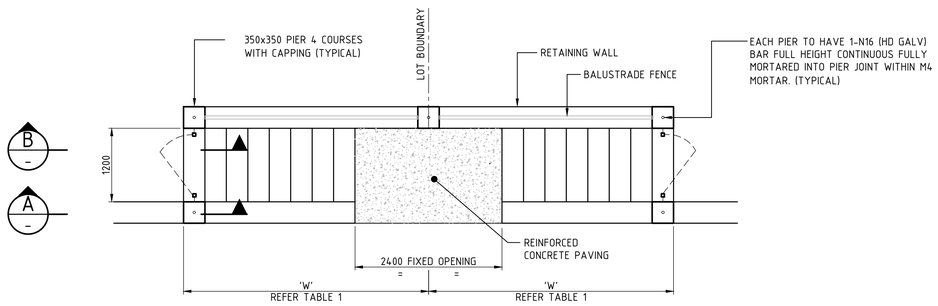
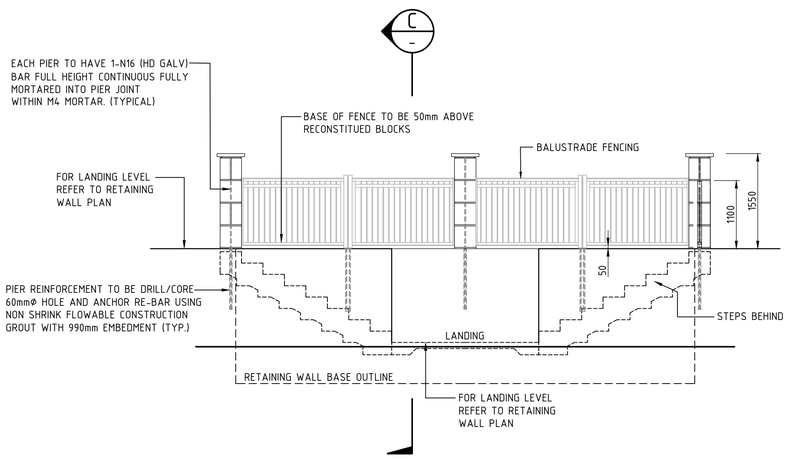
FOR INFORMATION ONLY

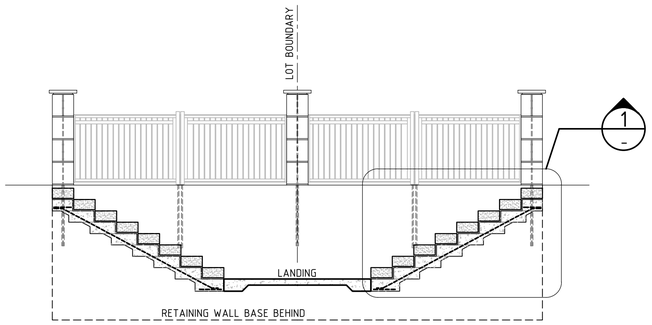


PLAN

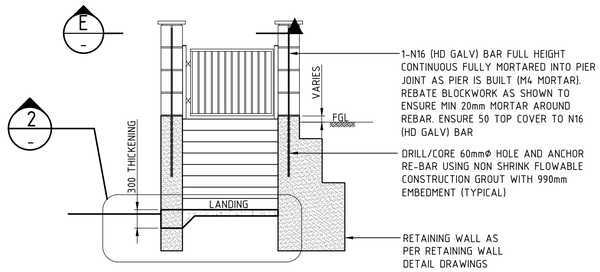
TYPICAL RETAINING WALL STEP ACCESS - DOUBLE



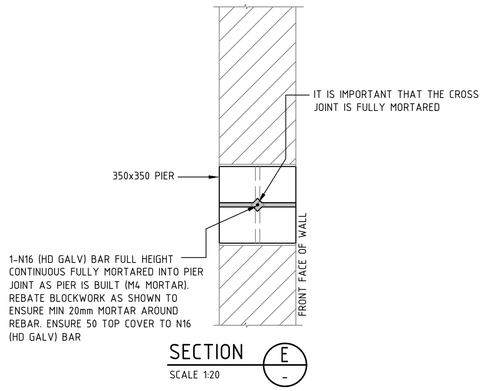
ELEVATION A
SCALE NTS



SECTION B
NTS



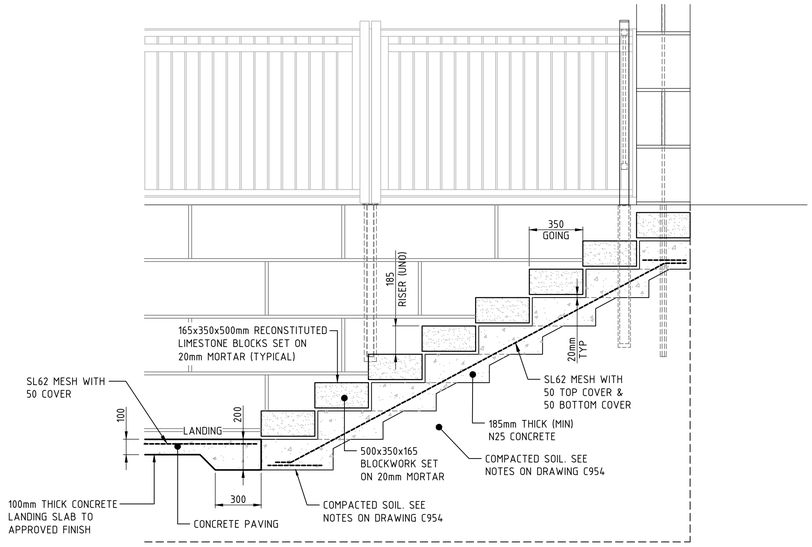
SECTION C
NTS



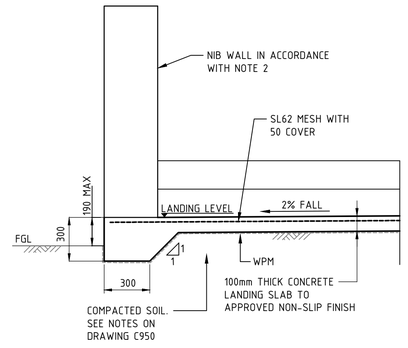
SECTION E
SCALE 1:20

TYPICAL PLAN ON PIER DETAIL

TABLE 1	
NUMBER OF STEPS	WIDTH 'W'
2	1900
3	2250
4	2600
5	2950
6	3300
7	3650
8	4000
9	4350



DETAIL 1
NTS



DETAIL 2
NTS

GENERAL NOTES:

1. REFER TO DRAWING JDS212023.0_C901/C902 AND C954-C957 FOR GENERAL NOTES.
2. ALL RETAINING WALLS, PIERS, FENCE POSTS AND BALUSTERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH JDS212023.0_C901/C902 AND C954-C957
3. ALL EXPOSED MORTAR JOINTS SHALL MATCH BLOCK COLOUR.
4. ALL MORTARED JOINTS SHALL BE TOOLED FINISHED.
5. REFER TO RELEVANT SUB-DIVISIONAL STAGE RETAINING WALL DRAWINGS FOR STAIR LOCATIONS AND STEP INFORMATION.
6. ALL WORKS SHALL BE CONSTRUCTED TO WORKSAFE PRACTICES TO ENSURE SAFETY TO PERSONNEL AND STRUCTURES

EARTHWORKS:

10. SITE CLASSIFICATION - CLASS 'A'
11. COMPACT THE SOIL UNDER FOOTINGS, SLABS ON GROUND & STAIRS TO 8 BLOWS FOR 150-450mm, 9 BLOWS FOR 450-700mm AND 11 BLOWS FOR 750-1050mm TESTED USING A STANDARD PERTH SAND PENETROMETER FOR A DEPTH OF AT LEAST 750mm BELOW THE FOUNDING LEVEL OF THEM OR TO A MINIMUM OF 95% MODIFIED MAXIMUM DRY DENSITY.
12. BACKFILL MATERIAL SHALL CONSIST OF COMPACTED CLEAN SAND THAT CAN BE TESTED USING A STANDARD PERTH PENETROMETER.

