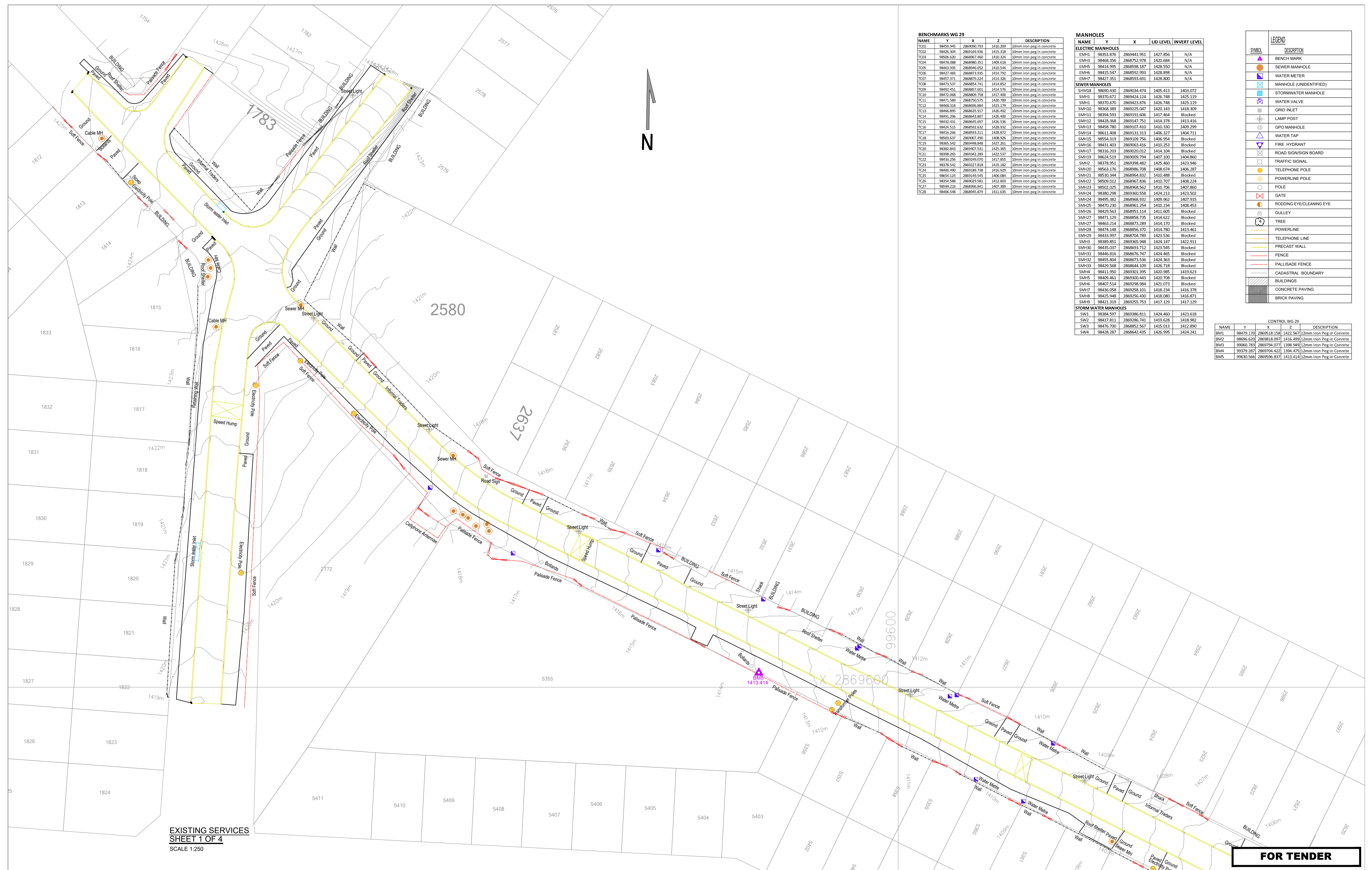


LIST OF DRAWINGS		
DRAWING NUMBER	DRAWING DESCRIPTION	REVISION
LIST OF DRAWINGS		
2021-014-TN-RD-001	LOCALITY PLAN, KEY PLAN AND LIST OF DRAWINGS	REV 0
ROADS		
2021-014-TN-RD-002	EXISTING SERVICES SHEET 1 OF 4	REV 0
2021-014-TN-RD-003	EXISTING SERVICES SHEET 2 OF 4	REV 0
2021-014-TN-RD-004	EXISTING SERVICES SHEET 3 OF 4	REV 0
2021-014-TN-RD-005	EXISTING SERVICES SHEET 4 OF 4	REV 0
2021-014-TN-RD-006	JB MARKS GEOMETRIC LAYOUT SHEET 1 OF 4	REV 0
2021-014-TN-RD-007	JB MARKS GEOMETRIC LAYOUT SHEET 2 OF 4	REV 0
2021-014-TN-RD-008	JB MARKS GEOMETRIC LAYOUT SHEET 3 OF 4	REV 0
2021-014-TN-RD-009	JB MARKS GEOMETRIC LAYOUT SHEET 4 OF 4	REV 0
2021-014-TN-RD-010	JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 1 OF 3	REV 0
2021-014-TN-RD-011	JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 2 OF 3	REV 0
2021-014-TN-RD-012	JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 3 OF 3	REV 0
2021-014-TN-RD-013	JB MARKS TEMPORARY BRIDGE RAMP	REV 0
2021-014-TN-RDLS-001	JB MARKS ROAD LONGITUDINAL SECTION	REV 0
2021-014-TN-RDCS-001	JB MARKS ROAD CROSS SECTION	REV 0
STORMWATER		
2021-014-TN-SW-001	STORMWATER LAYOUT SHEET 1 OF 2	REV 0
2021-014-TN-SW-002	STORMWATER LAYOUT SHEET 2 OF 2	REV 0
2021-014-TN-SWLS-001	STORMWATER LONGITUDINAL SECTION	REV 0
TYPICAL DETAIL		
2021-009-TN-TD-001	TYPICAL CROSS SECTION	REV 0
2021-009-TN-TD-002	TYPICAL ROAD DETAILS AND STORMWATER DETAILS 01	REV 0
2021-009-TN-TD-003	TYPICAL ROAD DETAILS AND STORMWATER DETAILS 02	REV 0
2021-009-TN-TD-004	UNIVERSAL DETAILS	REV 0
2021-009-TN-TD-005	TRADING STALLS DETAILS	REV 0
2021-009-TN-TD-006	JB MARKS CULVERT LAYOUT	REV 0
2021-009-TN-TD-007	JB MARKS CULVERT SECTION	REV 0
JRA STANDARD DRAWINGS		
JRA-SDRD-041	TYPICAL BUS LAYBY (RISFSA CLASS 3 & 4 ROADS)	
JRA-SDRCS-072	TYPICAL TACTILE PEDESTRIAN CROSSING - SIGNALISED INTERSECTION - COMBINATION RAMPING	
JRA-SDRCS-040	TYPICAL MINIBUS-TAXI LAY-BY	
JRA-SDRS-010	STANDARD TYPE KERBS - 1	
JRA-SDRD-120	TRAFFIC CALMING / SPEED HUMP	
JRA-SDRD-121	RAISED PEDESTRIAN CROSSING (SHEET 1 OF 2)	
JRA-SDRD-122	RAISED PEDESTRIAN CROSSING (SHEET 2 OF 2)	

KEY PLAN  
SCALE 1:1000

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: <b>AUG 2023</b> ECSA Pr. No. <b>200870199</b>		DATE: <b>21/08/2023</b>		AMENDMENTS		LOCALITY PLAN, KEY PLAN AND LIST OF DRAWINGS		DISTRICT JOHANNESBURG		REVISION <b>0</b>	
		No								Dwg No <b>2021-009-TN-RD-001</b>	



NAME	Y	X	Z	DESCRIPTION
TC01	9849.945	286890.793	1430.209	10mm iron peg in concrete
TC02	9846.304	286926.936	1434.338	10mm iron peg in concrete
TC03	98506.620	286886.460	1438.338	10mm iron peg in concrete
TC04	98478.088	286880.353	1408.638	10mm iron peg in concrete
TC05	98463.295	286894.022	1430.544	10mm iron peg in concrete
TC06	98474.483	286887.935	1434.792	10mm iron peg in concrete
TC07	98457.371	2868879.224	1414.326	10mm iron peg in concrete
TC08	98473.537	286884.743	1434.852	10mm iron peg in concrete
TC09	98492.453	286885.401	1434.576	10mm iron peg in concrete
TC10	98472.068	286889.758	1437.400	10mm iron peg in concrete
TC11	98471.589	2868750.575	1420.789	10mm iron peg in concrete
TC12	98468.338	2868696.884	1423.179	10mm iron peg in concrete
TC13	98466.895	2868625.917	1428.492	10mm iron peg in concrete
TC14	98491.296	2868641.807	1426.400	10mm iron peg in concrete
TC15	98432.431	2868645.697	1428.536	10mm iron peg in concrete
TC16	98424.515	2868593.632	1428.930	10mm iron peg in concrete
TC17	98436.266	2868593.211	1428.874	10mm iron peg in concrete
TC18	98503.637	2869007.490	1408.926	10mm iron peg in concrete
TC19	98365.542	2869448.848	1427.261	10mm iron peg in concrete
TC20	98382.843	2869407.531	1428.395	10mm iron peg in concrete
TC21	98398.205	2869342.289	1422.537	10mm iron peg in concrete
TC22	98433.256	2869349.070	1437.855	10mm iron peg in concrete
TC23	98378.542	2869227.818	1433.182	10mm iron peg in concrete
TC24	98400.490	2869188.738	1435.929	10mm iron peg in concrete
TC25	98654.124	2869148.545	1406.084	10mm iron peg in concrete
TC26	98354.588	2869029.581	1432.603	10mm iron peg in concrete
TC27	98509.216	2869096.941	1407.388	10mm iron peg in concrete
TC28	98406.548	2868945.879	1413.635	10mm iron peg in concrete

NAME	Y	X	LID LEVEL	INVERT LEVEL
EMH1	98353.876	2869441.951	1427.856	N/A
EMH3	98468.356	2868752.978	1420.684	N/A
EMH5	98414.995	2868581.197	1428.550	N/A
EMH6	98415.547	2868592.993	1428.898	N/A
EMH7	98427.351	2868593.691	1428.800	N/A
<b>SEWER MANHOLES</b>				
SMH18	98690.430	2869034.474	1405.413	1403.072
SMH1	98370.672	2869434.124	1426.748	1425.119
SMH1	98370.670	2869423.876	1426.748	1425.119
SMH10	98368.889	2869255.047	1420.143	1418.309
SMH11	98394.593	2869191.606	1417.464	Blocked
SMH12	98428.368	2869147.751	1414.378	1413.416
SMH13	98458.780	2869107.410	1410.330	1409.299
SMH14	98611.408	2869131.313	1406.327	1404.711
SMH15	98554.319	2869109.756	1406.954	Blocked
SMH16	98431.403	2869063.416	1410.253	Blocked
SMH17	98316.203	2869020.012	1414.104	Blocked
SMH19	98624.519	2869029.794	1407.100	1404.860
SMH2	98378.951	2869398.482	1425.460	1423.946
SMH20	98563.176	2868986.708	1408.674	1406.287
SMH21	98530.344	2868964.832	1410.488	Blocked
SMH22	98529.012	2868967.836	1410.707	1408.224
SMH23	98522.025	2868964.562	1410.706	1407.860
SMH24	98380.298	2869360.558	1424.213	1423.500
SMH24	98495.382	2868968.932	1409.962	1407.915
SMH25	98470.230	2868961.754	1410.234	1408.453
SMH26	98429.563	2868951.114	1411.605	Blocked
SMH27	98471.129	2868958.735	1414.622	Blocked
SMH27	98463.214	2868873.289	1414.170	Blocked
SMH28	98474.148	2868856.370	1414.780	1413.461
SMH29	98433.997	2868704.789	1423.536	Blocked
SMH3	98389.851	2869365.948	1424.147	1422.911
SMH30	98435.037	2868693.712	1423.545	Blocked
SMH31	98446.816	2868676.747	1424.465	Blocked
SMH32	98455.804	2868673.536	1424.363	Blocked
SMH33	98429.568	2868644.109	1426.718	Blocked
SMH4	98411.950	2869391.395	1420.985	1419.623
SMH5	98409.461	2869302.443	1420.708	Blocked
SMH6	98407.514	2869298.984	1421.073	Blocked
SMH7	98436.058	2869258.101	1418.234	1416.378
SMH8	98425.948	2869256.430	1418.080	1416.871
SMH9	98421.343	2869255.753	1417.129	1417.129
<b>STORM WATER MANHOLES</b>				
SW1	98384.597	2869386.811	1424.460	1423.618
SW2	98417.811	2869286.741	1419.628	1418.982
SW3	98476.700	2868852.567	1415.013	1412.890
SW4	98428.287	2868842.435	1426.995	1424.241

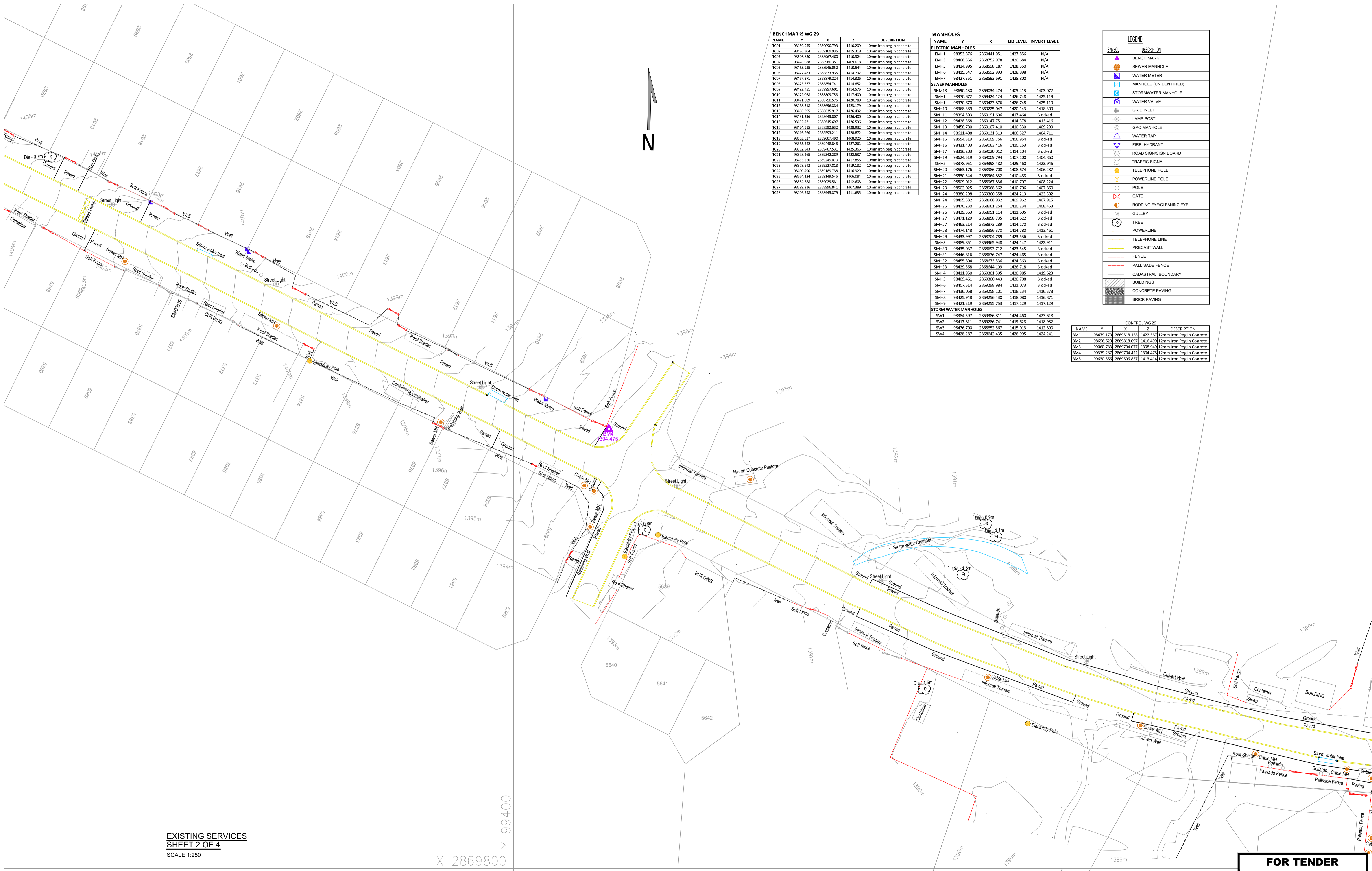
SYMBOL	DESCRIPTION
▲	BENCH MARK
○	SEWER MANHOLE
○	WATER METER
□	MANHOLE (UNIDENTIFIED)
□	STORMWATER MANHOLE
□	WATER VALVE
□	GRID INLET
○	LAMP POST
○	GPO MANHOLE
○	WATER TAP
○	FIRE HYDRANT
○	ROAD SIGN/SIGNAL BOARD
○	TRAFFIC SIGNAL
○	TELEPHONE POLE
○	POLE
○	GATE
○	RODDING EYE/CLEANING EYE
○	GULLEY
○	TREE
○	TELEPHONE LINE
○	PRECAST WALL
○	FENCE
○	PALLISADE FENCE
○	CADASTRAL BOUNDARY
○	BUILDINGS
○	CONCRETE PAVING
○	BRICK PAVING

