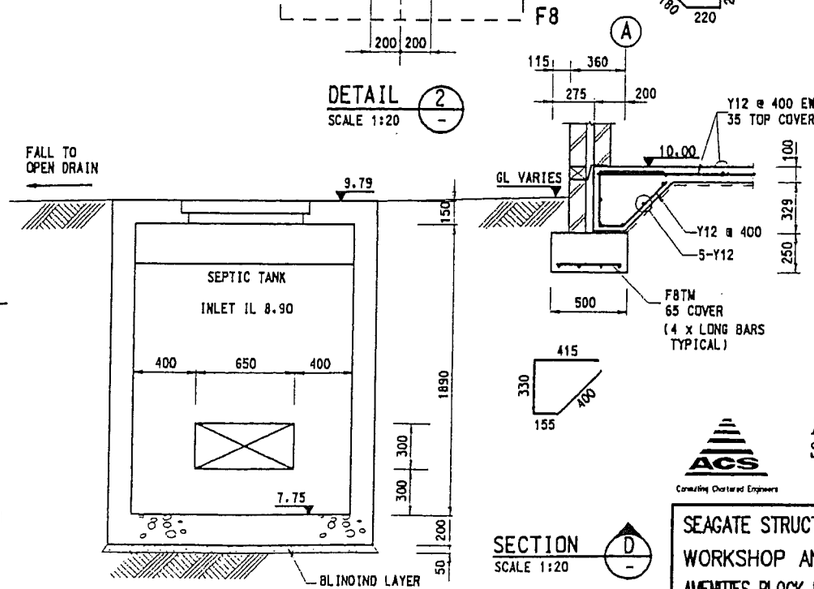


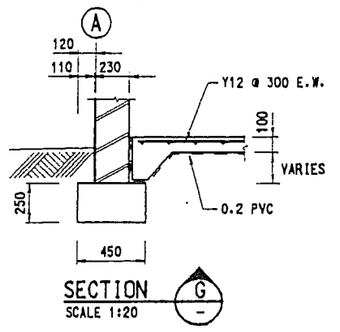












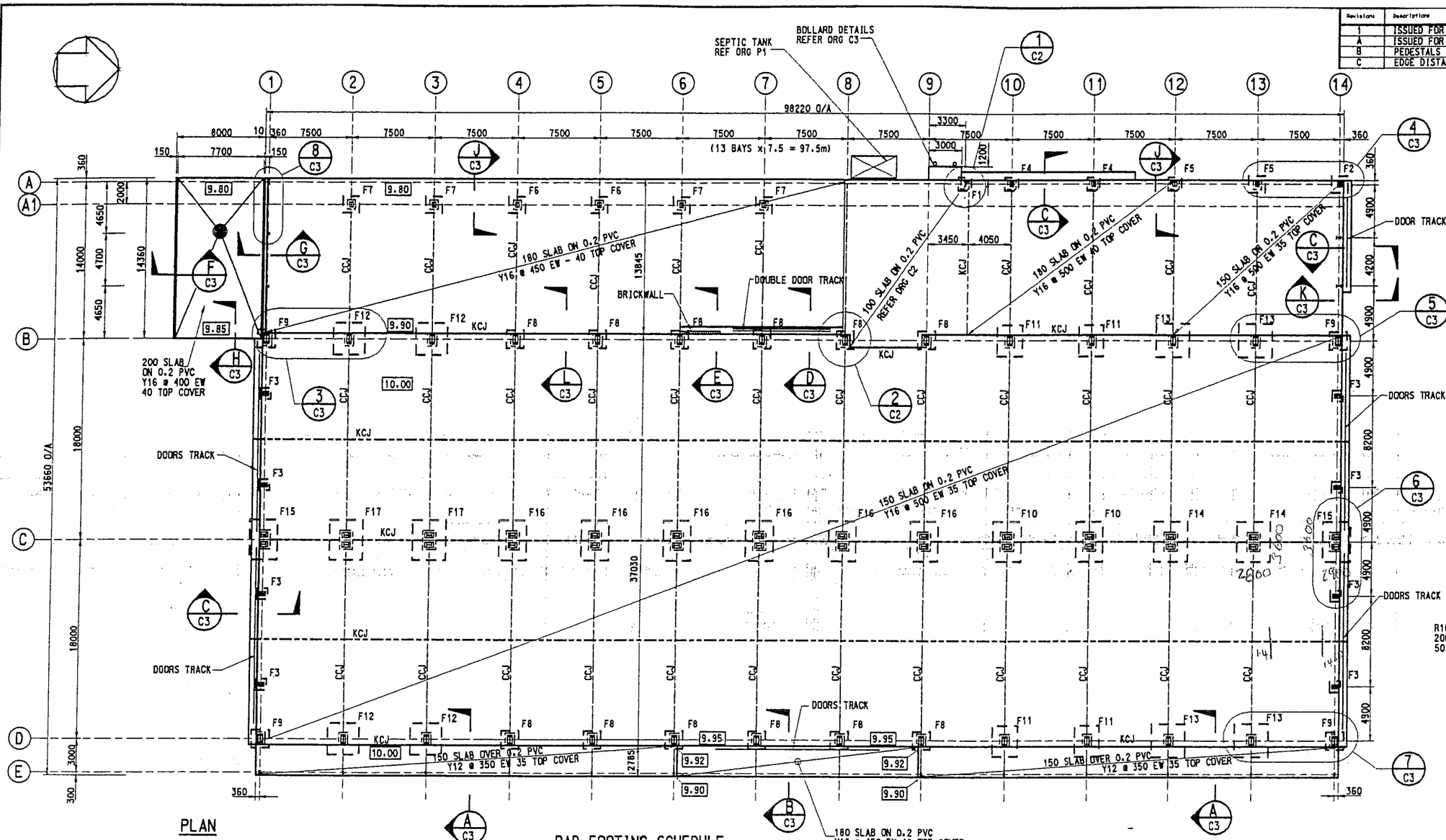
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

ACS Consulting Chartered Engineers

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
AMENITIES BLOCK FOOTING AND GROUND FLOOR SLAB

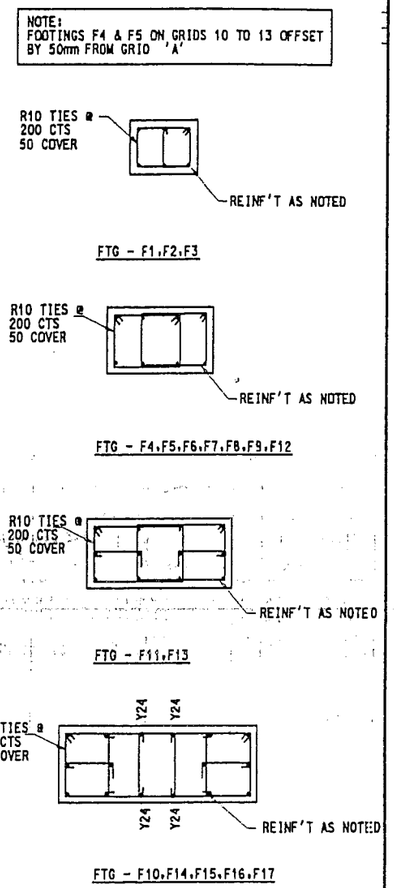
Drawn	MD	Approved	
Dated	23-01-95	Project No.	94080
Chkd	JFS	Drawing No.	Rev.
Scales	AS SHOWN	C2	A

Revisions	Descriptions	By	Date
1	ISSUED FOR APPROVAL	JK	15.12.94
A	ISSUED FOR CONSTRUCTION	JK	20.12.94
B	PEDESTALS DETAILS ADDED	MD	18.01.95
C	EDGE DISTANCES ADDED	MD	21.02.95

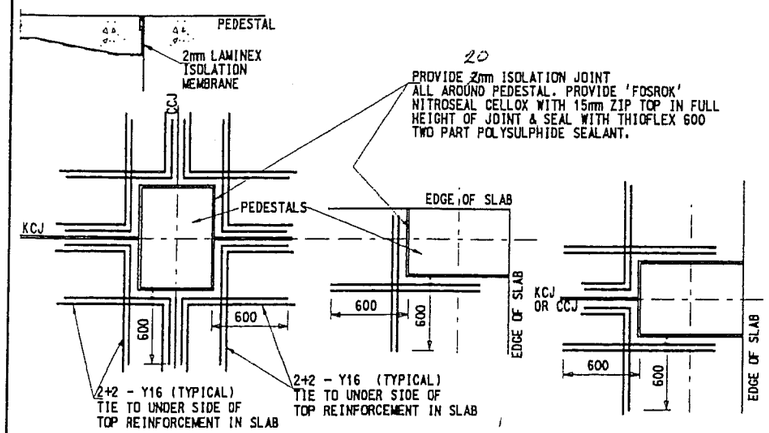


PLAN
1:200

NOTE:
FOOTINGS F4 & F5 ON GRIDS 10 TO 13 OFFSET BY 50mm FROM GRID 'A'



SECTION X

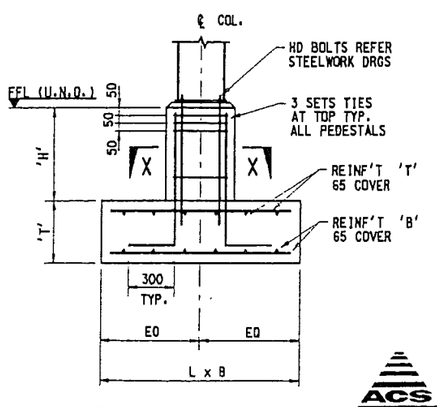


TYPICAL PEDESTAL JOINT DETAILS
N.T.S.

PAD FOOTING SCHEDULE
REFER TYPICAL DETAIL

MARK	SIZE L	SIZE B	SIZE T	FOOTING REINF.	PEDESTALS X	PEDESTALS Y	PEDESTALS H	PEDESTAL REINF.
F1	800	800	350	T & B 5-Y12 EW	300	600	350	6-Y20
F2	800	800	350	T & B 5-Y12 EW	550	600	350	6-Y20
F3	1000	1000	350	T & B 6-Y12 EW	650	400	350	6-Y20
F4	1000	1000	400	T & B 6-Y12 EW	400	700	350	8-Y20
F5	1500	1500	450	T & B 7-Y20 EW	400	700	1200	8-Y24
F6	1500	1500	450	T & B 7-Y16 EW	400	500	500	8-Y20
F7	1600	1600	550	T & B 6-Y20 EW	400	500	800	8-Y24
F8	1600	1600	600	T & B 6-Y20 EW	400	900	800	8-Y24
F9	1600	1600	600	T & B 6-Y20 EW	560	900	800	8-Y24
F10	2600	1800	650	T & B 7-Y20 / T & B 9-Y20	500	1300	900	16-Y24
F11	2800	2250	650	T & B 10-Y20 / T & B 12-Y20	500	1000	1200	12-Y28
F12	2850	2850	750	T & B 12-Y20 EW	400	900	1200	8-Y28
F13	3000	3000	650	T & B 13-Y20 EW	500	1000	1200	12-Y28
F14	3600	2800	750	T & B 12-Y20 / T & B 15-Y20	500	1300	1200	12-Y28, 4-Y24
F15	3600	2900	750	T & B 12-Y20 / T & B 15-Y20	735	1300	900	12-Y28, 4-Y24
F16	3600	2900	750	T & B 12-Y20 / T & B 15-Y20	650	1300	900	12-Y28, 4-Y24
F17	3600	3000	750	T & B 13-Y20 / T & B 15-Y20	650	1300	1200	12-Y28, 4-Y24

PAD FOOTING LEGEND
'X' DENOTES - WIDTH OF PEDESTAL PARALLEL TO ALPHABET GRID
'Y' DENOTES - WIDTH OF PEDESTAL PARALLEL TO NUMBER GRID



TYPICAL FOOTING AND PEDESTAL DETAILS
N.T.S.

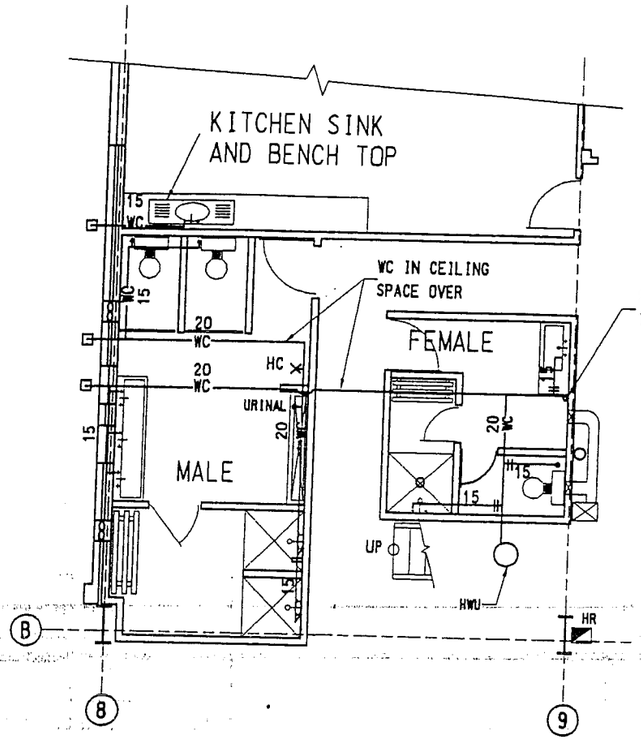
NOTE:
FOR POSITION OF PEDESTALS SEE DETAILS 3/C3 TO 7/C3
AND DETAILS 1/C2 AND 2/C2

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517
ACS Consulting Chartered Engineers

