



TIPLER LAYOUT DETAIL  
SCALE 1:500

TIPLER SETTING OUT COORDINATES			TIPLER SETTING OUT COORDINATES		
Position X	Position Y	COORDINATE ID	Position X	Position Y	COORDINATE ID
-63734.58	-3653422.36	B01	-63631.59	-3653274.07	B50
-63731.22	-3653420.57	B02	-63630.33	-3653270.99	B51
-63727.85	-3653418.78	B03	-63743.21	-3653405.24	BC (TIP CH L2)
-63724.49	-3653416.99	B04	-63740.05	-3653414.56	CC (TIP CH L3)
-63721.13	-3653415.21	B05	-63728.31	-3653417.04	EC (TIP CH L4)
-63717.76	-3653413.42	B06	-63625.08	-3653379.60	ER1
-63714.40	-3653411.63	B07	-63512.17	-3653385.80	ER2
-63711.03	-3653409.84	B08	-63528.16	-3653335.51	ER3
-63707.81	-3653407.61	B09	-63546.30	-3653126.57	ER4
-63704.69	-3653405.62	B10	-63587.05	-3653175.68	P01
-63701.65	-3653403.33	B11	-63595.83	-3653170.54	P02
-63698.70	-3653400.92	B12	-63587.12	-3653171.07	P03
-63695.83	-3653398.41	B13	-63591.76	-3653179.43	P05
-63693.06	-3653396.80	B14	-63590.70	-3653181.71	P06
-63690.39	-3653395.09	B15	-63523.09	-3653135.39	P07
-63687.81	-3653393.28	B16	-63538.28	-3653137.48	P08
-63685.33	-3653387.38	B17	-63553.56	-3653129.17	P09
-63682.97	-3653384.40	B18	-63552.51	-3653131.45	P10
-63680.71	-3653381.33	B19	-63544.35	-3653104.62	P15
-63678.57	-3653378.18	B20	-63532.38	-3653081.80	P12
-63676.54	-3653374.95	B21	-63535.47	-3653085.76	P13
-63674.63	-3653371.65	B22	-63532.19	-3653085.76	P14
-63672.85	-3653369.29	B23	-63544.35	-3653104.62	P15
-63671.19	-3653364.89	B24	-63542.07	-3653103.06	P16
-63669.59	-3653361.40	B25	-63523.96	-3653112.15	P17
-63667.81	-3653357.54	B26	-63525.01	-3653108.87	P18
-63666.41	-3653354.48	B27	-63517.39	-3653089.22	P19
-63664.63	-3653351.01	B28	-63515.11	-3653088.17	P20
-63663.26	-3653347.54	B29	-63293.34	-3653407.34	P21
-63661.69	-3653344.06	B30	-63295.38	-3653403.73	P22
-63660.13	-3653340.59	B31	-63291.54	-3653400.98	P23
-63658.58	-3653337.11	B32	-63295.31	-3653405.65	P24
-63657.03	-3653333.63	B33	-63308.46	-3653448.10	P25
-63655.48	-3653330.15	B34	-63306.18	-3653447.05	P26
-63653.94	-3653326.68	B35	-63291.54	-3653448.48	P27
-63652.41	-3653323.17	B36	-63292.62	-3653463.20	P28
-63650.89	-3653319.68	B37	-63244.32	-3653415.95	P29
-63649.37	-3653316.19	B38	-63246.60	-3653420.00	P30
-63647.85	-3653312.69	B39	-63551.08	-3653101.86	TIP CH L MH1 (START)
-63646.34	-3653309.19	B40	-63552.68	-3653403.68	TIP CH L5
-63644.84	-3653305.69	B41	-63531.23	-3653270.60	TIP CH R3 (START)
-63643.34	-3653302.19	B42	-63544.01	-3653301.89	TIP CH R4
-63641.85	-3653298.68	B43	-63551.08	-3653304.83	TIP CH R5
-63640.37	-3653295.17	B44	-63570.99	-3653375.17	TIP CH R6
-63638.89	-3653291.66	B45	-63581.69	-3653392.78	TIP MH6
-63637.42	-3653288.15	B46	-63299.76	-3653402.32	TIP P4 CH1
-63635.96	-3653284.63	B47	-63299.76	-3653406.95	TIP P4 CH2
-63634.49	-3653281.11	B48			

