



QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL

Sheet List	
Sheet Number	Sheet Name
S01	COVER SHEET
S02	CONSTRUCTION NOTES
S03	CONSTRUCTION NOTES
S05	QUICKBUILT ACOUSTIC PANEL BARRIER DESIGN DETAIL
S06	QUICKBUILT ACOUSTIC PANEL BARRIER DETAIL

SILVER WOLF PROJECTS PTY LTD



ABN 36 108 257 674
 Suite 12, 2-14 Bayswater Road
 Potts Point NSW 2011
 Tel/Fax: (02) 9358 2263
 Email info@silverwolfprojects.com.au
 Web www.silverwolfprojects.com.au

QUICKBUILT FENCE SYSTEMS



21 Econo Place
 Silverdale NSW 2752
 Tel: 1300 132 787
 Email sales@quickbuiltsystems.com.au
 Web: www.quickbuiltsystems.com.au

© These designs, drawing & specifications are the property of Silver Wolf Projects. They must not be used, reproduced or copied wholly or in part without written consent of Silver Wolf Projects.

No.	Description	Date
1	GENERAL DESIGN DETAIL	04/03/2015

QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL

COVER SHEET

Project number	SWP 150303	S01
Date	03/03/2015	
Drawn by	N.H	
Checked by	D.B	
Scale		@ A3

GENERAL

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CIVIL DRAWINGS, PLANS AND SPECIFICATIONS AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G2 ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METRES TO AHD.
- G3 IMPORTANCE LEVEL 2 STRUCTURE WITH 50 YEARS DESIGN WORKING LIFE HAS BEEN ADOPTED TO AS 1170.0.
- G4 ALL DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED ON SITE BY THE BUILDER PRIOR TO CONSTRUCTION OR FABRICATION.
- G5 U.N.O. NO DIMENSIONS ARE TO BE OBTAINED BY SCALING. FOR SETTING OUT INFORMATION, REFER TO SECTIONS AND PLANS.
- G6 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT GOVERNMENT AUTHORITY.
- G7 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS & EXCAVATIONS STABLE AT ALL TIMES.
- G8 THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATION IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROUNDING PROPERTY INCLUDING SERVICES. THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING AND ANCHORING SYSTEMS.
- G9 THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH SAA AND RELEVANT AUSTRALIAN STANDARD FOR WIND LOADS:
 - WIND REGION A1- A7 (N2)
 - TERRAIN CATEGORY 2
 - NO SHIELDING
 - FLAT TOPOGRAPHY

CONCRETE

- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600-2009 AND OTHER RELEVANT AUSTRALIAN STANDARDS.
- C2 CONCRETE QUALITY:
NOTE - ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT UNLESS SHOWN OTHERWISE.
ALL CEMENT SHALL BE ACSE SPECIFICATION TYPE A NORMAL PORTLAND CEMENT UNO.
- C3 READYMIX CONCRETE SUPPLY SHALL COMPLY WITH AS 1379

ELEMENT	CONC. STRENGTH f'c @ 28 DAYS U.N.O.	SLUMP
BORED PIERS	32	80
- C4 STRENGTH SHALL BE VERIFIED BY PROJECT CONTROL TESTING BY AN APPROVED NATA LABORATORY.
- C5 CONCRETE SIZES SHOWN ARE MINIMUM AND NO REDUCTIONS BY DUCTS. PIPES, REGLETS ETC. SHALL BE MADE WITHOUT THE APPROVAL OF THE SUPERINTENDENT. SIZES DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C6 PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE SUPERINTENDENT.
- C7 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE SUPERINTENDENT.
- C8 THE CONCRETE SHALL BE COMPACTED USING HIGH FREQUENCY VIBRATORS.