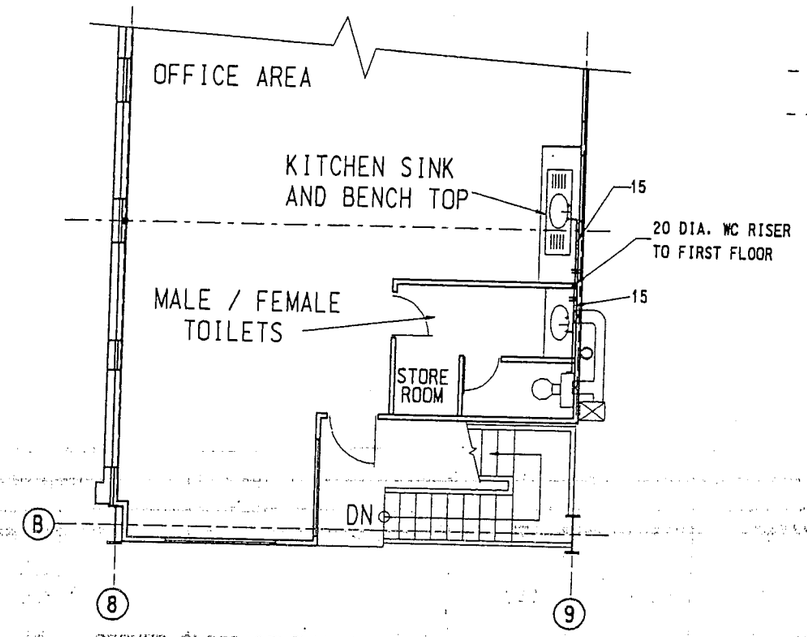
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
FOOTING AND GROUND SLAB LAYOUT

Drawn:	JK	Approved:	
Date:	23-8-94	Project No:	94080
Chkd:	JFS	Drawing No:	C1
Scale:	1:200	Rev:	C

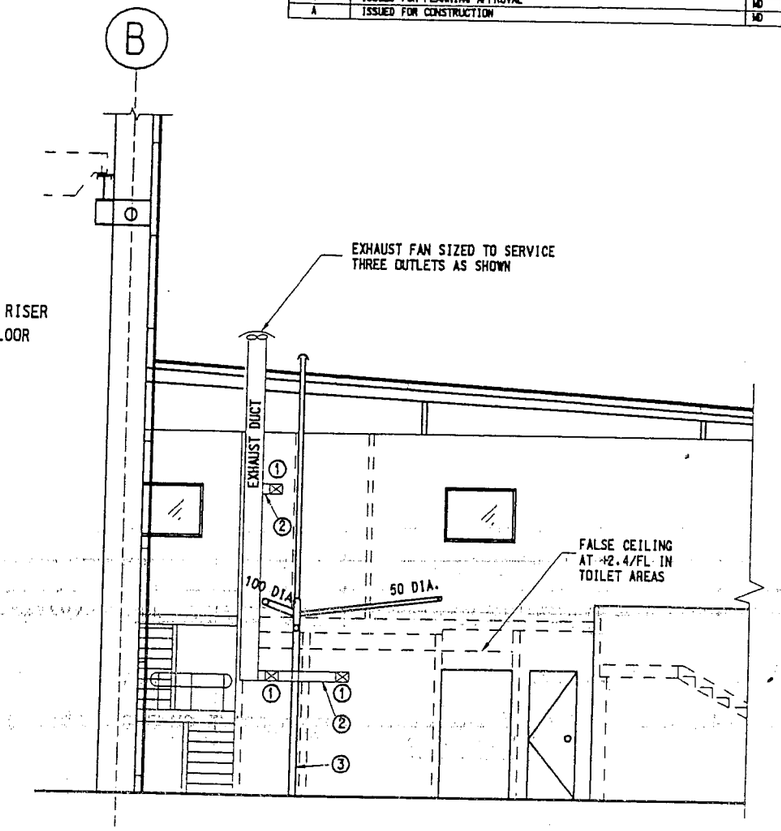
Revision	Description	By	Date
1	ISSUED FOR PLANNING APPROVAL	MD	29-12-94
A	ISSUED FOR CONSTRUCTION	MD	5-01-95



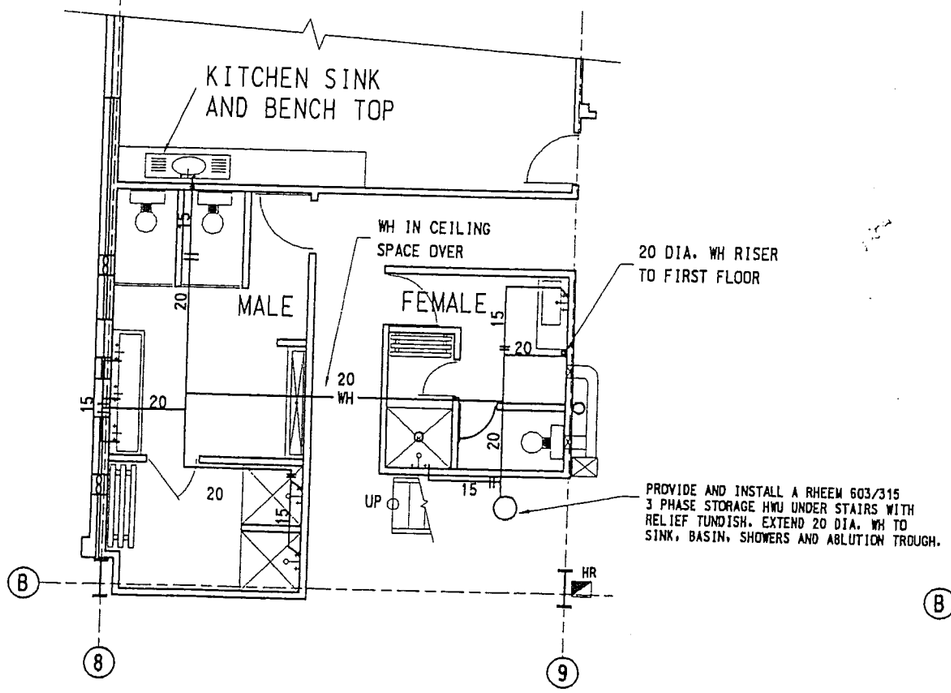
GROUND FLOOR COLD WATER LAYOUT



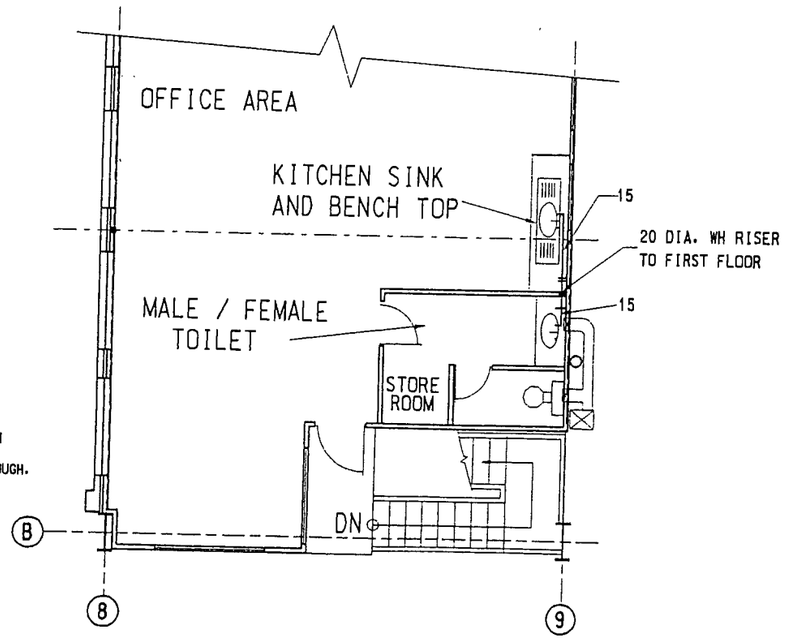
FIRST FLOOR COLD WATER LAYOUT



ELEVATION ON GRID 9
1:50



GROUND FLOOR HOT WATER LAYOUT



FIRST FLOOR HOT WATER LAYOUT

LEGEND:

① - EXHAUST OUTLET

② - EXHAUST DUCT SET OUT FROM WALL TO CLEAR PLUMBING STACK

③ - 100 DIA. P.V.C. SOIL STACK WITH 80 DIA. P.V.C. VENT FIXED TO FACE OF WALL

ACS Consulting Chartered Engineers

Australian Civil and Structural Pty Ltd

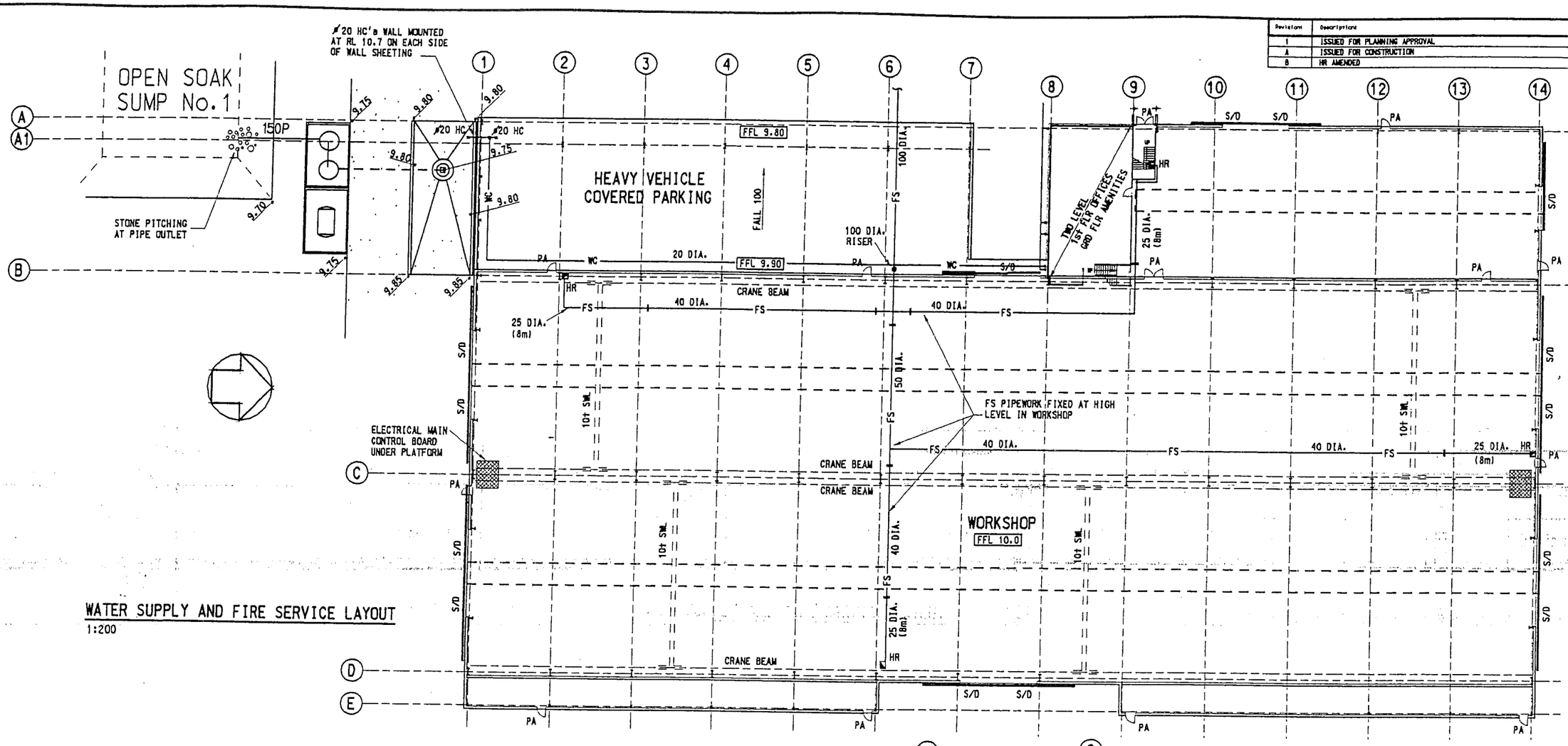
201 High Street, Fremantle
PO Box 682, Fremantle
Western Australia 6160

Telephone (09) 4305681
Facsimile (09) 4305517

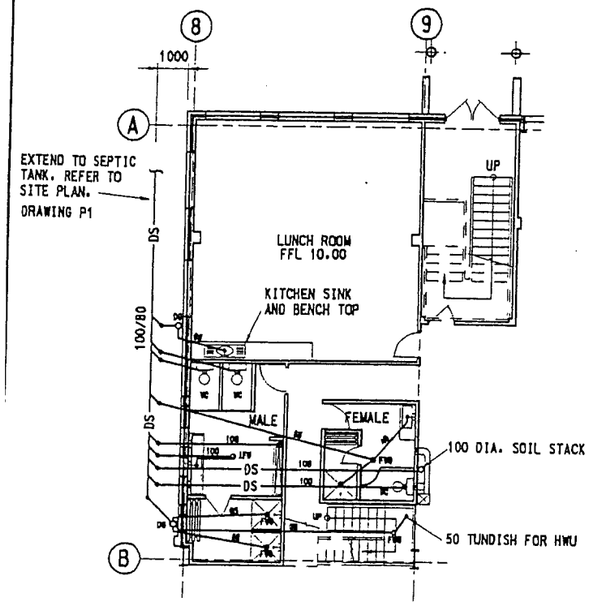
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.	Drawn: MD	Approved:	
WORKSHOP AND OFFICES FACILITIES	Date: 5-01-95	Project No: 94080	
WATER SERVICES LAYOUT	Chkd: JFS	Drawing No: P3	Rev: A
	Scale: 1:50		

5/1/95

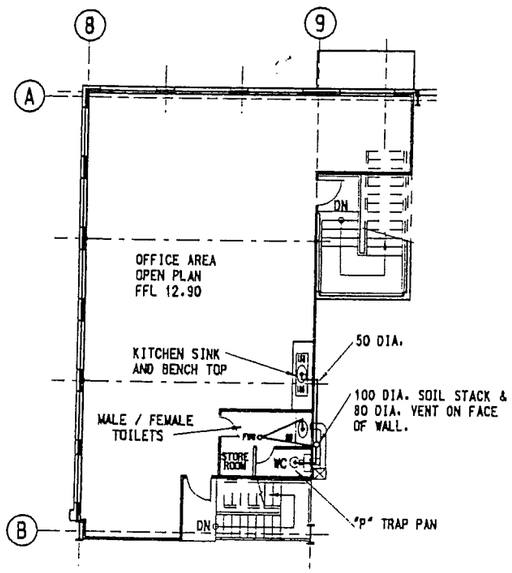
Revision	Description	By	Date
1	ISSUED FOR PLANNING APPROVAL	S.T.	18-7-94
A	ISSUED FOR CONSTRUCTION	M.D.	29-12-94
B	HR AMENDED	M.D.	21-02-95