NAME	Y	X	Z	DESCRIPTION
BM1	98479.170	2869518.158	1422.567	12mm Iron Peg in Concrete
BM2	98096.620	2868818.091	1416.499	12mm Iron Peg in Concrete
BM3	99060.783	2869794.077	1398.949	12mm Iron Peg in Concrete
BM4	99379.287	2869704.422	1394.475	12mm Iron Peg in Concrete
BM5	99630.566	2869596.837	1413.414	12mm Iron Peg in Concrete

EXISTING SERVICES  
SHEET 1 OF 4  
SCALE 1:250

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 201		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr No. 200870199		DESIGN CHECKED M Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA JOHANNESBURG DEVELOPMENT AGENCY		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		AMENDMENTS		DIEPSLOOT DEVELOPMENT PROJECT		EXISTING SERVICES SHEET 1 OF 4		2021-009-TN-RD-002	



**BENCHMARKS WG 29**

NAME	Y	X	Z	DESCRIPTION
TC01	98459.945	286906.793	1410.209	10mm iron peg in concrete
TC02	98426.304	2869169.596	1415.138	10mm iron peg in concrete
TC03	98406.620	286897.460	1410.334	10mm iron peg in concrete
TC04	98478.088	286890.351	1409.638	10mm iron peg in concrete
TC05	98463.595	286896.052	1410.544	10mm iron peg in concrete
TC06	98427.483	286873.935	1414.702	10mm iron peg in concrete
TC07	98457.371	286879.224	1414.326	10mm iron peg in concrete
TC08	98473.537	286884.741	1414.852	10mm iron peg in concrete
TC09	98492.451	286887.601	1414.576	10mm iron peg in concrete
TC10	98472.068	286880.758	1417.400	10mm iron peg in concrete
TC11	98471.589	2868750.575	1420.789	10mm iron peg in concrete
TC12	98468.335	286896.884	1423.179	10mm iron peg in concrete
TC13	98466.895	286885.517	1426.492	10mm iron peg in concrete
TC14	98491.296	2868643.807	1426.400	10mm iron peg in concrete
TC15	98432.431	2868645.697	1426.536	10mm iron peg in concrete
TC16	98424.515	2868692.632	1426.932	10mm iron peg in concrete
TC17	98416.266	2868593.211	1428.872	10mm iron peg in concrete
TC18	98503.637	2869007.490	1408.926	10mm iron peg in concrete
TC19	98395.542	2869448.648	1427.261	10mm iron peg in concrete
TC20	98382.943	2869407.531	1425.865	10mm iron peg in concrete
TC21	98398.265	2869342.289	1422.537	10mm iron peg in concrete
TC22	98433.256	2869249.070	1417.895	10mm iron peg in concrete
TC23	98378.542	2869227.818	1419.182	10mm iron peg in concrete
TC24	98406.490	2869188.738	1416.929	10mm iron peg in concrete
TC25	98654.124	2869149.545	1406.084	10mm iron peg in concrete
TC26	98394.588	2869029.581	1412.023	10mm iron peg in concrete
TC27	98599.216	2868996.841	1407.889	10mm iron peg in concrete
TC28	98406.548	2868945.879	1411.635	10mm iron peg in concrete

**MANHOLES**

NAME	Y	X	LID LEVEL	INVERT LEVEL
<b>ELECTRIC MANHOLES</b>				
EMH1	98353.876	2869441.951	1427.856	N/A
EMH3	98468.356	2868752.978	1420.684	N/A
EMH5	98414.995	2868598.187	1428.550	N/A
EMH6	98415.547	2868592.993	1428.898	N/A
EMH7	98427.351	2868593.691	1428.800	N/A
<b>SEWER MANHOLES</b>				
SMH18	98690.430	2869034.474	1405.413	1403.072
SMH1	98370.671	2869424.124	1426.748	1425.119
SMH1	98370.670	2869443.876	1426.748	1425.119
SMH10	98368.389	2869225.047	1420.143	1418.309
SMH11	98394.593	2869191.606	1417.464	Blocked
SMH12	98428.368	2869147.751	1414.378	1413.416
SMH13	98458.780	2869107.410	1410.330	1409.299
SMH14	98611.408	2869131.313	1406.327	1404.711
SMH15	98554.319	2869109.756	1406.954	Blocked
SMH16	98431.403	2869063.416	1410.253	Blocked
SMH17	98316.203	2869020.012	1414.104	Blocked
SMH19	98624.519	2869009.794	1407.100	1404.860
SMH2	98378.951	2869398.482	1425.460	1423.946
SMH20	98563.176	2868986.708	1408.674	1406.287
SMH21	98530.344	2868964.832	1410.488	Blocked
SMH22	98509.012	2868967.836	1410.707	1408.224
SMH23	98521.025	2868968.562	1410.706	1407.860
SMH24	98380.298	2869360.558	1424.213	1423.502
SMH24	98495.382	2868968.932	1409.962	1407.915
SMH25	98470.230	2868961.254	1410.234	1408.453
SMH26	98429.563	2868951.114	1411.695	Blocked
SMH27	98471.129	2868958.755	1414.627	Blocked
SMH27	98463.214	2868873.289	1414.170	Blocked
SMH28	98474.148	2868856.370	1414.780	1413.461
SMH29	98433.997	2868704.789	1423.536	Blocked
SMH3	98389.851	2869365.948	1424.147	1422.911
SMH30	98495.037	2869399.712	1423.545	Blocked
SMH31	98446.816	2868676.747	1424.465	Blocked
SMH32	98455.804	2868673.536	1424.363	Blocked
SMH33	98429.568	2868644.109	1426.718	Blocked
SMH4	98411.950	2869301.395	1420.985	1419.623
SMH5	98429.461	2869300.443	1420.798	Blocked
SMH6	98407.514	2869298.984	1421.073	Blocked
SMH7	98436.058	2869258.101	1418.234	1416.378
SMH8	98425.948	2869256.430	1418.080	1416.871
SMH9	98421.315	2869255.753	1417.129	1417.129
<b>STORM WATER MANHOLES</b>				
SW1	98384.597	2869386.811	1424.460	1423.618
SW2	98417.811	2869286.741	1419.628	1418.982
SW3	98476.700	2868852.567	1415.013	1412.890
SW4	98428.287	2868642.435	1426.995	1424.241

**LEGEND**

SYMBOL	DESCRIPTION
▲	BENCH MARK
○	SEWER MANHOLE
○	WATER METER
○	MANHOLE (UNIDENTIFIED)
○	STORMWATER MANHOLE
○	WATER VALVE
○	GRID INLET
○	LAMP POST
○	GPO MANHOLE
○	WATER TAP
○	FIRE HYDRANT
○	ROAD SIGN/SIGN BOARD
○	TRAFFIC SIGNAL
○	TELEPHONE POLE
○	POWERSHED POLE
○	POLE
○	GATE
○	RODDING EYE/CLEANING EYE
○	GULLY
○	TREE
○	POWERLINE
○	TELEPHONE LINE
○	PRECAST WALL
○	FENCE
○	PALLISADE FENCE
○	CADASTRAL BOUNDARY
○	BUILDINGS
○	CONCRETE PAVING
○	BRICK PAVING

**CONTROL WG 29**

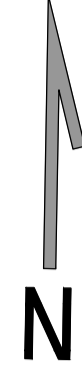
NAME	Y	X	Z	DESCRIPTION
BM1	98479.170	2869518.158	1422.567	12mm Iron Peg in Concrete
BM2	98666.620	2869618.097	1416.499	12mm Iron Peg in Concrete
BM3	99060.783	2869794.077	1398.949	12mm Iron Peg in Concrete
BM4	99379.287	2869704.427	1394.475	12mm Iron Peg in Concrete
BM5	99630.566	2869596.837	1413.414	12mm Iron Peg in Concrete

EXISTING SERVICES  
SHEET 2 OF 4  
SCALE 1:250

X 2869800  
Y 99400

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S Mathabula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES		DESIGNED BY S Mathabula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajace.co.za www.ajace.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024		DESIGN CHECKED M Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA JOHANNESBURG DEVELOPMENT AGENCY		DISTRICT JOHANNESBURG		REVISION 0	
for CLIENT (NAME AND SIGNATURE)		DATE 02/02/2024		ISSUED FOR TENDER		EXISTING SERVICES SHEET 2 OF 4		Dwg No		2021-009-TN-RD-003	
DATE: FEB 2024		No		AMENDMENTS		4		-		-	

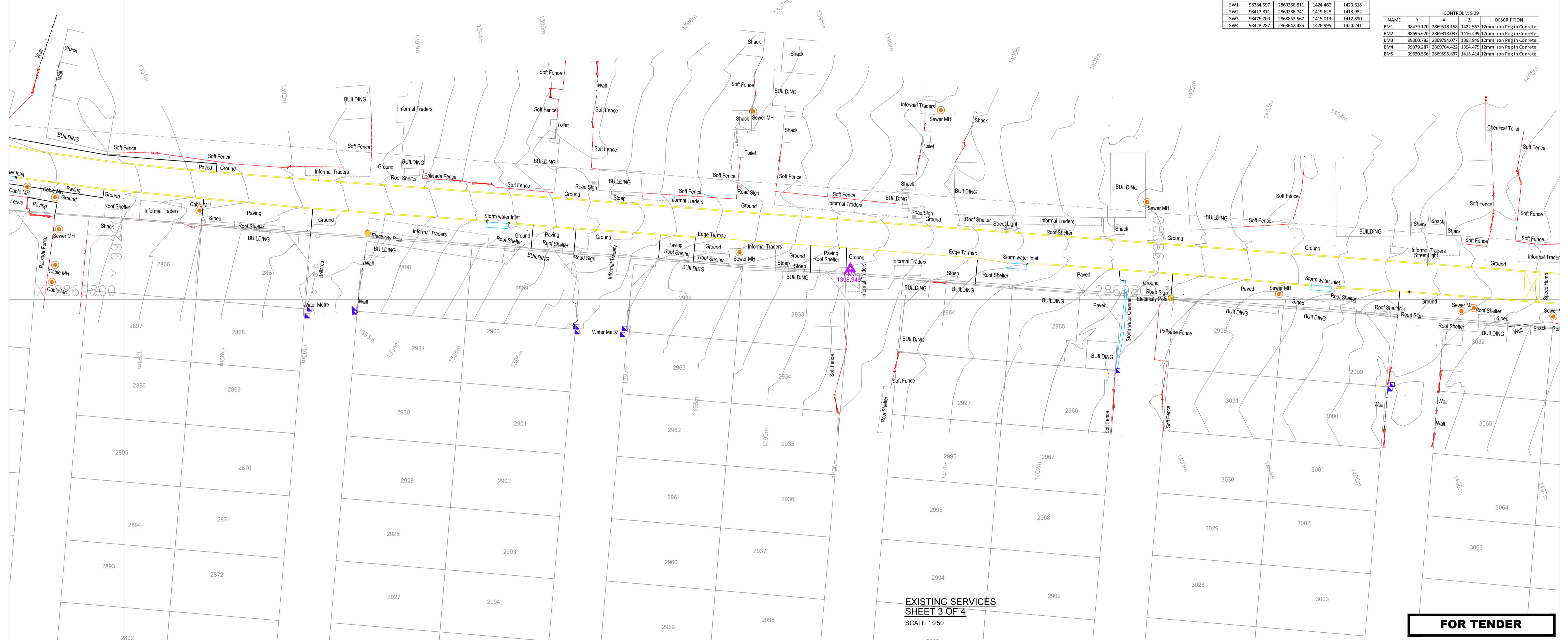


BENCHMARKS WG 29				
NAME	Y	X	Z	DESCRIPTION
TC01	98450.945	286900.793	1410.209	10mm iron peg in concrete
TC02	98426.344	2869169.595	1415.318	10mm iron peg in concrete
TC03	98426.420	286897.460	1410.334	10mm iron peg in concrete
TC04	98478.088	286890.351	1409.618	10mm iron peg in concrete
TC05	98463.935	286894.052	1410.544	10mm iron peg in concrete
TC06	98427.483	286873.935	1414.792	10mm iron peg in concrete
TC07	98457.371	286879.224	1414.326	10mm iron peg in concrete
TC08	98473.537	286884.741	1414.852	10mm iron peg in concrete
TC09	98492.451	286887.001	1414.376	10mm iron peg in concrete
TC10	98472.008	286890.758	1417.400	10mm iron peg in concrete
TC11	98471.580	286870.575	1420.789	10mm iron peg in concrete
TC12	98468.318	286896.884	1423.179	10mm iron peg in concrete
TC13	98466.895	286865.917	1426.982	10mm iron peg in concrete
TC14	98491.296	286864.807	1426.400	10mm iron peg in concrete
TC15	98432.431	286865.697	1426.536	10mm iron peg in concrete
TC16	98404.515	286892.432	1428.942	10mm iron peg in concrete
TC17	98416.295	286899.311	1428.872	10mm iron peg in concrete
TC18	98503.637	286907.490	1428.926	10mm iron peg in concrete
TC19	98395.542	286948.848	1427.261	10mm iron peg in concrete
TC20	98382.843	286907.331	1425.365	10mm iron peg in concrete
TC21	98398.265	286934.289	1422.537	10mm iron peg in concrete
TC22	98433.256	2869249.070	1417.855	10mm iron peg in concrete
TC23	98378.542	286927.818	1419.182	10mm iron peg in concrete
TC24	98400.490	286938.738	1416.929	10mm iron peg in concrete
TC25	98654.124	2869149.545	1406.084	10mm iron peg in concrete
TC26	98194.588	2869209.561	1413.603	10mm iron peg in concrete
TC27	98599.214	286896.841	1407.389	10mm iron peg in concrete
TC28	98406.548	2868945.879	1411.635	10mm iron peg in concrete

