

The design and detail shown on these drawings are applicable to this project only and may not be reproduced in whole or any part or be used for any other purpose without the written permission of FBHS (Aust) Pty Limited with whom copyright resides. The local distributor you are dealing with is an authorised independent distributor of Fair Dinkum Homes & Sheds' products and enters into agreements with its customers on its own behalf and not as an agent of Fair Dinkum Homes & Sheds.

ENGINEERING SPECIFICATION:

GENERAL

This drawing shall be read in conjunction with Fair Dinkum Homes and Sheds Drawings.

Allow for falls to wastes, set downs for files & weather steps.

At all times during construction water must be drained away from the building. Ponding must not be allowed to remain along the sides of the building or in trenches close to the building.

All downpipes, top outlets, condensate, drains etc. are to be drained away from the building and discharged to an outfall or an area remote from the building.

Refer to engineer for footings details if site conditions other than assumed are encountered.

The ground and slabs are to be treated for termites in accordance with Australian Standards and council requirements. (Optional for Class 10a structures).

Damp-proofing membranes to be provided under slab in South Australia and areas prone to rising damp and salt attack. (Optional for Class 10a structures).

A site specific Geotechnical investigation is recommended.

All footings are to be placed into firm, natural, undisturbed ground unless written approval is received from the engineer.

The builder is to check for soft spots that may exist under footings and contact the engineer if in doubt to the foundation quality. All vegetation and soft soil beneath slabs and footings are to be removed before construction of filling commences. In the circumstance where trees beneath or close to the building pad are to be removed, they shall be removed wholly including the main roots. Holes that are created due to removal of vegetation should be filled with soil matching the composition of the existing surrounding soil. If in doubt about the

requirements for backfilling excavations resulting from removal of soft spots or tree stumps, contact the engineer.

Fill beneath slabs is to be granular, CBR as per table and compacted in layers of 150mm maximum to a minimum of 95% minimum dry density ratio (based on standard compaction) for cohesive soils, and to a minimum density index of 70% for cohesion less soils. Maximum fill depth 900mm, refer to engineer if greater depth of fill is required. It is the builder's responsibility to test the compaction to ensure compliance. All earth work to be in accordance with AS3798-2007.

CONCRETE

All concrete details and placement shall be performed in accordance with AS3600.

Minimum strength. Footings N25 MPa, Internal Slabs N25 MPa, Exposed Slabs N32 MPa. Maximum slump to be 80mm, max. 20mm aggregate. All concrete is to be mechanically vibrated and cured by an approved method for a minimum of 3 days. We recommend curing of slabs with ULTRA-CURE liquid membrane forming curing compound. For concrete members poured within 1km of the coast or for members in contact with water, tidal or splash zones refer to engineer for additional requirements.

Concrete NOT to be poured in temperatures below 5°C OR above 35°C.

Provide 2-N16 bars 1500mm long to u/s of mesh adjacent re-entrant corners. Where reinforcement has been used to provide for services, an equivalent amount of trimming reinforcement is to be placed each side of the service.

Reinforcement is to be supported on approved bar chairs at 800 max. centres in both directions.

Unless otherwise noted, the following minimum reinforcement splices are required:

- N12 - 600mm lap
- N16 - 800mm lap
- Reinforcing fabric - One grid overlap plus 25mm.
- Trench mesh - 600mm

SERVICE

Avoid services beneath slabs wherever possible. Where services are placed beneath slabs:

- Provide 40mm of flexible sealant / lagging between pipes and penetrated concrete.
- Provide a flexible joint each side of the concrete and another within 500mm upstream and downstream, creating a short length of pipe each side of the short pipe through the concrete.

Service trench inverts are to slope away from the footings and be backfilled and compacted with clay from the site. Flexible joints are to be provided where services adjoin the building.

LANDSCAPING & MAINTENANCE

Trees must be kept well away from the building. Recommended minimum distance of at least the height of a mature tree and 1.5 times this for a group of trees.

The builder should instruct the owner of his/her responsibility for maintenance of the area around the building in accordance with CSIRO sheet No. 10-91, especially with respect to surface water, trees and plumbing leaks.