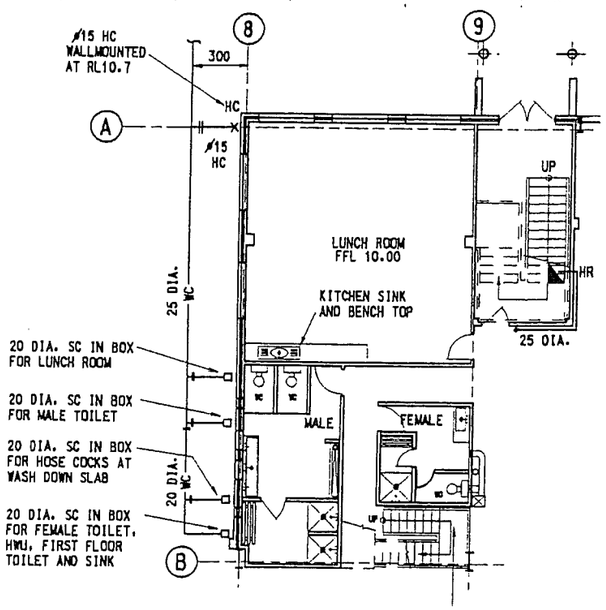
WATER SUPPLY AND FIRE SERVICE LAYOUT
1:200



GROUND FLOOR SEWERAGE LAYOUT
1:100



FIRST FLOOR SEWERAGE LAYOUT
1:100



WATER SERVICE SUPPLY
1:100

NOTES:

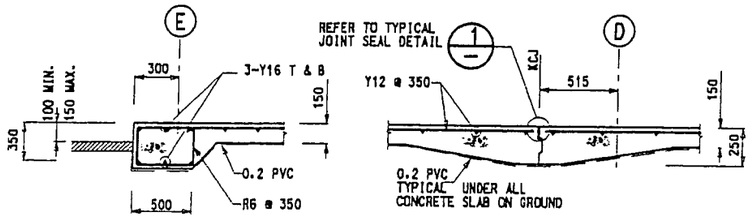
1). FOR SITE PLAN OF WATER, SEWER AND DRAINAGE REFER TO DRAWING P1.
2). FOR LEGEND REFER TO DRAWING P1.
3). FOR INTERNAL HOT AND COLD WATER RETICULATION AND ELEVATION ON GRID 9 REFER TO DRAWING P3.

ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 862, Fremantle
Western Australia 6160
Telephone (09) 4305451
Facsimile (09) 4305517

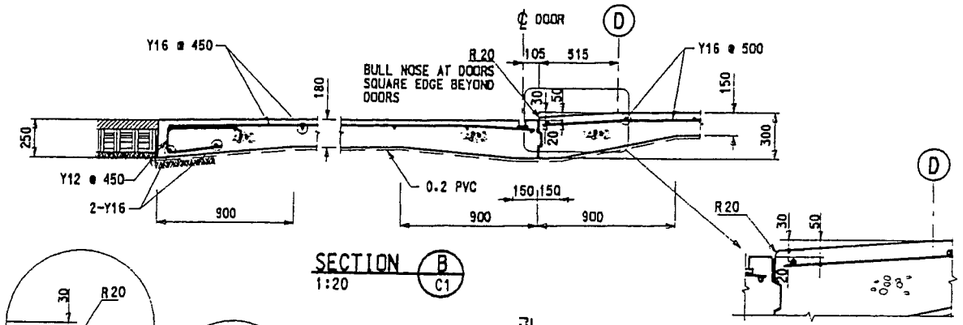
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
FIRE AND PLUMBING SERVICES LAYOUT

Drawn	JK & ST
Dated	17-6-94
Check	JFS
Scale	AS SHOWN
Approved	
Project No	94080
Drawing No	P2
Rev	B

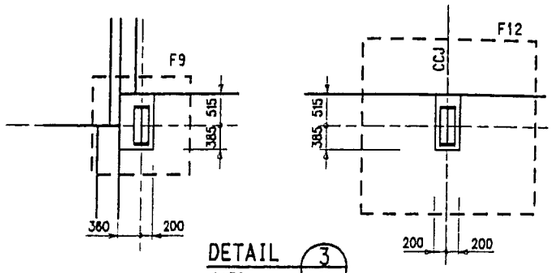
Revision	Description	By	Date
1	ISSUED FOR APPROVAL	VK	16.12.94
A	ISSUED FOR CONSTRUCTION	VK	20.12.94
B	MINOR CHANGES	MD	18.01.95
C	PEDESTAL DETAILS ADDED	MD	25.01.95



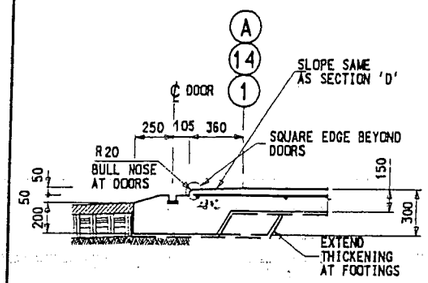
SECTION A C1 1:20



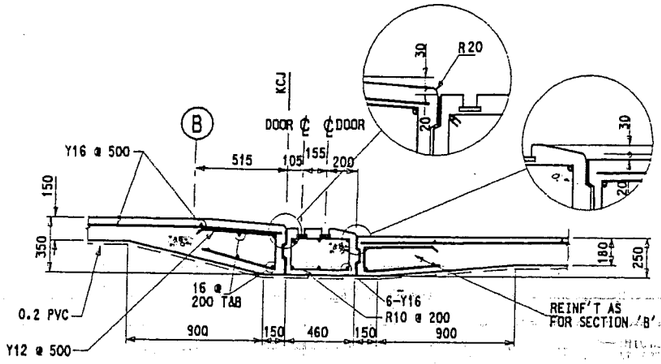
SECTION B C1 1:20



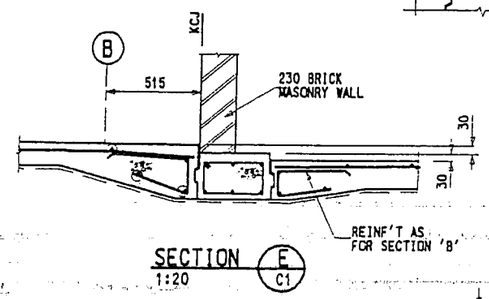
DETAIL 3 C1 1:50



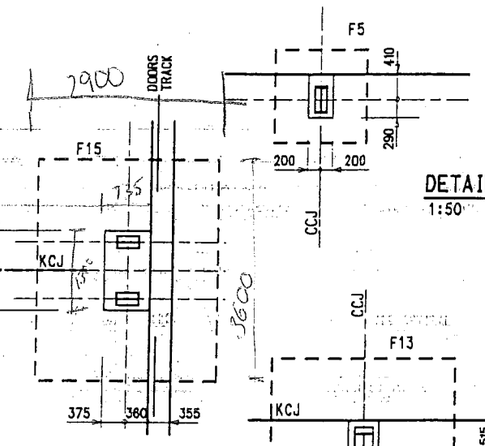
SECTION C C1 1:20

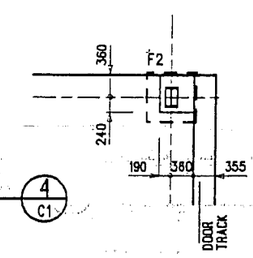


SECTION D C1 1:20

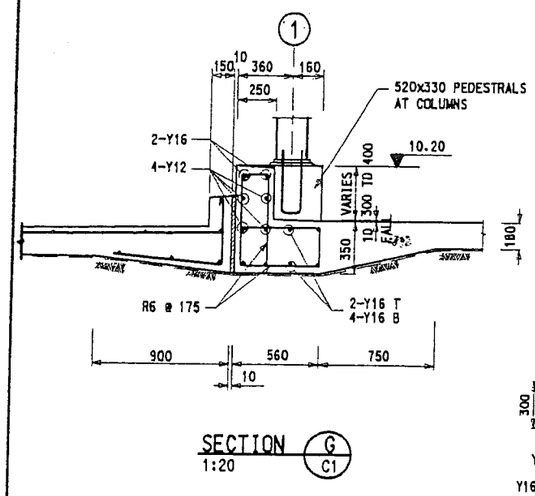


SECTION E C1 1:20

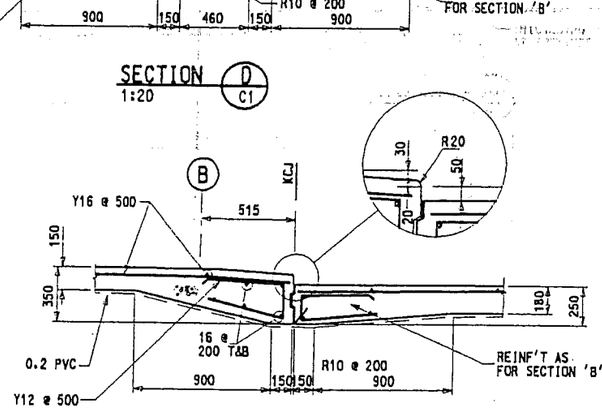




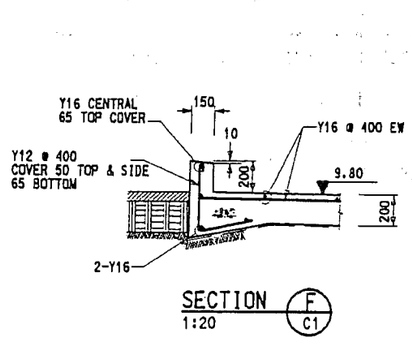
DETAIL 4 C1 1:50



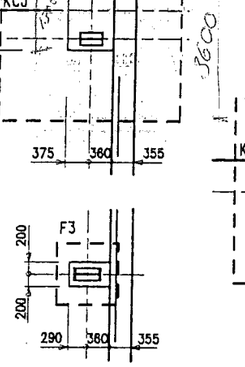
SECTION G C1 1:20

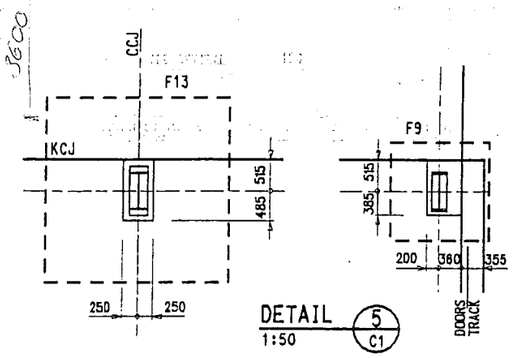


SECTION L C1 1:20



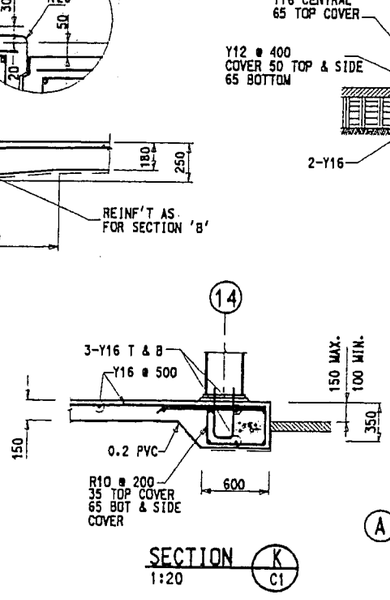
SECTION F C1 1:20





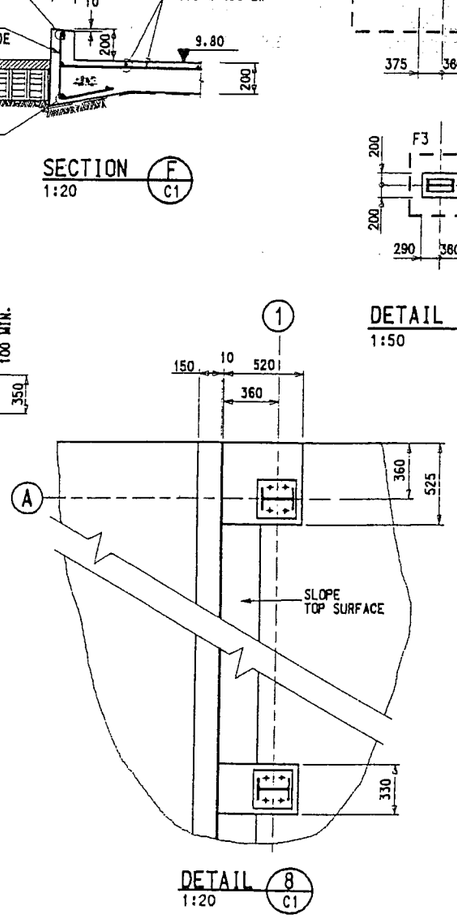
DETAIL 5 C1 1:50

DETAIL 6 C1 1:50



SECTION H C1 J C1 SIMILAR 1:20

SECTION K C1 1:20

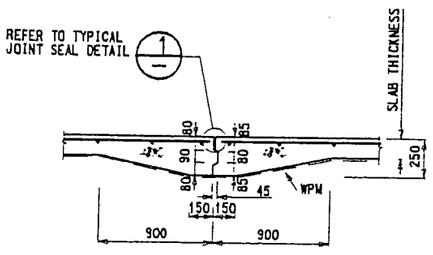


DETAIL 8 C1 1:20

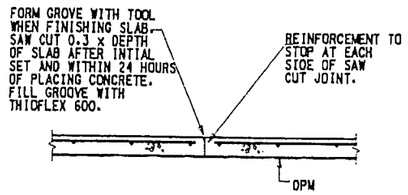
DETAIL 7 C1 1:50

25.64

1300 x 735

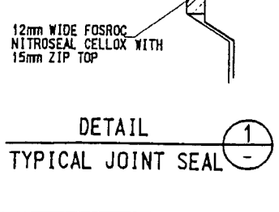


KEYED CONSTRUCTION JOINT (KCJ)



