GENERAL:

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH CONTRACT DOCUMENTS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS DURING THE COURSE OF THE CONTRACT. READ THE DRAWINGS CAREFULLY AND REFER ANY DISCREPANCIES TO THE SUPERINTENDENTS REPRESENTATIVE FOR DECISION PRIOR TO PROCEEDING WITH THE WORK.
2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION AND FABRICATION. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE (U.N.O.). WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT STANDARDS ASSOCIATION OF AUSTRALIA (SAA) CODES AND RELEVANT BUILDING AUTHORITY.
4. THE BUILDER SHALL BE RESPONSIBLE FOR THE STRUCTURE DURING ERECTION AND PROVIDE ADEQUATE PROPPING AND SUPPORTS.
5. WHERE DTC STANDARDS ARE REFERENCED THESE REFER TO STANDARDS WITHIN THE NORTHERN TERRITORY DEEMED TO COMPLY MANUAL PREPARED BY THE DEPARTMENT OF LANDS AND PLANNING.
6. BUILDING FROM THESE DRAWINGS IS NOT TO COMMENCE WITHOUT A BUILDING APPROVAL BEING ISSUED.
7. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LOADS (TO AS 1170.1-2002 & AS 1170.2-2002):

WIND LOADS (IN ACCORDANCE WITH AS 1170.2-2002)	
IMPORTANCE LEVEL;	2
Ms , Mt	1 , 1
WIND REGION	C
REGIONAL WIND SPEEDS; V500 V20	69.3m/s (ULS) 45m/s (SLS)
TERRAIN CATEGORY	2
INTERNAL PRESSURE COEFFICIENT (CPi)	-
LIVE LOADS (IN ACCORDANCE WITH AS 1170.1-2002)	
FLOOR - SLAB	5kPa
THE ALLOWABLE FOUNDATION BEARING PRESSURE	100kPa

EXISTING CONDITIONS AND SERVICES:

1. CONTRACTOR TO USE "DIAL BEFORE YOU DIG" PRIOR TO COMMENCEMENT OF ANY SITE WORKS.
2. CONTRACTOR TO ENSURE THAT NEW WORKS DO NOT DAMAGE ANY EXISTING SERVICES. CONTRACTOR TO LOCATE ALL EXISTING ABOVEGROUND AND UNDERGROUND SERVICES IN THE VICINITY OF THE SITE OF WORKS. DUE CARE SHOULD BE MAINTAINED WHEN WORKING AND EXCAVATING IN ALL AREAS.

STEELWORK:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 4100-1998 AND AS 1554-2014, BUILDING CODE OF AUSTRALIA (BCA) AND NT WORKSAFE REGULATIONS.
2. ALL WELDS TO BE 6MM CONTINUOUS SPECIAL CLASS FILLET WELDS U.N.O.
3. ALL WELDS SHALL BE PERFORMED BY A QUALIFIED WELDER IN ACCORDANCE WITH AS 1554-2014 AND WITH E41XX ELECTRODES.
4. STEELWORK THAT IS SITE WELDED OR SUSTAINS ANY OTHER TYPE OF SURFACE DAMAGE SHALL BE PREPARED TO AS 1627-1997 PART 2 (CLASS 3) AND PRIMED WITH TWO COATS OF SINGLE PACK, ZINC-RICH PRIMER IN ACCORDANCE WITH MANUFACTURERS SPECIFICATION.
5. FINISH COATS TO EXPOSED STEELWORK TO BE PAINT COMPATIBLE WITH PRIMER AND IN ACCORDANCE WITH ARCHITECTS SPECIFICATIONS.
6. ALL BOLT TYPES (AND DESIGNATIONS WHERE USED) SHALL BE AS FOLLOWS:
   - 6.1. 4.6/S - COMMERCIAL BOLTS TO AS 1111-2015 AND AS 1112-2015 SNUG TIGHT.
   - 6.2. 8.8/S - HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS 1252-1996, SNUG TIGHTENED ONLY.
7. ALL BOLTS, NUTS AND WASHERS INCLUDING H.D. BOLTS/REO ARE TO BE HOT DIP GALVANISED. ALL CAST-IN FERRULES AND MASONRY ANCHORS TO BE PASSIVATED ZINC COATED. ALL GALVANISED COMPONENTS CAST-IN TO CONCRETE MUST BE PASSIVATED.
8. ALL STEELWORK SHALL HAVE STEEL GRADE AS FOLLOWS:

STEEL MEMBER	STEEL GRADE	CORRESPONDING STANDARD
HOT ROLLED PLATES	250	AS 3678-2016
HOT ROLLED STEEL SECTIONS	300	AS 3679-2016
RECTANGULAR & SQUARE HOLLOW SECTIONS	450	AS 1163-2016