- C9 CURING OF CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY MOIST FOR A PERIOD OF 7 DAYS. APPROVED SPRAYED ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED (REFER MANUFACTURER'S SPECIFICATION).POLYTHENE SHEETING OR WETHESSIAN MAY BE USED TO RETAINCONCRETE MOISTURE. IT MUST BE SECURELY HELD DOWN.
- C10 CO-ORDINATE STRUCTURAL DETAILS WITH SURVEY SETOUT DETAILS BEFORE POURING OR FORMING SLAB PROFILES. ADVISE SUPERINTENDENT IMMEDIATELY OF ANY DISCREPANCIES.
- C11 THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT A MINIMUM OF 48 HOURS BEFORE REINFORCEMENT HAS BEEN COMPLETED. THE CONTRACTOR SHALL ALLOW 2 HOURS AFTER THE COMPLETION OF THE REINFORCEMENT FOR THE SUPERINTENDENT INSPECTION. CONCRETE SHALL NOT BE ORDERED UNTIL REINFORCEMENT HAS BEEN APPROVED BY THE SUPERINTENDENT.
- C12 FORMWORK SHALL NOT BE STRIPPED NOR PROPS REMOVED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.
- C13 MAXIMUM LIFT OF POUR FOR CONCRETE ELEMENTS TO BE 3m UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY THE SUPERINTENDENT.
- C14 REINFORCEMENT SYMBOLS:
N HOT ROLLED DEFORMED BAR TO AS 4671. (GRADE 500)
R STRUCTURAL GRADE PLAIN ROUND BAR TO AS 4671.
W HARD DRAWN STEEL WIRE TO AS 4671.
S STRUCTURAL GRADE DEFORMED BAR TO AS 4671.
F HARD DRAWN STEEL WIRE REINFORCEMENT FABRIC TO AS 4671.
- C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C16 SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT.
- C17 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE SUPERINTENDENT.
- C18 REINFORCEMENT SPLICES: UNLESS NOTED OTHERWISE ON THE DRAWING ALL SPLICES SHALL CONFORM TO THE FOLLOWING TABLE.

BAR DIA	MINIMUM LAP LENGTH	BAR DIA	MINIMUM LAP LENGTH	BAR DIA	MINIMUM LAP LENGTH
N12	500	N20	1000	N28	1400
N16	600	N24	1200	N30	1500

NOTE: THE ABOVE LAP LENGTHS TO DEVELOP YIELD STRENGTH ARE BASED ON:
K1 = 1.0 FOR HORIZONTAL BARS WITH LESS THAN 300MM OF CONCRETE CAST BELOW THE BAR
K1 = 1.25 FOR HORIZONTAL BARS WITH MORE THAN 300MM OF CONCRETE CAST BELOW THE BAR
IN ACCORDANCE WITH AS 3600 CLAUSE 13.1.2.1

SILVER WOLF PROJECTS PTY LTD

ABN 36 108 257 674
Suite 12, 2-14 Bayswater Road
Potts Point NSW 2011
Tel/Fax: (02) 9358 2263
Email info@silverwolfprojects.com.au
Web www.silverwolfprojects.com.au

QUICKBUILT FENCE SYSTEMS

21 Econo Place
Silverdale NSW 2752
Tel: 1300 132 787
Email sales@quickbuiltsystems.com.au
Web: www.quickbuiltsystems.com.au

© These designs, drawing & specifications are the property of Silver Wolf Projects. They must not be used, reproduced or copied wholly or in part without written consent of Silver Wolf Projects.

No.	Description	Date
1	GENERAL DESIGN DETAIL	04/03/2015

QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL

CONSTRUCTION NOTES

Project number	SWP 150303	S02
Date	03/03/2015	
Drawn by	N.H	
Checked by	D.B	
Scale		@ A3

STRUCTURAL STEELWORK

- S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100.
- S2 STEEL COMPONENTS SHALL CONFORM TO THE FOLLOWING TABLE U.N.O.