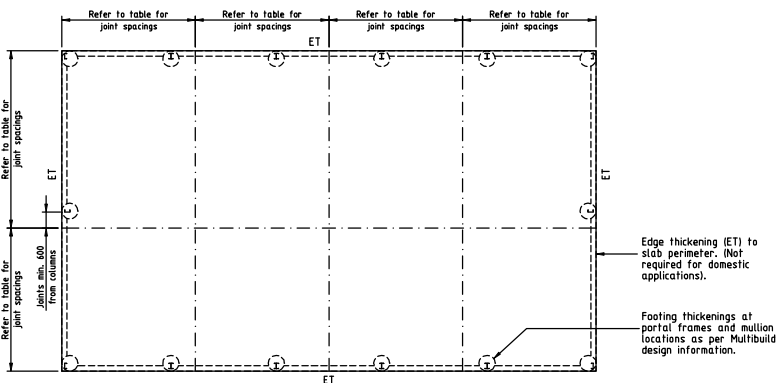
SLAB DESIGN LOADINGS :

DOMESTIC	COMMERCIAL	LIGHT INDUSTRIAL	MEDIUM INDUSTRIAL	HEAVY INDUSTRIAL
- Domestic storage (up to 3kPa)	- Light storage (up to 5kPa)	- Light storage (up to 10kPa)	- Medium storage (up to 25kPa)	- Storage greater than 30kPa
- Foot traffic	- Commercial premises, shops, showrooms	- Light industrial activity (max. axle load = 4.5t, approx. 2.5t forklift)	- Medium industrial activity (max. axle load = 11.5t, approx. 5t forklift)	- Heavy industrial activity (forklifts greater than 5t)
- Garages mainly for private cars (up to 4.5t GVW)		- Racking loads (2.5t max. concentrated post load, 1.0m min. spacings)	- Racking loads (4t max. concentrated post load, 1.0m min. spacings)	- Heavy racking loads
		- Garages mainly for commercial vehicles (up to 8t GVW)	- Garages for large commercial vehicles up to 15t GVW	- Heavy commercial/machinery heavy/articulated vehicles up to 40t GVW

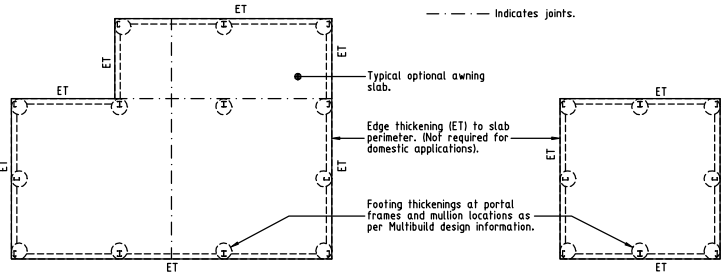
- Forklift axle load approximately = 2.5 x rated capacity (confirm with manufacturers specifications)
- Ground conditions min. 100 kPa & 3 CBR.

SITE CLASS	SLAB LOADING	CONCRETE STRENGTH	ADDITIONAL SITE FILL	UNDER SLAB FILL	SLAB THICKNESS	SLAB REINFORCEMENT	RECOMMENDED JOINT SPACING	DSWJ/SJ JOINT REINFORCEMENT REQUIREMENTS	FOOTINGS AT COLUMN/MULLION LOCATION	ADDITIONAL INFORMATION
A, S	Domestic	25 MPa	N/A	N/A	As per Multibuild design information	SL72 mesh, 30 top cover	6m (9m max.)	R12 Bars at 300 max. cts.	As per Multibuild design information	Edge thickening not required for domestic applications but recommended
	Commercial	25 MPa	N/A	150mm thick CBR25 gravel base.	125mm	SL72 mesh, 30 top cover	6m (7.5m max.)	R16 Bars at 450 max. cts.	As per Multibuild design information	Refer to light industrial for commercial with racking loads
	Light Industrial	32 MPa	N/A	150mm thick CBR25 gravel base.	150mm	SL82 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 450 max. cts.	As per Multibuild design information	
	Medium Industrial	32 MPa	N/A	150mm thick CBR25 gravel base.	180mm	SL92 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 300 max. cts.	As per Multibuild design information	
	Heavy Industrial									

Refer to engineers for custom design of slabs

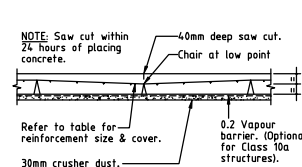


--- Indicates joints.