MANHOLES				
NAME	Y	X	LID LEVEL	INVERT LEVEL
<b>ELECTRIC MANHOLES</b>				
EMH1	98353.876	2869441.951	1427.856	N/A
EMH3	98468.356	2868752.978	1420.684	N/A
EMH5	98414.995	2868998.107	1428.550	N/A
EMH6	98415.547	2868992.993	1428.898	N/A
EMH7	98427.351	2868959.691	1428.800	N/A
<b>SEWER MANHOLES</b>				
SMH18	98690.430	2869034.474	1405.413	1403.072
SMH1	98370.672	2869424.124	1426.748	1425.119
SMH1	98370.670	2869423.876	1426.748	1425.119
SMH10	98368.389	2869225.047	1420.143	1418.309
SMH11	98394.593	2869191.606	1417.464	Blocked
SMH12	98428.368	2869147.751	1414.378	1413.416
SMH13	98458.780	2869107.410	1410.330	1409.299
SMH14	98611.408	2869131.313	1406.327	1404.711
SMH15	98554.319	2869109.756	1406.954	Blocked
SMH16	98431.403	2869063.416	1410.253	Blocked
SMH17	98316.203	2869200.012	1414.104	Blocked
SMH19	98424.519	2869009.794	1407.100	1404.860
SMH2	98378.951	2869398.482	1425.460	1423.946
SMH20	98563.176	2868986.708	1408.674	1406.287
SMH21	98530.344	2868964.832	1410.488	Blocked
SMH22	98509.012	2868967.836	1410.707	1408.224
SMH23	98502.025	2868968.562	1410.706	1407.860
SMH24	98380.298	2869360.558	1424.213	1423.502
SMH24	98495.382	2868968.932	1409.962	1407.915
SMH25	98470.230	2868961.254	1410.234	1408.453
SMH26	98429.563	2868951.114	1411.605	Blocked
SMH27	98471.129	2868958.725	1414.622	Blocked
SMH27	98463.214	2868873.289	1414.170	Blocked
SMH28	98474.148	2868856.370	1414.780	1413.461
SMH29	98433.997	2868704.789	1423.536	Blocked
SMH3	98389.851	2869365.948	1424.147	1422.911
SMH30	98435.037	2868993.712	1423.545	Blocked
SMH31	98446.816	2868976.747	1424.465	Blocked
SMH32	98455.804	2868673.536	1424.363	Blocked
SMH33	98429.568	2868644.109	1426.718	Blocked
SMH4	98411.950	2869301.395	1420.985	1419.623
SMH5	98429.461	2869303.443	1420.708	Blocked
SMH6	98407.514	2869298.984	1421.073	Blocked
SMH7	98436.058	2869258.101	1418.234	1416.378
SMH8	98425.948	2869256.430	1418.080	1416.871
SMH9	98421.219	2869255.753	1417.129	1417.129
<b>STORMWATER MANHOLES</b>				
SW1	98384.597	2869386.811	1424.460	1423.618
SW2	98417.811	2869286.741	1419.628	1418.982
SW3	98476.700	2868852.567	1415.013	1412.890
SW4	98428.287	2868642.435	1426.995	1424.241

CONTROL WG 29				
NAME	Y	X	Z	DESCRIPTION
BM1	98479.170	2869518.158	1422.567	12mm Iron Peg in Concrete
BM2	98696.620	2869618.097	1416.499	12mm Iron Peg in Concrete
BM3	99060.753	2869794.077	1398.949	12mm Iron Peg in Concrete
BM4	99379.287	2869704.422	1394.475	12mm Iron Peg in Concrete
BM5	99630.566	2869596.837	1413.414	12mm Iron Peg in Concrete

LEGEND	
SYMBOL	DESCRIPTION
	BENCH MARK
	SEWER MANHOLE
	WATER METER
	MANHOLE (UNIDENTIFIED)
	STORMWATER MANHOLE
	WATER VALVE
	GRID INLET
	LAMP POST
	GPO MANHOLE
	WATER TAP
	FIRE HYDRANT
	ROAD SIGN/SIGN BOARD
	TRAFFIC SIGNAL
	TELEPHONE POLE
	POWERLINE POLE
	POLE
	GATE
	RODDING EYECLEANING EYE
	GULLY
	TREE
	POWERLINE
	TELEPHONE LINE
	PRECAST WALL
	FENCE
	PALLISADE FENCE
	CADASTRAL BOUNDARY
	BUILDINGS
	CONCRETE PAVING
	BRICK PAVING



EXISTING SERVICES  
SHEET 3 OF 4  
SCALE 1:250

**FOR TENDER**

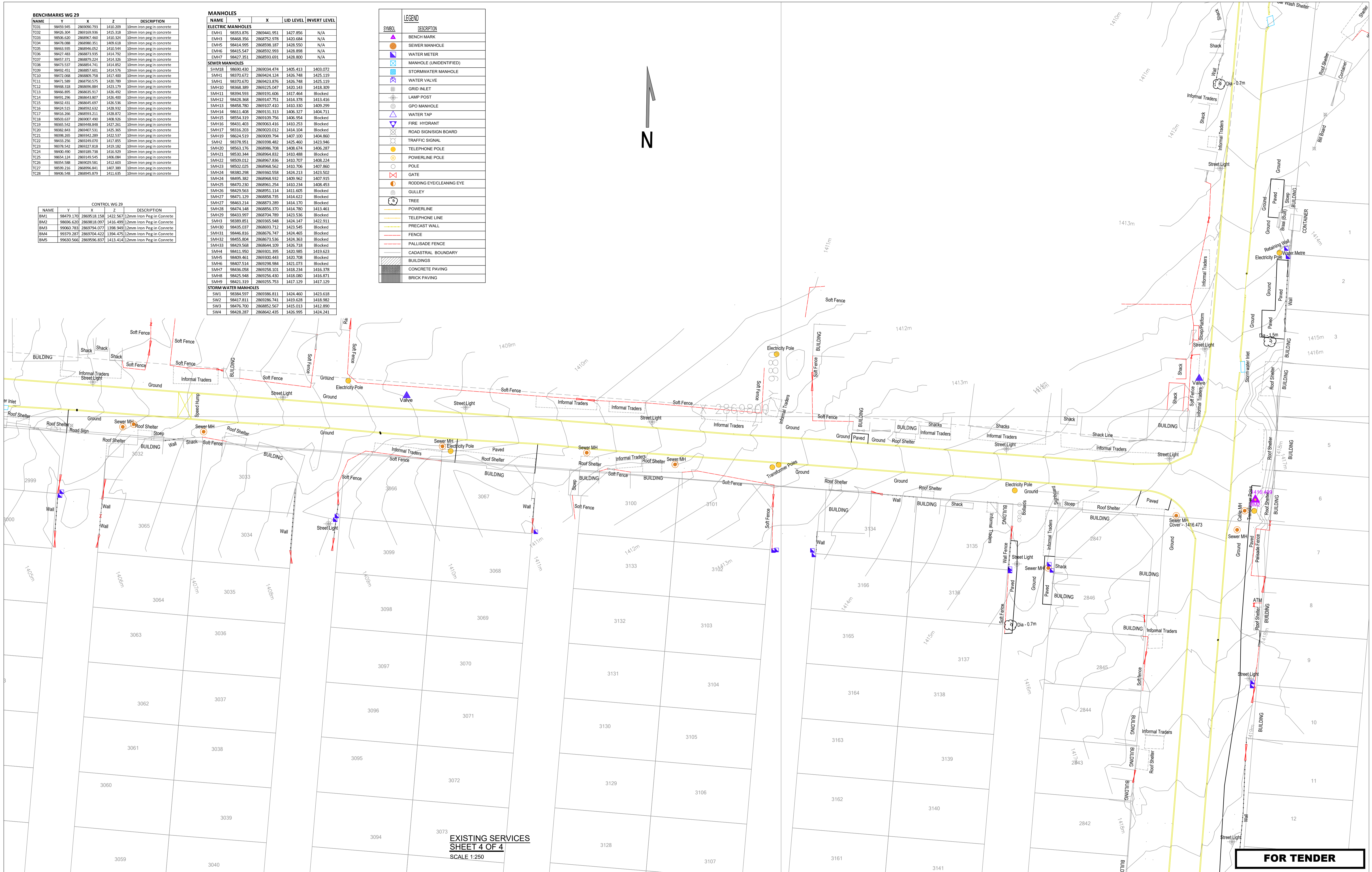
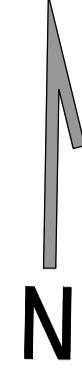
DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 201		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 9993 Fax: (086) 763 7046 info@ajace.co.za www.ajace.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr No: 200870199		DESIGN CHECKED M. Jantjies		Tel: (012) 991 9993 Fax: (086) 763 7046 info@ajace.co.za www.ajace.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		DISTRICT JOHANNESBURG		REVISION 0	
DATE		DATE		AMENDMENTS		AMENDMENTS		2021-009-TN-RD-004		Dwg No	

NAME	Y	X	Z	DESCRIPTION
TC01	98459.345	2869490.793	1420.209	10mm iron peg in concrete
TC02	98406.804	2869199.936	1413.318	10mm iron peg in concrete
TC03	98506.620	2868867.460	1410.324	10mm iron peg in concrete
TC04	98478.088	2868880.351	1409.618	10mm iron peg in concrete
TC05	98463.335	2869948.052	1410.544	10mm iron peg in concrete
TC06	98427.483	2868873.935	1414.792	10mm iron peg in concrete
TC07	98457.371	2868879.224	1414.326	10mm iron peg in concrete
TC08	98473.537	2868854.741	1414.852	10mm iron peg in concrete
TC09	98492.451	2868971.691	1414.576	10mm iron peg in concrete
TC10	98472.068	2868809.758	1417.400	10mm iron peg in concrete
TC11	98471.589	2868750.575	1420.789	10mm iron peg in concrete
TC12	98468.318	2868994.884	1421.179	10mm iron peg in concrete
TC13	98466.895	2868635.917	1426.492	10mm iron peg in concrete
TC14	98491.296	2868643.807	1426.400	10mm iron peg in concrete
TC15	98432.411	2868645.697	1426.536	10mm iron peg in concrete
TC16	98424.515	2868904.432	1428.916	10mm iron peg in concrete
TC17	98416.266	2868931.211	1428.872	10mm iron peg in concrete
TC18	98403.637	2869007.490	1408.926	10mm iron peg in concrete
TC19	98385.442	2869448.881	1427.263	10mm iron peg in concrete
TC20	98382.843	2869407.531	1425.365	10mm iron peg in concrete
TC21	98398.265	2869342.289	1422.537	10mm iron peg in concrete
TC22	98433.256	2869249.070	1417.855	10mm iron peg in concrete
TC23	98378.542	2869227.848	1419.186	10mm iron peg in concrete
TC24	98400.490	2869189.738	1416.929	10mm iron peg in concrete
TC25	98454.124	2869149.545	1406.094	10mm iron peg in concrete
TC26	98354.588	2869229.581	1411.603	10mm iron peg in concrete
TC27	98399.216	2868996.841	1407.389	10mm iron peg in concrete
TC28	98406.548	2868945.879	1411.635	10mm iron peg in concrete

NAME	Y	X	Z	DESCRIPTION
BM1	98479.170	2869518.158	1427.747	12mm iron Peg in Concrete
BM2	98696.620	2869818.097	1416.409	12mm iron Peg in Concrete
BM3	99060.783	2869794.077	1398.949	12mm iron Peg in Concrete
BM4	99379.287	2869704.422	1394.471	12mm iron Peg in Concrete
BM5	99630.566	2869596.837	1413.414	12mm iron Peg in Concrete

NAME	Y	X	Z	DESCRIPTION
EMH1	98353.676	2869441.951	1427.856	N/A
EMH3	98468.356	2868752.978	1420.684	N/A
EMH5	98414.995	2868598.187	1428.550	N/A
EMH6	98415.547	2868592.993	1428.898	N/A
EMH7	98427.351	2868593.691	1428.800	N/A
SMH18	98690.430	2869034.474	1405.413	1403.072
SMH1	98370.672	2869424.124	1426.748	1425.119
SMH11	98370.670	2869423.876	1426.748	1425.119
SMH10	98368.389	2869225.047	1420.143	1418.309
SMH11	98394.599	2869191.606	1417.464	Blocked
SMH12	98428.368	2869147.751	1414.378	1413.416
SMH13	98458.780	2869107.410	1410.330	1409.299
SMH14	98611.408	2869131.313	1406.327	1404.711
SMH15	98554.319	2869109.756	1406.954	Blocked
SMH16	98431.403	2869263.416	1410.253	Blocked
SMH17	98316.203	2869020.012	1414.104	Blocked
SMH19	98624.519	2869009.794	1407.100	1404.860
SMH2	98378.951	2869398.482	1425.460	1423.946
SMH20	98563.176	2868996.738	1408.674	1406.287
SMH21	98530.344	2869044.932	1410.489	Blocked
SMH22	98509.012	2868967.836	1410.707	1408.224
SMH23	98502.025	2868968.562	1410.706	1407.860
SMH24	98380.798	2869360.558	1424.213	1423.502
SMH24	98495.382	2868968.932	1409.962	1407.915
SMH25	98470.230	2868961.254	1410.244	1408.453
SMH26	98429.563	2868951.114	1411.605	Blocked
SMH27	98471.129	2868858.735	1414.622	Blocked
SMH27	98463.214	2868873.289	1414.170	Blocked
SMH28	98474.148	2868936.370	1414.789	1413.461
SMH29	98433.997	2868704.789	1423.536	Blocked
SMH3	98389.851	2869395.948	1424.147	1422.911
SMH30	98435.037	2868693.712	1423.545	Blocked
SMH31	98446.816	2868676.747	1424.465	Blocked
SMH32	98455.804	2868673.536	1424.363	Blocked
SMH33	98429.568	2868644.109	1426.718	Blocked
SMH4	98411.950	2869301.395	1420.985	1419.623
SMH5	98409.461	2869300.443	1420.708	Blocked
SMH6	98407.514	2869298.984	1421.073	Blocked
SMH7	98436.058	2869258.101	1418.234	1416.378
SMH8	98425.948	2869256.430	1418.080	1416.871
SMH9	98421.319	2869255.753	1417.129	1417.129
SW1	98384.597	2869398.611	1424.460	1423.618
SW2	98417.811	2869396.741	1419.628	1418.982
SW3	98476.700	2868852.567	1415.013	1412.890
SW4	98428.287	2868642.435	1426.995	1424.241

SYMBOL	DESCRIPTION
▲	BENCH MARK
●	SEWER MANHOLE
○	WATER METER
□	MANHOLE (UNIDENTIFIED)
■	STORMWATER MANHOLE
⊕	WATER VALVE
⊖	GRID INLET
⊙	LAMP POST
⊗	GPO MANHOLE
⊘	FIRE TAP
⊚	FIRE HYDRANT
⊛	ROAD SIGN/SIGN BOARD
⊜	TRAFFIC SIGNAL
⊝	TELEPHONE POLE
⊞	POWERLINE POLE
⊟	POLE
⊠	GATE
⊡	RODDING EYE/CLEANING EYE
⊢	GUILLEY
⊣	TREE
—	POWERLINE
—	TELEPHONE LINE
—	PRECAST WALL
—	FENCE
—	PALLISADE FENCE
—	CADASTRAL BOUNDARY
—	BUILDINGS
—	CONCRETE PAVING
—	BRICK PAVING



EXISTING SERVICES  
SHEET 4 OF 4  
SCALE 1:250

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 61877 MARSHALLTOWN 2001		AGREEMENT No -	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -	
DATE: FEB 2024 ECSA Pr. No. 200870199		DESIGN CHECKED M. Jantjies		<b>AJA</b> CONSULTING CIVIL ENGINEERS		<b>JDA</b> JOHANNESBURG DEVELOPMENT AGENCY		SCALE AS INDICATED	
0 02/02/2024 ISSUED FOR TENDER		No DATE AMENDMENTS		EXISTING SERVICES SHEET 4 OF 4		DISTRICT JOHANNESBURG		REVISION 0	
								Dwg No 2021-009-TN-RD-005	



**LEGEND**

EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS**
- ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  - EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  - SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS.
  - TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS.
  - ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION.
  - REMAINDER OF AREA TO BE NEARLY FINISHED OFF.
  - CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENCRUSH INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS.
  - ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS.
  - THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)