CUT CONTROL JOINT (CCJ)

CONTROL JOINTS IN SLAB
NTS

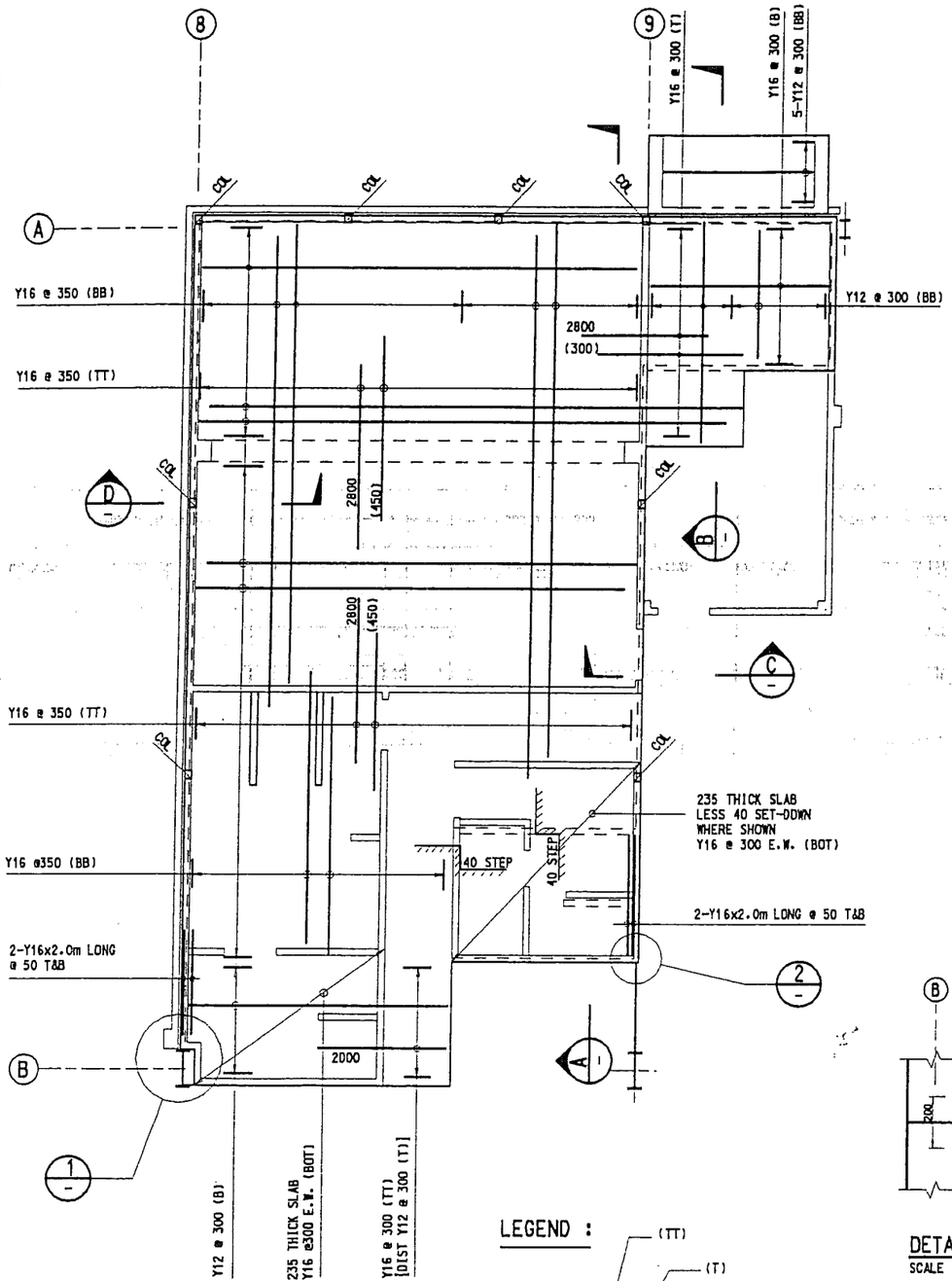


DETAIL TYPICAL JOINT SEAL 1/-

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 681, Fremantle
Western Australia 6160
Telephone (09) 4335481
Facsimile (09) 4335537

SEAGATE STRUCTURAL ENGINEERING PTY.LTD. WORKSHOP AND OFFICES FACILITIES CONCRETE DETAILS	Drawn M.D.	Approved	
	Date 5-12-94	Project No. 94080	
	Check JFS	Drawing No. C3	Rev. C
	Scale AS SHOWN		

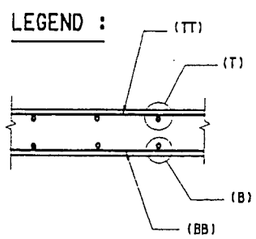
Revision	Description	By	Date
A	ISSUED FOR CONSTRUCTION	M.D.	08-12-94



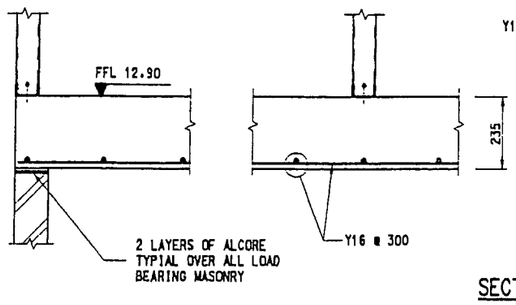
SUSPENDED SLAB PLAN - OFFICE
SCALE 1:50

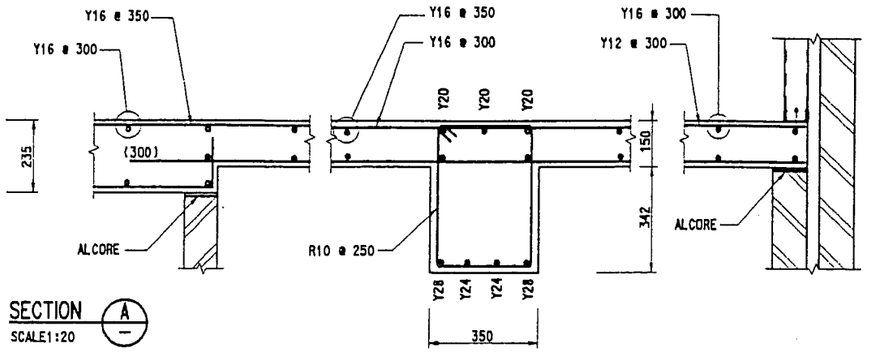
NOTE :
150 THICK SLAB U.N.O.
DISTRIBUTION STEEL - 12 @ 300 U.N.O.

LEGEND :

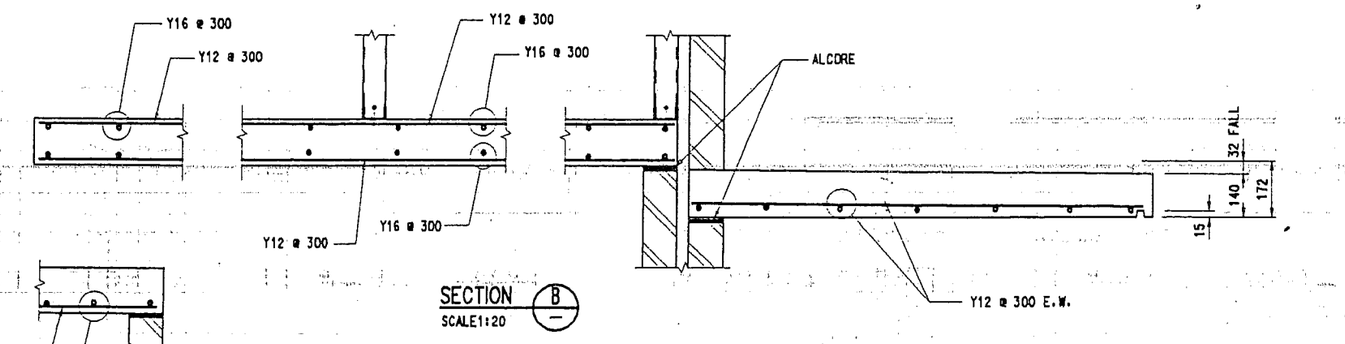


- LOAD BEARING WALLS UNDER
- WALLS ABOVE SLAB

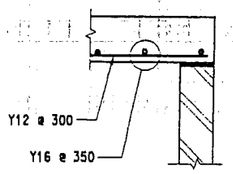




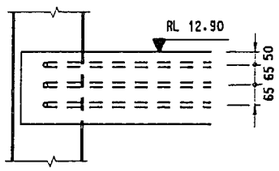
SECTION A
SCALE1:20



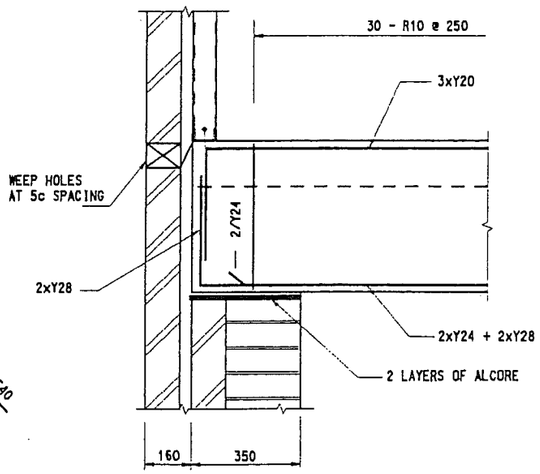
SECTION B
SCALE1:20



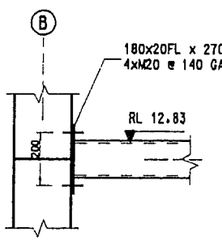
SECTION C
SCALE1:20



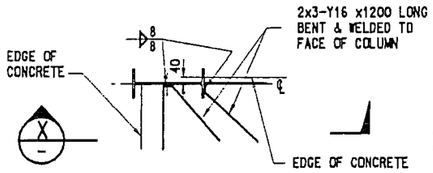
SECTION X
SCALE 1:20



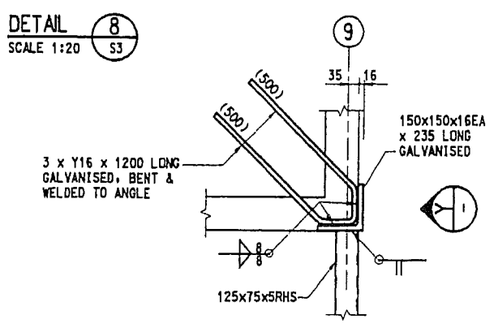
SECTION D
SCALE1:20



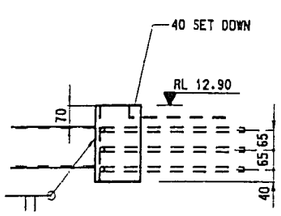
DETAIL 8
SCALE 1:20 S3



DETAIL 1
SCALE 1:20



DETAIL 2
SCALE 1:10



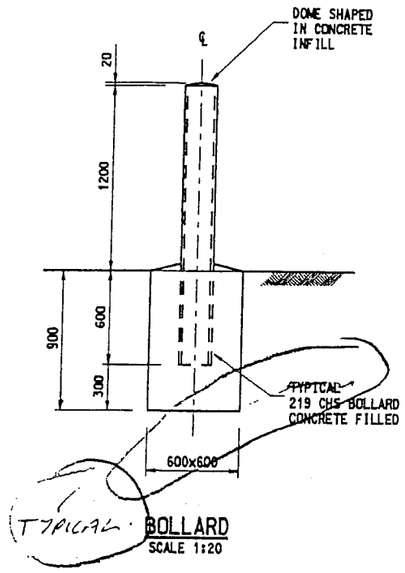
VIEW Y
SCALE 1:10

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517
Consulting Chartered Engineers

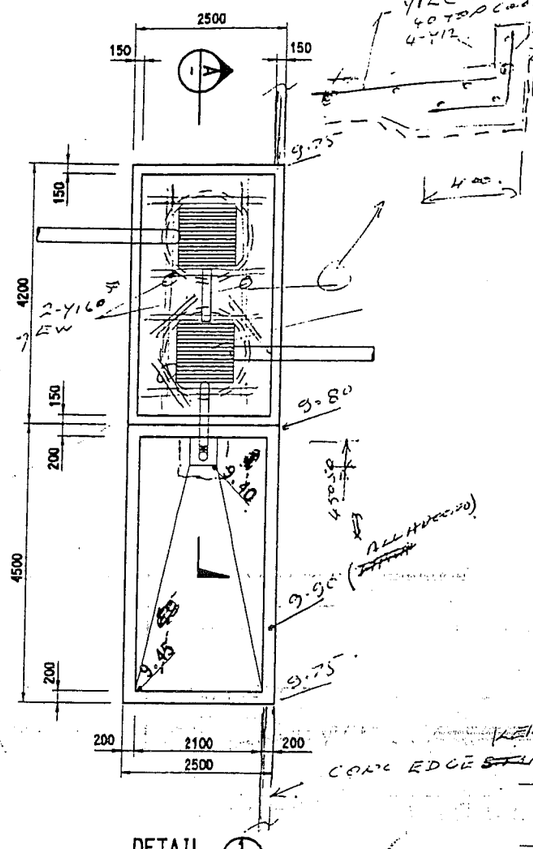
SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
FIRST FLOOR CONCRETE PLAN AND DETAILS

Drawn: M.O.	Approved:		
Date: 08-12-94	Project No: 94080		
Check: JFS			
Scale: AS SHOWN	Drawing No: C4	Rev: A	

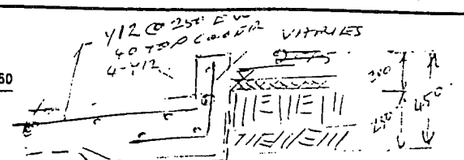
Revisions	Descriptions	Byl	Dated
A	ISSUED FOR CONSTRUCTION	M.D.	07-01-95