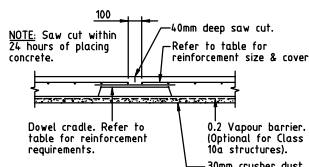


TYPICAL SLAB AND FOOTING LAYOUTS FOR 'A' AND 'S' CLASS SITES

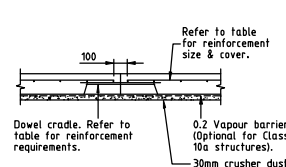
For BCA class 7a, 8 and 10a buildings



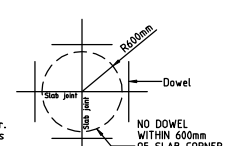
SAWN JOINT (SWJ)



DOWELLED SAWN JOINT (DSWJ)



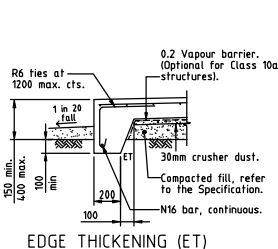
SLAB JOINT (SJ)



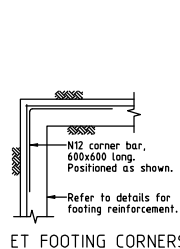
SLAB JOINT INTERSECTION DETAIL

JOINING NOTES:

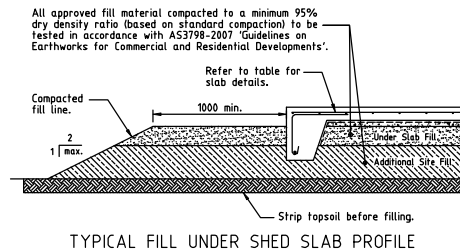
1. A DSWJ or SJ joint **MUST BE** provided in lieu of every THIRD SWJ joint.
 2. Joints to be located min. 600 from column locations.
 3. Crack inducer is recommended for slabs greater than 150 thick.
 4. Where possible, joints should be located to create square slab panels.
- Maximum recommended ratio of sides is 1.5:1.



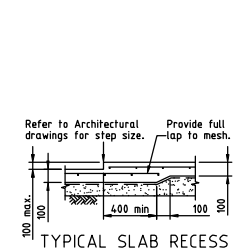
EDGE THICKENING (ET)



ET FOOTING CORNERS



TYPICAL FILL UNDER SHED SLAB PROFILE



TYPICAL SLAB RECESS

SHEET 1 OF 1

JOB NO. 02/03/2011

DATE 02/03/2011

CHECKED TM

DRAWN FDHS

STEEL BUILDING BY

TYPICAL SLAB AND FOOTING LAYOUTS FOR 'A' AND 'S' CLASS SITES

FOR AT

For BCA class 7a, 8 and 10a buildings

fair dinkum
HOMES & SHEDS

NORTHERN CONSULTING
engineers

Registered Chartered Professional Engineer
Registered Professional Engineer (Civil & Structural) QLD
Registered Certifying Engineer (Structural) N.T.
Registered Engineer - (Civil) VIC
Registered Engineer - (Civil) TAS

Regn. No. 2558980
Regn. No. 9985
Regn. No. 116373ES
Regn. No. EC36692
Regn. No. CC5648M

Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Phone: 07 4725 5550
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980

Signature: *T. Messer*

Date: 02/03/2011

Registered on the NPBR in the areas of practice of Civil & Structural National Professional Engineers Register

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.

The design and detail shown on these drawings are applicable to this project only and may not be reproduced in whole or any part or be used for any other purpose without the written permission of FBHS (Aust) Pty Limited with whom copyright resides. The local distributor you are dealing with is an authorised independent distributor of Fair Dinkum Homes & Sheds' products and enters into agreements with its customers on its own behalf and not as an agent of Fair Dinkum Homes & Sheds.

ENGINEERING SPECIFICATION:

GENERAL

This drawing shall be read in conjunction with Fair Dinkum Homes and Sheds Drawings.

Allow for falls to wastes, set downs for files & weather steps.

At all times during construction water must be drained away from the building. Ponding must not be allowed to remain along the sides of the building or in trenches close to the building.

All downpipes, tap outlets, condensate, drains etc. are to be drained away from the building and discharged to an outfall or an area remote from the building.

Refer to engineer for footings details if site conditions other than assumed are encountered.

The ground and slabs are to be treated for termites in accordance with Australian Standards and council requirements. (Optional for Class 10a structures).

Damp-proofing membranes to be provided under slab in South Australia and areas prone to rising damp and salt attack. (Optional for Class 10a structures).

A site specific Geotechnical investigation is recommended.

All footings are to be placed into firm, natural, undisturbed ground unless written approval is received from the engineer.

The builder is to check for soft spots that may exist under footings and contact the engineer if in doubt to the foundation quality. All vegetation and soft soil beneath slabs and footings are to be removed before construction of filling commences. In the circumstance where trees beneath or close to the building pad are to be removed, they shall be removed wholly (including the main roots). Holes that are created due to removal of vegetation should be filled with soil matching the composition of the existing surrounding soil. If in doubt about the

requirements for backfilling excavations resulting from removal of soft spots or tree stumps, contact the engineer.