COMPONENT AUSTRALIAN GRADE	AUSTRALIAN STANDARD	GRADE
PLATE	AS3678	250
HOT ROLLED SECTIONS	AS3679	300
WELDED BEAMS , COLUMNS	AS3679	300
FLAT BARS , RODS	AS3679	250

- S3 THREE (3) COPIES OR 1 TRANSPARENCY OF FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR REVIEW AT LEAST 10 WORKING DAYS PRIOR TO THE COMMENCEMENT OF FABRICATION. FABRICATION IS NOT TO COMMENCE WITHOUT THE ENGINEER'S APPROVAL OF WORKSHOP DRAWINGS. ALL DIMENSIONS AND SETOUTS TO BE OBTAINED FROM ARCHITECTURAL DRAWINGS WHERE NOT INDICATED ON STRUCTURAL DRAWINGS.
- S4 THE CONTRACTOR SHALL PROVIDE AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED SUCH TEMPORARY BRACING AS IS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
- S5 AFTER FABRICATION ALL STEELWORK NOTED ON THE DRAWINGS AND STEELWORK BUILT IN EXTERNAL WALLS INCLUDING FITMENTS, NUTS, BOLTS, WASHERS & HOLDING DOWN BOLTS ARE TO BE HOT DIP GALVANISED AFTER PICKLE OR ABRASIVE BLAST TO CLASS 3, TO COMPLY WITH AS 4680. ANY SITE WELDING IS TO BE TOUCHED UP WITH 2 COATS OF APPROVED ZINC RICH PAINT.
- S6 ALL PLATES SHALL BE 10mm U.N.O.
- S7 STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING PROTECTIVE TREATMENT

ELEMENT	SURFACE PREPARATION	PROTECTIVE COATING
EXPOSED TO WEATHER INCLUDING WALL STIFFENERS	PICKLE (AS1627 PART 5)	IN ACCORDANCE WITH AS 2312 CATEGORY C: MEDIUM

NOTE: REFER TO SPECIFICATION FOR DETAILS OF ANY PAINTING COATS OVER PRIMER & FIRE PROTECTION.

- S8 THE SUB-CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR ALL ATTACHMENTS WHETHER OR NOT DETAILED ON THE DRAWINGS.
- S9 THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY A QUALIFIED ENGINEER EXPERIENCED IN SUCH SUPERVISION, TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET
- S10 THE CONTRACTOR SHALL MAKE THE NECESSARY ALLOWANCES FOR COORDINATING ALL ARCHITECTURAL AND STRUCTURAL ELEMENTS IN THE PREPARATION OF STRUCTURAL STEELWORK SHOP DRAWINGS AND SUBSEQUENT FABRICATION AND ERECTION. CONNECTION DETAILS SHOWN ON STRUCTURAL DRAWINGS ARE TYPICAL ONLY. WITH AS4100 & THE AISC PUBLICATION " DESIGN OF STRUCTURAL CONNECTIONS' & 'STANDARDISED STRUCTURAL CONNECTIONS". THESE DETAILS SHALL TAKE DUE ACCOUNT OF ARCHITECTURAL & SERVICES REQUIREMENTS & SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE ENGINEER SHALL SUPPLY LOADS AS REQUIRED. ALL COSTS & THE IMPLICATIONS ASSOCIATED WITH THESE WORKS ARE TO ALLOWED FOR BY THE CONTRACTOR.

FOUNDATIONS

- F1 PILE LEVELS, WHERE SHOWN, ARE ESTIMATES ONLY. REQUIRED LEVELS SHALL BE ESTABLISHED ON SITE
- F2 BORED PIER HAS BEEN DESIGNED BASED ON GEOTECHNICAL PROVISIONS:
 - STIFF CLAY FOUNDATION MATERIAL WITH MINIMUM COHESION (Cu=50 kPa).
 - MEDIUM DENSE SAND, SILTY SAND, FINE SAND, SHALE WITH NO COHESION (Cu= 0), ANGLE OF FRICTION (φ) 30° AND UNIT WEIGHT (γ) OF 18 kN/m3.
- F3 FOOTINGS SHALL BE CONSTRUCTED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID SOFTENING OR DRYING OUT BY EXPOSURE.
- F4 EXCAVATION NEAR FOOTINGS SHALL NOT EXTEND BELOW FOUNDATION LEVEL WITHOUT THE SUPERINTENDENT APPROVAL
- F5 ALL FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS U.N.O.
- F6 ANY SPACE LEFT BETWEEN SHORING AND THE EXCAVATED FACE AND ALSO BETWEEN THE SHORING AND NEW PERMANENT STRUCTURE SHALL BE BACKFILLED WITH STABILISED SAND (14 PARTS SAND TO 1 PART CEMENT)
- F7 THE DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF ANY TEMPORARY SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITIES

- U1 THE LOCATION OF UTILITIES SHOWN ON THESE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL, BEFORE COMMENCING ANY WORKS:
 - (I) DETERMINE THE EXTENT OF EXISTING UTILITY SURVEY AND INFORMATION REFERENCED ON THESE DRAWINGS.
 - (II) OBTAIN CURRENT DIAL BEFORE YOU DIG PLANS AND INFORMATION BY TELEPHONING 1100 OR FAX 1300 682 077 TO ASCERTAIN THE EXACT LOCATION OF UTILITIES;
 - (III) MAKE ANY OTHER ENQUIRIES AS THE CONTRACTOR CONSIDERS NECESSARY TO SATISFY ITSELF AS TO THE EXACT LOCATION OF UTILITY SERVICES; AND
 - (IV) ENSURE THAT THE ADOPTED WORK METHOD WILL AVOID DAMAGE TO ALL UTILITIES.



- U2 THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF EXISTING UTILITY SERVICES.
- U3 SILVER WOLF PROJECTS WILL NOT BE LIABLE FOR ANY COSTS ARISING FROM DAMAGE TO ANY UTILITY SERVICES CAUSED BY THE CONTRACTOR.

SILVER WOLF PROJECTS PTY LTD

ABN 36 108 257 674
Suite 12, 2-14 Bayswater Road
Potts Point NSW 2011
Tel/Fax: (02) 9358 2263
Email info@silverwolfprojects.com.au
Web www.silverwolfprojects.com.au

QUICKBUILT FENCE SYSTEMS

21 Econo Place
Silverdale NSW 2752
Tel: 1300 132 787
Email sales@quickbuiltsystems.com.au
Web: www.quickbuiltsystems.com.au

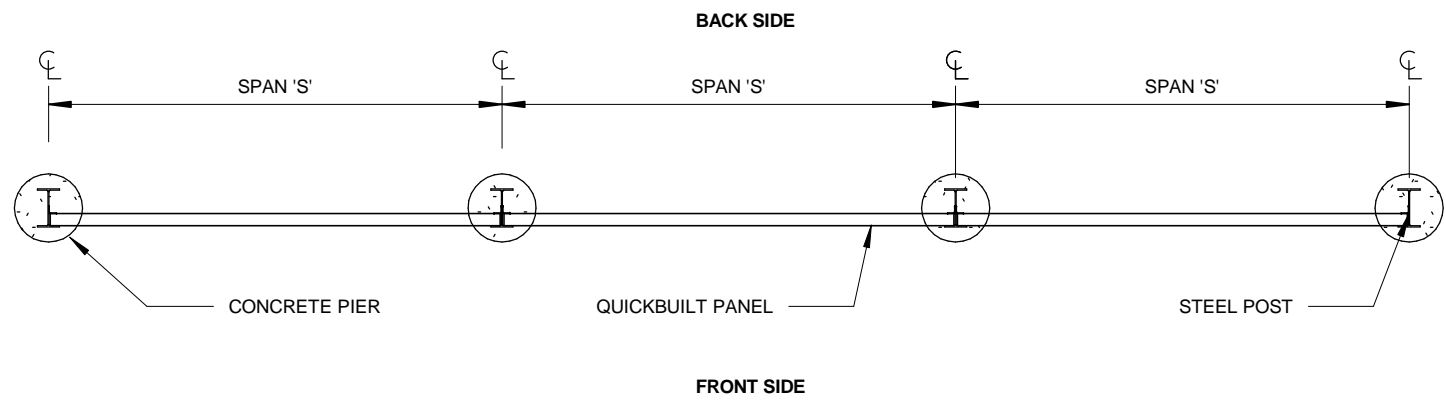
© These designs, drawing & specifications are the property of Silver Wolf Projects. They must not be used, reproduced or copied wholly or in part without written consent of Silver Wolf Projects.