**JB MARKS GEOMETRIC LAYOUT  
SHEET 1 OF 4  
SCALE 1:250**

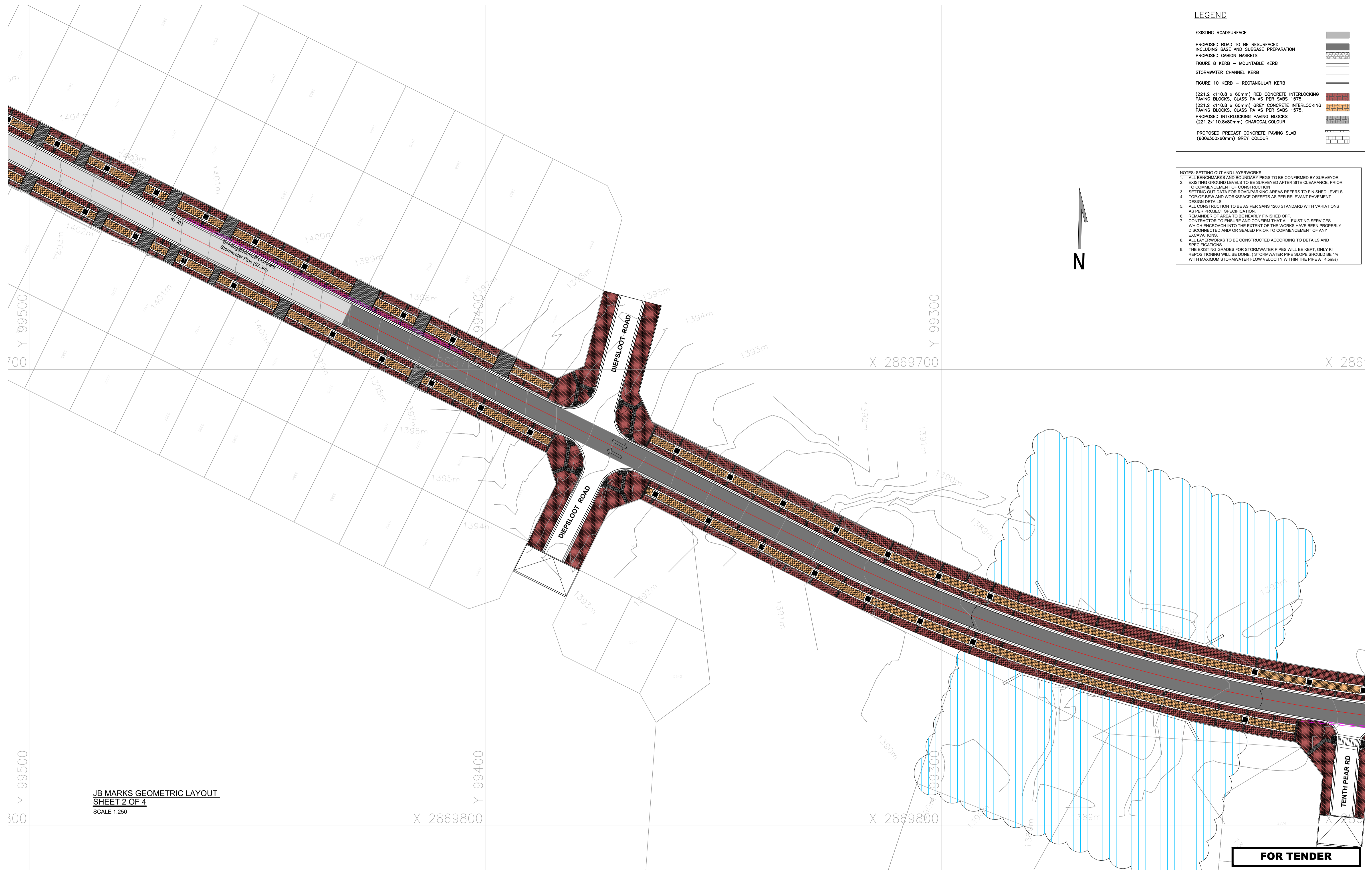
**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE: 02/02/2024		ISSUED FOR TENDER		JB MARKS GEOMETRIC LAYOUT SHEET 1		DISTRICT JOHANNESBURG		REVISION 0	
DATE: _____		DATE: _____		AMENDMENTS				Dwg No		821-009-TN-RD-006	

**LEGEND**

EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS**
- ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  - EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  - SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS.
  - TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS.
  - ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION.
  - REMAINDER OF AREA TO BE NEARLY FINISHED OFF.
  - CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENDOUR INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS.
  - ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS.
  - THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)



**JB MARKS GEOMETRIC LAYOUT**  
**SHEET 2 OF 4**  
 SCALE 1:250

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DESIGN CHECKED M. Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		ISSUED FOR TENDER		JB MARKS GEOMETRIC LAYOUT SHEET 2		Dwg No		2021-009-TN-RD-007	



LEGEND	
EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS
1. ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  2. EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  3. SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS.
  4. TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS
  5. ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION
  6. REMAINDER OF AREA TO BE NEARLY FINISHED OFF.
  7. CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENDOUR INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS.
  8. ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS.
  9. THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)

**JB MARKS GEOMETRIC LAYOUT**  
**SHEET 3 OF 4**  
 SCALE 1:250

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr No: 200870199		DATE: 02/02/2024		ISSUED FOR TENDER		JB MARKS GEOMETRIC LAYOUT SHEET 3		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		AMENDMENTS				Dwg No		2021-009-TN-RD-008	



**LEGEND**

EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS**
- ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  - EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  - SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS
  - TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS
  - ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION
  - REMAINDER OF AREA TO BE NEARLY FINISHED OFF
  - CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENCRUSCH INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS
  - ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS
  - THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)



**JB MARKS GEOMETRIC LAYOUT**  
**SHEET 3 OF 4**  
 SCALE 1:250

**FOR TENDER**

DRAWING TYPE	TENDER DRAWINGS
DRAWING APPROVAL	
M. JANTJIES	for CLIENT (NAME AND SIGNATURE)
DATE: FEB 2024	ECSA Pr No: 200870199

DRAWN BY	S Shoko	
DRAWING CHECKED	S Mathebula	
DESIGNED BY	S Mathebula	
DESIGN CHECKED	M Jantjies	
No	DATE	AMENDMENTS
0	02/02/2024	ISSUED FOR TENDER

CONSULTANTS:  
**AJA CONSULTING CIVIL ENGINEERS**  
 P. O. Box 2890  
 FAERIE GLEN  
 0043  
 Tel: (012) 991 1993  
 Fax: (086) 763 7046  
 info@ajace.co.za  
 www.ajace.co.za

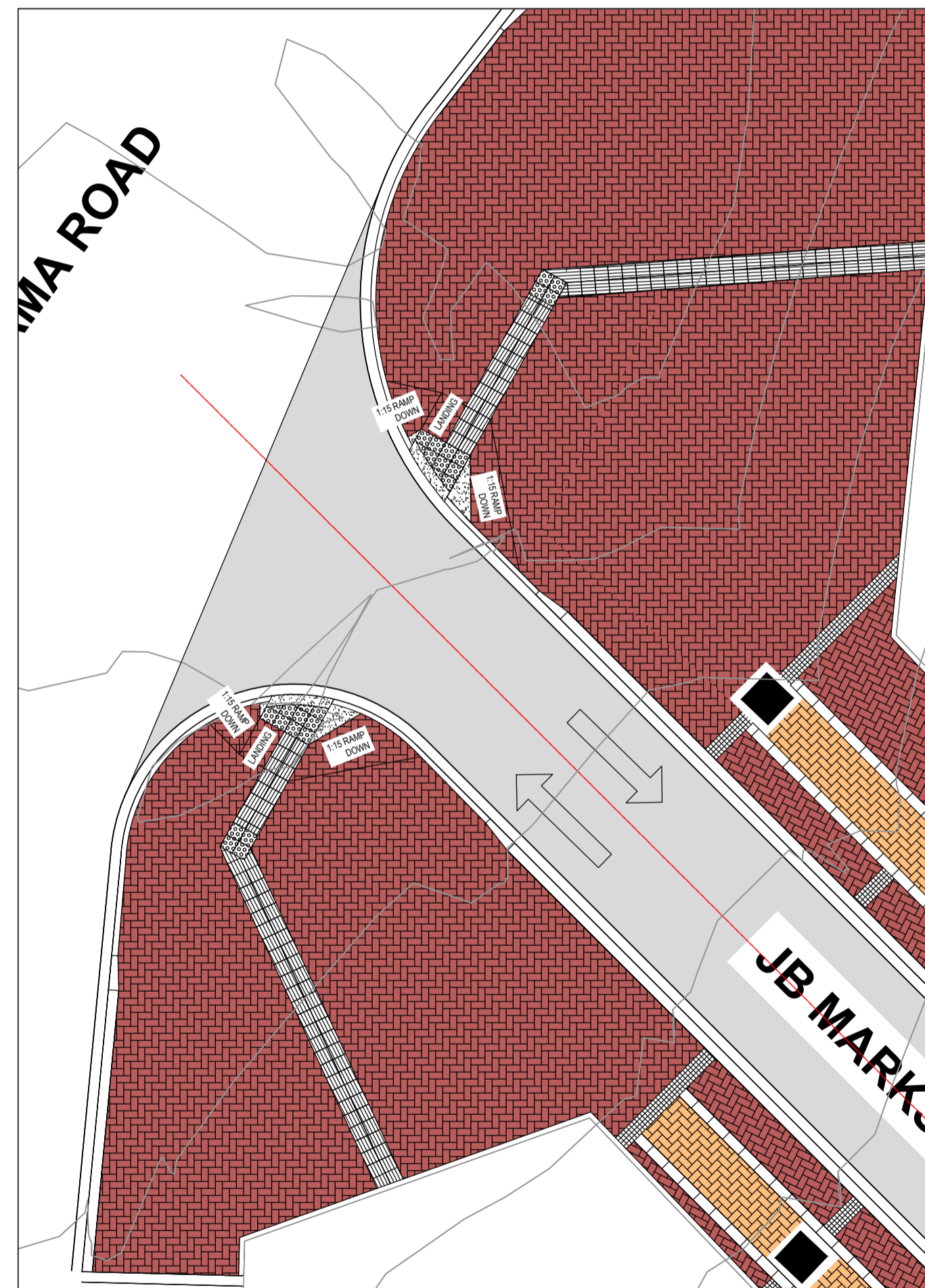
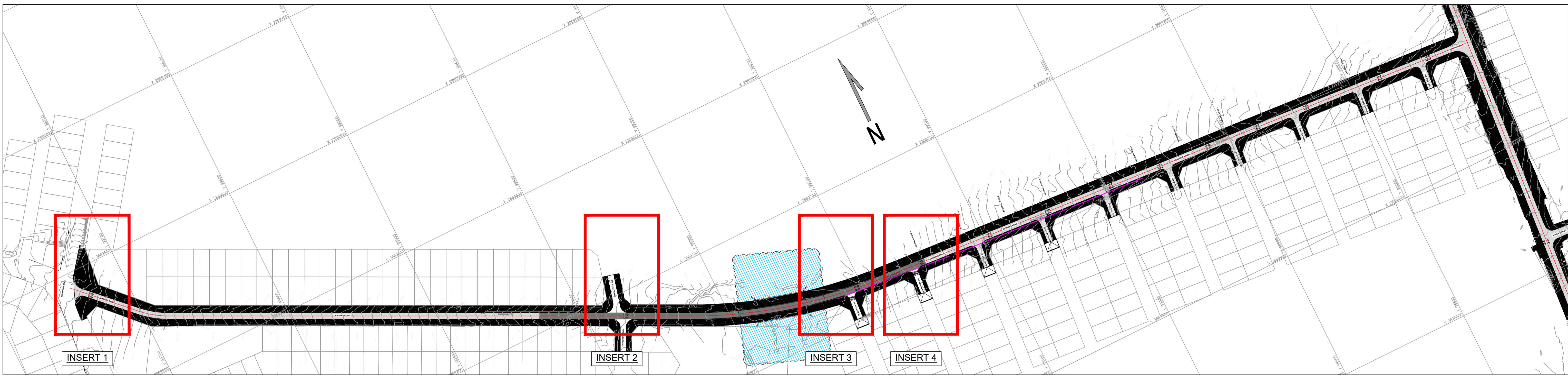
CLIENT:  
**JOHANNESBURG DEVELOPMENT AGENCY**  
 P. O. Box 61877  
 MARSHALLTOWN  
 2017  
 Tel: (011) 688 7851  
 info@jda.org.za  
 www.jda.org.za