Fill beneath slabs is to be granular, CBR as per table and compacted in layers of 150mm maximum to a minimum of 95% minimum dry density ratio (based on standard compaction) for cohesive soils, and to a minimum density index of 70% for cohesion less soils. Maximum fill depth 900mm, refer to engineer if greater depth of fill is required. It is the builder's responsibility to test the compaction to ensure compliance. All earth work to be in accordance with AS3798-2007.

CONCRETE

All concrete details and placement shall be performed in accordance with AS3600.

Minimum strength, Footings N25 MPa, Internal Slabs N25 MPa, Exposed Slabs N32 MPa. Maximum slump to be 80mm, max. 20mm aggregate. All concrete is to be mechanically vibrated and cured by an approved method for a minimum of 3 days. We recommend curing of slabs with ULTRA-CURE liquid membrane forming curing compound. For concrete members poured within 1km of the coast or for members in contact with water, tidal or splash zones refer to engineer for additional requirements.

Concrete NOT to be poured in temperatures below 5°C OR above 35°C.

Provide 2-N16 bars 1500mm long to u/s of mesh adjacent re-entrant corners. Where reinforcement has been cut to provide for services, an equivalent amount of trimming reinforcement is to be placed each side of the service.

Reinforcement is to be supported on approved bar chairs at 800 max. centres in both directions.

Unless otherwise noted, the following minimum reinforcement splices are required:

- N12 - 600mm lap
- N16 - 800mm lap
- Reinforcing fabric - One grid overlap plus 25mm.
- Trench mesh - 600mm

SERVICE

Avoid services beneath slabs wherever possible. Where services are placed beneath slabs:

- Provide 40mm of flexible sealant / lagging between pipes and penetrated concrete.
- Provide a flexible joint each side of the concrete and another within 500mm upstream and downstream, creating a short length of pipe each side of the short pipe through the concrete.

Service trench inverts are to slope away from the footings and be backfilled and compacted with clay from the site. Flexible joints are to be provided where services adjoin the building.

LANDSCAPING & MAINTENANCE

Trees must be kept well away from the building. Recommended minimum distance of at least the height of a mature tree and 1.5 times this for a group of trees.

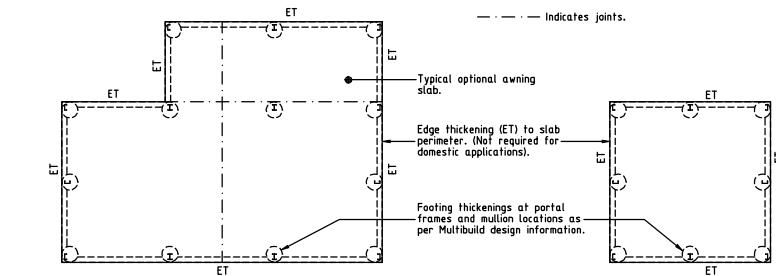
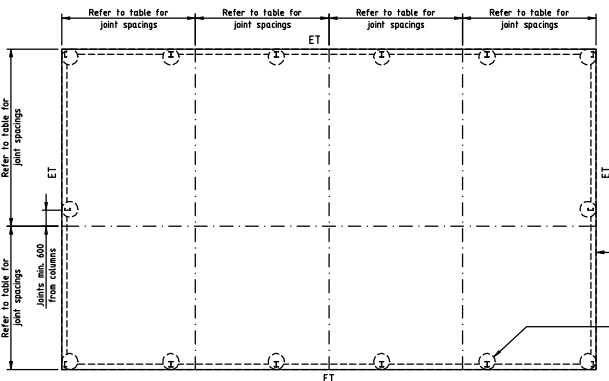
The builder should instruct the owner of his/her responsibility for maintenance of the area around the building in accordance with CSIRO sheet No. 10-91, especially with respect to surface water, trees and plumbing leaks.