REFERENCE DRAWINGS	
5200157-2-001-C-LA-0002-01	TIPLER - STORMWATER TIPLER GENERAL LAYOUT AND KEY PLAN
5200157-2-001-C-LA-0002-02	TIPLER - LAYOUT DETAIL SHEET 1 OF 3
5200157-2-001-C-LA-0002-03	TIPLER - LAYOUT DETAIL SHEET 2 OF 3
5200157-2-001-C-LA-0002-04	TIPLER - LAYOUT DETAIL SHEET 3 OF 3
5200157-2-001-C-SE-0002-01	TIPLER - STORMWATER LONGSECTION SHEET 1 OF 3
5200157-2-001-C-SE-0002-02	TIPLER - STORMWATER LONGSECTION SHEET 2 OF 3
5200157-2-001-C-SE-0002-03	TIPLER - STORMWATER LONGSECTION SHEET 3 OF 3
5200157-2-001-C-DE-0002-01	TIPLER - POND 1, POND 2 AND POND 4 GROSS SECTION DETAIL
5200157-2-001-C-DE-0002-02	TYPICAL GRID CHANNEL, MOUNTABLE KERB, SUBSOIL COLLECTOR (SC2) AND TRAPEZOIDAL CHANNEL DETAIL
5200157-2-002-C-DE-0002-03	TIPLER - TYPICAL STORMWATER MANHOLE DETAILS SD4 AND SD5
DRAWING NO.	REFERENCE

NOTES	
a.	MEASUREMENTS ARE BASED ON METRIC SYSTEM
b.	ALL LEVELS ARE IN METERS TO MEAN SEA LEVELS (MSL)
c.	DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED
d.	THE CONTRACTOR SHALL VERIFY ALL SERVICES OR CONDITIONS ON THE SITE AND NOTIFY THE ENGINEERING OF ANY VARIATIONS FROM DIMENSIONS BEFORE CONSTRUCTION