RECONSTITUTED LIMESTONE:

20. COMPLY WITH AS 3700
21. RECONSTITUTED LIMESTONE UNITS SHALL HAVE A MINIMUM DRY DENSITY OF 1750Kg/m^3 AND A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 5.0 MPa.
22. RECONSTITUTED LIMESTONE STAIR UNITS SHALL BE LAID ON A 100mm MINIMUM THICK BED OF MORTAR. MORTAR MIX SHALL BE M3 MORTAR.
23. ALL JOINTS SHALL BE FULLY MORTARED WITH M3 MORTAR.
24. ALL RISERS FOR STAIRS TYPES 1 AND 2 SHALL BE UNIFORM FOR EACH SPECIFIC LOT. RISERS SHALL BE 185mm HIGH (UNO ON RELEVANT STAIR AND FENCING PLAN). THE LANDING HEIGHT MAY VARY TO A MAXIMUM HEIGHT OF 190mm
25. ALL FACE BLOCKS TO BE BGC 'NATURAL EARTH' RECONSTITUTED LIMESTONE BLOCKS

CONCRETE:

30. COMPLY WITH AS 3600.
31. BUILD FORMWORK FROM DRAWINGS PROVIDED. CHECK FOR BUILT IN FIXINGS, ELECTRICAL FITTINGS AND HYDRAULICS.
32. COMPACT CONCRETE USING APPROVED INTERNAL VIBRATORS.
33. CURE ALL CONCRETE FOR 7 DAYS USING AN APPROVED CURING COMPOUND OR REGULARLY MOISTENED PVC MEMBRANE.
34. ALL CONCRETE SHALL BE SUPPLIED BY AN APPROVED PRE-MIX COMPANY AS FOLLOWS -

	GRADE	SLUMP	MAX. AGG.
SLABS ON GROUND	N25	80mm	20mm
PAD FOOTINGS	N25	80mm	20mm

35. NOTIFY THE SUPERINTENDENT AT LEAST 24 HOURS BEFORE PLACING CONCRETE.

STEELWORK:

40. COMPLY WITH AS 4100 AND AS/NZS 1554.1
41. THE FENCE AND POSTS ARE TO BE IN ACCORDANCE WITH CURRENT BCA AND RELEVANT AUSTRALIAN STANDARDS.
42. SITE CHECK ALL DIMENSIONS.
43. ALL ADHESIVE ANCHORS, BOLTS, NUTS, WASHERS AND SCREWS SHALL BE HOT DIPPED GALVANISED.
44. ALL STEELWORK SHALL BE HOT DIPPED GALVANISED IN ACCORDANCE WITH AS/NZS 4680 & AS/NZS 4792. IN ADDITION, EXPOSED STEELWORK SHALL BE POWDERCOATED, REFER TO SPECIFICATIONS.
45. COAT ALL STEELWORK BELOW TOP OF WALL WITH 2 COATS OF DUREMAX GPE (MIN DFT 250 MICRONS) OR SIMILAR APPROVED.
46. 'FULLY WELDED' DENOTES FULL STRENGTH BUTT WELDS OR 5 CFW.

REV	DATE	DRAWN	CHECKED	APPROVED	
0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
C	21.12.22	BVS	BG		RE-ISSUED FOR STRUCTURAL CERTIFICATION
B		MI			ISSUED FOR STRUCTURAL CERTIFICATION
A	26.08.22	VL	RR	BSS	ISSUED FOR COUNCIL APPROVAL

NOTE
This drawing shall be preliminary only until it is issued for Construction.

Certified Quality System to ISO 9001

JDSi CONSULTING ENGINEERS
Level 1, 432 Murray Street, Perth WA 6000
P: (08) 9227 0595 F: (08) 9227 8617

CLIENT: DevelopmentWA

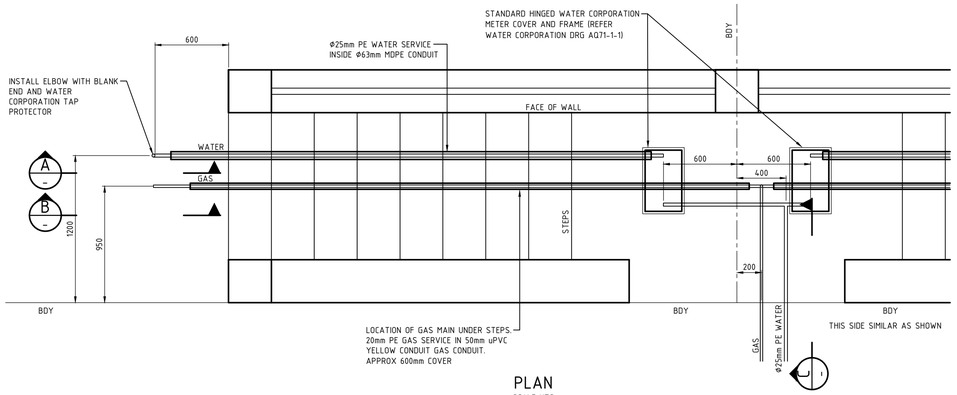
PROJECT: JINDOWIE ESTATE, YANCHEP

DRAWING TITLE: STANDARD STAIR DETAILS

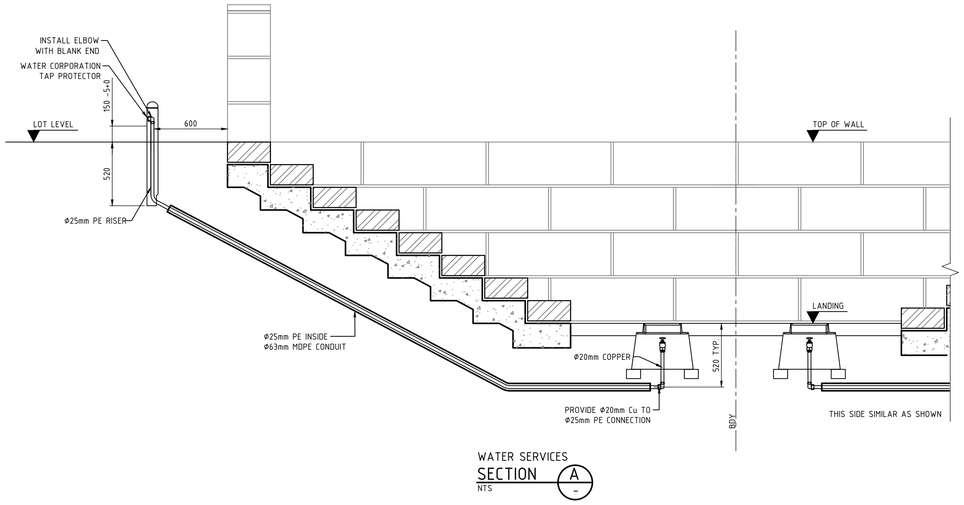
DRAWN: V. LE		WAPC No.: 161117	
DESIGNED: V. LE		SCALE @ A1: AS SHOWN	
PROJECT MANAGER: S. FOLEY	DATUM: AHD	CO-ORDS: PCG-95	
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C901	REVISION: 0	

Plotted By: micanovski Plot Date: 14/02/23 - 10:39 Cad File: I:\JDS212023\JDS212023.0\02 CIVIL\Drawings\JDS212023.0_C901.dwg

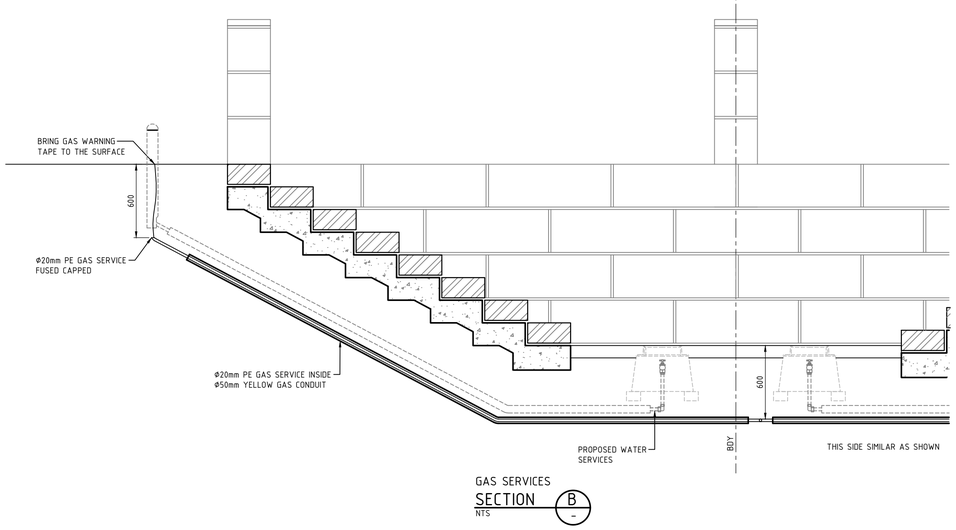
FOR INFORMATION ONLY



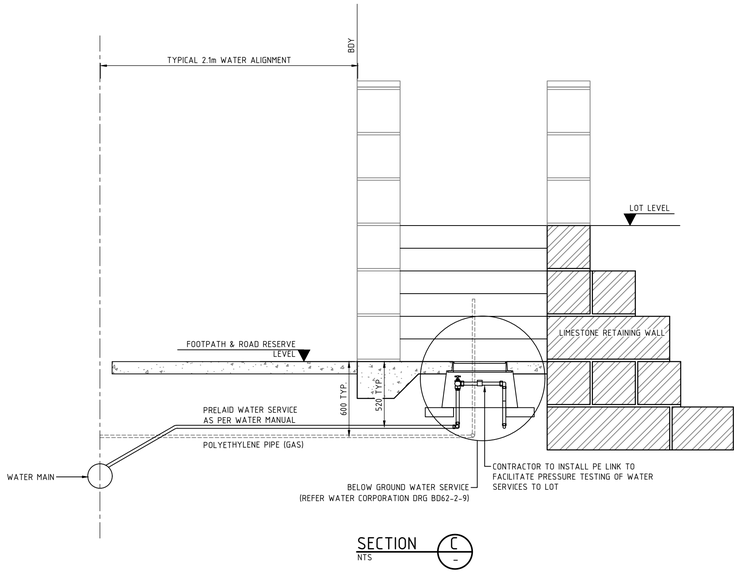
PLAN
SCALE NTS



WATER SERVICES
SECTION A
NTS



GAS SERVICES
SECTION B
NTS



SECTION C
NTS

REV	DATE	DRAWN	CHECKED	APPROVED	
0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
C	21.12.22	BVS	BG		RE-ISSUED FOR STRUCTURAL CERTIFICATION
B		MI			ISSUED FOR STRUCTURAL CERTIFICATION
A	26.08.22	VL	RR	BSS	ISSUED FOR COUNCIL APPROVAL