SLAB DESIGN LOADINGS :

DOMESTIC	COMMERCIAL	LIGHT INDUSTRIAL	MEDIUM INDUSTRIAL	HEAVY INDUSTRIAL
- Domestic storage (up to 3kPa)	- Light storage (up to 5kPa)	- Light storage (up to 10kPa)	- Medium storage (up to 25kPa)	- Storage greater than 30kPa
- Foot traffic	- Commercial premises, shops, showrooms	- Light industrial activity (max. axle load = 6.5t, approx. 2.5t forklift)	- Medium industrial activity (max. axle load = 11.5t, approx. 5t forklift)	- Heavy industrial activity (forklifts greater than 5t)
- Garages mainly for private cars (up to 4.5t GVM)		- Racking loads (2.5t max. concentrated post load, 1.0m min. spacings)	- Racking loads (4t max. concentrated post load, 1.0m min. spacings)	- Heavy racking loads
		- Garages mainly for commercial vehicles up to 8t GVM	- Garages for large commercial vehicles up to 15t GVM	- Heavy commercial/machinery
				- Heavy articulated vehicles up to 40t GVM

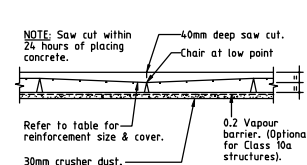
- Forklift axle load approximately = 2.5 x rated capacity (confirm with manufacturers specifications)
- Ground conditions min. 100 kPa & 3 CBR.

SITE CLASS	SLAB LOADING	CONCRETE STRENGTH	ADDITIONAL SITE FILL	UNDER SLAB FILL	SLAB THICKNESS	SLAB REINFORCEMENT	RECOMMENDED JOINT SPACING	DSW/SJ JOINT REINFORCEMENT REQUIREMENTS	FOOTINGS AT COLUMN/MULLION LOCATION	ADDITIONAL INFORMATION
M & M-D	Domestic	25 MPa	N/A	N/A	As per Multibuild design information	SL72 mesh, 30 top cover	6m (9m max.)	R12 Bars at 300 max. cts.	As per Multibuild design information	Edge thickening not required for domestic applications but recommended
	Commercial	25 MPa	N/A	150mm thick CBR25 gravel base.	125mm	SL72 mesh, 30 top cover	6m (7.5m max.)	R16 Bars at 450 max. cts.	As per Multibuild design information	Refer to light industrial for commercial with racking loads
	Light Industrial	32 MPa	N/A	150mm thick CBR25 gravel base.	150mm	SL82 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 450 max. cts.	As per Multibuild design information	
	Medium Industrial	32 MPa	N/A	150mm thick CBR25 gravel base.	180mm	SL92 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 300 max. cts.	As per Multibuild design information	
	Heavy Industrial									Refer to engineers for custom design of slabs

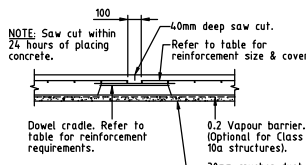


TYPICAL SLAB AND FOOTING LAYOUTS FOR 'M' AND 'M-D' CLASS SITES

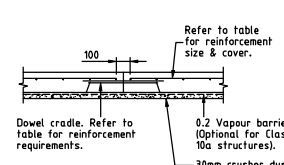
For BCA class 7a, 8 and 10a buildings



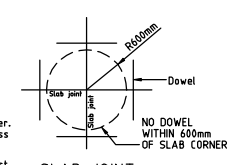
SAWN JOINT (SWJ)



DOWELLED SAWN JOINT (DSWJ)



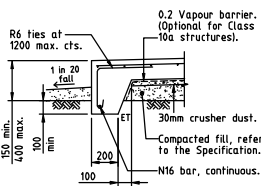
SLAB JOINT (SJ)



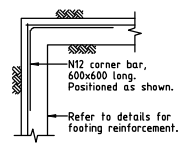
SLAB JOINT INTERSECTION DETAIL

JOINING NOTES:

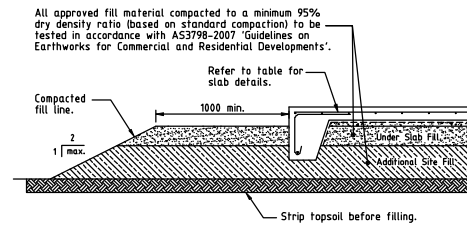
1. A DSWJ or SJ joint **MUST BE** provided in lieu of every **THIRD** SWJ joint.
 2. Joints to be located min. 600 from column locations.
 3. Crack inducer is recommended for slabs greater than 150 thick.
 4. Where possible, joints should be located to create square slab panels.
- Maximum recommended ratio of sides is 1.5:1.



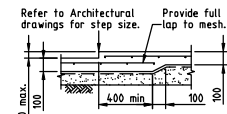
EDGE THICKENING (ET)



ET FOOTING CORNERS



TYPICAL FILL UNDER SHED SLAB PROFILE



TYPICAL SLAB RECESS

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.