- GENERAL NOTES:
- THE CONTRACTOR WILL BE DEEMED TO HAVE INSPECTED THE SITE AND BE IN AGREEMENT WITH THE WORKS REQUIRED AS PER THE TENDER DOCUMENTS, UNLESS ALTERNATIVE PROPOSALS WITH COST IMPLICATIONS ARE RECEIVED TOGETHER WITH THE TENDER DOCUMENTS. ALTERNATIVE PROPOSALS SUBMITTED DURING CONSTRUCTION SHALL BE ON A DESIGN AND CONSTRUCT BASIS, WITH THE DESIGN AT CONTRACTOR'S EXPENSE.
  - VARIATIONS DEEMED NECESSARY BY THE CONTRACTOR SHALL BE FORWARDED TO THE PROJECT MANAGER IN WRITING FOR APPROVAL BEFORE ANY CONSTRUCTION, BASED ON THE VARIATION COMMENCES.
  - SERVICES SHOWN ON DRAWING ARE KNOWN OR SOURCED FROM EXISTING DRAWINGS. THE CONTRACTOR MUST ENSURE THAT ALL SERVICES THAT INTERSECT OR RUN ALONGSIDE THE PROPOSED WORKS ARE LOCATED BEFORE CONSTRUCTION COMMENCES. ANY CLASHES SHALL BE REPORTED TO THE PROJECT MANAGER IN WRITING. THE CONTRACTOR SHALL BE HELD LIABLE FOR ANY DAMAGES TO EXISTING SERVICES DUE TO NEGLIGENCE.
  - ALL EXISTING PIPES AND MANHOLES INCORPORATED INTO THE NEW SYSTEM SHALL HAVE DEFECTS RECTIFIED TO COMPLY TO STANDARDS FOR NEW WORKS.
  - DIMENSIONS SHOWN ON DRAWINGS SHALL TAKE PREFERENCE OVER DIMENSIONS SCALED.
  - ALL LEVELS AND DIMENSIONS SHALL BE CHECKED BEFORE ANY WORK COMMENCES. FAILURE TO DO SO SHALL DEEM THE CONTRACTOR LIABLE FOR ANY WORK REQUIRED TO RECTIFY ERRORS AS A RESULT OF THE FAILURE TO CHECK THE LEVELS AND DIMENSIONS.
  - ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS, UNLESS OTHERWISE INDICATED.
  - THE LATEST REVISION OF SANS SPECIFICATIONS SHALL APPLY. ALL WORK SHALL BE DONE IN ACCORDANCE WITH RELEVANT SANS SPECIFICATIONS, UNLESS OTHERWISE INDICATED.
  - ALL LENGTHS SHOWN ARE APPROXIMATE AND SHALL BE CONFIRMED ON SITE BY CONTRACTOR.
- EARTHWORKS:
- ANY DISCREPANCIES IN LEVELS AND SETTING OUT DATA TO BE COUNTERED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.
  - ALL WORKMANSHIP TO BE IN ACCORDANCE WITH SANS 1200 PART D: EARTHWORKS AND THE RELEVANT PROJECT SPECIFICATIONS AS INCLUDED IN THE CONTRACT.
  - BEFORE PLACING ANY FILL MATERIAL, THE EXISTING GROUND SURFACE MUST BE CLEARED AND GRUBBED OF ALL VEGETATION AND ORGANIC MATTER.
  - UNLESS OTHERWISE INDICATED, ALL BANK SLOPES TO BE 1:1.5 OUT AND 1:2 FILL.
  - THE UNCOMPLICATED THICKNESS OF FILL LAYERS SHALL NOT EXCEED 300mm.
  - LOCATE ALL EXISTING SERVICES IN AREA PRIOR TO ANY CONSTRUCTION. TAKING PLACE.
  - THE CONTRACTOR IS TO TAKE DRAINAGE AND COUNTERING BACKDROPP INTO ACCOUNT IN ACCORDANCE TO THE TRUE NATURE AND EXTENT OF THE WORKS. SEE WORKS INFORMATION FOR MORE DETAIL.
- STORMWATER NOTES:
- TRENCHES FOR PIPES TO BE EXCAVATED AND BACKFILLED IN ACCORDANCE WITH THE REQUIREMENT OF SANS 1200 D - PIPE TRENCHES.
  - ALL RIGID CONCRETE PIPES SHALL HAVE CLASS B BEDDING UNLESS STATED OTHERWISE.
  - FOR STORMWATER PIPES SHALL BE SPOOT & SOCKET CLASS 1000 (SANS 67).
  - ALL CONCRETE PIPE JOINTS TO BE WRAPPED WITH 42 BDM (NONWOVEN CONTINUOUS FILAMENT NEEDLE PUNCHED POLYESTER GEOTEXTILE) MIN. WIDTH TO BE 150mm FOR PIPES 3000 TO 6000.
  - NB. ALL MANHOLE COVERS TO SUIT CROSSFALL OF FINISHED PAVING.
  - ON COMPLETION, THE INSTALLATION SHALL BE TESTED TO THE ENGINEER'S SPECIFICATION.
  - THE CONTRACTOR SHALL SUBMIT A FULL SET OF AS-BUILT DRAWINGS UPON COMPLETION OF THE INSTALLATION.
  - ALL EXISTING STORMWATER PIPES, MANHOLES, CHANNELS AND ANY OTHER STORMWATER INFRASTRUCTURE TO BE CLEARED AND CLEARED OF ALL DEBRIS BEFORE ANY WORK COMMENCES. ALL DAMAGED EXISTING STORMWATER INFRASTRUCTURE SHALL BE REINTEGRATED TO ORIGINAL CONDITION.
  - ANY DISCREPANCIES IN LEVELS AND SETTING OUT DATA TO BE COUNTERED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.
  - ALL EXISTING STORMWATER PIPES ARE CONCRETE UNLESS STATED OTHERWISE.
  - WHERE MINIMUM COVER OF 1000mm FOR OPERATIONAL AREAS & 600mm FOR NON OPERATIONAL AREAS CANNOT BE ACHIEVED, CONCRETE ENCASEMENT IS REQUIRED AS PER THE DETAIL DRAWINGS.
- CONSTRUCTION & REHABILITATION ACTIVITIES FOR STORMWATER SYSTEM:
- REMOVE ALL DIRT & CAVED MATERIAL FROM SURFACE & SUB-SURFACE DRAINAGE SYSTEMS.
  - REPAIR EROSION RUNNELS & RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE TOWARDS THE DETENTION POND.
  - PIPES, CULVERTS, MANHOLES & CHANNELS NEED TO BE CLEARED REGULARLY AS SYSTEM IS BLOODED & MANHOLES ARE SILENT UP.
  - LENGTHS OF PIPES, NUMBER OF CULVERTS & MANHOLES CLEARLY SHOWN IN LONGITUDINAL SECTION FOR QUANTIFYING.
  - CLEAN OUT ALL SLABS & DRYING BEDS.
  - RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE AWAY FROM THE ROADS TOWARDS THE STORMWATER POND.
  - LOW POINTS TO BE REPAIRED WITH A MINIMUM OF 150 mm G2 LAYER COMPACTED TO 95% MOD-AASHTO.
  - CONSTRUCTION & REHABILITATION ACTIVITIES FOR POND 1, POND 2 AND POND 4:
  - FOR RESPECTIVE POND DETAIL REFER TO DRAWING 5200157-2-001-C-DE-0002-01.
  - CLEAR ALL GRUB & VEGETATION.
  - COMPACT TO 95% MOD-AASHTO.
  - REPAIR & REINSTATE ALL DOWN CUTS IF APPLICABLE.
  - PLACE STONE PITCHING ENERGY DISSIPATORS AT OUTLET OF CULVERTS & DOWN CHUTES.
  - DETENTION POND TO BE CONSTRUCTED TO NEW APPROVED LAYERSWORKS.
  - PLEASE SEE 5200157-2-001-C-DE-0002-01 FOR POND 1, POND 2 AND POND 4 LAYERSWORKS.