NOTE
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Certified Quality System to ISO 9001

JDSi
CONSULTING ENGINEERS
Level 1, 432 Murray Street, Perth WA 6000
P: (08) 9227 0595 F: (08) 9227 8617

CLIENT: DevelopmentWA

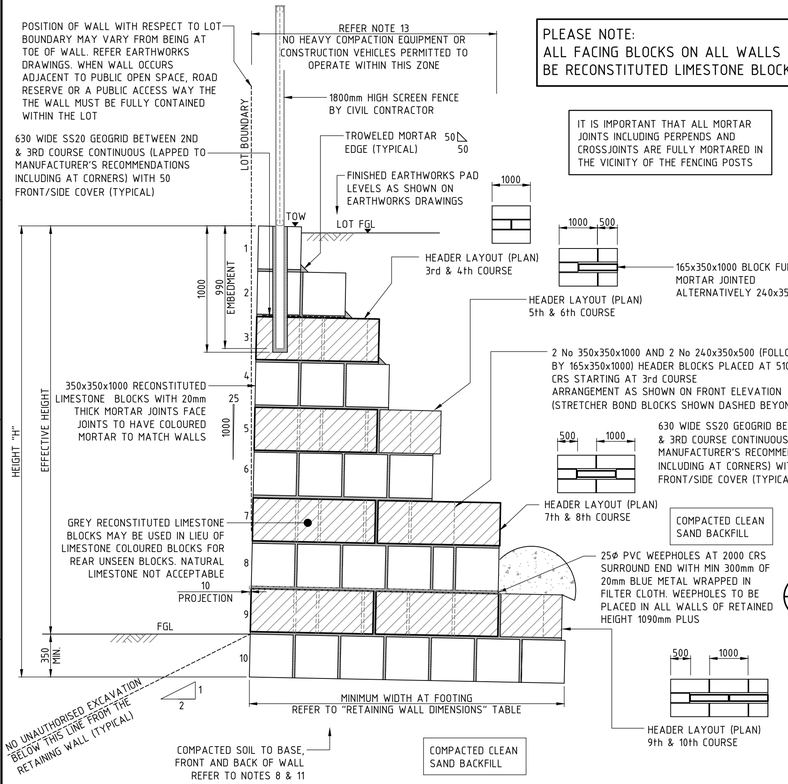
PROJECT: JINDOWIE ESTATE, YANCHEP

DRAWING TITLE: WATER IN STAIR LANDING DETAIL

DRAWN: V. LE		WAPC No.: 161117	
DESIGNED: V. LE		SCALE @ A1: AS SHOWN	
PROJECT MANAGER: S. FOLEY		DATUM: AHD	CO-ORDS: PCG-96
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C902		REVISION: 0

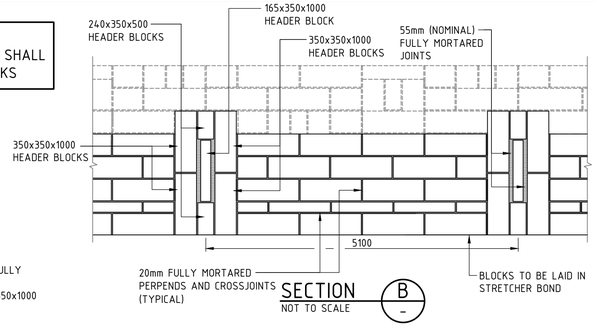
PLEASE NOTE:
ALL FACING BLOCKS ON ALL WALLS SHALL BE RECONSTITUTED LIMESTONE BLOCKS

IT IS IMPORTANT THAT ALL MORTAR JOINTS INCLUDING PERPENDS AND CROSSJOINTS ARE FULLY MORTARED IN THE VICINITY OF THE FENCING POSTS

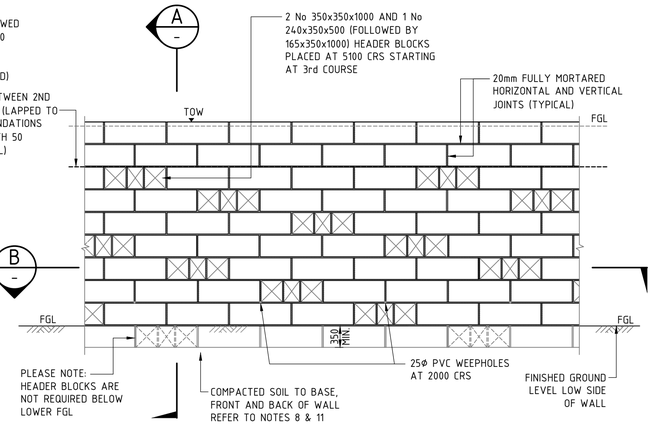


RETAINING WALL GREATER THAN 740mm HIGH

SECTION A – NOT TO SCALE



SECTION B – NOT TO SCALE



TYPICAL RECONSTITUTED LIMESTONE RETAINING WALL ELEVATION

NOT TO SCALE

GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE CONTRACT DRAWINGS AND SPECIFICATION
2. ALL RECONSTITUTED LIMESTONE BLOCKS SHALL BE FREE FROM VOIDS AND EXCESSIVE BONEY AREAS
3. RECONSTITUTED LIMESTONE SHALL HAVE A MINIMUM DRY DENSITY OF 1750 kg/m^3 AND AN UNCONFINED CRUSHING STRENGTH OF 5.0 MPa MINIMUM
4. GREY RECONSTITUTED LIMESTONE BLOCKS MAY BE USED IN LIEU OF LIMESTONE COLOURED BLOCKS FOR REAR UNSEEN BLOCKS
5. MORTAR CLASS SHALL BE M3 UNLESS OTHERWISE DETAILED COMPLYING WITH ALL THE RELEVANT REQUIREMENTS OF AS 3700.
6. ALL JOINTS SHALL BE FULLY MORTARED INCLUDING PERPENDS AND CROSSJOINTS. WATER CONTENT IN MORTAR MUST BE CONTROLLED TO MINIMISE EXCESSIVE SHRINKAGE CRACKING.
7. ALL TOPSOIL, VEGETATION AND DELETERIOUS MATTERS SHALL BE REMOVED FROM THE FOUNDATION AREA
8. COMPACT THE SOIL UNDER WALLS TO 8 BLOWS FOR 150-450mm, 9 BLOWS FOR 450-700mm AND 11 BLOWS FOR 750-1050mm TESTED USING A STANDARD PERTH SAND PENETROMETER FOR A DEPTH OF AT LEAST 750mm BELOW THE FOUNDING LEVEL OF THE WALLS OR TO A MINIMUM OF 95% MODIFIED MAXIMUM DRY DENSITY
9. ALL BACKFILLING SHALL BE CARRIED OUT USING MATERIAL WHICH SHALL GENERALLY BE SANDY IN NATURE AND FREE FROM LARGE PIECES OF ROCK TO THE EXTENT THAT THE MATERIAL CAN BE COMPACTED USING A VIBRATING PLATE COMPACTOR TO MEET THE REQUIREMENTS OF THE SPECIFICATION
10. IN ALL CASES THE BACKFILL MATERIAL SHALL BE SELECTED SUCH THAT ONCE COMPACTED THE STANDARD OF COMPACTION CAN BE MEASURED USING A STANDARD PERTH PENETROMETER
11. COMPACTION OF THE BACKFILL MATERIAL TO THE FRONT AND BACK OF THE WALLS SHALL BE IN ACCORDANCE WITH THE SPECIFIED BACKFILL COMPACTION REQUIREMENTS OF 8 BLOWS FOR 150-450mm, 9 BLOWS FOR 450-700mm AND 11 BLOWS FOR 750-1050mm TESTED USING A STANDARD PERTH SAND PENETROMETER FOR A DEPTH OF AT LEAST 750mm BELOW THE FOUNDING LEVEL OF THE WALLS OR TO A MINIMUM OF 95% MODIFIED MAXIMUM DRY DENSITY
12. PRIOR TO PRACTICAL COMPLETION THE CONTRACTOR SHALL PROVIDE WRITTEN CERTIFICATION FROM A CERTIFIED PRACTICING STRUCTURAL ENGINEER THAT THE WALL CONSTRUCTION AND BACKFILL COMPACTION HAS BEEN CARRIED OUT IN ACCORDANCE WITH THESE DRAWINGS, THE SPECIFICATION AND ANY REQUIREMENTS SHOWN ON THE BUILDING LICENCE
13. NO HEAVY COMPACTION EQUIPMENT SHALL OPERATE WITHIN 1200mm FROM THE FACE OF THE WALL FOR H < 800mm AND WITHIN 2000mm FROM THE FACE OF THE WALL FOR H > 800mm
14. PROVIDE CONTROL JOINTS (CJ) WITHIN THE RETAINING WALLS WHERE NOTED BELOW:
    - WHERE 'STRAIGHT' RUNS OF WALLS EXCEED THE SPACING OF 20 METERS
    - WHERE THE DIRECTION OF A RETAINING WALL CHANGES. A CJ SHALL BE PROVIDED AT A DISTANCE NO GREATER THAN THE BASE WIDTH OF THE WALL
    - WHERE THE WALL HEIGHT STEPS >700mm
    - WHERE FENCE POSTS ARE LOCATED WITHIN 1000mm FROM A CJ, IF REQUIRED WITHIN THEN INSTALL POST BOTH SIDES OF CJ WITHIN 350mm
15. THE CONTROL JOINTS SHALL BE CONSTRUCTED AS DETAILED ELSEWHERE IN THE DOCUMENTS
16. COMPLETED THICKNESS OF THE RETAINING WALLS SHALL BE OF A THICKNESS NO LESS THAN THE MINIMUM PROFILE DETAILED ON THIS DRAWING
17. ALL RETAINING WALLS HAVE BEEN DESIGNED FOR A HORIZONTAL BACKFILL SLOPE – ANY OTHER CIRCUMSTANCES SHALL BE ASSESSED INDIVIDUALLY BY A CERTIFIED PRACTICING STRUCTURAL ENGINEER
18. ALL RETAINING WALLS SHALL HAVE STAGGERED INTERLOCKING BLOCKS COMMENCING AT THE THIRD COURSE DOWN FROM TOP OF WALLS AS DETAILED ON THIS DRAWING
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CERTIFICATION OF THE RECONSTITUTED LIMESTONE BLOCK RETAINING WALLS BEING AS-CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SHALL BE RESPONSIBLE FOR THE APPOINTMENT OF A CERTIFIED PRACTICING STRUCTURAL ENGINEER TO PROVIDE A LETTER OF CERTIFICATION FOR THE AS-CONSTRUCTED RECONSTITUTED LIMESTONE BLOCK RETAINING WALLS AT PRACTICAL COMPLETION
20. ALL VISIBLE RECONSTITUTED LIMESTONE (INCLUDING THE FRONT, TOP AND REAR OF A WALL) SHALL BE FLUSH POINTED WITH MATCHING COLOURED M4 MORTAR
21. RETAINING WALL HAS BEEN DESIGNED ACCORDING TO AS 4678-2002 (INCORPORATING AMENDMENT NO.1)
    - 21.1. STRUCTURE CLASSIFICATION IS CLASS B
    - 21.2. CLASS II CONTROLLED FILL
    - 21.3. SITE FACTOR IS LESS THAN 1.1 (EARTHQUAKE)