SHEET OF

JOB NO. 02/03/2011

DATE 02/03/2011

CHECKED TM

DRAWN FDHS

STEEL BUILDING BY

TYPICAL SLAB AND FOOTING LAYOUTS FOR 'M' AND 'M-D' CLASS SITES

FOR

AT

For BCA class 7a, 8 and 10a buildings

fair dinkum

HOMES & SHEDS

SHED SAFE

approved

NORTHERN CONSULTING engineers

Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Phone: 07 4725 5550
Fax: 07 4725 5850
Email: design@ncong.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer
Registered Professional Engineer (Civil & Structural) QLD
Registered Certifying Engineer (Structural) N.T.
Registered Engineer - (Civil) VIC
Registered Engineer - (Civil) TAS

Regn. No. 2558980
Regn. No. 9985
Regn. No. 116373ES
Regn. No. EC36692
Regn. No. CC3648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Registered Professional Engineer 2558980

Signature *T. Messer*

Date 02/03/2011

Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

The design and detail shown on these drawings are applicable to this project only and may not be reproduced in whole or any part or be used for any other purpose without the written permission of FBHS (Aust) Pty Limited with whom copyright resides. The local distributor you are dealing with is an authorised independent distributor of Fair Dinkum Homes & Sheds' products and enters into agreements with its customers on its own behalf and not as an agent of Fair Dinkum Homes & Sheds.

ENGINEERING SPECIFICATION:

GENERAL

This drawing shall be read in conjunction with Fair Dinkum Homes and Sheds Drawings.

Allow for falls to wastes, set downs for files & weather steps.

At all times during construction water must be drained away from the building. Ponding must not be allowed to remain along the sides of the building or in trenches close to the building.

All downpipes, top outlets, condensate, drains etc. are to be drained away from the building and discharged to an outfall or an area remote from the building.

Refer to engineer for footings details if site conditions other than assumed are encountered.

The ground and slabs are to be treated for termites in accordance with Australian Standards and council requirements. (Optional for Class 10a structures).

Damp-proofing membranes to be provided under slab in South Australia and areas prone to rising damp and salt attack. (Optional for Class 10a structures).

A site specific Geotechnical investigation is recommended.

All footings are to be placed into firm, natural, undisturbed ground unless written approval is received from the engineer.

The builder is to check for soft spots that may exist under footings and contact the engineer if in doubt to the foundation quality. All vegetation and soft soil beneath slabs and footings are to be removed before construction of filling commences. In the circumstance where trees beneath or close to the building pad are to be removed, they shall be removed wholly (including the main roots). Holes that are created due to removal of vegetation should be filled with soil matching the composition of the existing surrounding soil. If in doubt about the

requirements for backfilling excavations resulting from removal of soft spots or tree stumps, contact the engineer.

Fill beneath slabs is to be granular, CBR as per table and compacted in layers of 150mm maximum to a minimum of 95% minimum dry density ratio (based on standard compaction) for cohesive soils, and to a minimum density index of 70% for cohesion less soils. Maximum fill depth 900mm, refer to engineer if greater depth of fill is required. It is the builder's responsibility to test the compaction to ensure compliance. All earth work to be in accordance with AS3798-2007.

CONCRETE

All concrete details and placement shall be performed in accordance with AS3600.

Minimum strength, Footings N25 MPa, Internal Slabs N25 MPa, Exposed Slabs N32 MPa. Maximum slump to be 80mm, max. 20mm aggregate. All concrete is to be mechanically vibrated and cured by an approved method for a minimum of 3 days. We recommend curing of slabs with ULTRA-CURE liquid membrane forming curing compound. For concrete members poured within 1m of the coast or for members in contact with water, tidal or splash zones refer to engineer for additional requirements.

Concrete NOT to be poured in temperatures below 5°C OR above 35°C.

Provide 2-N16 bars 1500mm long to u/s of mesh adjacent re-entrant corners. Where reinforcement has been cut to provide for services, an equivalent amount of trimming reinforcement is to be placed each side of the service.

Reinforcement is to be supported on approved bar chairs at 800 max. centres in both directions.

Unless otherwise noted, the following minimum reinforcement splices are required:

- N12 - 600mm lap
- N16 - 800mm lap
- Reinforcing fabric - One grid overlap plus 25mm.
- Trench mesh - 600mm

SERVICE

Avoid services beneath slabs wherever possible. Where services are placed beneath slabs:

- Provide 40mm of flexible sealant / lagging between pipes and penetrated concrete.
- Provide a flexible joint each side of the concrete and another within 500mm upstream and downstream, creating a short length of pipe each side of the short pipe through the concrete.