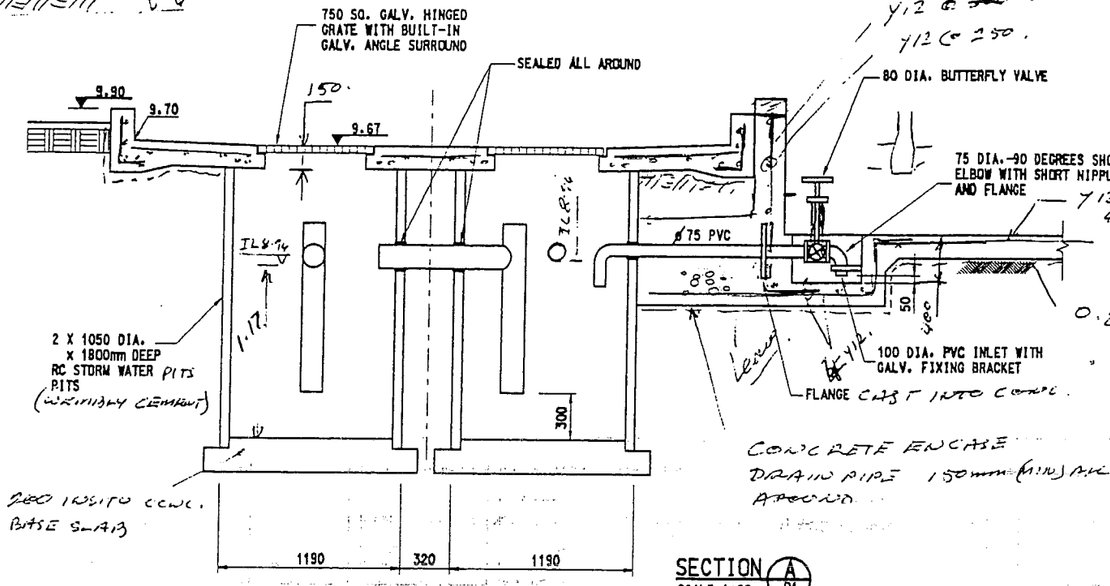


TYPICAL BOLLARD
SCALE 1:20



DETAIL 1
SCALE 1:50 P1

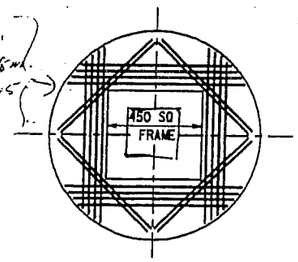




CONCRETE ENCASE DRAIN PIPE 150mm (MIN) AS APPROVED

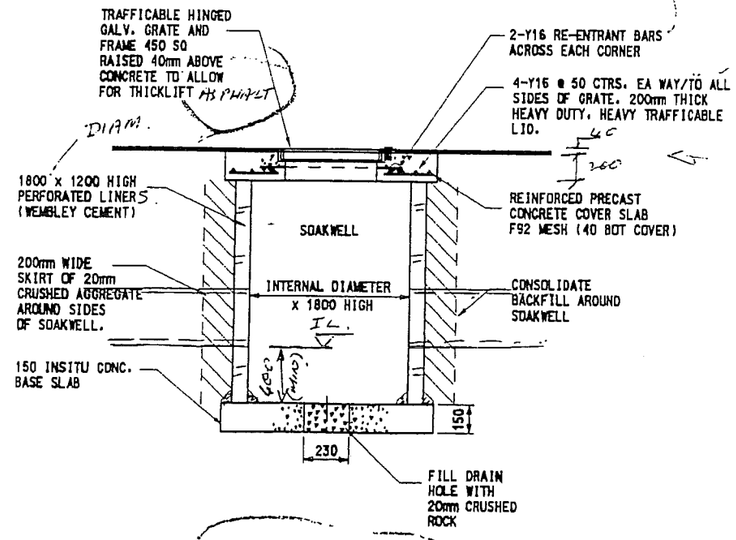
SECTION A
SCALE 1:20

THIS IS CUT OF PROPERTY. THE SUMP IS Ø1.8m. THE GRATE IS 0.45 REINFT SHOULD BE INSIDE THE HOLE

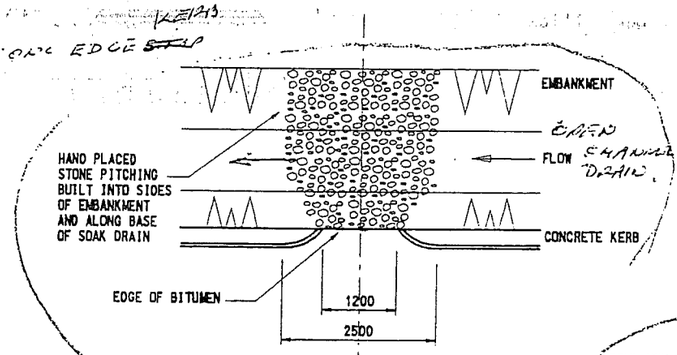


PLAN VIEW

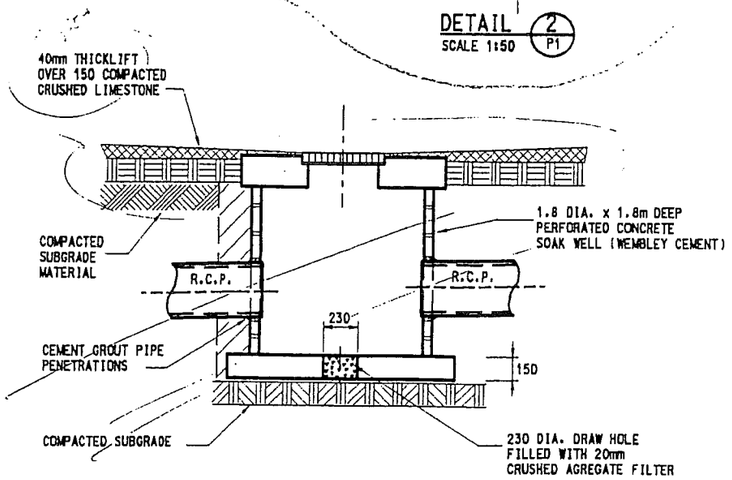
REINFORCEMENT FOR HEAVY DUTY TRAFFICABLE LID CONCRETE TO BE GRADE N32 E3



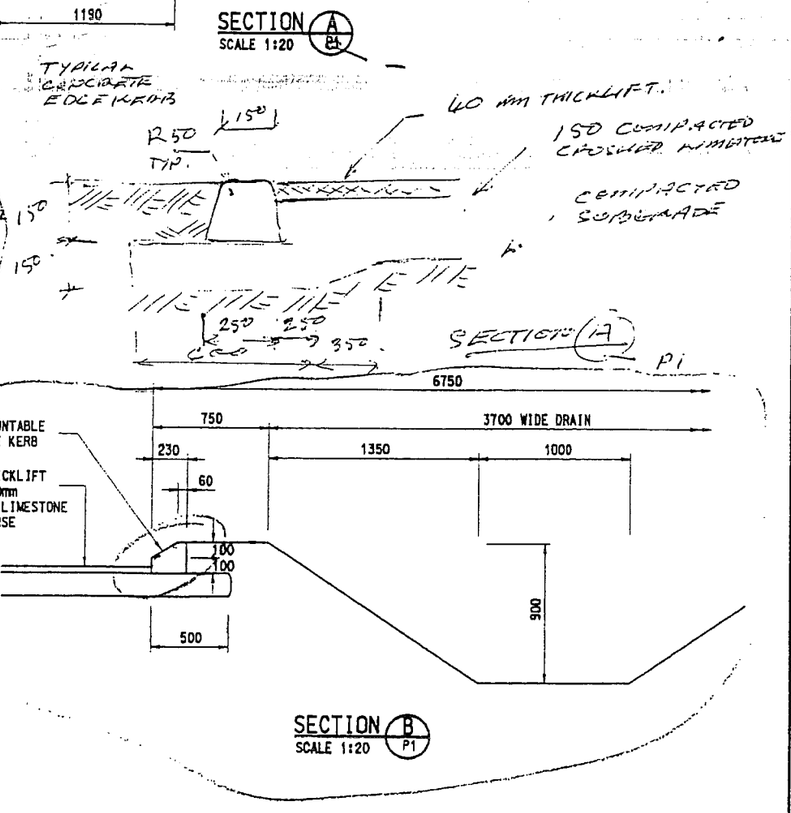
TYPICAL SOAKWELL DETAIL
N.T.S.
SCALE 1:50



DETAIL 2
SCALE 1:50 P1



SOAK PIT DETAIL 3
SCALE 1:20 P1



SECTION B
SCALE 1:20 P1

Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 582, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
FIRST FLOOR CONCRETE PLAN AND DETAILS

Drawn: M.D.	Approved:		
Date: 07-01-95	Project No: 94080		
Chkd: JFS	Drawing No: C5	Rev: A	
Scale: AS SHOWN			

NOTES

GENERAL:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER LISTED STRUCTURAL DESIGN DRAWINGS TOGETHER WITH ALL REFERENCE ARCHITECTURAL AND PLUMBING DRAWINGS. DO NOT SCALE OFF THE DRAWINGS, EXCEPT WHERE SPECIFICALLY SHOWN. ALL DIMENSIONS TO BE TAKEN FROM THE ARCHITECTURAL DRAWINGS.

2. ANY VARIATION TO THE DETAILS SHOWN ON THE DRAWINGS MUST BE AUTHORISED BY THE ENGINEER PRIOR TO FABRICATION.

3. CONSTRUCTION WORK TO BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH, SAFETY AND WELFARE REGULATIONS 1968.

4. THIS BUILDING HAS BEEN DESIGNED FOR WIND CONDITIONS - REGION 'A' TERRAIN CATEGORY 2 - Vp = 41mps.

SITEWORKS AND FOUNDATIONS:

1. FOUNDATIONS HAVE BEEN DESIGNED FOR A SAFE BEARING PRESSURE OF 150 kPa.

2. STRIP AND CLEAR ALL TOPSOIL, VEGETATION, OLD TREE STUMPS, OLD BUILDING RUBBLE OR RUBBISH AND COMPACT PRIOR TO FILLING.

3. COMPACT THE WHOLE OF THE BUILDING AREA UNIFORMLY TO A MINIMUM DRY DENSITY INDEX OF 70%. FOR CLEAN SAND, TEST USING A STANDARD, 16mm DIAM. PERTH PENETROMETER TO 1.15m BELOW THE SOFFIT OF ANY SLAB OR FOOTING. FOR PERTH SAND, (AS A GUIDE ONLY), NOT LESS THAN 7 BLOWS FOR EACH 300mm PENETRATION.

4. ALL FILL SHALL BE CLEAN SAND TO THE APPROVAL OF THE ENGINEER. WELL WATERED, PLACED AND COMPACTED AS SPECIFIED ABOVE IN LAYERS NOT EXCEEDING 250mm LOOSE THICKNESS.

5. FOUNDATION LEVELS SHOWN RELATE TO ADJACENT FLOOR LEVELS. ALL FINISHED LEVELS TO BE TAKEN FROM ARCHITECTURAL DRAWINGS OR AS DIRECTED BY THE SUPERVISING ENGINEER.

6. FOOTINGS AT LOWEST LEVEL MUST BE FIRST FOOTINGS POURED.

7. NO FOOTING TO BE SET WITH ITS SOFFIT FURTHER ABOVE ANY OTHER ADJACENT FOOTING (OR EXCAVATION) THAN HALF THE CLEAR DISTANCE BETWEEN THEM.

8. UNDERSIDE OF ALL FOOTINGS TO OCCUR A MINIMUM OF 300mm BELOW FINISHED GROUND LEVEL UNLESS OTHERWISE SHOWN.

9. PROVIDE ADEQUATE FORMWORK TO ALL FOOTINGS UNLESS OTHERWISE AUTHORISED BY THE SUPERVISING ENGINEER.

10. ALL EXCAVATIONS MUST BE APPROVED PRIOR TO POURING CONCRETE FOOTINGS.

11. PROVIDE A BLINDING LAYER OF CLEAN SAND 50mm THICK UNDER ALL CONCRETE SLABS ON THE GROUND.

12. PRIOR TO PLACING ANY NEW CONCRETE AND JUST PRIOR TO LAYING PVC MEMBRANE, TREAT THE SOIL FOR TERMITE PROTECTION IN ACCORDANCE WITH AS2057-SOIL TREATMENT FOR PROTECTION OF BUILDINGS AGAINST SUBTERRANEAN TERMITES AND/OR AS DIRECTED BY THE SHIRE.

13. PLACE 0.20mm THICK P.V.C. MEMBRANE UNDER ALL CONCRETE SLABS ON GROUND. ALL SPLICES TO BE LAPPED AND JOINED USING AN APPROVED ADHESIVE TAPE.

CONCRETE:

1. ALL CONCRETE SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH AS3600-1988 CONCRETE STRUCTURES CODE, THE ASSOCIATED DRAWINGS AND THE DETAILED SPECIFICATION.

2. QUALITY OF CONCRETE SHALL BE:

		TYPE A	TYPE B
MINIMUM COMPRESSIVE STRENGTH (F'c (min) at 28 days)	MPa	N20	N32
SLUMP (max)	mm	100	100
AGGREGATE SIZE (max)	mm	40	20

CEMENT SHALL BE ORDINARY PORTLAND CEMENT FOR TYPE "B" CONCRETE AND MAY BE BLENDED TYPE S.A. FOR TYPE "A".
AGGREGATE TO BE ANGULAR, CONTINUOUSLY GRADED.
CONCRETE FOOTINGS SHALL BE TYPE "A" CONCRETE - ALL OTHER CONCRETE (REINFORCED CONCRETE SLABS ON GROUND, SUSPENDED SLABS, STAIRS, LANDINGS, AND BEAMS) SHALL BE TYPE B.