ANTI-GRAFFITI REQUIREMENTS

30. ALL RETAINING WALLS SHALL BE ANTI-GRAFFITI COATED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
31. AS-CONSTRUCTED RECORD OF ANTI-GRAFFITI COATING SHALL BE PROVIDED AT PRACTICAL COMPLETION
32. CLEANING SPECIFICATION SHALL BE PROVIDED AT PRACTICAL COMPLETION
33. WARRANTY CERTIFICATE SHALL BE PROVIDED AT PRACTICAL COMPLETION

FENCING NOTES

40. WHERE FENCING IS REQUIRED TO BE USED ON TOP OF THE RECONSTITUTED LIMESTONE BLOCK RETAINING WALLS, THE FENCING SHALL NOT BE HIGHER THAN 1800mm
41. WHERE FENCING IS REQUIRED TO FIX OVER THE TOP OF THE RECONSTITUTED LIMESTONE BLOCK RETAINING WALL, THE FENCING SHALL BE STRUCTURALLY CONNECTED INTO THE RECONSTITUTED LIMESTONE BLOCK WALL AS DETAILED ON THESE DRAWINGS
42. WHERE FENCING IS TO BE PROVIDED, THE SPACING OF THE STRUCTURAL CONNECTIONS BETWEEN THE RECONSTITUTED LIMESTONE BLOCK RETAINING WALL AND THE NEW FENCE SHOULD NOT BE MORE THAN 2350mm CENTRES
43. IF THE SPACING OF THE CONNECTIONS HAS TO BE INCREASED, THEN THE CONNECTION AND STRUCTURAL ADEQUACY OF THE WALL SHALL TO BE ASSESSED AND DESIGNED BY A PRACTICING STRUCTURAL ENGINEER TO ENSURE NO LOCAL FAILURES OR INSTABILITY CERTIFIED OF THE WALL
44. THE 1800mm HIGH FENCE POSTS SHALL BE PLACED IN 120mm DIAMETER CORED HOLES WHICH EXTEND 260mm INTO THE THIRD COURSE
45. THE 1050mm HIGH OPEN FENCING BALUSTERS SHALL BE PLACED IN 80mm DIAMETER CORED HOLES WHICH EXTEND 160mm INTO THE THIRD COURSE
46. THE FENCE POSTS AND BALUSTERS SHALL BE PLACED CENTRAL TO THE TOP ROW OF BLOCKS IN PLAN. AN APPROVED NON-SHRINK FLOWABLE CONSTRUCTION GROUT eg. CONBEXTRA GP FROM PARCHEM OR SIKA GROUT GP FROM SIKA SHALL BE USED TO ANCHOR THE FENCE POSTS INTO THE CORED HOLES. ALTERNATIVELY THE CORED HOLES SHALL BE THOROUGHLY CLEANED AND FULLY FILLED WITH M4 MORTAR TO WITHIN 25mm FROM TOP OF THE HOLES PRIOR TO INSERTING THE FENCING POSTS TO THEIR CORRECT HEIGHT AND ALIGNMENT. THE TOP OF THE HOLES SHALL BE TOPPED UP WITH MATCHING COLOURED M4 MORTAR.

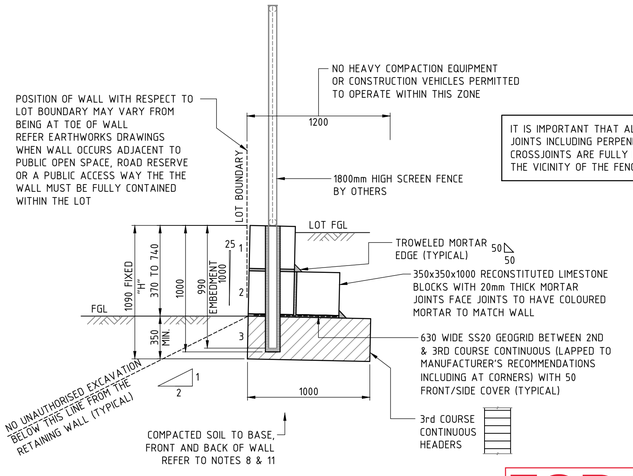
SAFETY

50. ALL RETAINING WALLS SHALL BE CONSTRUCTED TO WORKSAFE PRACTICES TO ENSURE SAFETY TO PERSONNEL AND STRUCTURES
51. DURING CONSTRUCTION THE CONTRACTOR SHALL INSTALL A 3 STRAND STAR PICKET FENCE TO ALL RETAINING WALLS GREATER THAN 1000mm HIGH. PICKETS SHALL BE CAPPED AND PIECES OF YELLOW SURVEY RIBBON SHALL BE ATTACHED TO THE TOP STRAND AT 1000mm CENTRES REFER TO DETAILS ON THESE DRAWINGS
52. THE CONTRACTOR SHALL INSTALL TEMPORARY WARNING SIGNS AS NECESSARY. REFER TO SPECIFICATIONS.

RECONSTITUTED LIMESTONE PIER NOTES

60. ALL RECONSTITUTED LIMESTONE PIERS HIGHER THAN 720mm SHALL BE CENTRALLY REINFORCED WITH A HOT DIPPED GALVANISED N10/N12/N16 BAR AS DETAILED ON THE DRAWINGS.
61. THE HOT DIPPED GALVANISED STARTER BARS SHALL BE ANCHORED INTO THE RECONSTITUTED LIMESTONE WALL BELOW WITHIN A 60ø CORED HOLE WHICH SHALL BE THOROUGHLY CLEANED PRIOR TO INSTALLING AN APPROVED NON-SHRINK FLOWABLE CONSTRUCTION GROUT eg. CONBEXTRA GP FROM PARCHEM OR SIKA GROUT GP FROM SIKA AND THE STARTER BAR WHICH SHALL HAVE AN EMBEDMENT DEPTH OF 900mm. IF THE PIERS ARE CONSTRUCTED ONTO A REINFORCED CONCRETE FOOTING, THE CENTRALLY LOCATED STARTER BAR SHALL BE DRILLED AND EPOXIED INTO THE FOUNDING FOOTING USING HILTI HY200 ADHESIVE OR SIMILAR APPROVED WITH A MINIMUM EMBEDMENT OF 200mm.
62. THE CENTRALLY LOCATED N10/N12/N16 PIER REINFORCEMENT SHALL BE FULLY EMBEDDED WITHIN THE M4 PERPEND JOINTS/NOTCHED RECESSES/CORED HOLES AS DETAILED ON THE DRAWINGS. IT IS IMPORTANT THAT THE REINFORCEMENT IS FULLY BONDED TO THE RECONSTITUTED LIMESTONE VIA THE M4 MORTAR JOINT/FILL.