Service french inverts are to slope away from the footings and be backfilled and compacted with clay from the site. Flexible joints are to be provided where services adjoin the building.

LANDSCAPING & MAINTENANCE

Trees must be kept well away from the building. Recommended minimum distance of at least the height of a mature tree and 1.5 times this for a group of trees.

The builder should instruct the owner of his/her responsibility for maintenance of the area around the building in accordance with CSIRO sheet No. 10-91, especially with respect to surface water, trees and plumbing leaks.

SLAB DESIGN LOADINGS :

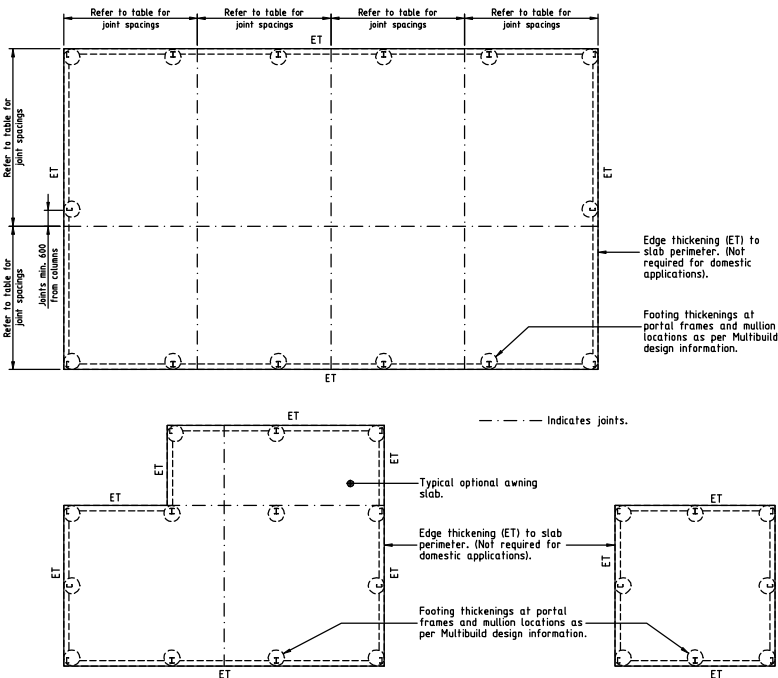
DOMESTIC	COMMERCIAL	LIGHT INDUSTRIAL	MEDIUM INDUSTRIAL	HEAVY INDUSTRIAL
- Domestic storage (up to 3kPa) - Foot traffic - Garages mainly for private cars (up to 4.5t GVM)	- Light storage (up to 5kPa) - Commercial premises, shops, showrooms	- Light storage (up to 10kPa) - Light industrial activity (max. axle load = 6.5t, approx. 2.5t forklift) - Racking loads (2.5t max. concentrated post load, 1.0m min. spacings) - Garages mainly for commercial vehicles up to 8t GVM	- Medium storage (up to 25kPa) - Medium industrial activity (max. axle load = 11.5t, approx. 5t forklift) - Racking loads (4t max. concentrated post load, 1.0m min. spacings) - Garages for large commercial vehicles up to 15t GVM	- Storage greater than 30kPa - Heavy industrial activity (forklifts greater than 5t) - Heavy racking loads - Heavy commercial/machinery heavy/articulated vehicles up to 40t GVM

- Forklift axle load approximately = 2.5 x rated capacity (confirm with manufacturers specifications)
- Ground conditions min. 100 kPa & 3 CBR.

SITE CLASS	SLAB LOADING	CONCRETE STRENGTH	ADDITIONAL SITE FILL	UNDER SLAB FILL	SLAB THICKNESS	SLAB REINFORCEMENT	RECOMMENDED JOINT SPACING	DSW/SJ JOINT REINFORCEMENT REQUIREMENTS	FOOTINGS AT COLUMN/MULLION LOCATION	ADDITIONAL INFORMATION
H	Domestic	25 MPa	150 CBR15 gravel sub base	N/A	As per Multibuild design information	SL72 mesh, 30 top cover	6m (9m max.)	R12 Bars at 300 max. cts.	As per Multibuild design information	Edge thickening not required for domestic applications but recommended
	Commercial	25 MPa	200 CBR15 gravel sub base	150mm thick CBR25 gravel base.	125mm	SL72 mesh, 30 top cover	6m (7.5m max.)	R16 Bars at 450 max. cts.	As per Multibuild design information	Refer to light industrial for commercial with racking loads
	Light Industrial	32 MPa	200 CBR15 gravel sub base	150mm thick CBR25 gravel base.	150mm	SL82 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 450 max. cts.	As per Multibuild design information	
	Medium Industrial	32 MPa	200 CBR15 gravel sub base	150mm thick CBR25 gravel base.	180mm	SL92 mesh, 30 top cover	6m (7.5m max.)	R20 Bars at 300 max. cts.	As per Multibuild design information	
Heavy Industrial	Refer to engineers for custom design of slabs									