**DIEPSLOOT DEVELOPMENT PROJECT**  
**JB MARKS GEOMETRIC LAYOUT**  
**SHEET 4 OF 4**

FILE No	-
AGREEMENT No	-
ROAD No s	-
DISTRICT	JOHANNESBURG

TYPE OF PLANNING	TENDER DRAWINGS
CONTRACT No	N/A
SCALE	AS INDICATED
DWG No	2021-009-TN-RD-009

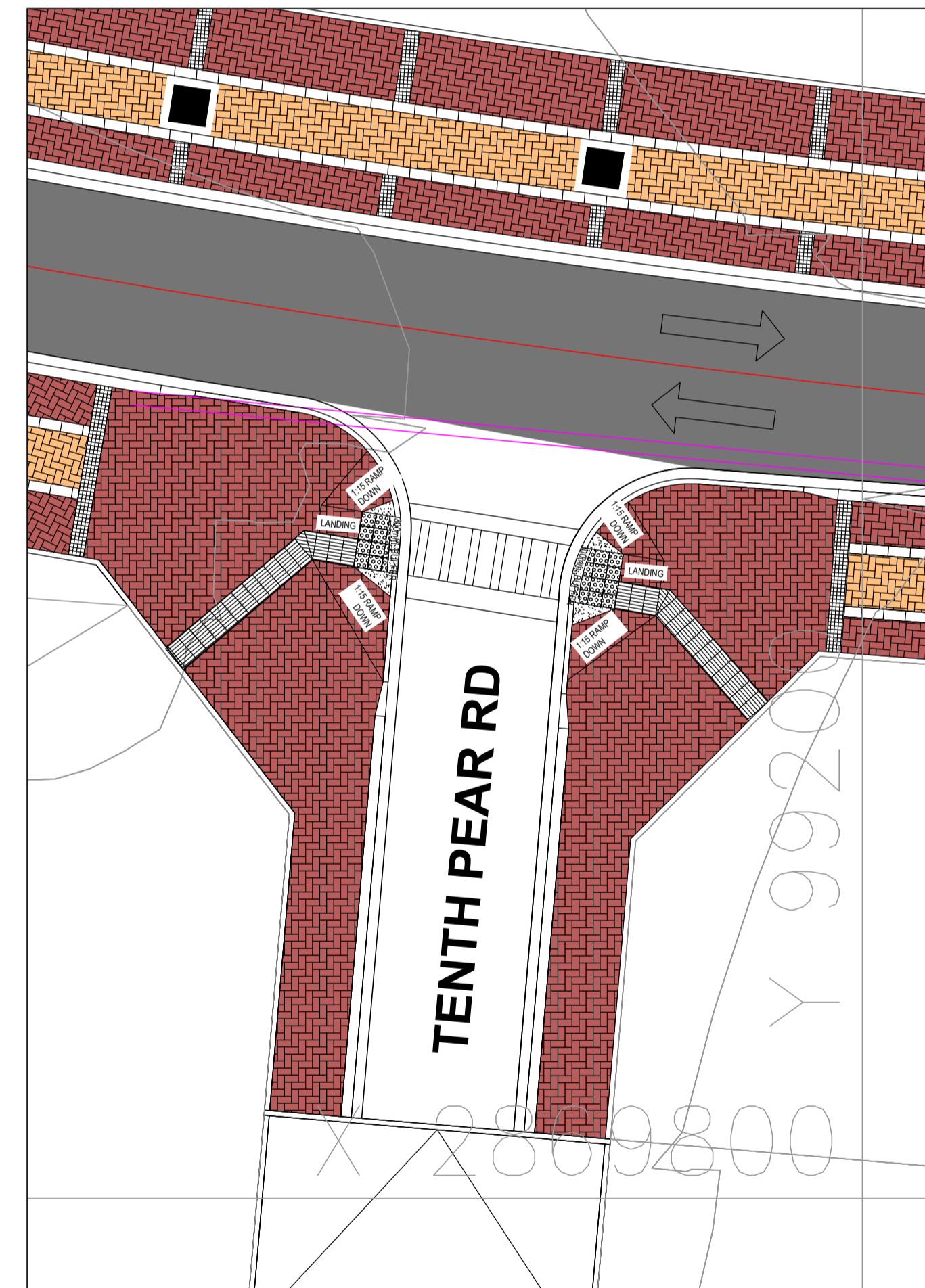
REVISION	0
----------	---



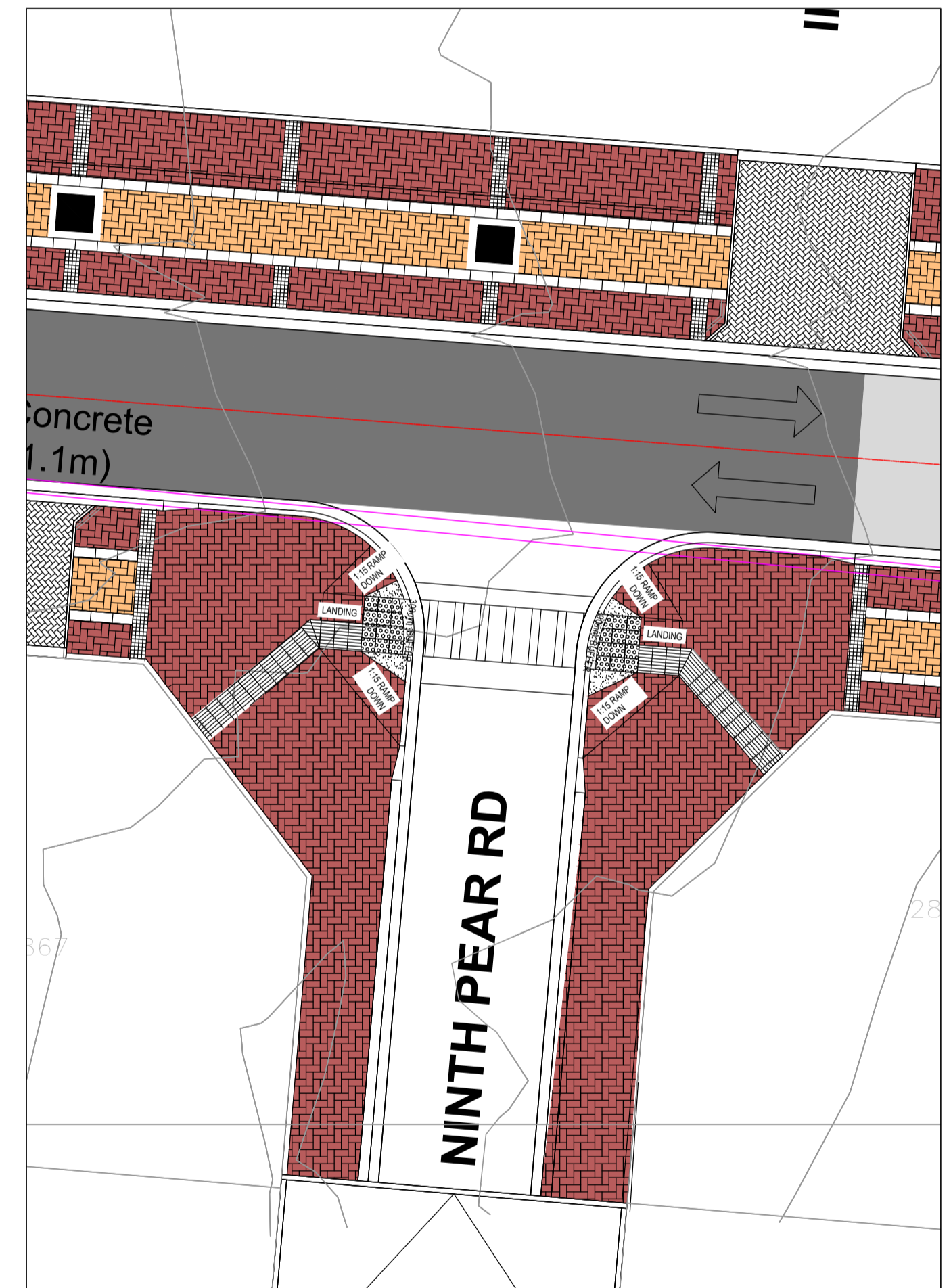
UNIVERSAL ACCESS LAYOUT  
INSERT 1  
SCALE 1:150



UNIVERSAL ACCESS LAYOUT  
INSERT 2  
SCALE 1:150



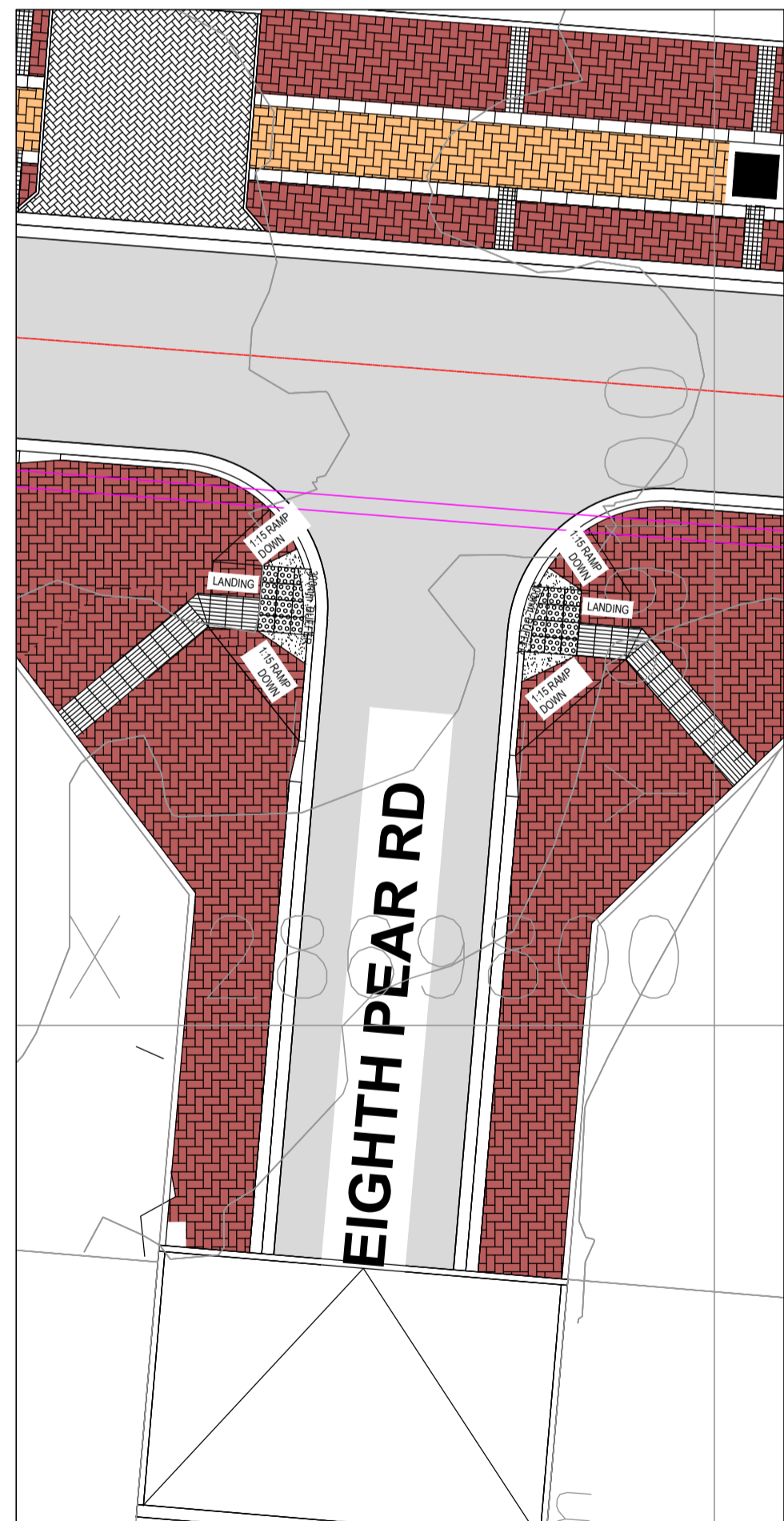
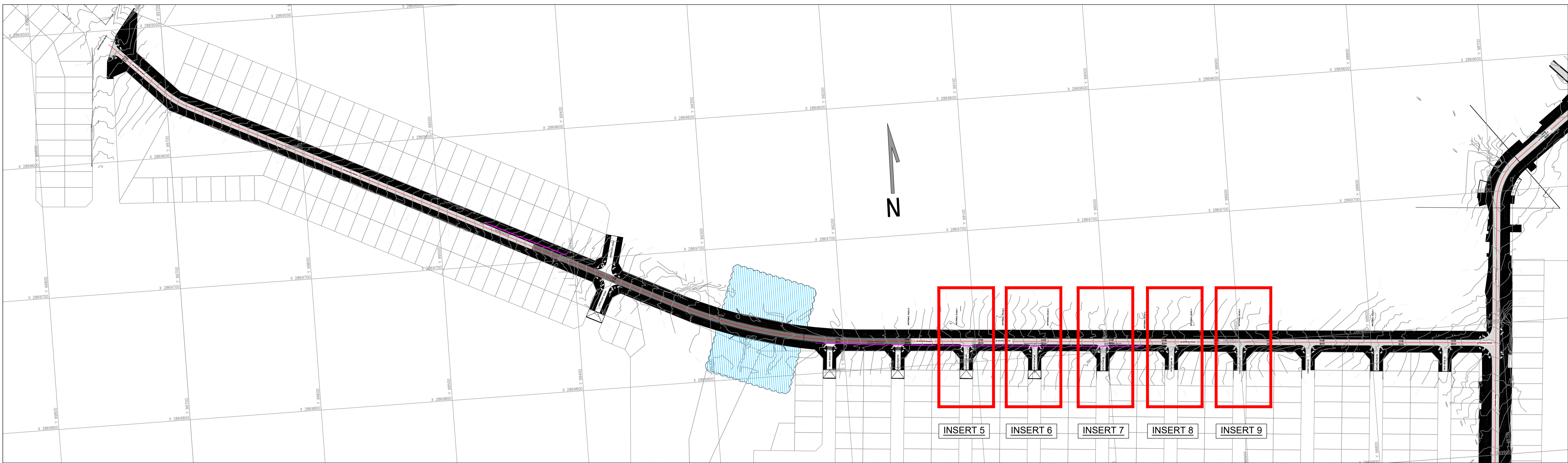
UNIVERSAL ACCESS LAYOUT  
INSERT 3  
SCALE 1:150



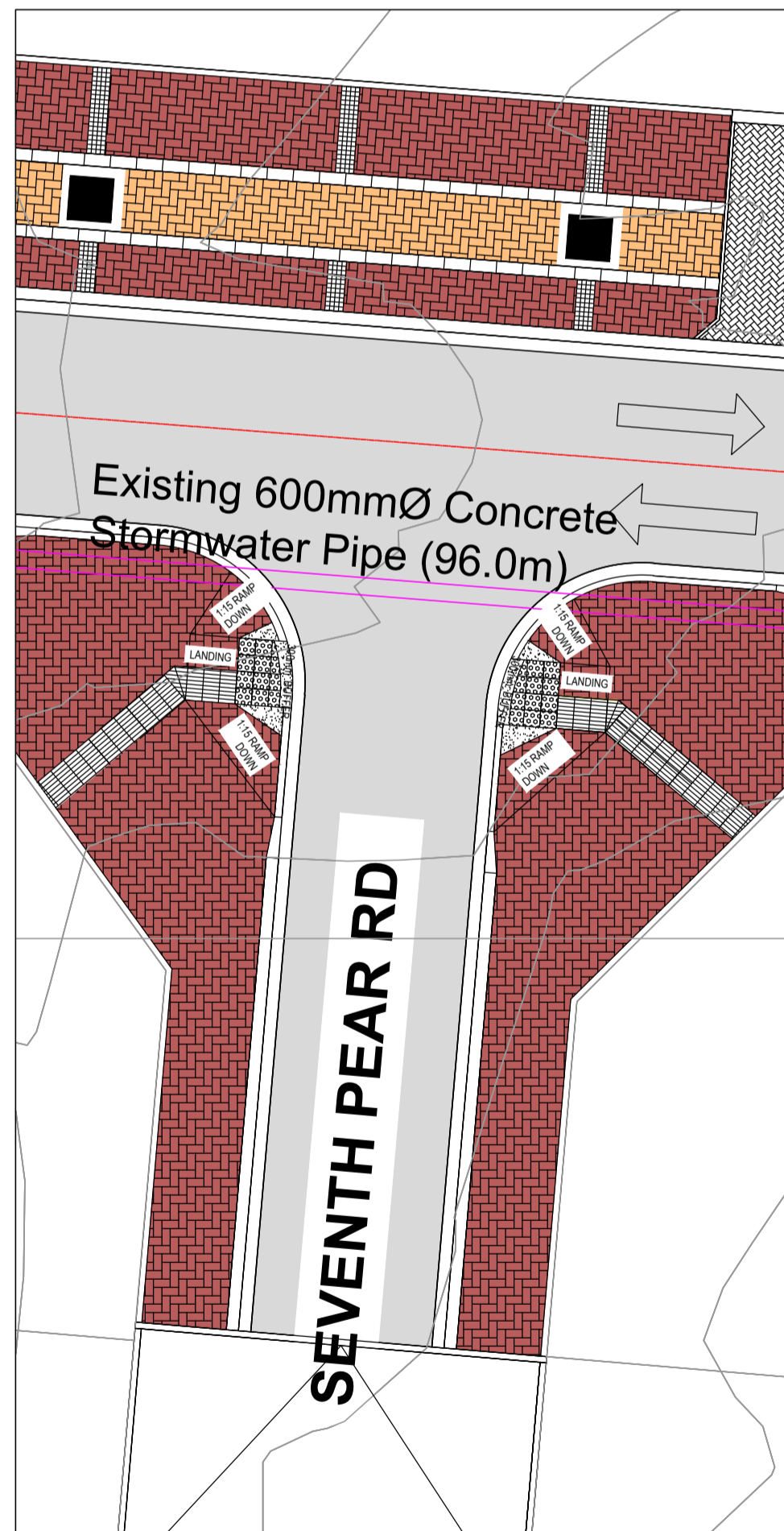
UNIVERSAL ACCESS LAYOUT  
INSERT 4  
SCALE 1:150

**FOR TENDER**

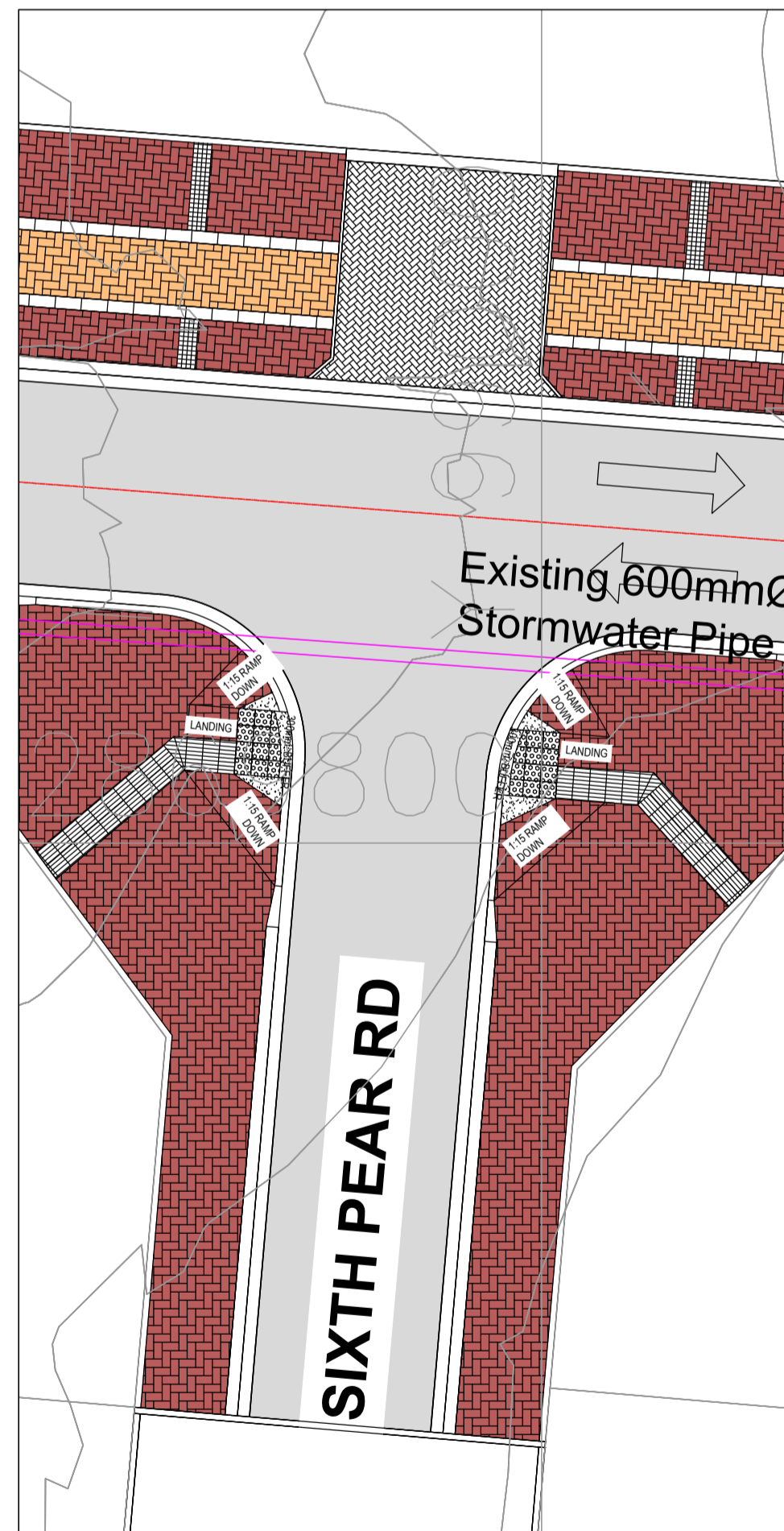
DRAWING TYPE <b>TENDER DRAWINGS</b>				DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS			
DRAWING APPROVAL				DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A			
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		for CLIENT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED		REVISION <b>0</b>	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE		DESIGN CHECKED M. Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA Johannesburg Development Agency		DISTRICT JOHANNESBURG		Dwg No 2021-009-TN-RD-010			
		0 02/02/2024 ISSUED FOR TENDER								DIEPSLOOT DEVELOPMENT PROJECT					
		No DATE AMENDMENTS								JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 1 OF 3					