IT IS IMPORTANT THAT ALL MORTAR JOINTS INCLUDING PERPENDS AND CROSSJOINTS ARE FULLY MORTARED IN THE VICINITY OF THE FENCING POSTS



RETAINING WALL 370mm TO 740mm HIGH

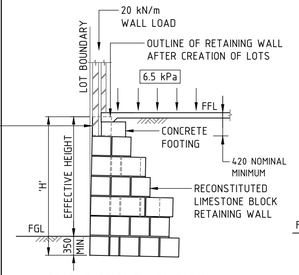
NOT TO SCALE

TOP COURSE BLOCKS SHALL SUBSEQUENTLY BE REMOVED BY LOT OWNERS TO ENABLE STRIP FOOTING, SLAB ON GROUND AND EXTERNAL LEAF OF BRICKWORK TO BE CONSTRUCTED AS INDICATED

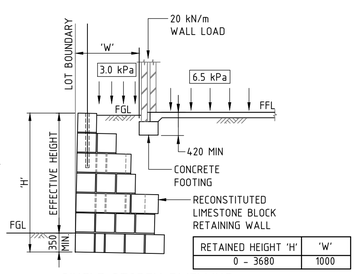
RETAINING WALL DIMENSIONS		
COURSE No.	HEIGHT "H"	MIN WIDTH AT COURSE
1	350	350
2	720	720
3	1090	905
4	1460	1090
5	1830	1275
6	2200	1460
7	2570	1645
8	2940	2015
9	3310	2385
10	3680	2570

FOR INFORMATION ONLY

DESIGN LOADS SUMMARY AND SPECIAL CONDITIONS

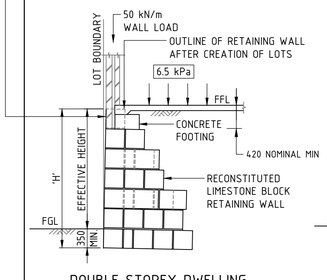


SINGLE STOREY DWELLING – ON BOUNDARY

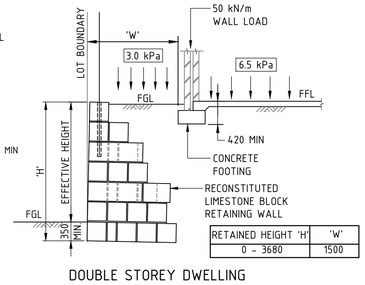


RETAINED HEIGHT 'H'	'W'
0 – 3680	1000

SINGLE STOREY DWELLING – OFF BOUNDARY



DOUBLE STOREY DWELLING – ON BOUNDARY



RETAINED HEIGHT 'H'	'W'
0 – 3680	1500

DOUBLE STOREY DWELLING – OFF BOUNDARY

DESIGN PARAMETERS

EFFECTIVE SOIL FRICTION ANGLE (ϕ)	32°
DENSITY OF BACKFILL SOIL (γ)	18kN/m^3
FRICTION ANGLE BETWEEN RETAINING STRUCTURE AND SOIL (δ)	30°

WIND LOADINGS FOR RETAINING WALLS TAKEN AS

TERRAIN CATEGORY	2.5
REGION	A1

NOTES

1. SITE CLASSIFICATION – CLASS 'A' FOLLOWING EARTHWORKS TO GEOTECHNICAL SPECIFICATION.
2. ALL BLOCKS SHALL BE RECONSTITUTED LIMESTONE WITH A MINIMUM DRY DENSITY OF 1750 kg/m^3 AND AN UNCONFINED COMPRESSIVE STRENGTH OF 5.0 MPa MINIMUM
3. THE DOCUMENTED WALL PROFILES HAVE ALSO BEEN DESIGNED FOR THE FOLLOWING LOAD CASES:
   - 3.1. 5 kPa SURCHARGE TO BACK OF WALL PLUS TC2.5 WIND REGION A1 WIND LOADING TO AS/NZS 1170.2 ON AN 1800mm HIGH FENCE ON TOP OF WALL
   - 3.2. 5 kPa SURCHARGE TO BACK OF WALL PLUS BALUSTRADE LOADING TO AS/NZS 1170.1
4. FOR ANY OTHER LOAD CASES CERTIFICATION MUST BE OBTAINED FROM A CERTIFIED PRACTICING STRUCTURAL ENGINEER
5. SURCHARGE LOADS TO THE BACK OF WALLS DURING CONSTRUCTION MUST NOT EXCEED THE ALLOWABLE SURCHARGE LOADS INDICATED ABOVE
6. DO NOT BACKFILL AND COMPACT SAND FILL BEHIND WALLS UNTIL THE LAST BLOCKS LAID ARE AT LEAST 5 DAYS OLD
7. USE ONLY LIGHT COMPACTION EQUIPMENT (PLATE COMPACTORS) WITHIN 'H' OF THE WALL
8. SPECIAL PRECAUTIONS ARE REQUIRED IN THE SELECTION OF TREES AND SHRUBS WITHIN A DISTANCE EQUIVALENT TO THE HEIGHT OF THE RETAINING WALL TO AVOID DAMAGE FROM ROOT IMPOSED LOADS (SEEK PROFESSIONAL ADVICE IF NECESSARY)
9. NO HEAVY COMPACTION EQUIPMENT OR CONSTRUCTION VEHICLES SHALL BE OPERATED BEHIND THE RETAINING WALLS – REFER TO EXCLUSIONS ZONES NOMINATED ON SECTIONS
10. ALL TREES SHALL BE MAINTAINED TO AVOID IMPACT LOADS ON FENCES WHICH MAY BE TRANSFERRED TO THE TOP OF RETAINING WALLS
11. NO TRAFFICABLE DRIVEWAYS SHALL BE CONSTRUCTED CLOSER THAN 1200mm FROM THE FRONT FACE OF THE WALL WITHOUT THE APPROVAL FROM A CERTIFIED PRACTICING STRUCTURAL ENGINEER
12. BLOCKS SHALL NOT BE ADDED TO THE TOP OF RETAINING WALLS AND GROUND LEVELS ALTERED WITHOUT THE APPROVAL FROM A CERTIFIED PRACTICING STRUCTURAL ENGINEER
13. WALL PROFILES HAVE BEEN DESIGNED TO SUPPORT AN 1800mm HIGH POST AND RAIL SHEET FENCING INSTALLED IN STRICT ACCORDANCE WITH THE FENCING NOTES OUTLINED ON THIS DRAWING AND DRAWING C955.

ALLOWABLE FOOTING LOCATIONS ADJACENT TO RETAINING WALLS

NOMINATED ALLOWABLE LOADS ABOVE INCORPORATE BOTH DEAD LOADS AND LIVE LOADS

REV	DATE	DRAWN	CHECKED	APPROVED	
0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
B	21.12.22	BVS	BG		RE-ISSUED FOR STRUCTURAL CERTIFICATION
A		MI			ISSUED FOR STRUCTURAL CERTIFICATION

NOTE
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Certified Quality System to ISO 9001

JDSi CONSULTING ENGINEERS
Level 1, 432 Murray Street, Perth WA 6000
P: (08) 9227 0595 F: (08) 9227 8617

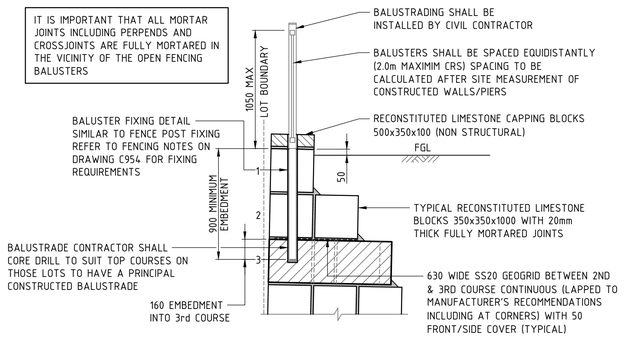
CLIENT: DevelopmentWA

PROJECT: JINDOWIE ESTATE, YANCHEP

DRAWING TITLE: STANDARD RETAINING WALL SHEET 1 OF 2

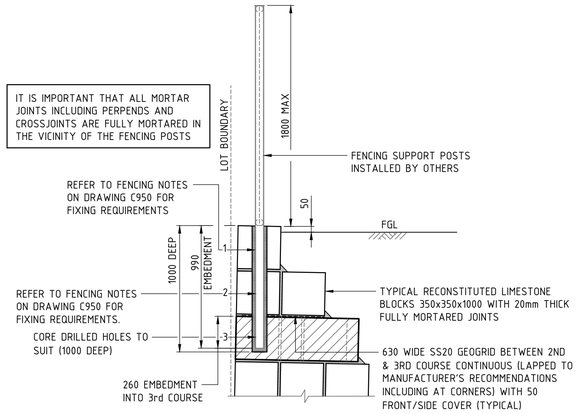
DRAWN: M.ICANOVSKI	WAPC No.: 161117
DESIGNED: M.ICANOVSKI	SCALE @ A1: NTS
PROJECT MANAGER: B.STYLE	DATUM: AHD; CO-ORDS: PCG 94
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C954; REVISION: 0