3. ALL CONCRETE SHALL BE PLANT CONTROL BATCH TESTED AND RECORDED IN ACCORDANCE WITH AS3600-SAA CONCRETE STRUCTURES CODE.

4. ADDITIVES SHALL NOT BE USED WITHOUT WRITTEN APPROVAL FROM THE SUPERVISING ENGINEER.

5. ALL CONCRETE THROUGHOUT THE JOB SHALL BE THOROUGHLY COMPACTED USING MECHANICAL HIGH FREQUENCY VIBRATORS.

6. ALL CONCRETE SHALL BE CURED BY KEEPING MOIST FOR A MINIMUM PERIOD OF SEVEN (7) DAYS AFTER PLACING. CURING SHALL COMMENCE AS SOON AS POSSIBLE AFTER PLACING THE CONCRETE. CURING AGENTS MAY BE USED WITH WRITTEN APPROVAL FROM THE SUPERVISING ENGINEER. THEY SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. C309 - SPECIFICATION FOR LIQUID MEMBRANE FORMING COMPONENTS FOR CURING CONCRETE AND MUST BE ABLE TO BE REMOVED OR BE COMPATIBLE WITH ADHESIVES USED FOR GROUTING FLOOR TILES OR FIXING FLOOR COVERINGS.

7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

8. BEAM SIZES ARE DESIGNATED WIDTH BY DEPTH (INCLUDING SLAB, IF ANY).

9. PROVIDE 20mm CHAMFERS OR FILLETS TO ALL EXPOSED EDGES AND CORNERS AND DRIP GROOVES TO THE SOFFIT OF EXPOSED SLABS.

10. REINFORCING BARS AND MESH TO BE SUPPLIED AND PLACED IN ACCORDANCE WITH AS3600-1988 CONCRETE STRUCTURES CODE. ASSOCIATED DRAWINGS AND THE DETAILED SPECIFICATION.

11. REINFORCING BARS AND MESH TO BE PLACED WITH SUPPORTS AT 500mm CTRS. ON PLASTIC TIPPED WIRE (OR PLASTIC) CHAIRS. MESH IN SLABS ON GROUND MAY BE SUPPORTED ON CONCRETE BLOCKS SPACED AT 600 CTRS.

12. REINFORCING IS DESIGNATED AS FOLLOWS:-

Y	DENOTES	TEMPCORE HIGH STRENGTH DEFORMED BARS
R	"	PLAIN ROUND BARS
TT	"	TOP LAYER OF TOP REINFORCING
T	"	BOTTOM LAYER OF TOP REINFORCING
B	"	TOP LAYER OF BOTTOM REINFORCING
BB	"	BOTTOM LAYER OF BOTTOM REINFORCING

13. COVER TO REINFORCING AS SHOWN ON DRAWING AND:-

i)	FOOTINGS		65mm TOP, BOTTOM & SIDES	
ii)	PEDESTALS		50mm TOP & SIDES	
iii)	SLABS ON GROUND	a) INTERNAL	35mm TOP	40mm EDGES & BOTTOM
		b) EXTERNAL	40mm TOP, EDGES & BOTTOM	
iv)	SUSPENDED SLAB	a) INTERNAL	20mm TOP & BOTTOM	
		b) EXTERNAL	35mm TOP & BOTTOM	
v)	CONCRETE BEAMS	a) INTERNAL	35mm BOTTOM & SIDES	
		b) EXTERNAL	40mm BOTTOM & SIDES	

ALL SPLICES IN REINFORCEMENT SHALL BE LAPPED SO AS TO DEVELOP FULL TENSILE STRENGTH IN ACCORDANCE WITH AS3600-1988 CONCRETE STRUCTURES CODE.
LOCATE ALL CONDUITS AND PIPES CENTRALLY IN SLABS WITH 50mm CLEAR SPACING FROM REINFORCING BARS.
NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE SUPERVISING ENGINEER.

14. FORM ALL CONSTRUCTION JOINTS AND CUT CRACK CONTROL JOINTS INTO THE CONCRETE SLABS AS INDICATED ON THE DRAWING AND USE ONLY WHERE SHOWN OR AS APPROVED BY THE SUPERVISING ENGINEER.

15. ALL GROOVED CONSTRUCTION AND EXPANSION JOINTS FORMED IN STRUCTURAL CONCRETE SHALL BE SEALED USING A POLYETHELENE BACKING STRIP AND AN APPROVED POLYURETHANE FILLING COMPOUND PLACED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATION.

16. WHERE CONCRETE BEARS ONTO LOAD BEARING MASONRY, TROWEL SMOOTH AND FLAT A 5mm LAYER OF MORTAR AND SEPARATE THE CONCRETE THEREFROM WITH TWO LAYERS OF 'SUPER ALCOR' OR APPROVED EQUIVALENT UNLESS SHOWN OTHERWISE. ALL NON-LOAD BEARING WALLS TO BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY A MINIMUM OF 20mm.

17. ALL FORMWORK TO SUSPENDED SLABS, STAIRS AND BEAMS SHALL BE IN ACCORDANCE WITH THE SPECIFIC CLASS REQUIREMENTS OF AS3610-1990 SAA FORMWORK FOR CONCRETE.

CONCEALED SIDES OF FOOTINGS, SLABS AND PEDESTALS	- CLASS 5
UPPER SURFACE OF FLOOR SLABS AND STAIR TREADS	- MONO STEEL TROWEL
SET-DOWN IN WET AREAS TO RECEIVE TILES	- SMOOTH SCREED
SOFFIT OF SUSPENDED CONCRETE AND EXPOSED FACES OF CONC. WHICH ARE NOT TO BE COVERED OR RENDERED	- CLASS 3
SOFFIT OF SUSPENDED CONCRETE AND EXPOSED FACES OF CONCRETE WHICH ARE TO BE RENDERED OR COVERED WITH FINISHING SYSTEM	- CLASS 4
PRECAST CONCRETE	- CLASS 1

18. SUSPENDED SLABS AND BEAMS TO REMAIN FORMED AND PROPPED FOR NOT LESS THAN TEN (10) DAYS AFTER WHICH FORMWORK MAY BE REMOVED BUT BACK PROPPING TO REMAIN IN PLACE TO SLABS FOR A FURTHER FIVE (5) DAYS. BEAMS AND CANTILEVERS SHALL REMAIN PROPPED FOR A FURTHER FOURTEEN (14) DAYS.

19. ALL PROPS AND FORMWORK FOR BEAMS AND SLABS TO BE REMOVED BEFORE CONSTRUCTION OF ANY WALLS OR OTHER PERMANENT LOADING ON THE SLAB.

20. CONSTRUCTION TOLERANCES SHALL BE IN ACCORDANCE WITH AS3600-1988 SAA CONCRETE STRUCTURES.

21. ALL EXPOSED STEEL SECTIONS CAST INTO ANY CONCRETE SHALL BE HOT DIPPED GALVANISED.

STRUCTURAL STEELWORK:

1. SHOP DRAWINGS OF ALL STRUCTURAL STEELWORK TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

2. ALL STEELWORK TO BE SUPPLIED, FABRICATED AND ERECTED STRICTLY IN ACCORDANCE WITH AS4100-1990 STEEL STRUCTURES CODE.

3. ALL STEEL SHALL BE IN ACCORDANCE WITH:-
   AS1163 GRADE C250 AND C350 FOR CIRCULAR HOLLOW SECTIONS AS APPROPRIATE
   AS1163-GRADE C350 FOR RECTANGULAR HOLLOW SECTIONS, AND
   AS1397-G450-Z275 FOR COLD FORMED SECTIONS.
   AS3678 HOT ROLLED STRUCTURAL STEEL PLATES, FLOOR PLATES AND SLABS
   AS3679 HOT ROLLED STRUCTURAL STEEL BARS AND SECTIONS

4. PROVIDE ALL CLEATS, BRACKETS, HOLES, ETC. NOT SHOWN BUT NECESSARY TO COMPLETE THE BUILDING, INCLUDING ALL ARCHITECTURAL FIXINGS WHICH ARE NOT NECESSARILY SHOWN ON THE STRUCTURAL DRAWINGS BUT NECESSARY FOR THE PROPER COMPLETION OF THE BUILDING AND SERVICES.
- ALL BASE PLATES AND CAP PLATES TO BE A MINIMUM 16mm THICK PLATE UNLESS NOTED OTHERWISE. (U.N.O.)
- END PLATES TO SECONDARY STRUTS AND BEAMS TO BE MINIMUM 12mm THICK FLAT PLATE U.N.O.
- THE MINIMUM LENGTH OF ALL PLATES CONNECTING STEEL SECTIONS IN SHEAR SHALL BE 2/3 TIMES THE DIMENSION OF THE SECTION BEING CONNECTED.
- ALL STEEL MEMBERS SHALL BE FROM SINGLE LENGTHS UNLESS OTHERWISE DETAILED.
- STEEL BEAMS TO BE FABRICATED WITH NATURAL CAMBER UP.
- ALL NOTCHES TO HAVE 12mm RADIUS AT INTERNAL CORNERS.
- BRACING COMPONENT CENTRELINES SHALL INTERSECT CONCURRENTLY U.N.O.

5. ALL WELDING SHALL BE S.P.- STRUCTURAL PURPOSE WELDS AND SHALL CONFORM TO AS1554, PART 1-1985 WELDING OF STEEL STRUCTURES.
- ALL WELDS TO BE MINIMUM 6mm CONTINUOUS FILLET U.N.O.
- ALL BUTT WELDS TO BE FULLY PREPARED COMPLETE PENETRATION BUTT WELDS.
- ELECTRODE CLASSIFICATION E48XX OR W50.
- FULL LENGTH SEAL WELD ALL BOXED MEMBERS AND INTERMITTENT WELDS.

6. ALL BOLTED CONNECTIONS:-
   . SHALL BE DETAILED TO CONFORM TO THE MINIMUM REQUIREMENTS SHOWN ON THE DRAWINGS.
   . SUPPORTING BEAMS, SHALL BE DETAILED FOR A MINIMUM OF 80% OF THE SHEAR STRENGTH OF THE MEMBER TO BE CONNECTED.
   . TO HAVE A MINIMUM OF 2/M20 GRADE 8.8/TB TIGHTENED BY PART TURN METHOD OR BY USING CORONET LOAD INDICATING WASHERS.
   . SHALL BE PROVIDED WITH THE APPROPRIATE WASHER UNDER THE TURNED PART. WHERE NECESSARY TAPER WASHERS TO BE PROVIDED AND USED IN ADDITION TO FLAT WASHERS.
- BOLT HOLES TO BE DRILLED TO A MAXIMUM 2mm OVERSIZE EXCEPT COLUMN BASE PLATES WHICH MAY BE DRILLED 4mm OVERSIZE AND FITTED WITH OVERSIZE WASHERS.
- HOLES FOR PURLINS AND GIRTS TO BE DRILLED 18mm DIAMETER IN CLEATS AND STANDARD PUNCHED, SLOTTED HOLES IN PURLINS AND GIRTS - LYSAGHT HIGH STRENGTH PURLIN BOLTS, PB1230HS SHALL BE USED WHERE SHOWN, ELSEWHERE STANDARD LYSAGHT PURLIN BOLTS, PB1230 SHALL BE USED.

7. ALL PURLINS AND GIRTS SHALL BE LYSAGHT OR APPROVED EQUIVALENT COLD FORMED FROM ZINC COATED STEEL STRIP CONFORMING TO AS1397-G450-Z275 AND TO SIZES SHOWN ON THE DRAWINGS. PROVIDE BRIDGING AND STRUCTURAL LAPS AS NOTED ON THE DRAWINGS.

8. PLATFORMS, LADDERS & HANDRAILS SHALL BE AS DETAILED AND MANUFACTURED STRICTLY IN ACCORDANCE WITH AS1657-1985, CODE FOR FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS.
FLOOR GRATING SHALL BE WEBFORGE SERIES 2, SIZED AS SHOWN, SECURED TO STEELWORK WITH STANDARD CLIPS OR BY WELDING.
HANDRAILS SHALL BE STANDARD MONOWELLS TYPE STAUNCHIONS OR APPROVED EQUIVALENT AS INDICATED ON THE DRAWING.
LADDER STYLES SHALL BE 65 x 12mm FLAT WITH FIXINGS AT 3m MAXIMUM SPACING.
LADDER RUNGS SHALL BE 20mm DIAM. SOLID ROUND.
ALL STAIR TREADS TO BE SIZED AND SHAPED AS SHOWN.

9. TREATMENT TO STEELWORK TO BE:

   (a) ALL NUTS, BOLTS, WASHERS, BACKING PLATES, ANCHOR BOLTS, STEEL LINTELS, LADDERS, STAIR TREADS, FLOOR GRATING, HANDRAILS, POSTS AND KICKBOARDS AND ITEMS BUILT INTO EXTERNAL BRICK WORK OR CAST INTO CONCRETE SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH AS1650-1982 GALVANISED COATINGS.

   (b) ALL OTHER STEEL TO BE TREATED WITH A SINGLE PRIME COAT OF INORGANIC ETHYL ZINC SILICATE AND TO ALL EXPOSED STEELWORK APPLY, TWO TOP COATS OF ACRYLIC GLOSS - COLOURED TO CLIENTS REQUIREMENTS.
   ABRASIVE BLAST TO CLASS 2.5 TO REMOVE ALL SCALE AND RUST FROM SURFACE OF STEEL AND IMMEDIATELY APPLY A SINGLE COAT OF INORGANIC ETHYL ZINC SILICATE, "VESSEY" CARBO ZINC 11 (OR APPROVED EQUIVALENT COMPLYING TO AUSTRALIAN STANDARD 2105-1980), TO 75 MICRONS DRY FILM THICKNESS (D.F.T.).
   ALLOW PRIME COAT TO DRY THEN TO ALL EXPOSED STEELWORK APPLY TWO COATS OF "VESSEY" HYDRAPERM, WATER BORNE EXTERIOR GLOSS ACRYLIC OR APPROVED EQUIVALENT, EACH TO 50 MICRONS D.F.T. STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATION.
   TOTAL BUILD 175 MICRONS D.F.T.
   ALLOW 24 HOURS CURING TIME BEFORE HANDLING AND SITE ERECTION.
   THE COLOURS OF THE TOP COAT SHALL BE IN ACCORDANCE WITH THE OWNERS REQUIREMENTS.

10. PROVIDE AND USE ALL NECESSARY PROPS AND TEMPORARY BRACING AS REQUIRED DURING ERECTION TO ENSURE THE SAFETY OF THE STRUCTURE.