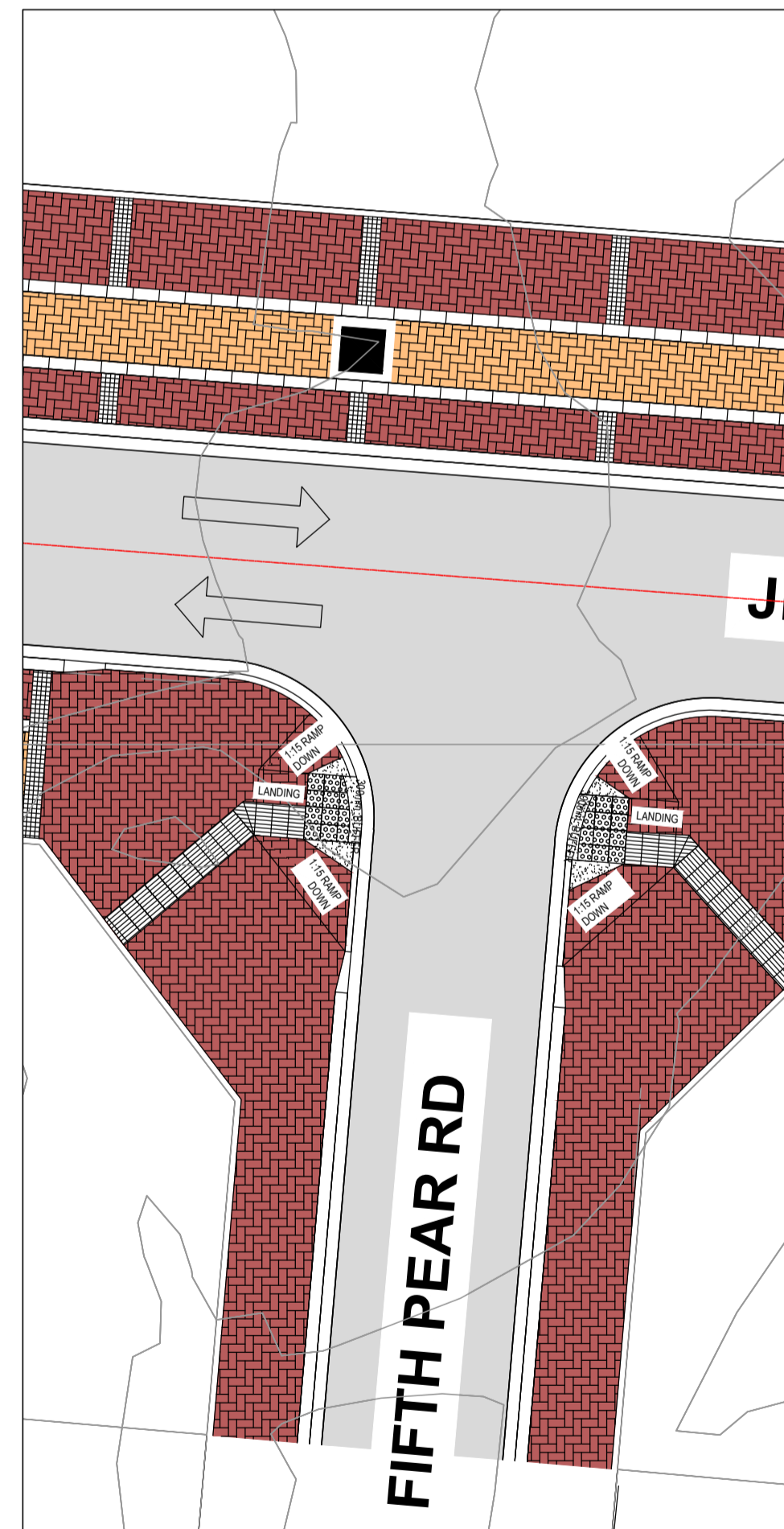
UNIVERSAL ACCESS LAYOUT  
INSERT 5  
SCALE 1:150



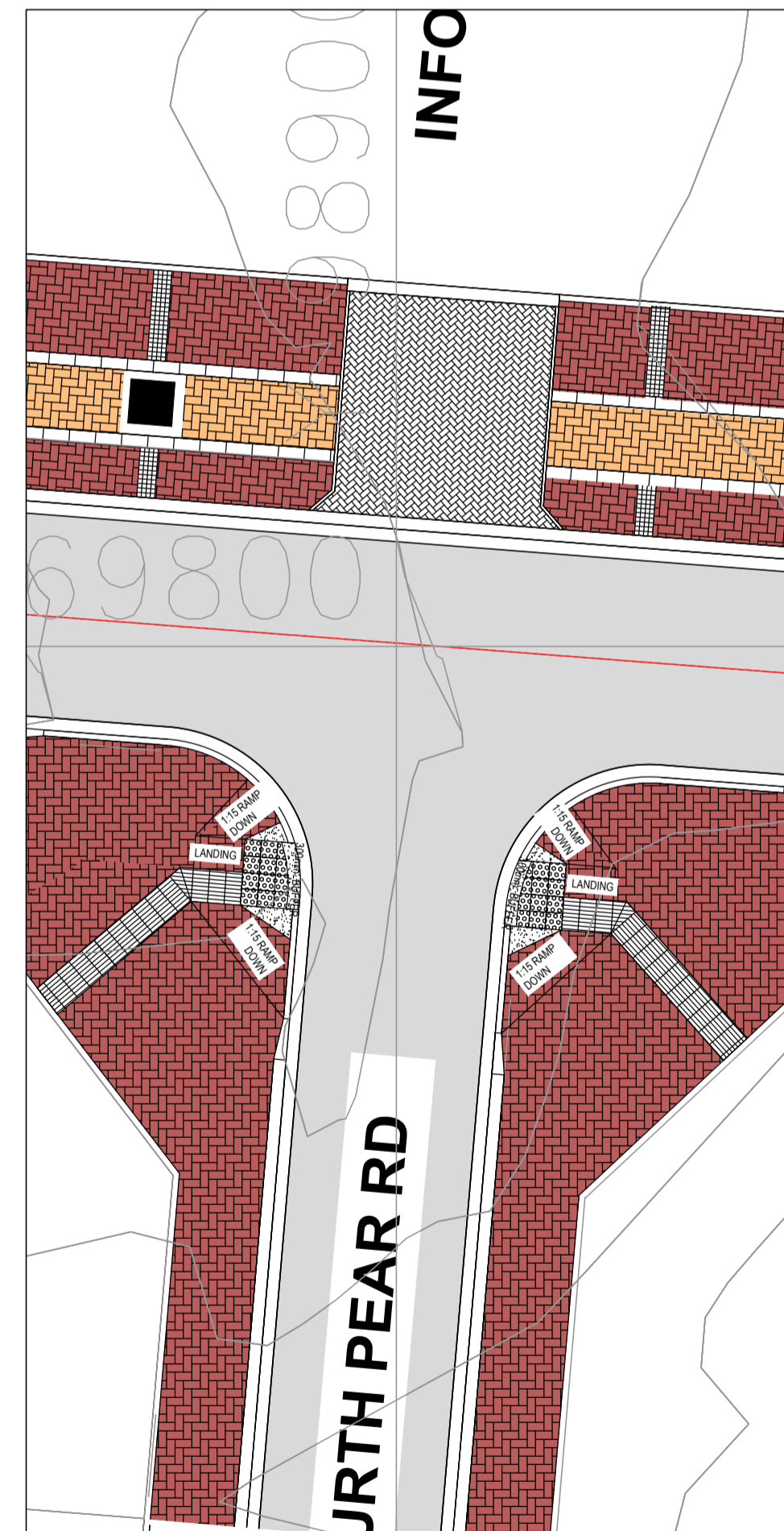
UNIVERSAL ACCESS LAYOUT  
INSERT 6  
SCALE 1:150



UNIVERSAL ACCESS LAYOUT  
INSERT 7  
SCALE 1:150



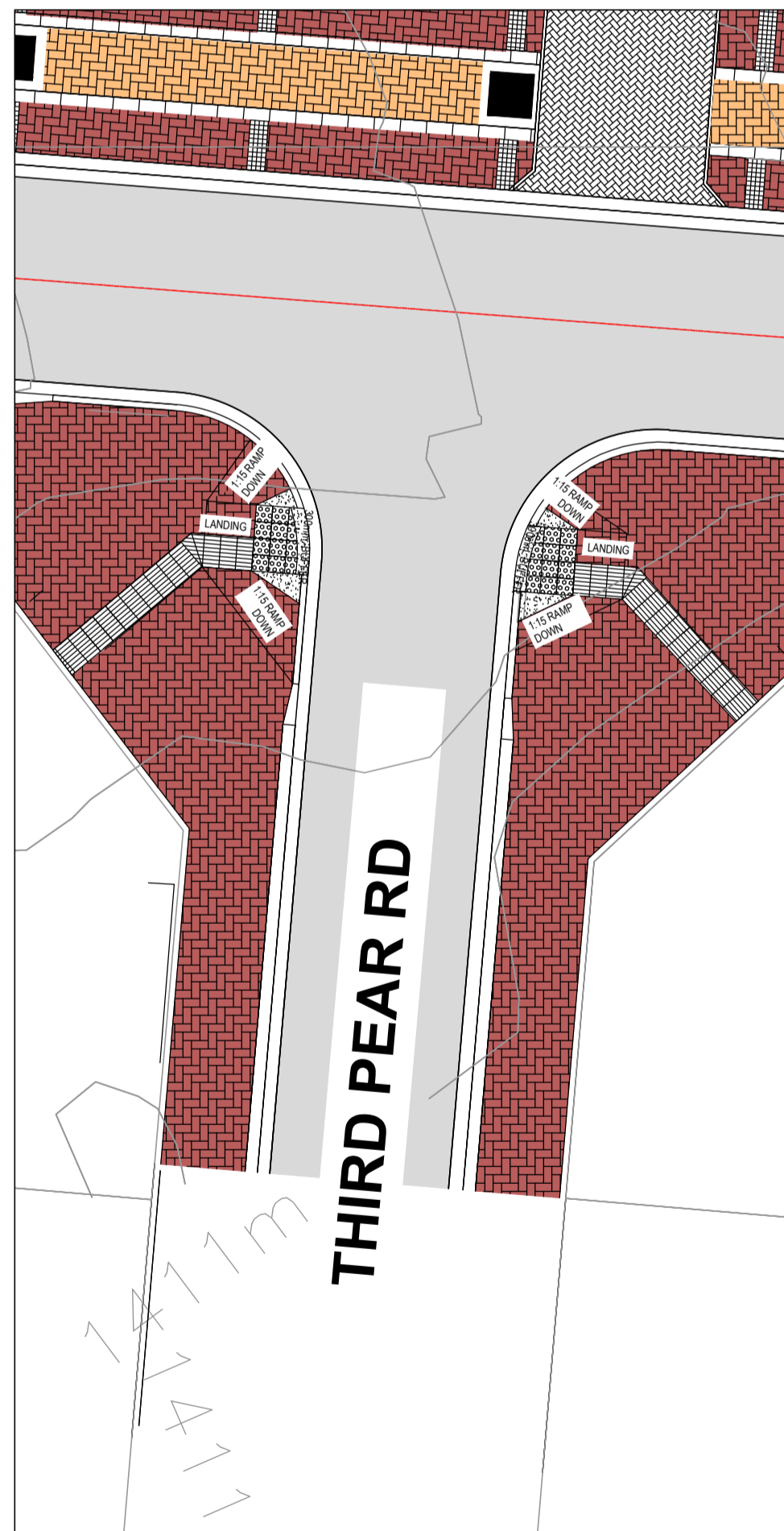
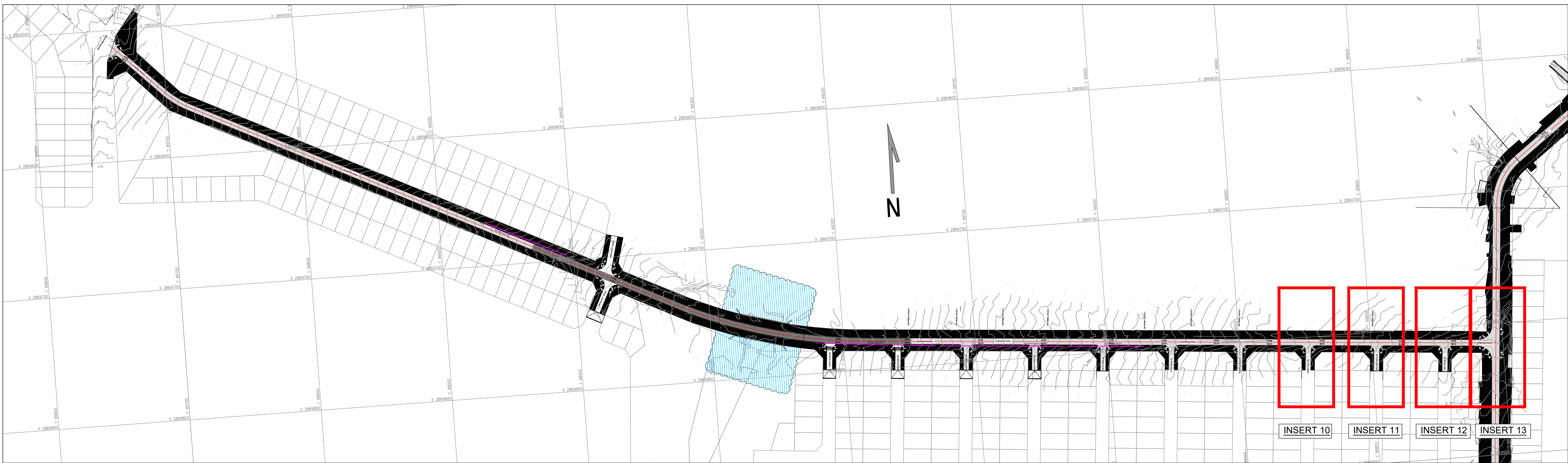
UNIVERSAL ACCESS LAYOUT  
INSERT 8  
SCALE 1:150