No.	Description	Date
1	GENERAL DESIGN DETAIL	04/03/2015

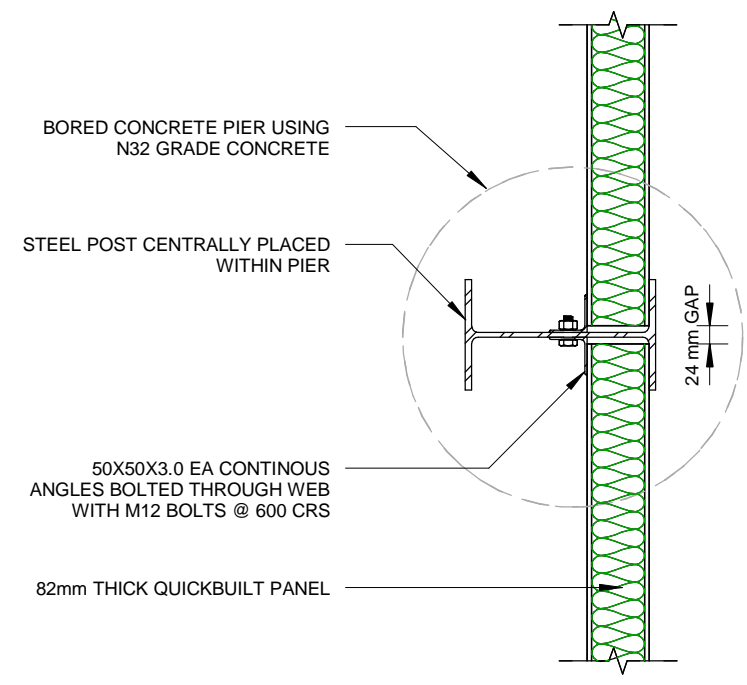
QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL

CONSTRUCTION NOTES

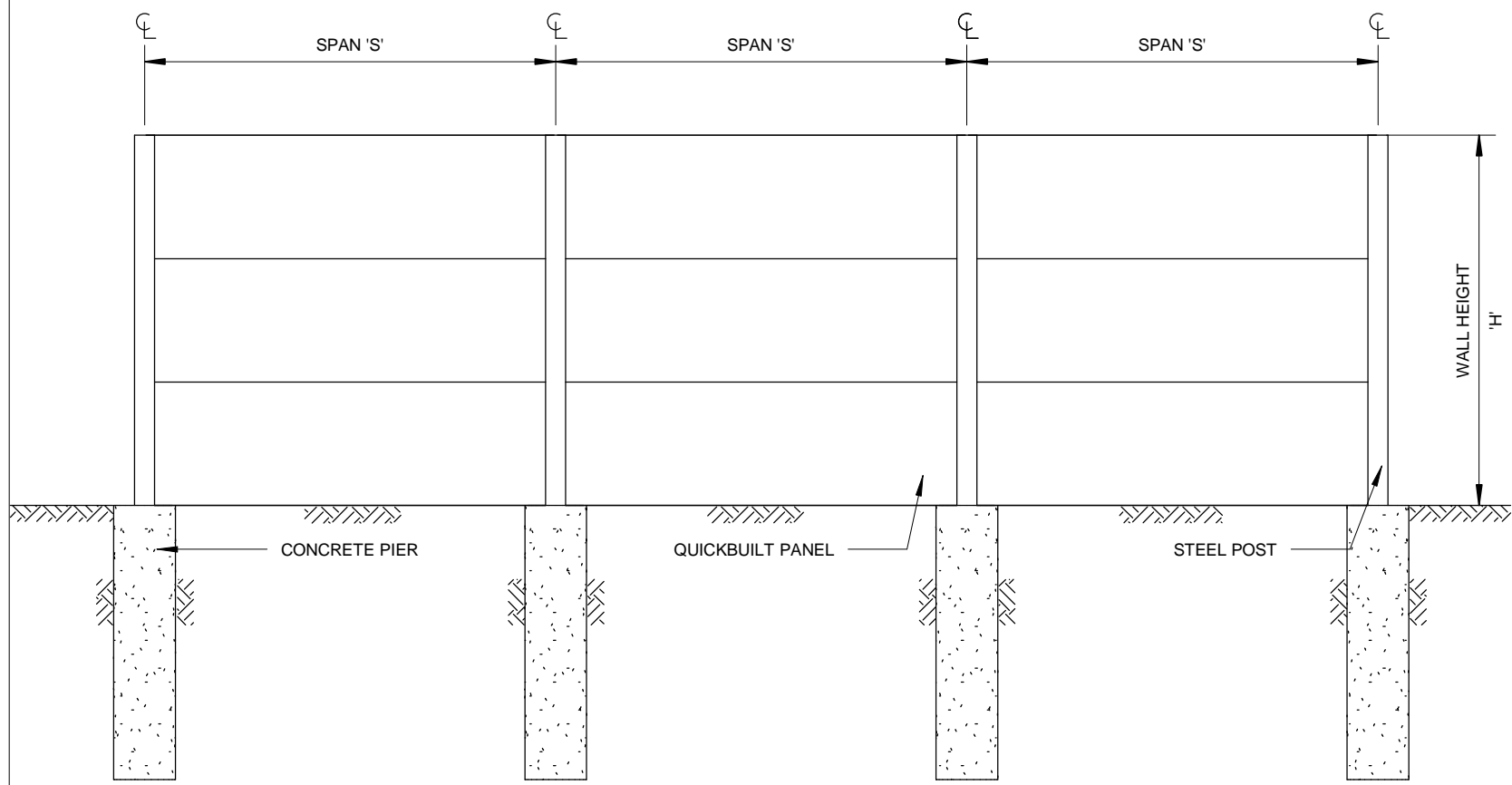
Project number	SWP 150303	S03
Date	03/03/2015	
Drawn by	N.H	
Checked by	D.B	
Scale		@ A3