Plotted By: micanovski Plot Date: 14/02/23 - 10:40 Cad File: I:\JDS212023\JDS212023.0\02 CIVIL\Drawings\JDS212023.0_C954.dwg



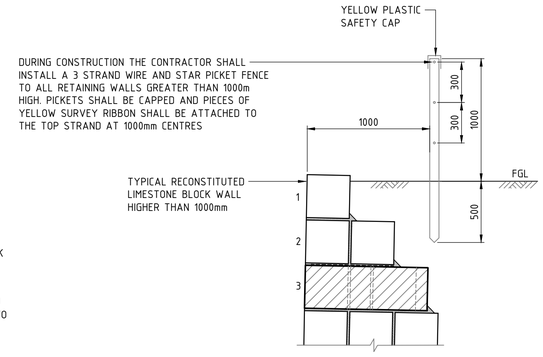
TYPICAL BALUSTER FIXING DETAIL

NOT TO SCALE



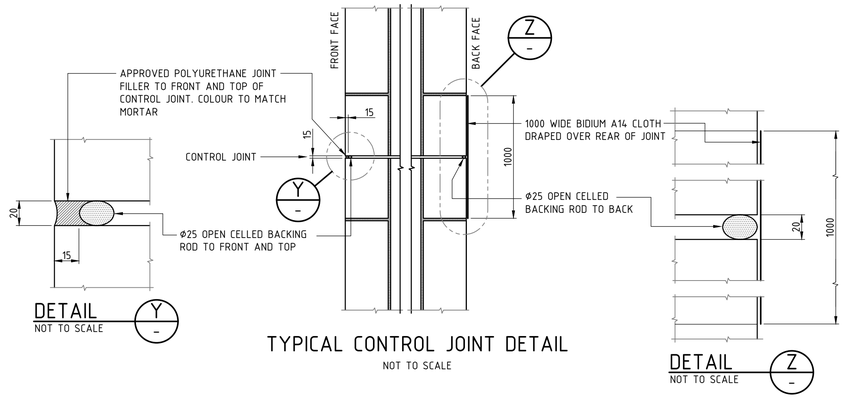
TYPICAL FENCE POST FIXING DETAIL

NOT TO SCALE



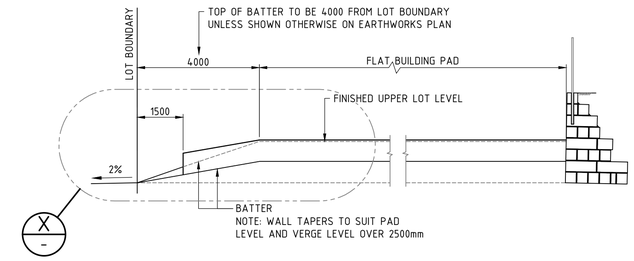
TYPICAL SAFETY FENCE DETAIL

NOT TO SCALE



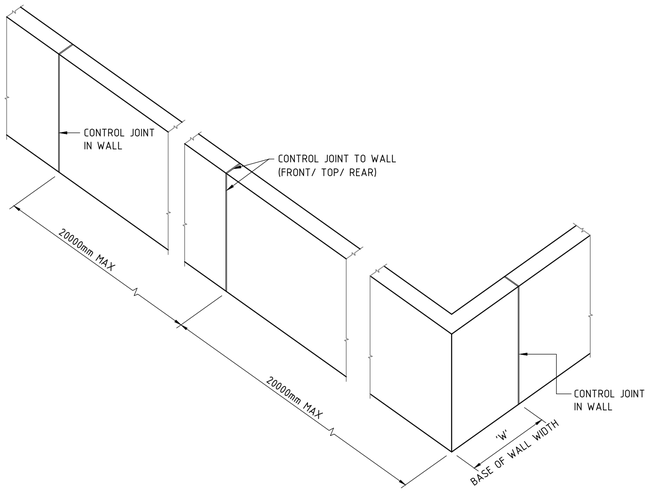
TYPICAL CONTROL JOINT DETAIL

NOT TO SCALE



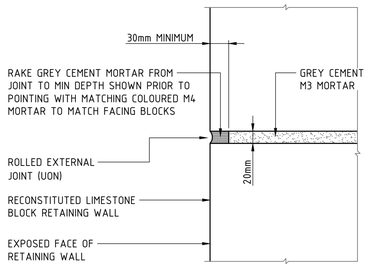
TYPICAL LOT SECTION

NOT TO SCALE



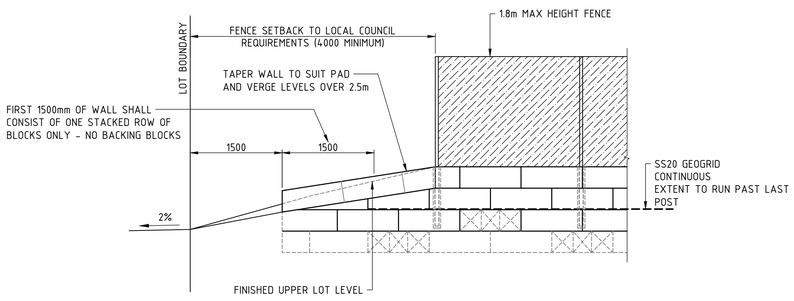
TYPICAL CONTROL JOINT REQUIREMENTS IN RETAINING WALLS

PLEASE NOTE:
ALL FACING BLOCKS ON ALL WALLS SHALL BE RECONSTITUTED LIMESTONE BLOCKS



TYPICAL EXPOSED MORTAR JOINT DETAIL

MORTARS SHALL COMPLY WITH ALL THE RELEVANT REQUIREMENTS OF AS 3700



TYPICAL RETAINING WALL END DETAIL

DETAIL X
NOT TO SCALE

FOR INFORMATION ONLY

REV	DATE	DRAWN	CHECKED	APPROVED	
0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
B	21.12.22	BVS	BG		RE-ISSUED FOR STRUCTURAL CERTIFICATION
A		MI			ISSUED FOR STRUCTURAL CERTIFICATION

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Level 1, 432 Murray Street, Perth WA 6000
P: (08) 9227 0595 F: (08) 9227 8617

CLIENT: DevelopmentWA

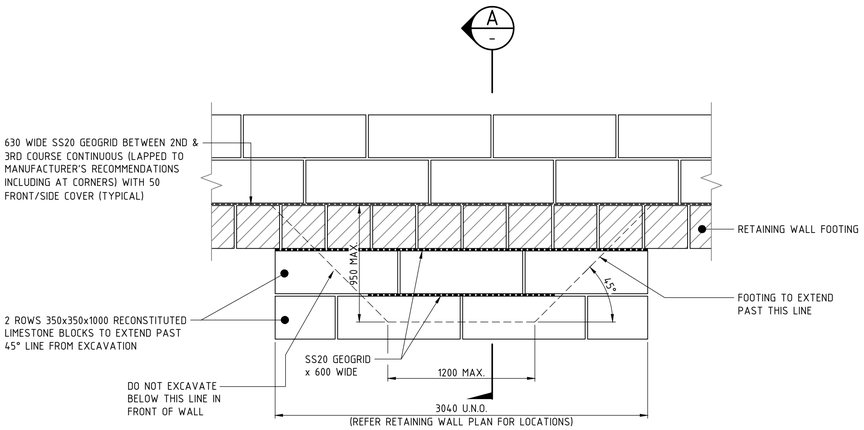
PROJECT: JINDOWIE ESTATE, YANCHEP

DRAWING TITLE: STANDARD RETAINING WALL SHEET 2 OF 2

DRAWN: M.ICANOVSKI	WAPC No.: 161117
DESIGNED: M.ICANOVSKI	SCALE @ A1: NTS
PROJECT MANAGER: B.STYLE	DATUM: AHD / CO-ORDS: PCG 94
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C955 / REVISION: 0