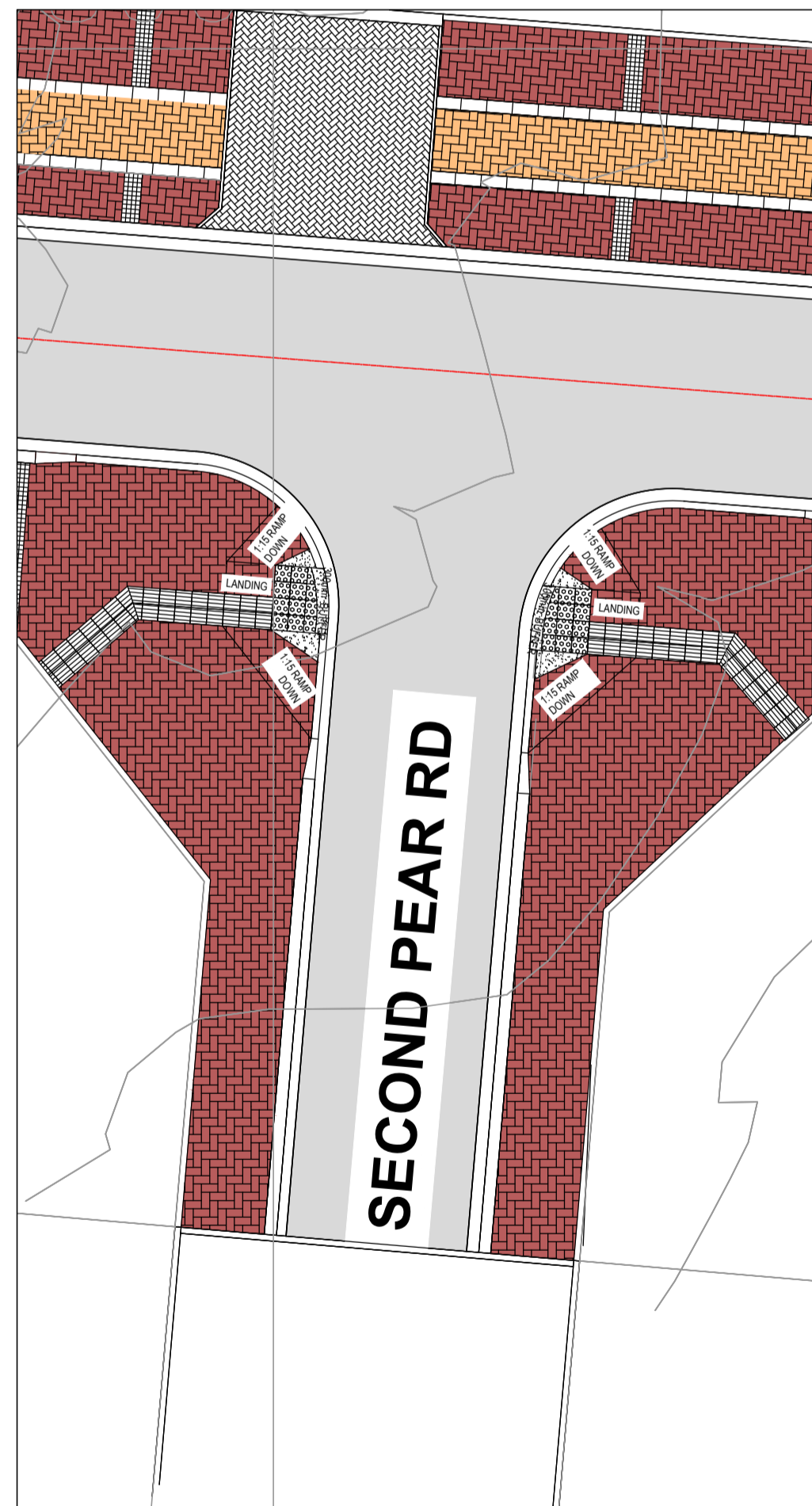
UNIVERSAL ACCESS LAYOUT  
INSERT 9  
SCALE 1:150

**FOR TENDER**

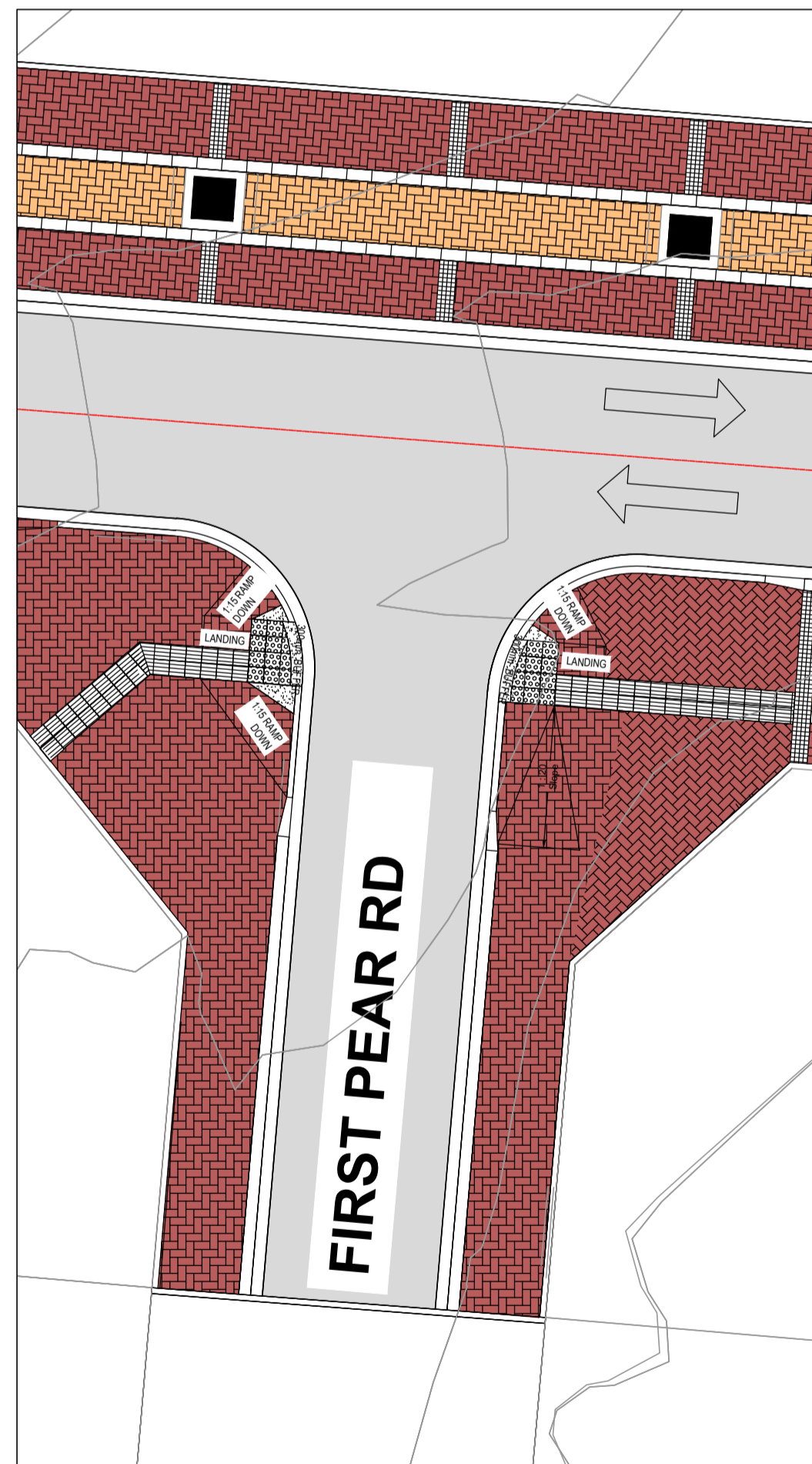
DRAWING TYPE TENDER DRAWINGS		DRAWN BY S. Shoko		CONSULTANTS: AJA CONSULTING CIVIL ENGINEERS		CLIENT: JOHANNESBURG DEVELOPMENT AGENCY		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathabula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathabula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE: 02/02/2024		AJA CONSULTING CIVIL ENGINEERS		JDA		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		AMENDMENTS		DIEPSLOOT DEVELOPMENT PROJECT		-		Dwg No 2021-009-TN-RD-011	
						JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 2 OF 3					



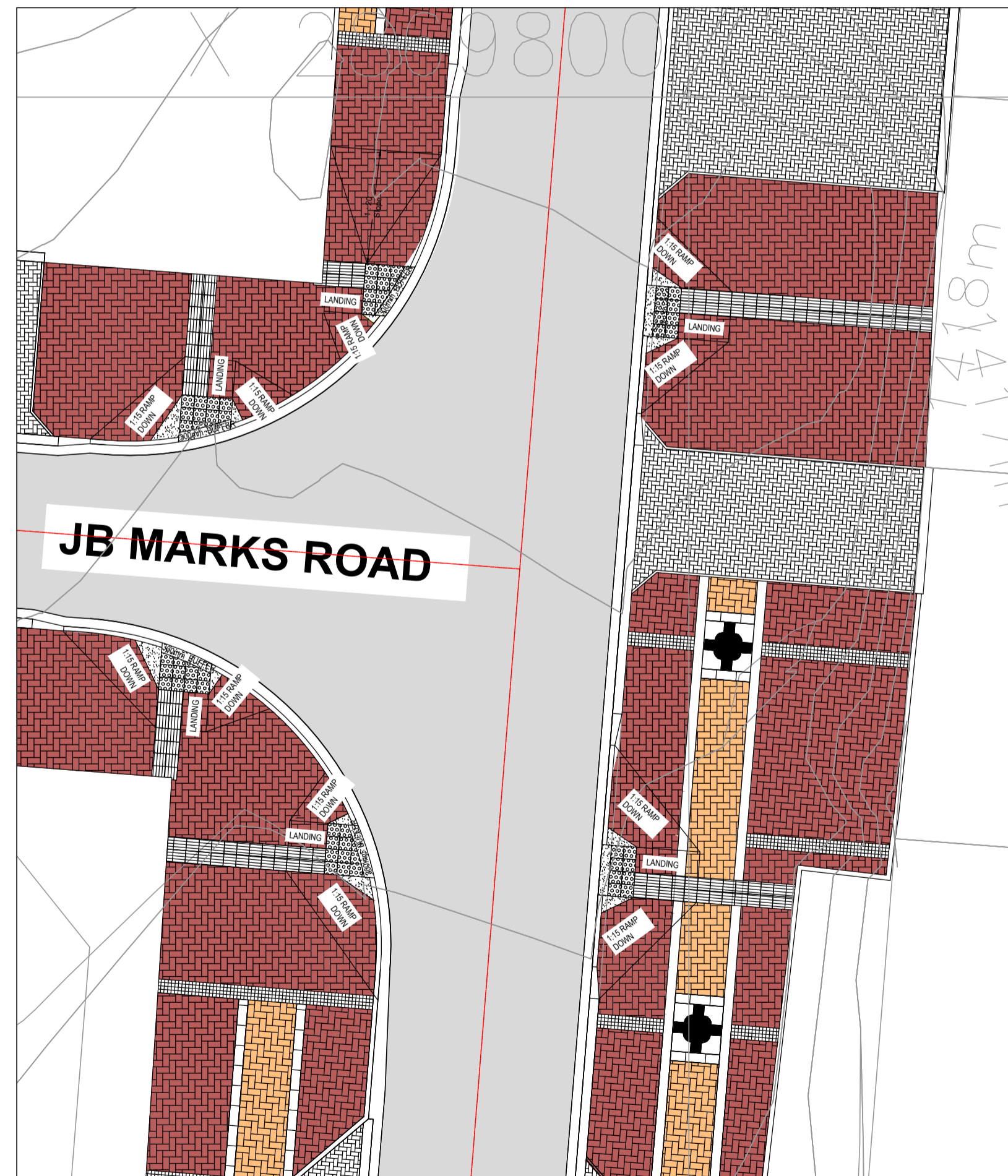
UNIVERSAL ACCESS LAYOUT  
INSERT 10  
SCALE 1:150



UNIVERSAL ACCESS LAYOUT  
INSERT 11  
SCALE 1:150



UNIVERSAL ACCESS LAYOUT  
INSERT 12  
SCALE 1:150



UNIVERSAL ACCESS LAYOUT  
INSERT 13  
SCALE 1:150

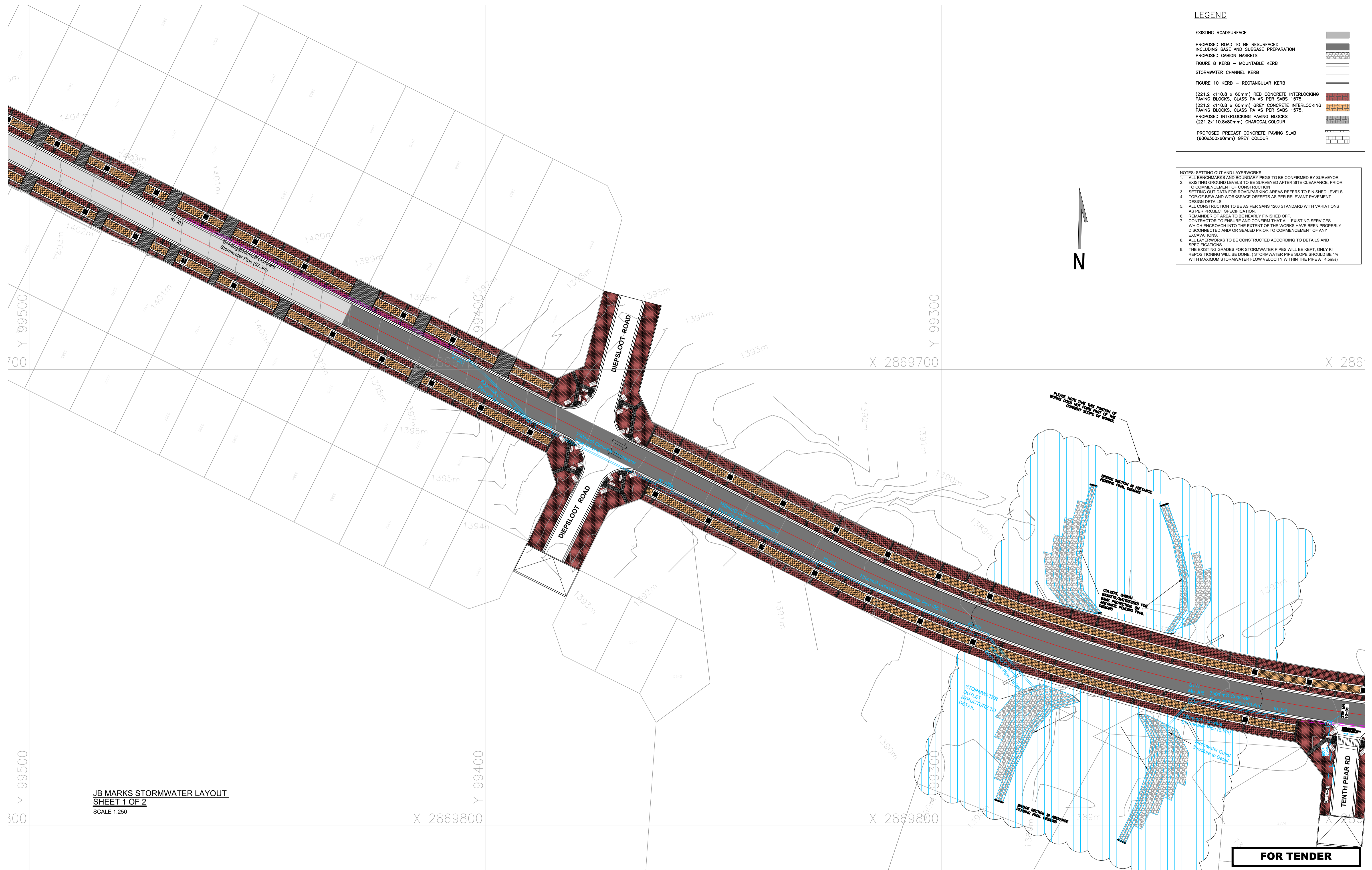
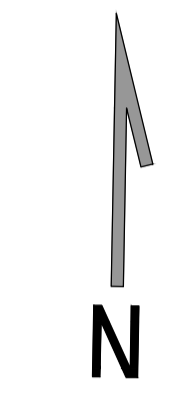
**FOR TENDER**