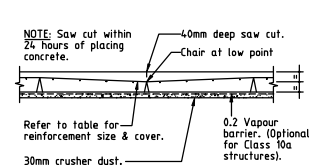
*Alternative to additional site fill, refer to engineer for internal/external beam layout

SITE CLASS	SLAB LOADING	CONCRETE STRENGTH	ADDITIONAL SITE FILL	UNDER SLAB FILL	SLAB THICKNESS	SLAB REINFORCEMENT	RECOMMENDED JOINT SPACING	DSW/SJ JOINT REINFORCEMENT REQUIREMENTS	FOOTINGS AT COLUMN/MULLION LOCATION	ADDITIONAL INFORMATION
H-D	All loading applications									Refer to engineers for custom design of slabs

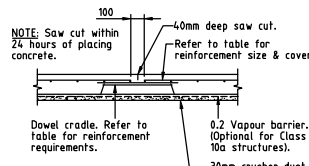


TYPICAL SLAB AND FOOTING LAYOUTS FOR 'H' AND 'H-D' CLASS SITES

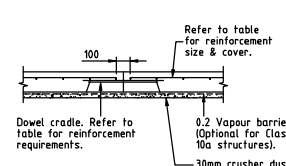
For BCA class 7a, 8 and 10a buildings



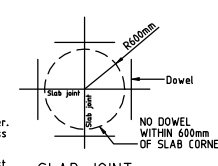
SAWN JOINT (SWJ)



DOWELLED SAWN JOINT (DSWJ)



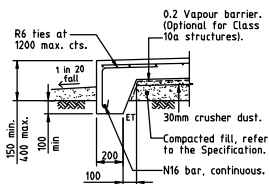
SLAB JOINT (SJ)



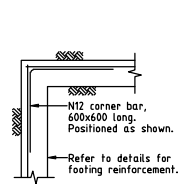
SLAB JOINT INTERSECTION DETAIL

JOINTING NOTES:

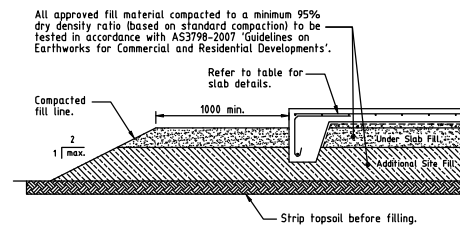
1. A DSWJ or SJ joint **MUST BE** provided in lieu of every **THIRD** SWJ joint.
2. Joints to be located min. 600 from column locations.
3. Crack inducer is recommended for slabs greater than 150 thick.
4. Where possible, joints should be located to create square slab panels. Maximum recommended ratio of sides is 1.5:1.



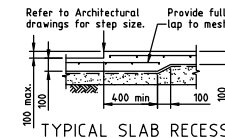
EDGE THICKENING (ET)



ET FOOTING CORNERS



TYPICAL FILL UNDER SHED SLAB PROFILE



TYPICAL SLAB RECESS

SHEET OF	JOB NO. 02/03/2011	DATE 02/03/2011	CHECKED TM	DRAWN FDHS	STEEL BUILDING BY	<p>TYPICAL SLAB AND FOOTING LAYOUTS FOR 'H' AND 'H-D' CLASS SITES</p> <p>FOR</p> <p>FOR 'H' AND 'H-D' CLASS SITES</p> <p>AT</p> <p>For BCA class 7a, 8 and 10a buildings</p>				Civil & Structural Engineers 50 Punari Street Currajong, Qld 4812 Phone: 07 4725 5550 Fax: 07 4725 5850 Email: design@ncong.com.au ABN 341 008 173 56	Mr Timothy Roy Messer BE MIEAust RPEQ Registered Professional Engineer 2558980 Signature: <i>T. Messer</i> Date: 02/03/2011 Registered on the NPBR in the areas of practice of Civil & Structural National Professional Engineers Register
					Registered Chartered Professional Engineer Registered Professional Engineer (Civil & Structural) QLD Registered Certifying Engineer (Structural) N.T. Registered Engineer - (Civil) VIC Registered Engineer - (Civil) TAS						

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.