NOTES

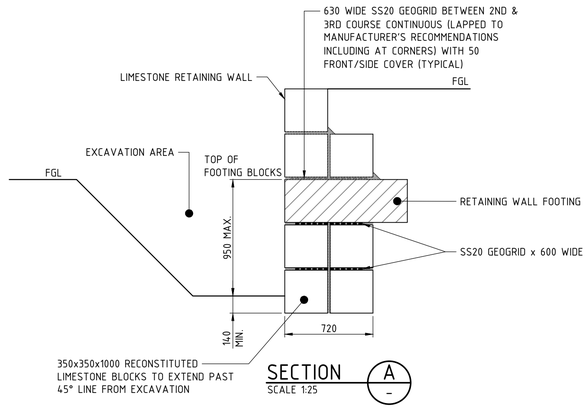
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE CONTRACT DRAWINGS AND SPECIFICATION
2. CONTRACTOR TO INSTALL ALL CONDUITS UNDER WALL PRIOR TO INSTALLATION OF FOOTINGS. REFER TO STANDARD DRAWINGS JDS212023.0_C954-C955 FOR COMPACTION REQUIREMENTS
3. FOR LIMESTONE RETAINING WALL DETAILS REFER TO STANDARD DRAWINGS JDS212023.0_C954-C955
4. CONTRACTOR TO ENSURE DEEPENED FOOTINGS ARE INSTALLED AT ALL PROPOSED POWER ACCESS LOCATIONS (INCLUDING JOINTING AND CABLE HAULING LOCATIONS)
5. ALL EXCAVATIONS SHALL BE RE-INSTATED TO MATCH COMPACTION OF EXISTING GROUND
6. CONTRACTOR TO PROVIDE DEEPENED FOOTING AS CONSTRUCTED INFORMATION TO BE DOCUMENTED ON THE RELEVANT POWER AS CONSTRUCTED PLAN

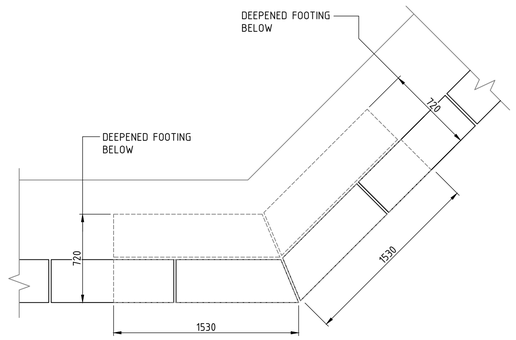


NOTE: MAX EXCAVATION DEPTH = 950mm

RETAINING WALL FOOTING DEEPENING AT ELECTRICAL DUCT TERMINATION AND CONSTRUCTION LOCATIONS (TYPE 1)

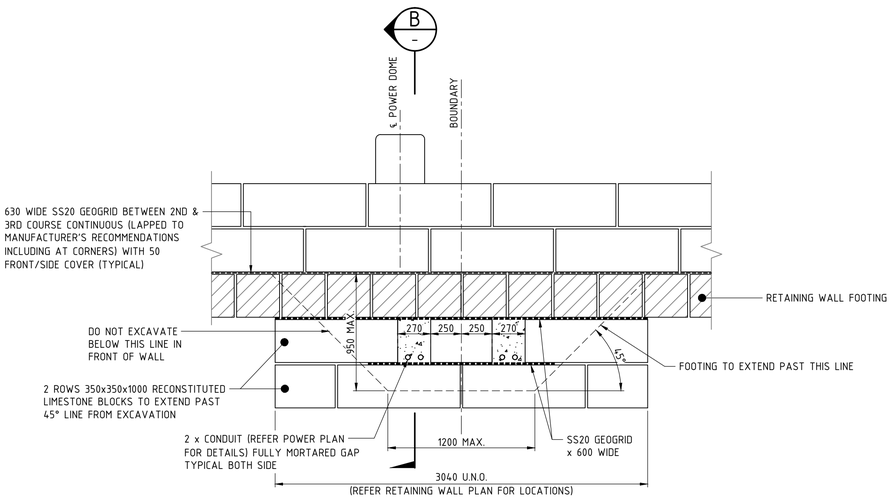
SCALE 1:25





VIEW 'Y'

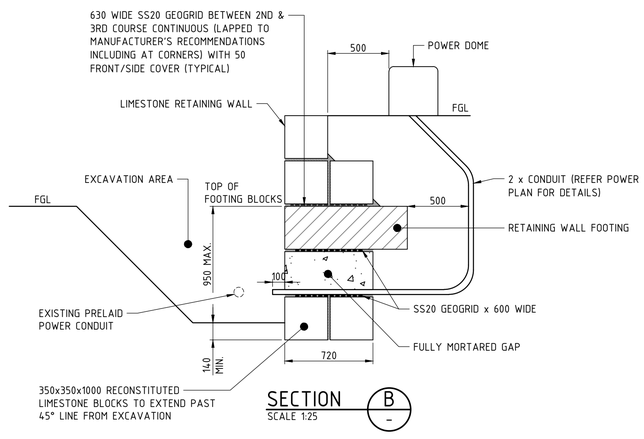
SCALE 1:25

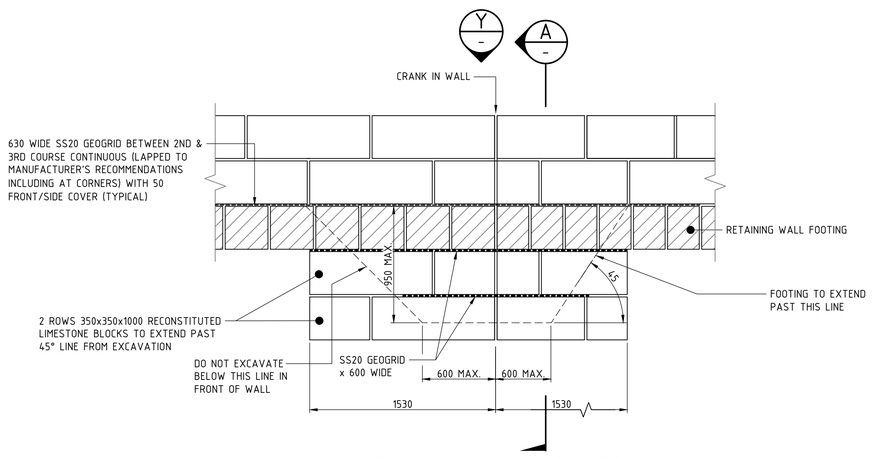


NOTE: MAX EXCAVATION DEPTH = 950mm

RETAINING WALL FOOTING DEEPENING AT POWER DOME CONNECTIONS (TYPE 2)

SCALE 1:25





NOTE: MAX EXCAVATION DEPTH = 950mm

RETAINING WALL FOOTING DEEPENING FOR CRANKED WALL AT SERVICES LOCATIONS

SCALE 1:25

FOR INFORMATION ONLY

0 0.25 0.5 1.0 1.5m

SCALE 1:25 @ ORIGINAL SHEET SIZE A1

REV	DATE	DRAWN	CHECKED	APPROVED	
0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
B	21.12.22	BVS	BG		RE-ISSUED FOR STRUCTURAL CERTIFICATION
A		MI			ISSUED FOR STRUCTURAL CERTIFICATION

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P: (08) 9227 0595 F: (08) 9227 8617

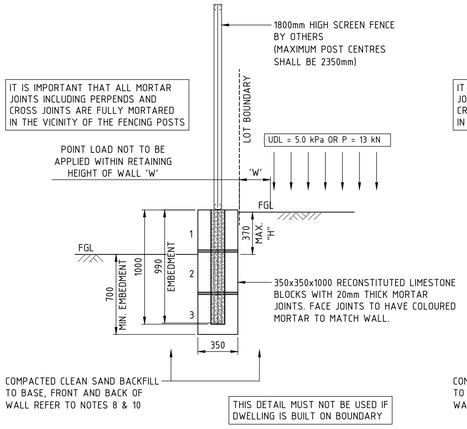
CLIENT: DevelopmentWA

PROJECT: JINDOWIE ESTATE, YANCHEP

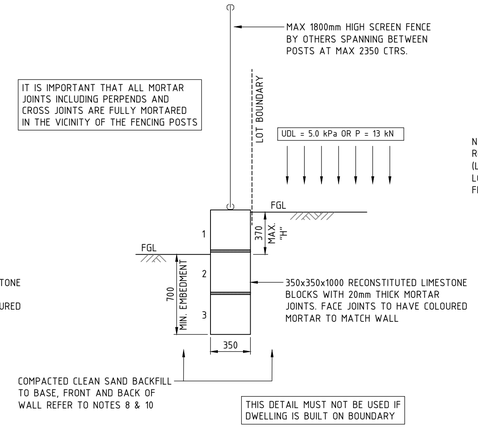
DRAWING TITLE: STANDARD RETAINING WALL DETAILS DEEPENED FOOTINGS DETAILS

DRAWN: M.ICANOVSKI	WAPC No.: 161117
DESIGNED: M.ICANOVSKI	SCALE @ A1: AS SHOWN
PROJECT MANAGER: B.STYLE	DATUM: AHD / CO-ORDS: PCG 94
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C956 / REVISION: 0

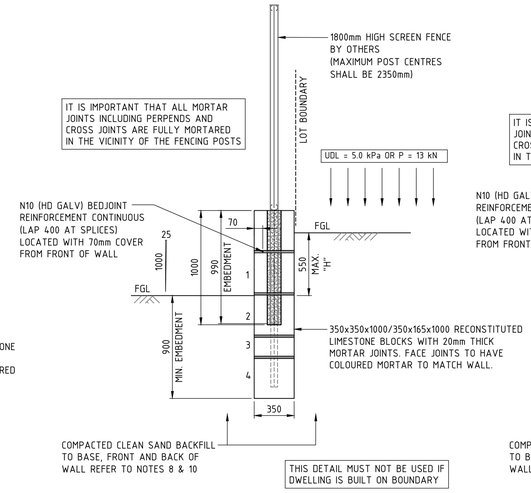
Plotted By: micanovski Plot Date: 14/02/23 - 10:42 Cad File: I:\JDS212023\JDS212023.0\02 CIVIL\Drawings\JDS212023.0_C956.dwg