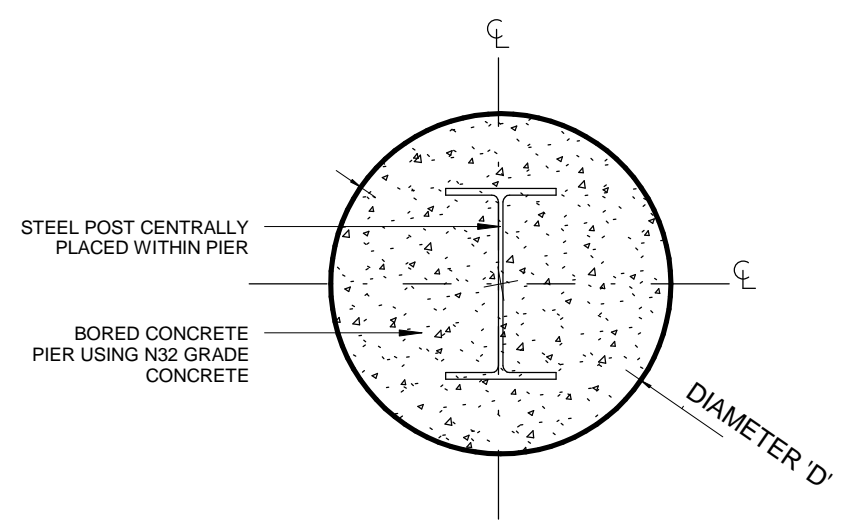
1 TYPICAL NOISE WALL PLAN
1 : 50



3 TYPICAL QUICKBUILT PANEL DETAIL
1 : 10



2 TYPICAL NOISE WALL ELEVATION
1 : 50

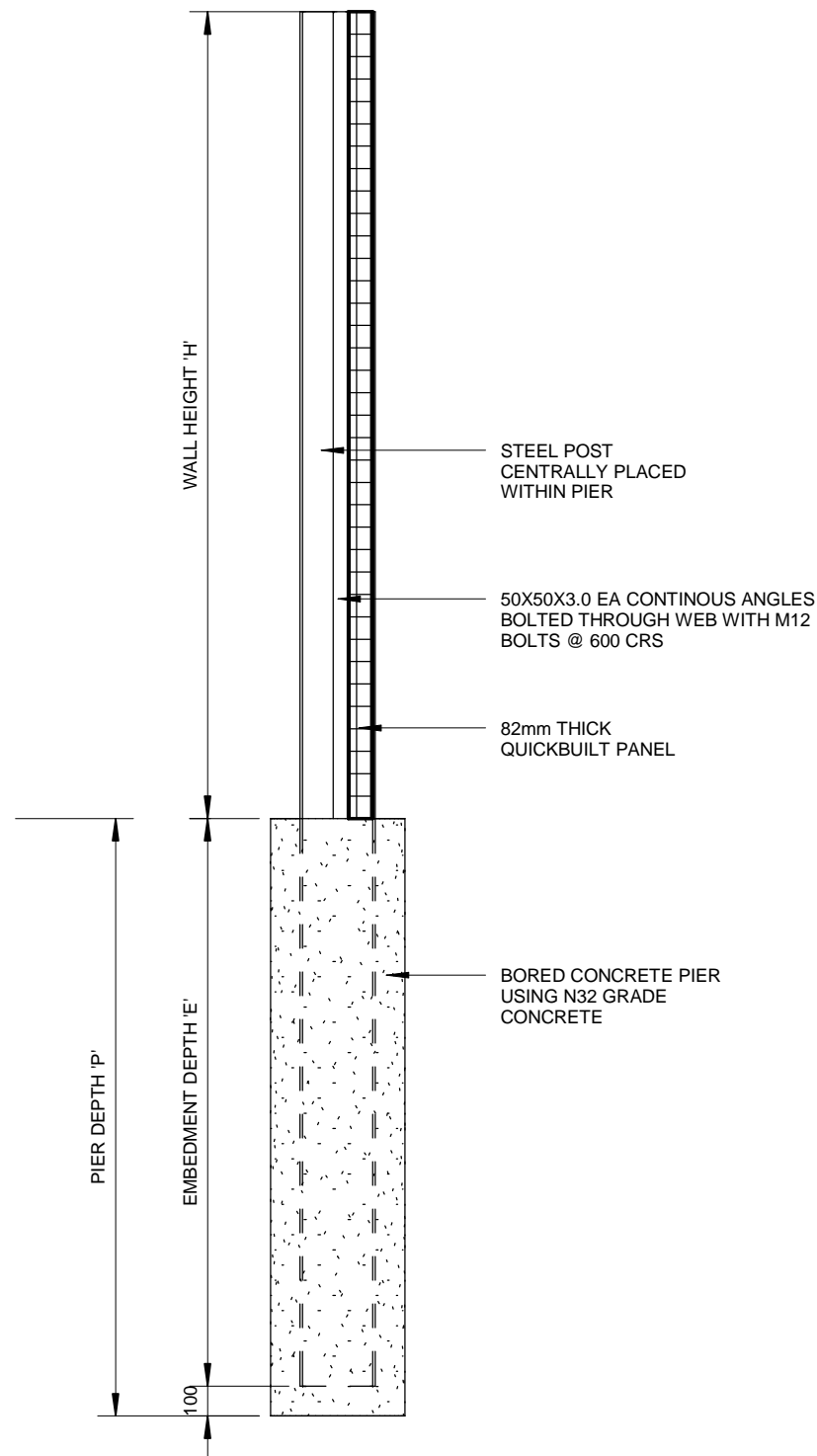


4 TYPICAL CONCRETE PIER DETAIL
1 : 10

<p>SILVER WOLF PROJECTS PTY LTD</p>  <p>ABN 36 108 257 674 Suite 12, 2-14 Bayswater Road Potts Point NSW 2011 Tel/Fax: (02) 9358 2263 Email info@silverwolfprojects.com.au Web www.silverwolfprojects.com.au</p>	<p>QUICKBUILT FENCE SYSTEMS</p>  <p>21 Econo Place Silverdale NSW 2752 Tel: 1300 132 787</p> <p>Email sales@quickbuiltsystems.com.au Web: www.quickbuiltsystems.com.au</p>
<p>© These designs, drawing & specifications are the property of Silver Wolf Projects. They must not be used, reproduced or copied wholly or in part without written consent of Silver Wolf Projects.</p>	