11. ON ERECTION, ALL STEELWORK SHALL BE WEDGED LEVEL AND PLUMB.
CEMENT GROUT, 30mm AVERAGE THICKNESS SHALL BE PACKED INTO THE CAVITY UNDER ALL SEATING AND BASE PLATES ENSURING THAT THE SPACE UNDER THE PLATE IS COMPLETELY FILLED. MINIMUM CLEARANCE SHALL BE 20mm BETWEEN PLATE AND CONCRETE.
AT LEAST TWO (2) DAYS SHALL ELAPSE BEFORE REMOVING WEDGES THEN BOLTS SHALL BE TIGHTENED DOWN.
CEMENT GROUT SHALL COMPRISE 1 CEMENT TO 3 SAND MIXED WITH WATER TO PRODUCE A WORKABLE TEXTURE SO AS NOT TO FLOW OUT FROM UNDER THE PLATE.
BEVEL ALL EXPOSED EDGES AT 45 DEGREES.

Revisions	Description	By	Date
A	ISSUED FOR CONSTRUCTION	JK	7.1.95

LIGHT GAUGE STEEL FRAMING:

1. ALL COLD FORMED STEEL SECTIONS SHALL BE ZINC COATED STEEL COMPLYING WITH AS1297-1984 "HOT DIPPED ZINC COATED STEEL COIL AND CUT LENGTHS" AND AS1538-1988 "COLD FORMED STEEL STRUCTURES CODE".

2. WALL FRAMING SHALL BE FABRICATED OF ALL WELDED CONSTRUCTION USING THE DESIGN FABRICATION AND ERECTION DATA SHOWN IN THE LYSAGHT BROWNBUILT INDUSTRIES PUBLICATIONS. REF No. SWF2-1 MAY 1988.
DETAILS SHOWN ON THESE DRAWINGS SHALL TAKE PRECEDENCE OVER DETAILS SHOWN IN THE ABOVE REFERENCES. CRIMP AND PUNCH ENDS OF SECTIONS WHERE SIMILAR SIZED MEMBERS ARE TO BE NESTED.

3. COMPONENTS ARE TO BE CUT ACCURATELY TO LENGTH SO THAT THEY FIT FIRMLY AGAINST ABUTTING MEMBERS AND ARE TO BE HELD FIRMLY IN PLACE EITHER BY CLAMPS OR JIG UNTIL WELDED.

4. STUD MEMBERS ARE TO BE SINGLE LENGTH WITH NO SPLICE PERMITTED.

5. GAP BETWEEN END OF STUD AND WALL PLATES TO BE KEPT TO A MINIMUM.

6. NOGGING CHANNELS ARE TO BE LOCATED IN THE WALL WITH WEB AT RIGHT ANGLES TO THE FACE OF THE WALL AND FLANGE TOES DOWN UNLESS SPECIFICALLY OTHERWISE NOTED ON THE DETAILS.

7. WALL PLATES TO BE FULL LENGTH OF EACH FRAME SECTION WITH NO SPLICE PERMITTED.

8. WALL STUDS - GENERAL (WALL HT. 2700)
   a) EXTERNAL WALLS - 75 x 32 x 1.2 G300-Z200 Z200 @ 450 MAX CTS
   b) INTERNAL WALLS - 75 x 32 x 1.2 G300-Z200 Z200 @ 450 MAX CTS
   c) WALL NOGGINGS:
      EXTERNAL WALLS
      - 75 x 32 x 1.2 G300 Z200
        1 ROW AT MID HEIGHT
      INTERNAL WALLS
      - 75 x 32 x 1.2 G300 Z200
        1 ROW AT MID HEIGHT

9. WALL PLATES
   a) TOP - STIFFENED TOP PL. 75 x 79 x 1.6 G450-Z200
   b) BOTTOM - 75 x 40 x 1.6 G450-Z200

10. FRAMING AROUND WALL OPENINGS

10.1 EXTERNAL WALLS
   a) WALL STUDS FOR OPENINGS TO 1850 WIDE
      - 2/75 x 40 x 1.6 G450 (((PIGGY BACK) EACH SIDE
   b) WINDOW AND DOOR HEADS TO 1900 WIDE
      - 1/75 x 32 x 1.2 G300
      WINDOW HEADS GREATER THAN 1000 TO 1800 WIDE
      - 1/75 x 40 x 1.6 G450
   c) WINDOW SILLS TO 1800 WIDE
      - 1/75 x 40 x 1.6 G450

10.2 INTERNAL WALLS
   a) WALL STUDS TO OPENINGS 900 WIDE
      - 1/75 x 32 x 1.2 G300
      WALL STUDS TO OPENINGS 900 TO 1800 WIDE
      - 2/75 x 32 x 1.2 G300

10.3 WINDOW HEAD TRUSSES
   a) VERTICALS - 75 x 32 x 1.2 G300 STUDS
   b) DIAGONALS - 75 x 32 x 1.2 G300 STUDS
   c) WINDOW HEAD - REFER 10.1(b) ABOVE

ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle PO Box 662, Fremantle Western Australia 6160
Telephone (09) 4305481 Facsimile (09) 4305517

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
NOTES - SHT 1 OF 2

Drawn:	JK	Approved:	
Date:	7-1-95	Project No:	94080
Chkd:	JFS	Drawing No:	N1
Scale:	AS SHOWN	Revn:	A

Revision	Description	By	Dated
A	ISSUED FOR CONSTRUCTION	JK	7.1.95

11. WALL FRAMING WELDING - GENERAL
    a) WELDING SHALL BE CONT. M.I.G. FILLET WELD USING GRADE E48 ELECTRODE. NOMINAL SIZE OF WELD TO BE THICKNESS OF MEMBERS JOINED U.O.N. FOR LENGTH OF WELD REQUIRED REFER TO THESE NOTES OR DETAILED DRAWINGS.
    b) BRACING STRAP WELDING TO BE GROUND SMOOTH WHERE WALL SHEETING IS SUBSEQUENTLY TO BE ADDED.
    c) ALL WELDS TO BE WIRE BRUSH CLEANED AND THEN PAINTED WITH "VESSEY" CARBO ZINC II OR EQUIVALENT ZINC RICH PAINT.

12. JOINT WELDING REQUIREMENTS
    a) EXTERNAL STUDS
       - 60mm EACH STUD AT EACH END
       (x 2 OR 3 FOR BOXED STUDS)
    b) INTERNAL STUDS
       - 45mm U.O.N. EACH STUD AT EACH END
    c) BOXED STUDS (INTERMITTENT WELDS)
       - 25mm BOTH SIDES AT TOP & BOTTOM PLATES NOGGING LEVEL AND 450 CTS IN BETWEEEN
    d) NOGGINS
       - 2 x 15mm WELD EACH END TO EVERY STUD
    e) BRACING - REFER DETAILS
    f) WINDOW AND DOOR HEAD TRUSSES
       - VERTICALS - 60mm EACH END
       - DIAGONALS - 80mm EACH END

13. BRACING
    WALLS - WELDED NOGGING AND STRAPS
    REFER DRAWING FOR DETAILED BRACING REQUIREMENTS.

14. BRICK CAVITY TIES TO WALL STUDS
    BRICK TIES TO BE 40 x 1.2 G300 "L" GALVANISED STEEL CAVITY WALL TIES WITH CRIMPED HORIZONTAL LEG BUILT INTO HORIZONTAL JOINTS.
    MAX. VERTICAL CTS - GENERALLY 4 CRS
    - AT OPENINGS 3 CRS
    MAX. HORIZONTAL CTS - 450 MAX.
    FIX VERTICAL LEG TO STUD FACE WITH 2 TEK No.8 x 16 HEX. HEAD SCREWS.

15. SCREWS
    SCREWS SHALL BE SELF TAPPING BUILDEX OR APPROVED EQUIVALENT TEKS (STEEL CONNECTION) OR TYPE 17 (TIMBER CONNECTION) AS NOTED. SELF TAPPING SCREWS ARE DESIGNATED "STS" ON THE DRAWINGS.

16. FRAME TO FRAME CONNECTIONS
    a) AT EXTERNAL WALL CORNERS - REFER DETAILS
    b) AT INTERSECTION INTERNAL TO EXTERNAL WALL - REFER DETAILS
    c) EXTERNAL WALL PANELS END TO END CONNECTION - REFER DETAILS

ROOF AND WALL CLADDING:

1. ROOF AND WALLS:
   LYSAGHT HI-TEN TRIMDEK COLORBOND 0.42 BMT SHEETING.
   COLOUR TO OWNER'S SPECIFICATION.
   SCREW FIX ALL ROOF SHEETING AT EVERY PURLIN/CREST LOCATION USING No.12-14x45 HIGRIP HI-TEKS, HEX HEAD "DEUTCHER" SELF DRILLING SCREWS (SDS).
   SCREW FIX ALL WALL CLADDING TO WALL GIRTS BY VALLEY FIXING USING No.10-16x16mm HEX HEAD S.D.S.
   PROVIDE EPDM SEALS TO ALL SCREW FIXINGS.

2. SUPPLY AND INSTALL GLASS FIBRE REINFORCED POLYESTER TRANSLUCENT SHEETING TO THE ROOF AND WALLS WHERE SHOWN. THE TRANSLUCENT SHEETING TO BE MANUFACTURED FROM FIRE RETARDED MATERIAL TO 2400 g.s.m. DENSITY WITH MATCHING PROFILE TO THE LYSAGHT TRIMDEK AND COLOURED LIGHT GREEN ALLOWING MINIMUM 50% LIGHT TRANSMITTANCE. INSTALLATION SHALL COMPLY WITH AS2424-PLASTICS BUILDING SHEETS - GENERAL INSTALLATION REQUIREMENTS.
   . PRE-DRILL OVERSIZE HOLES TO ALLOW FOR EXPANSION AND CONTRACTION OF SHEETS.
   . USE APPROPRIATE FIXING ASSEMBLY INCLUDING A 32mm WEATHERLOK SEAL TO ENSURE A FIRM, WATERTIGHT SEAL.
   . APPLY A PROTECTIVE FOAM STRIP BETWEEN SAFETY MESH AND FIBREGLASS SHEET AT EVERY PURLIN SUPPORT.
   . FOR ALL END LAPPING, APPLY 2 CONTINUOUS BEADS OF CLEAR NON-HARDENING SILICONE, OR A SELF ADHESIVE CLOSED CELL FOAM STRIP (3mm x 25mm) PLACED DIRECTLY OVER THE PURLIN AND BETWEEN THE TWO SHEETS BEING FIXED.
   . STORE ALL SHEETS IN A DRY AND FIRE SAFE AREA. DO NOT STORE ANY HEAVY MATERIALS ON THE SHEETS.

3. SUPPLY AND INSTALL JVR - "LOWLINE" HIGH CAPACITY CONTINUOUS RIDGE VENTILATOR WITH 915mm WIDE THROAT, MANUFACTURED FROM COLORBOND METAL, COLOURED TO MATCH THE ROOF SHEETING, COMPLETE WITH ALL FIXING BRACKETS AND A CENTRAL EXPANSION JOINT WHERE SHOWN.

4. SUPPLY AND INSTALL JVR - "LOWLINE" FIXED LOUVRES, MANUFACTURED FROM COLORBOND METAL, COLOURED TO MATCH THE WALL CLADDING.

5. FLASHINGS:
   ALL ROOF AND WALL FLASHINGS SHALL BE FORMED FROM 0.42mm BMT COLORBOND STEEL STRIP TO SHAPE AND SIZE AS SHOWN OR AS REQUIRED TO FULLY FLASH THE JOINED PARTS AND COLOURED TO MATCH THE SHEETING. FLASHING TO BE STITCH FASTENED TO CRESTS AT 300mm CTS BETWEEN PURLINS USING No.10-16x16mm HWF WITH EDPM SEALS.

6. PROVIDE PREFORMED DRIP MOULD OVER ALL DOOR AND LOUVRE OPENINGS.

7. SUPPLY AND INSTALL COLORBOND, METAL CLAD SLIDING DOORS COLOURED TO THE CLIENT'S REQUIREMENT. INSTALLED AND FIXED TO DETAIL.

8. SUPPLY AND INSTALL DUFEU - DELUX ZINCANNEAL METAL DOOR FRAMES 114 BACK OPENING. SCREWFIX WITH CONCEALED SCREWS THROUGH THE BACK OF THE STILES TO SUIT 2040 x 870 STANDARD DOOR. COMPLETE WITH GALVANISED BUTT HINGES WELDED TO FRAME. FLUSHSTOP FIXING HOLES, PRIME AS REQUIRED AND APPLY TOP COAT OF HIGH GLOSS ACRYLIC PAINT AFTER INSTALLATION, COLOURED TO THE CLIENT'S REQUIREMENTS.

9. SUPPLY AND INSTALL METAL CLAD, STEEL FRAMED PERSONNEL DOORS COMPLETE WITH LOCKWOOD STREAM LATCH SECURITY NIGHT LATCH, WITH THREE KEYS.
   PAINT TREAT STEELWORK AS SPECIFIED ABOVE. DOOR CLADDING TO BE COLOURED TO THE CLIENT'S REQUIREMENTS.

MASONRY WALLS:

1. ALL LOAD BEARING MASONRY WALLS TO BE CONSTRUCTED FROM APPROVED CLAY BRICKS WITH A MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF 15 MPa IN ACCORDANCE WITH AS3700-1988 SAA MASONRY CODE, ASSOCIATED DRAWINGS AND AS SPECIFIED BELOW.

2. ALL PIERS TO BE FULLY BONDED AND BUILT INTEGRALLY WITH ADJACENT WALLS.

3. THE MORTAR MIX FOR THE CONSTRUCTION OF ALL LOAD BEARING BRICKWORK SHALL BE 1 CEMENT : 1 LIME : 6 SAND WITHOUT ADMIXTURES.
   ALTERNATIVELY, A PREMIXED MORTAR MAY BE USED, HOWEVER, THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE SUPERVISING ENGINEER, LIME SHALL THEN NOT BE USED AND THE ALTERNATE MIX SHALL COMPRISE: COCKBURN CEMENT BRAND-"BRICKIES GREY", 1 (CEMENT MIX) TO 3 (SAND) BY VOLUME.
   MORTAR STRENGTH SHALL BE A MINIMUM F'c = 10 MPa @ 14 DAYS.
   CEMENT SHALL BE AN APPROVED BRAND OF NORMAL PORTLAND CEMENT.
   LIME SHALL BE AN APPROVED BRAND OF HYDRATED LIME.
   SAND SHALL BE CLEAN, SHARP AND CONTINUOSLY GRADED.