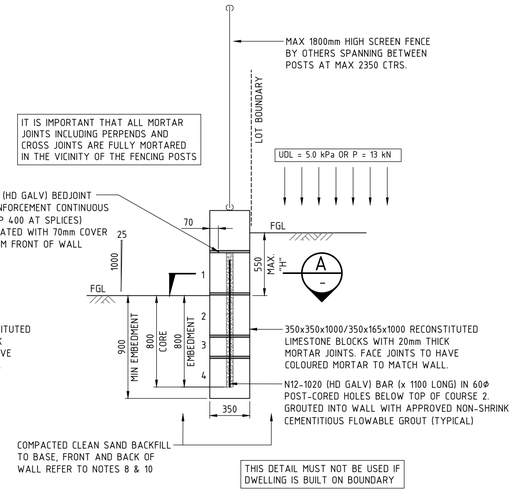
AT FENCING POST LOCATIONS



AT REINFORCEMENT LOCATIONS



AT FENCING POST LOCATIONS



AT REINFORCEMENT LOCATIONS

RETAINING WALL 0mm TO 370mm HIGH

NOT TO SCALE

PLEASE NOTE:
NO HEAVY COMPACTION EQUIPMENT OR CONSTRUCTION VEHICLES PERMITTED TO OPERATE WITHIN THE RETAINING HEIGHT 'H' FROM BACK OF RETAINING WALL

RETAINING WALL 0mm TO 550mm HIGH

NOT TO SCALE

NOTES

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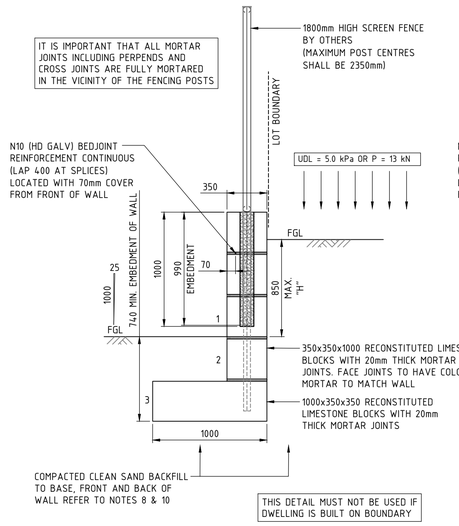
2. CONTRACTOR TO INSTALL ALL CONDUITS UNDER WALL PRIOR TO INSTALLATION OF FOOTINGS. REFER TO STANDARD DRAWINGS JDS212023.0_C954-C955 FOR COMPACTION REQUIREMENTS
3. FOR LIMESTONE RETAINING WALL DETAILS REFER TO STANDARD DRAWINGS JDS212023.0_C954-C955
4. CONTRACTOR TO ENSURE DEEPENED FOOTINGS ARE INSTALLED AT ALL PROPOSED POWER ACCESS LOCATIONS (INCLUDING JOINTING AND CABLE HAULING LOCATIONS)
5. ALL EXCAVATIONS SHALL BE RE-INSTATED TO MATCH COMPACTION OF EXISTING GROUND
6. CONTRACTOR TO PROVIDE DEEPENED FOOTING AS CONSTRUCTED INFORMATION TO BE DOCUMENTED ON THE RELEVANT POWER AS CONSTRUCTED PLAN

PLEASE NOTE:
NO HEAVY COMPACTION EQUIPMENT OR CONSTRUCTION VEHICLES PERMITTED TO OPERATE WITHIN THE RETAINING HEIGHT 'H' FROM BACK OF RETAINING WALL



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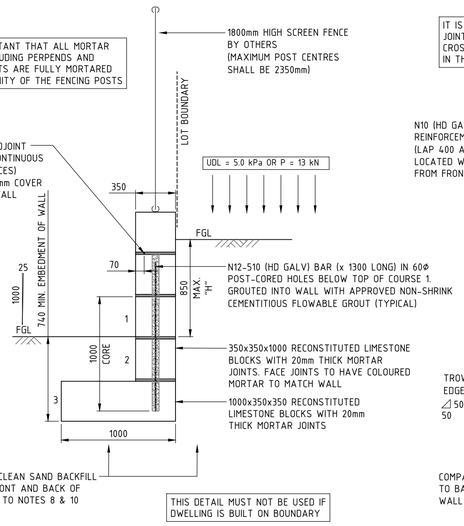

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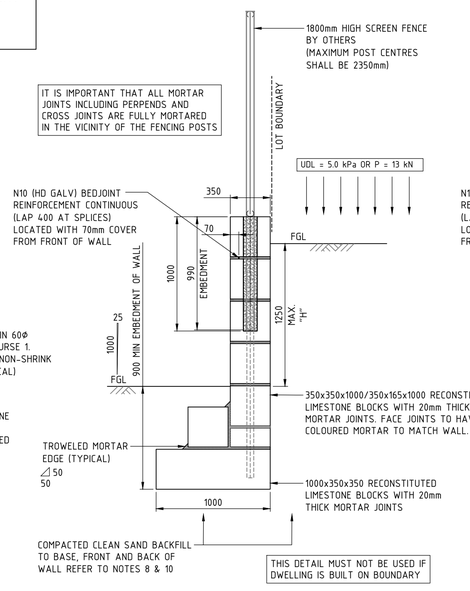
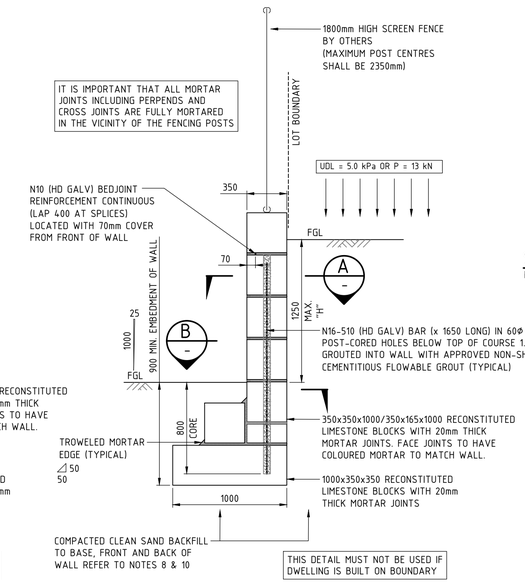
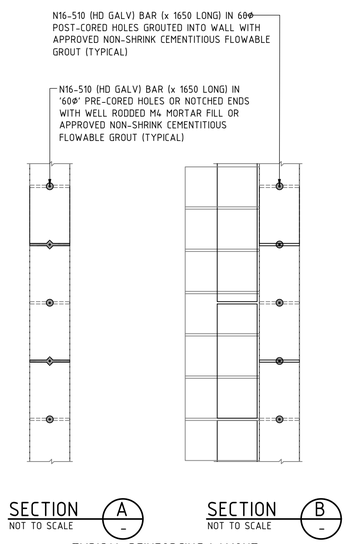


AT FENCING POST LOCATIONS



AT REINFORCEMENT LOCATIONS



TYPICAL REINFORCING LAYOUT
PLAN VIEW

RETAINING WALL 0mm TO 850mm HIGH

NOT TO SCALE

PLEASE NOTE:
NO HEAVY COMPACTION EQUIPMENT OR CONSTRUCTION VEHICLES PERMITTED TO OPERATE WITHIN THE RETAINING HEIGHT 'H' FROM BACK OF RETAINING WALL

RETAINING WALL 0mm TO 1250mm HIGH

NOT TO SCALE

0 0.25 0.5 1.0 1.5m
SCALE 1:25 @ ORIGINAL SHEET SIZE A1

FOR INFORMATION ONLY

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0	14.02.23	MI	BG	RR	ISSUED FOR CONSTRUCTION
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A		MI			ISSUED FOR STRUCTURAL CERTIFICATION

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CONSULTING ENGINEERS
Level 1, 432 Murray Street, Perth WA 6000
P: (08) 9227 0595 F: (08) 9227 8617

CLIENT: DevelopmentWA

PROJECT: JINDOWIE ESTATE, YANCHEP

DRAWING TITLE: STANDARD RETAINING WALL REVERSE WALL

DRAWN: M.ICANOVSKI	WAPC No.: 161117
DESIGNED: M.ICANOVSKI	SCALE @ A1: AS SHOWN
PROJECT MANAGER: B.STYLE	DATUM: AHD / CO-ORDS: PCG 94
JDSi PROJECT No.: JDS212023.0	DRAWING No.: C957 / REVISION: 0

Plotted By: micanovski Plot Date: 14/02/23 - 10:43 Cad File: I:\JDS212023\JDS212023.0\02 CIVIL\Drawings\JDS212023.0_C957.dwg