No.	Description	Date
1	GENERAL DESIGN DETAIL	04/03/2015

QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL		QUICKBUILT ACOUSTIC PANEL BARRIER DESIGN DETAIL	
Project number	SWP 150303	S05	Scale As indicated @ A3
Date	03/03/2015		
Drawn by	N.H		
Checked by	D.B		



POST SPACING 'S'	WALL HEIGHT 'H'	PIER					POST SIZE
		DIAMETER 'D'	COHESIVE STIFF CLAY $C_u = 50 \text{ kPa}$		SOFT CLAY, SAND $C_u = 0 \text{ kPa}$		
			DEPTH 'P'	EMBEDMENT 'E'	DEPTH 'P'	EMBEDMENT 'E'	
2400	3000	450	1400	1300	2800	2700	180 UB 16.1
	3600	450	1600	1500	3100	3000	200 UB 22.3
	4200	450	1700	1600	3400	3300	250 UB 31.4
	4800	600	1700	1600	3400	3300	310 UB 40.4
	5200	600	1800	1700	3500	3400	310 UB 46.2
2700	3000	450	1400	1300	1900	1800	180 UB 18.1
	3600	450	1600	1500	2200	2100	200 UB 25.4
	4200	450	1800	1700	2400	2300	250 UB 31.4
	4800	600	1800	1700	2600	2500	310 UB 40.4
	5200	600	1900	1800	2700	2600	310 UB 46.1
3000	3000	450	1500	1400	2900	2800	180 UB 18.1
	3600	450	1700	1600	3200	3100	200 UB 25.4
	4200	450	1900	1800	3500	3400	250 UB 31.4
	4800	600	1900	1800	3500	3400	310 UB 40.4
	5200	600	2000	1900	3600	3500	310 UB 46.1

NOTES:

- VALUES HAVE BEEN DESIGNED FOR STIFF CLAY FOUNDATION MATERIAL WITH MINIMUM COHESION ($C_u=50 \text{ kPa}$).
- VALUES HAVE BEEN DESIGNED ASSUMING MEDIUM DENSE SAND, SILTY SAND, FINE SAND, SHALE WITH NO COHESION ($C_u=0$), ANGLE OF FRICTION (ϕ) 30° AND UNIT WEIGHT (γ) OF 18 kN/m^3 .
- THE ABOVE MENTIONED GEOTECHNICAL PARAMETERS TO BE VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.
- POSTS HAVE BEEN DESIGNED FOR:
 - A) WIND REGION A1- A7 (N2)
 - B) TERRAIN CATEGORY 2
 - C) NO SHIELDING
 - D) FLAT TOPOGRAPHY

1 TYPICAL WALL SECTION
1 : 25

SILVER WOLF PROJECTS PTY LTD

ABN 36 108 257 674
Suite 12, 2-14 Bayswater Road
Potts Point NSW 2011
Tel/Fax: (02) 9358 2263
Email info@silverwolfprojects.com.au
Web www.silverwolfprojects.com.au

QUICKBUILT FENCE SYSTEMS

21 Econo Place
Silverdale NSW 2752
Tel: 1300 132 787
Email sales@quickbuiltsystems.com.au
Web: www.quickbuiltsystems.com.au

© These designs, drawing & specifications are the property of Silver Wolf Projects. They must not be used, reproduced or copied wholly or in part without written consent of Silver Wolf Projects.

No.	Description	Date
1	GENERAL DESIGN DETAIL	04/03/2015

QUICKBUILT ACOUSTIC PANEL BARRIER GENERAL DESIGN DETAIL

QUICKBUILT ACOUSTIC PANEL BARRIER DETAIL

Project number	SWP 150303	S06
Date	03/03/2015	
Drawn by	N.H	
Checked by	D.B	
Scale	As indicated @ A3	