FOUNDATIONS:

1. FOUNDATION MATERIAL (AFTER EXCAVATION) SHALL BE APPROVED FOR A SAFE BEARING CAPACITY OF 100kPa.
2. SUB-BASE FOR SLAB ON GROUND AND BACKFILL OVER FOOTINGS SHALL BE APPROVED GRANULAR MATERIAL, COMPACTED IN LAYERS OF 150mm MAX. TO 95% MAXIMUM MODIFIED DRY DENSITY (MMDD) IN ACCORDANCE WITH AS 1289-2014.
3. SURFACE TO BE STRIPPED OF ALL ORGANIC MATTER (e.g. TOP SOIL). PROOF ROLL SUBGRADE TO 95% MMDD.
4. SELECTED FILL SHALL BE A GRAVEL, DECOMPOSED OR BROKEN ROCK, FREE FROM ORGANIC MATTER AND LUMPS OF CLAY AND SHALL CONFORM TO THE FOLLOWING CRITERIA:

AS METRIC SIEVE	% PASSING BY WEIGHT
75.0mm	100
9.5mm	30 - 100
2.36mm	15 - 65
0.075mm	5 - 25

- 4.1 % PASSING 0.075mm/% PASSING 2.36mm : 0.2% - 0.4%
- 4.2 LINEAR SHRINKAGE (PASSING 0.425mm) : 2% - 8%
- 4.3 MINIMUM 4 DAY SOAKED C.B.R. (95% RELATIVE COMPACTION) : 30%

5. TESTING OF MATERIALS AND FOR COMPACTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALLOW FOR A MINIMUM OF COMPACTION TESTS FOR THE BUILDING PAD.
6. FOUNDATIONS SHALL BE INSPECTED BY THE CERTIFYING DESIGN ENGINEER PRIOR TO PLACEMENT OF CONCRETE.

CONCRETE:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600-2009.
2. ALL FORMWORK SHALL CONFORM TO AS 3610-1995. RE-SHORING IS NOT PERMITTED.
3. CONCRETE CHARACTERISTICS SHALL BE AS FOLLOWS U.N.O.:

STRUCTURAL ELEMENT	COMPRESSIVE STRENGTH (F'c - 28 Days MPa)	SLUMP (mm)	MAX. AGGREGATE SIZE (mm)
MASS CONCRETE & STRIP FOOTINGS	25	65 ± 15	20
SLAB ON GROUND	32	65 ± 15	20

4. DIMENSIONS OF CONCRETE ELEMENTS IN THESE DRAWINGS DO NOT INCLUDE APPLIED FINISHES THICKNESS.
5. ALL FORMED EDGES AND CORNERS OF CONCRETE MEMBERS SHALL HAVE 20mm CHAMFERS U.N.O.
6. NO ADMIXTURES ARE TO BE USED WITHOUT THE WRITTEN APPROVAL OF THE CERTIFYING DESIGN ENGINEER.
7. ALL CONCRETE TO BE COMPACTED USING MECHANICAL VIBRATION.
8. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THESE DRAWINGS SHALL BE MADE IN CONCRETE WITHOUT PRIOR APPROVAL OF THE CERTIFYING DESIGN ENGINEER.
9. ALL CONCRETE SURFACES ARE TO BE CURED FOR 7 DAYS AFTER CASTING USING A METHOD IN ACCORDANCE WITH THE SPECIFICATION.

DRAWING IS TYPICAL ONLY. OBTAIN ENGINEERING STRUCTURAL CERTIFICATE BEFORE CONSTRUCTION.

No.	DESCRIPTION	DATE	NAME	DEPT/COMPANY
0	ISSUED AS A STANDARD DRAWING	SEPT 2017	J.LEESON	EES/DoI

AMENDMENTS

WARNING

BEWARE OF UNDERGROUND SERVICES.
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DRAWN CNM DATE 22.02.2013	CHECKED JM DATE 22.02.2013		
DESIGNED CNM DATE 22.02.2013	CHECKED JM DATE 22.02.2013		
DESIGN LEADER S.HATZI DATE 15/09/2017	DESIGN DIRECTOR S.JACKSON DATE 15/09/2017		

Northern Territory Government

STANDARD DRAWINGS
BUS SHELTERS & ASSOCIATED INFRASTRUCTURE

BUS TOTEM STRUCTURE TYPICAL DETAILS - GENERAL STRUCTURAL NOTES

FILE No.	ASSET No.	SHEET No.	DRAWING No.	AMEND.	SHEET SIZE
-	-	1 OF 3	CS3717	0	A1

CS3717_AMED_0 RELEASED 15/09/2017