TIPLER STORMWATER SCHEDULE				
Name	Y-Coord	X-Coord		
TIP MH1	-63631.57	-3653103.45		
TIP MH2	-63650.60	-3653195.23		
TIP MH3	-63656.12	-3653174.31		
TIP MH4	-63666.27	-3653174.63		
TIP MH5	-63643.81	-3653061.29		
TIP MH6	-63691.72	-3653393.40		
TIP MH7	-63671.22	-3653404.36		
TIP MH8	-63670.69	-3653477.12		
TIP MH9	-63673.32	-3653556.05		
TIP MH10	-63693.41	-3653632.66		
TIP MH11	-63691.77	-3653702.38		
TIP MH12	-63696.42	-3653814.13		
TIP CH L1 START MH1	-63651.30	-3653158.39		
TIP CH L1 MID	-63671.68	-3653336.63		
TIP CH L2	-63673.21	-3653405.92		
TIP CH C1 BC	-63674.63	-3653409.39		
TIP CH C2	-63674.59	-3653414.17		
TIP CH L3	-63678.21	-3653417.80		
TIP CH C3	-63678.21	-3653419.39		
TIP CH L4 EC	-63678.40	-3653417.75		
TIP CH L5	-63678.40	-3653403.07		
TIP CH R1 EX	-63627.67	-3653239.86		
TIP CH R2	-63627.65	-3653254.20		
TIP CH R3	-63631.39	-3653271.15		
TIP CH R4	-63644.14	-3653302.25		
TIP CH R5	-63693.68	-3653485.62		
TIP CH R6	-63693.62	-3653754.14		
POND 2 INLET	-63666.27	-3653174.34		
TIP MH4	-63666.27	-3653181.81		
TIP CH MH4	-63645.04	-3653069.26		
TIP CH MH5	-63627.12	-3653016.70		
POND 1 INLET	-63654.59	-3653085.30		
TIP P1 OVERFLOW	-63638.06	-3653104.44		
TIP P1 INLET TO P2	-63651.66	-3653139.63		
TIP P2 OVERFLOW	-63651.00	-3653177.17		
TIP CH IN P4	-63657.40	-3653185.31		
TIP P4 CH	-63288.01	-3653388.13		
POND 4 INLET	-63287.00	-3653408.27		

BENCHMARK NAME				
Name	Y-Coord	X-Coord		
P002_S1	-63475.257	-3654991.162	B.592	Pillar Beacon
P004_S1	-64475.598	-3652739.595	B.1137	Pillar Beacon
P005_S1	-64450.94	-3653384.385	B.636	Pillar Beacon
P006_S1	-64121.508	-3654997.788	B.1218	Pillar Beacon
CD002_S1	-63761.795	-3653143.100	B.488	Target Survey Mark
B1	-63666.668	-3653004.206	B.515	Grid Hole in Concrete
B2	-63748.380	-3653363.958	B.513	12mm Round Iron Peg
B3	-63699.892	-3653754.514	B.597	12mm Round Iron Peg
B4	-64008.972	-3654037.881	B.839	12mm Round Iron Peg
B5	-64146.18	-3654428.191	B.555	12mm Round Iron Peg
B6	-64380.974	-3654714.528	B.566	Round Nail in Concrete
B7	-64294.697	-3655014.636	B.386	12mm Round Iron Peg
B8	-63629.945	-3654696.752	B.441	12mm Round Iron Peg
B9	-63195.652	-3653381.885	B.573	12mm Round Iron Peg
B10	-63631.637	-3653261.361	B.484	12mm Round Iron Peg

CONTRACTOR / CONSULTANT				
TITLE	NAME	SIGN	DATE	
DRAWN	RM		03 08 23	
CHECKED	HuW		03 08 23	
DESIGNED	RM		03 08 23	
CHECKED	HuW		03 08 23	
OPERATING DIVISIONS				
TITLE	NAME	SIGN	DATE	
PR. ENG. / PR. TECH. / PR. ARCH				
NAME	R. NADDOO		03 08 23	
SIGNATURE				
REG. NUMBER	201070216			
SCALE	AS SHOWN			

TRANSNET PORT TERMINALS

TRANSNET

PORT OF SALDANHA

TIPLER AREA

LAYOUT DETAIL 1:500

SHEET 1 OF 3

PROJECT NUMBER: 00 FRS DRS TYPE: DRAWING NO. SHEET: REV: ID

A052001572001C-LA-00020200 RM