4. ALL MIXTURES SHALL BE MIXED IN A MECHANICAL MIXER FIRST CHARGED WITH WATER, AFTER WHICH THE CEMENT AND SAND SHALL BE ADDED AND MIXED FOR NOT LESS THAN TWO (2) MINUTES. THE LIME SHALL THEN BE ADDED AND MIXING CONTINUED FOR AS LONG AS NECESSARY TO OBTAIN A UNIFORM MASS, BUT IN NO CASE LESS THAN SIX (6) MINUTES.

5. ANY MORTAR CONTAINING CEMENT MUST BE USED WITHIN 2 HOURS AFTER THE ADDITION OF THE WATER AND ANY MORTAR NOT THEN USED SHALL BE DISCARDED. IT SHALL NOT BE RETEMPERED.

6. BRICKS SHALL BE LAID ON A FULL MORTAR BED, (WITH FROG, IF ANY, UPPERMOST) PURPENDS AND BEDJOINTS COMPLETELY FILLED WITH MORTAR.

7. BRICKS WHICH ARE MOVED AFTER INITIAL PLACEMENT SHALL BE RELAID IN FRESH MORTAR.

8. BRICKS MUST BE CUT USING A MASONRY SAW. BRICKS CUT WITH A BOLSTER WILL NOT BE PERMITTED IN LOAD BEARING BRICKWORK.

9. NO HORIZONTAL OR DIAGONAL CHASING OF LOAD BEARING BRICKWORK WILL BE PERMITTED WITHOUT WRITTEN AUTHORITY FROM THE SUPERVISING ENGINEER.

10. VERTICAL CHASING MAY BE PERMITTED PROVIDING THE SUPERVISING ENGINEER IS INFORMED OF ANY CHASING REQUIRED AND HIS APPROVAL OBTAINED BEFORE ANY WORK COMMENCES. CHASING CAN ONLY BE CARRIED OUT USING A MASONRY SAW. THE MAXIMUM DEPTH OF CUT MUST NOT EXCEED 20mm.

11. ALL SLEEVES REQUIRED FOR SERVICES SHALL BE PROVIDED DURING ERECTION OF THE BRICKWORK. CUTTING AWAY AFTER THE BRICKWORK HAS BEEN ERECTED WILL NOT BE TOLERATED.

12. ALL LOAD BEARING BRICKWORK SHALL BE REINFORCED HORIZONTALLY WITH GALVANISED MASONRY REINFORCING MA/BL50 IN THE BEDJOINT IMMEDIATELY BELOW ALL WINDOW OPENINGS AND ABOVE ALL DOOR, WINDOW OR OTHER OPENINGS.

13. ALL STEEL LINTELS BUILT INTO BRICK WALLS TO BE GALVANISED STEEL ANGLES SIZED IN ACCORDANCE WITH THE LINTEL SCHEDULE BELOW.

14. CAVITY TIES SHALL BE GALVANISED STEEL WIRE 3.2mm MINIMUM DIAMETER FORMED WITH DRIP GROOVE FACING DOWNWARD IN THE CAVITY.
    TIES SHALL BE SPACED AT 600mm HORIZONTAL AND 600mm VERTICALLY WITH EACH LEVEL STAGGERED ABOVE THE ONE BELOW. BUILD IN ADDITIONAL TIES WITHIN 150mm OF OPENINGS AND CONTROL JOINTS SO AS TO HALVE THE ABOVE SPACING.

15. NEW BRICKWORK SHALL BE TEMPORARILY BRACED AGAINST LATERAL LOADS OR OTHERWISE SUPPORTED DURING CONSTRUCTION TO ENSURE THAT NO ADVERSE OR UNSAFE CONDITIONS OCCUR IN THE BRICKWORK.

16. PROVISION SHALL BE MADE AS THE WORK PROCEEDS FOR ALL PARTITIONS, STRAPS, BEAMS PLATES, CAVITY TIES, ETC. WHICH MUST BE BUILT OR KEYED INTO THE BRICKWORK.

17. ALL FRESHLY LAID BRICKWORK SHALL BE PROTECTED FROM RAIN DURING ANY PERIOD OF INTERRUPTION OR AT THE END OF THE DAYS WORK.

18. TOP COURSE OF ALL LOAD BEARING BRICK WALLS TO BE FROM SOLID BRICKS.

19. UNLESS OTHERWISE NOTED, PLACE TWO LAYERS OF "SUPER ALCOR" OR APPROVED EQUIVALENT OVER ALL BEARING BRICK WALLS BEFORE PLACING CONCRETE.

20. MASONRY CONTROL JOINTS SHALL BE CONSTRUCTED AS DETAILED USING THE SPECIFIED SLIDING JOINT TIES WITH POLYETHELENE BACKING STRIP ACROSS THE WIDTH OF THE JOINT AND SEALED USING AN APPROVED POLYURETHANE SEALANT.

LINTEL SCHEDULE		
OPENINGS IN mm		STEEL ANGLES
	UP TO 1000	100 x 8 FLAT
OVER 1000	UP TO 1500	75 x 75 x 8
OVER 1500	UP TO 1800	90 x 90 x 8
OVER 1800	UP TO 2100	100 x 75 x 8
OVER 2100	UP TO 2400	125 x 75 x 8
OVER 2400	UP TO 2700	125 x 75 x 10
OVER 2700	UP TO 3100	150 x 90 x 8
OVER 3100		TO DETAILS SHOWN

DRAINAGE:

1. SUPPLY AND LAY STORMWATER SOAK PITS, MANHOLES AND PIPES TO THE DETAILS SHOWN ON THE DRAWINGS.
   SOAK PITS, MANHOLES AND PIPE SET OUT TO BE DONE AS SHOWN ON THE DRAWINGS.
   ANY VARIATIONS TO THE LAYOUT SHOWN MUST FIRST BE TO THE APPROVAL OF THE SUPERVISING ENGINEER.

2. ALL PIPES SHALL BE CLASS 'Y' AND/OR 'Z' AS SHOWN IN ACCORDANCE WITH AS4058 "PRECAST CONCRETE PIPES" WITH SPIGOTED AND SOCKET RUBBER RING JOINTS. PIPES MAY BE REINFORCED CONCRETE (RCP) OR FIBRE REINFORCED CEMENT (FRC) UNLESS OTHERWISE SHOWN.

3. LAY PIPES WITH SOCKETS FACING UPSTREAM AND TO LINE, LEVELS AND GRADE SHOWN ON THE DRAWINGS.

4. ALL PIPES SHALL BE CORRECTLY HANDLED USING WOVEN SLINGS, AND LAID, BEDDED, JOINTED AND BACKFILLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTION AND AS SPECIFIED HEREIN.

5. LAY ALL PIPES ON SAND BEDDING TO CLASS 'B' IN ACCORDANCE WITH ASCA33. EXCAVATE CLEARANCE UNDER SOCKETS SO PIPE IS BEDDED ALONG THE BARREL AND NOT RESTING ON THE SOCKET. REFER DETAIL. NOTE REQUIREMENT FOR COMPACTION OF FULL DEPTH OF BACKFILL.

6. DO NOT BACKFILL ANY PIPE TRENCHES UNTIL PIPEWORK IS INSPECTED AND APPROVED FOR BACKFILLING BY THE SUPERVISING ENGINEER.

7. AFTER APPROVAL, BACKFILL WITH CLEAN SELECTED SAND FILL IN LAYERS NOT EXCEEDING 75MM THICK UP THE SIDES OF THE PIPES UNTIL REACHING THE PIPE TOP. WATER AND COMPACT WITH A HAND HELD RAMMER.

   FOR REMAINDER OF TRENCH, BACKFILL WITH CLEAN SELECTED SAND FILL IN LAYERS NOT EXCEEDING 200 THICK AND COMPACT TO NOT LESS THAN 60% DENSITY INDEX. (NOT LESS THAN 8 BLOWS/300mm OF A PERTH STANDARD PENETROMETER - DO NOT PENETRATE THE PIPE).

8. DRAINAGE PITS AND MANHOLES SHALL BE PRECAST REINFORCED CONCRETE LINERS SET ONTO PRECAST OR INSITU CONCRETE BASES UNLESS OTHERWISE SHOWN. ALL PITS AND MANHOLES TO HAVE NOT LESS THAN 300mm EXTRA DEPTH BELOW DOWNSTREAM INVERT LEVEL.

9. SUPPLY AND INSTALL PRECAST OR IN-SITU CONCRETE TRAFFICABLE LIDS IN THE PAVEMENT AREAS COMPLETE WITH RAISED GALVANISED GRATES INSTALLED AS DETAILED.
   NON TRAFFICABLE LIDS MAY BE USED IN THE NON PAVED LOCATIONS.
   BED ALL CONCRETE COVERS ON A 3:1 SAND/CEMENT MORTAR BED JOINT.

10. ALL PIPES SHALL HAVE NOT LESS THAN 600mm COVER TO TOP OF BARREL U.N.O.

PAVEMENT:

1. CONSTRUCT NEW ROAD PAVEMENT OVER PREPARED SUBGRADE WITH CONCRETE KERBS AS SHOWN IN ACCORDANCE WITH ALL ASSOCIATED DESIGN DRAWINGS.

2. EXCAVATE AS REQUIRED, SUPPLY AND INSTALL NEW CONCRETE SOAK PITS, MANHOLES AND DRAIN PIPES AS SHOWN. BACKFILL AROUND SIDES OF PITS AND COMPACT IN LAYERS (250mm MAX LOOSE THICKNESS) TO UNDERSIDE OF NEW PAVEMENT.

3. REMOVE ALL VEGETATION, NON PERMANENT FIXTURES AND OTHER OBSTRUCTIONS. BOX OUT AND GRADE TO LEVEL THE EXISTING SUBGRADE MATERIAL AS REQUIRED FOR THE NEW BITUMEN PAVEMENT.

4. PREPARE THE NATURAL SUBGRADE, SPREAD CUT TO FILL, WATER BLEND TO OPTIMUM MOISTURE CONTENT, COMPACT AND GRADE TO FINAL LEVELS TO THE SOFFIT OF THE PROPOSED NEW BASE COURSE AND CONCRETE SLAB. SUBGRADE TO BE COMPACTED TO ACHIEVE AN AVERAGE DENSITY INDEX OF 70% AS DEFINED BY AS1289 E6.1-1981 USING A MEDIUM WEIGHT VIBRATING SMOOTH STEEL ROLLER 1.8m WIDTH AND NOT LESS THAN 5+ MASS.
   COMPACTION TO BE TESTED USING A PERTH PENETROMETER TO 1.15m TOTAL DEPTH FIRST CALIBRATED FOR 70% AVERAGE DENSITY INDEX FOR THE SUBGRADE MATERIAL.

5. TO THE SURFACE OF THE NEW PAVED AREAS APPLY A SOLUTION OF WEED CONTROL HERBICIDE (AMITRAL ATRAZINE OR OTHER APPROVED) TO THE CORRECT DOSAGE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS.

6. CONSTRUCT THE LIMESTONE BASE COURSE TO THE GRADES AND LEVELS TO -0.04 BELOW FINISHED PAVEMENT LEVEL WITH THE CORRECT FALLS AS SHOWN. ENSURE THAT NO POOLING CAN OCCUR.
   THE BASE COURSE IS TO BE FROM SELECT LIMESTONE, SUPPLIED, PLACED, WATER BLENDED, SPREAD, COMPACTED AND FINISHED IN ACCORDANCE WITH THE SPECIFICATION BELOW AND TO THE NOMINAL SURFACE LEVELS SHOWN ON THE DRAWING.
   THE LIMESTONE SHALL COMPLY WITH THE FOLLOWING MINIMUM REQUIREMENTS:
   . CALCIUM CARBONATE NOT LESS THAN 60%.
   . LOS ANGELES ABRASION TEST LOSS NOT MORE THAN 60% BY WEIGHT.
   . GRADING TO FALL WITH THE FOLLOWING ENVELOPE.

AS SIEVE	% PASSING (BY WEIGHT)
75 mm	100
19 mm	55 - 80
2.36 mm	30 - 50

   . COMPACTION AT OPTIMUM MOISTURE CONTENT TO A MINIMUM DENSITY RATIO OF 95% MODIFIED DRY DENSITY RATIO.

7. BOX OUT AS REQUIRED, SUPPLY, PLACE, FINISH AND CURE THE EXTRUDED CONCRETE KERBS AS SHOWN. SAW CUT ALTERNATE CONSTRUCTION JOINTS WITHIN 24 HOURS OF INITIAL SET. ALLOW CONCRETE TO CURE AND DRY THEN SEAL ALL EXPANSION JOINTS.

8. PROVIDE ALL NECESSARY COVERS AND SHIELDING TO PROTECT ALL EXISTING BUILDING COMPONENTS AND CONCRETE SURFACES THEN JUST PRIOR TO PLACING THE THICKLIFT ASPHALT APPLY A BITUMINOUS TACK COAT TO THE FINISHED SURFACE OF THE LIMESTONE BASE COURSE.

9. SUPPLY, LAY, SPREAD, ROLL AND COMPACT A SINGLE LAYER OF HOT MIX BITUMINOUS "THICKLIFT" ASPHALT ACROSS THE WHOLE OF THE SURFACE TO BE PAVED.

ACS Consulting Chartered Engineers
Australian Civil and Structural Pty Ltd
201 High Street, Fremantle
PO Box 692, Fremantle
Western Australia 6160
Telephone (09) 4305481
Facsimile (09) 4305547

SEAGATE STRUCTURAL ENGINEERING PTY.LTD.
WORKSHOP AND OFFICES FACILITIES
NOTES - SHT 2 OF 2

Drawn	JK	Addendum	
Dated	7-1-95	Project No.	94080
Chkd	JFS	Drawing No.	N2
Scales	AS SHOWN	Rev.	A