DRAWING TYPE TENDER DRAWINGS				DRAWN BY S. Shoko		CONSULTANTS: AJA CONSULTING CIVIL ENGINEERS		CLIENT: JOHANNESBURG DEVELOPMENT AGENCY		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL				DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		for CLIENT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE		DESIGN CHECKED M. Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA JOHANNESBURG DEVELOPMENT AGENCY		DISTRICT JOHANNESBURG		REVISION 0	
0		02/02/2024		ISSUED FOR TENDER		DIEPSLOOT DEVELOPMENT PROJECT		JB MARKS UNIVERSAL ACCESS LAYOUT SHEET 3 OF 3		2021-009-TN-RD-012		Dwg No	

**LEGEND**

EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS**
- ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  - EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  - SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS.
  - TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS.
  - ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION.
  - REMAINDER OF AREA TO BE NEARLY FINISHED OFF.
  - CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENDOUR INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS.
  - ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS.
  - THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)



**JB MARKS STORMWATER LAYOUT**  
**SHEET 1 OF 2**  
 SCALE 1:250

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE: 02/02/2024		Issued for TENDER		www.jda.org.za		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		AMENDMENTS		JB MARKS STORMWATER LAYOUT SHEET 1 OF 2		Dwg No		2021-009-TN-SW-001	



**LEGEND**

EXISTING ROADSURFACE	
PROPOSED ROAD TO BE RESURFACED INCLUDING BASE AND SUBBASE PREPARATION	
PROPOSED GABION BASKETS	
FIGURE 8 KERB - MOUNTABLE KERB	
STORMWATER CHANNEL KERB	
FIGURE 10 KERB - RECTANGULAR KERB	
(221.2 x 110.8 x 60mm) RED CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
(221.2 x 110.8 x 60mm) GREY CONCRETE INTERLOCKING PAVING BLOCKS, CLASS PA AS PER SABS 1575.	
PROPOSED INTERLOCKING PAVING BLOCKS (221.2x110.8x60mm) CHARCOAL COLOUR	
PROPOSED PRECAST CONCRETE PAVING SLAB (600x300x60mm) GREY COLOUR	

- NOTES: SETTING OUT AND LAYERWORKS**
1. ALL BENCHMARKS AND BOUNDARY PEGS TO BE CONFIRMED BY SURVEYOR
  2. EXISTING GROUND LEVELS TO BE SURVEYED AFTER SITE CLEARANCE, PRIOR TO COMMENCEMENT OF CONSTRUCTION
  3. SETTING OUT DATA FOR ROAD/PARKING AREAS REFERS TO FINISHED LEVELS.
  4. TOP-OF-BEW AND WORKSPACE OFFSETS AS PER RELEVANT PAVEMENT DESIGN DETAILS
  5. ALL CONSTRUCTION TO BE AS PER SANS 1200 STANDARD WITH VARIATIONS AS PER PROJECT SPECIFICATION
  6. REMAINDER OF AREA TO BE NEARLY FINISHED OFF.
  7. CONTRACTOR TO ENSURE AND CONFIRM THAT ALL EXISTING SERVICES WHICH ENDOUR INTO THE EXTENT OF THE WORKS HAVE BEEN PROPERLY DISCONNECTED AND/OR SEALED PRIOR TO COMMENCEMENT OF ANY EXCAVATIONS.
  8. ALL LAYERWORKS TO BE CONSTRUCTED ACCORDING TO DETAILS AND SPECIFICATIONS.
  9. THE EXISTING GRADES FOR STORMWATER PIPES WILL BE KEPT, ONLY KI REPOSITIONING WILL BE DONE. (STORMWATER PIPE SLOPE SHOULD BE 1% WITH MAXIMUM STORMWATER FLOW VELOCITY WITHIN THE PIPE AT 4.5m/s)

**JB MARKS STORMWATER LAYOUT**  
**SHEET 2 OF 2**  
 SCALE 1:250

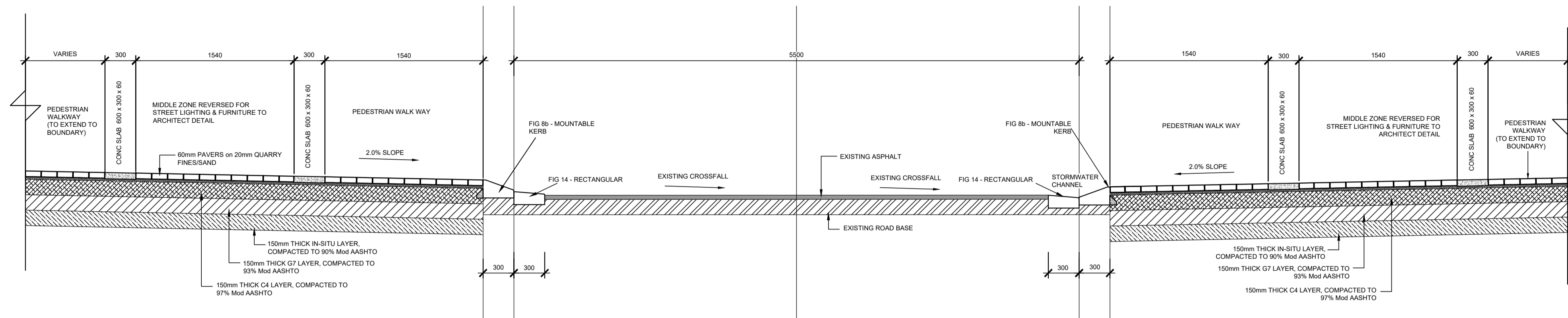
**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No N/A	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr No. 200870199		DATE: 02/02/2024		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		DISTRICT JOHANNESBURG		REVISION 0	
No		DATE		AMENDMENTS		DESIGN CHECKED M Jantjies		JB MARKS STORMWATER LAYOUT SHEET 2 OF 2		Dwg No 2021-009-TN-SW-002	

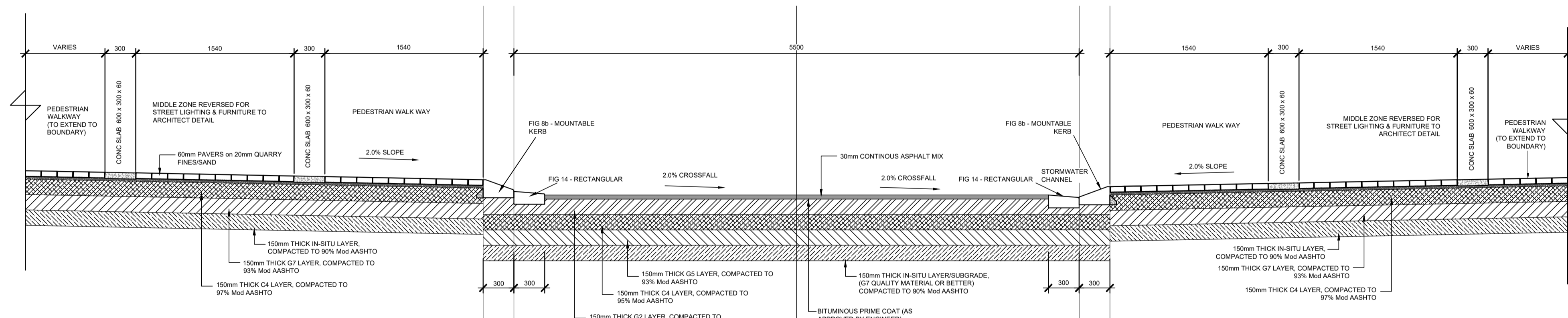
**GENERAL NOTES:**

1. WORK TO FIGURED DIMENSIONS ONLY.
2. ANY DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE EXECUTING ANY WORKS.
3. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERING AND ARCHITECTURAL DRAWINGS.
4. TYPICAL SECTIONS EXCLUDE BELLMOUTH AREAS AND ACCESSSES TO PRIVATE PROPERTIES.
5. REFER TO "UNIVERSAL ACCESSES" DRAWINGS FOR INTERSECTION DETAILS.
6. ALL PORTIONS TO BE RESURFACED INCLUDE BELLMOUTHS AT ALL ROAD INTERSECTIONS.
7. EXISTING SERVICES TO BE PROTECTED AND RETAINED (EXCEPT WHERE NEW STORMWATER SERVICES ARE PROPOSED).
8. ALL EXISTING STORMWATER DRAINS TO BE CLEANED AND / OR DE-SILT.

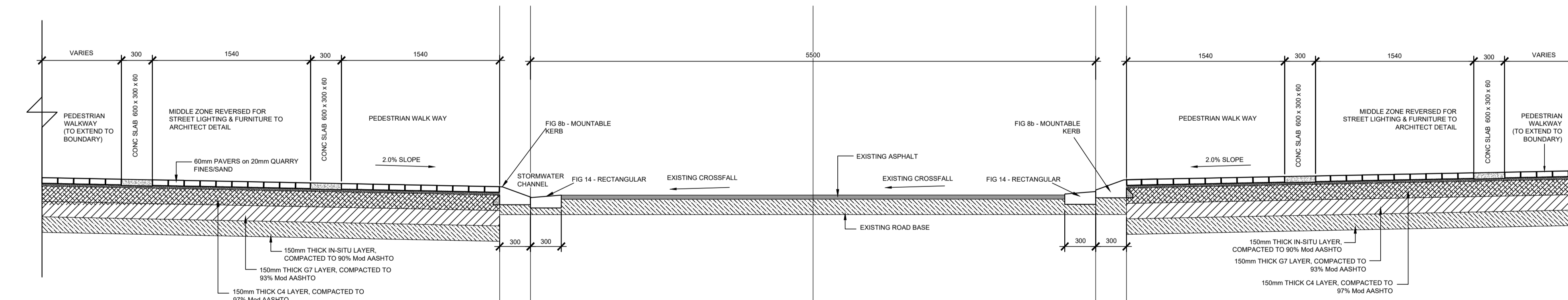
ALL SECTIONS ASSUME THAT ONE IS FACING IN THE DIRECTION OF RISING CHAINAGES



**TYPICAL CROSS SECTION JB MARKS 03**  
CH 0+660 km TO CH 1+088 km



**TYPICAL CROSS SECTION JB MARKS 02**  
CH 0+0360 km TO CH 0+526 km & CH 0+566 km TO CH 0+660 km

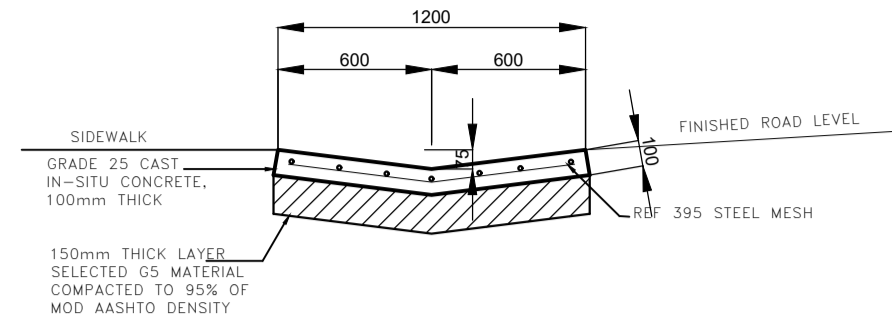


**TYPICAL CROSS SECTION JB MARKS 01**  
CH 0+012 km TO CH 0+360 km

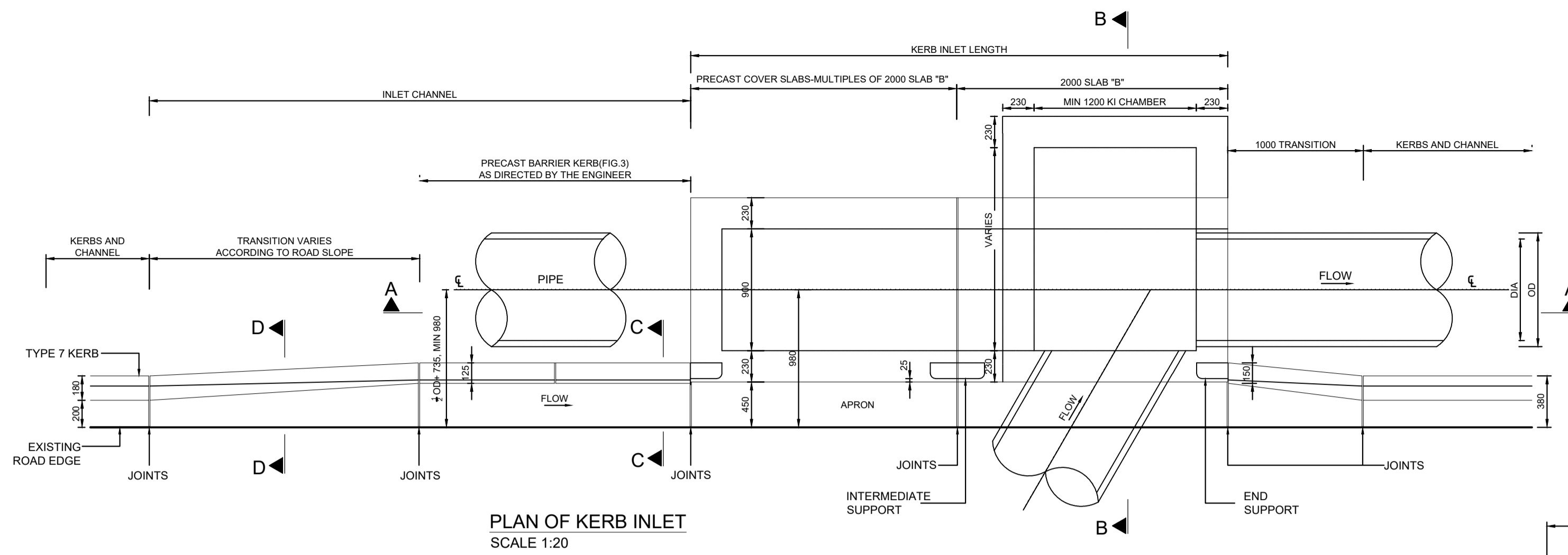
**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>				DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL				DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No -	
M. JANTJES for CONSULTANT (NAME AND SIGNATURE)		for CLIENT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA P: No. 200870199		DATE: 02/02/2024		ISSUED FOR TENDER		DESIGN CHECKED M. Jantjies				DISTRICT JOHANNESBURG		REVISION 0	
		No		DATE		AMENDMENTS						Dwg No 2021-009-TN-TD-001	

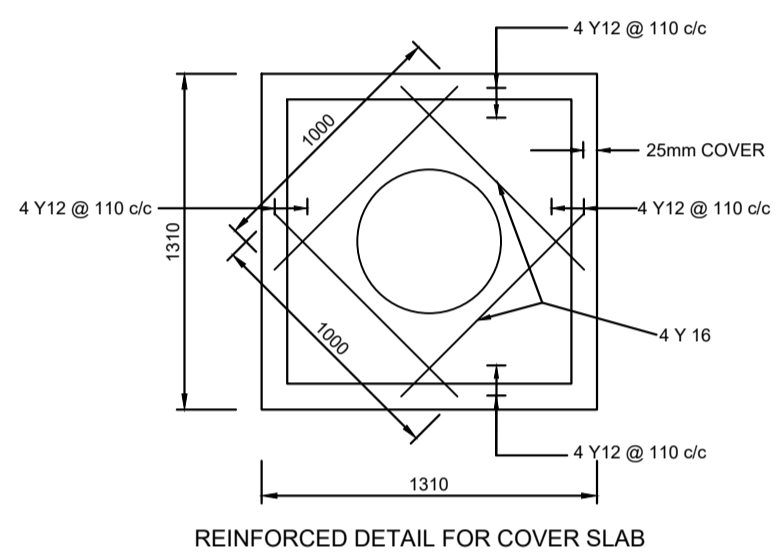
**DIEPSLOOT DEVELOPMENT PROJECT**  
**TYPICAL CROSS SECTION FOR PEACH STREET AND GATESIDE STREET**



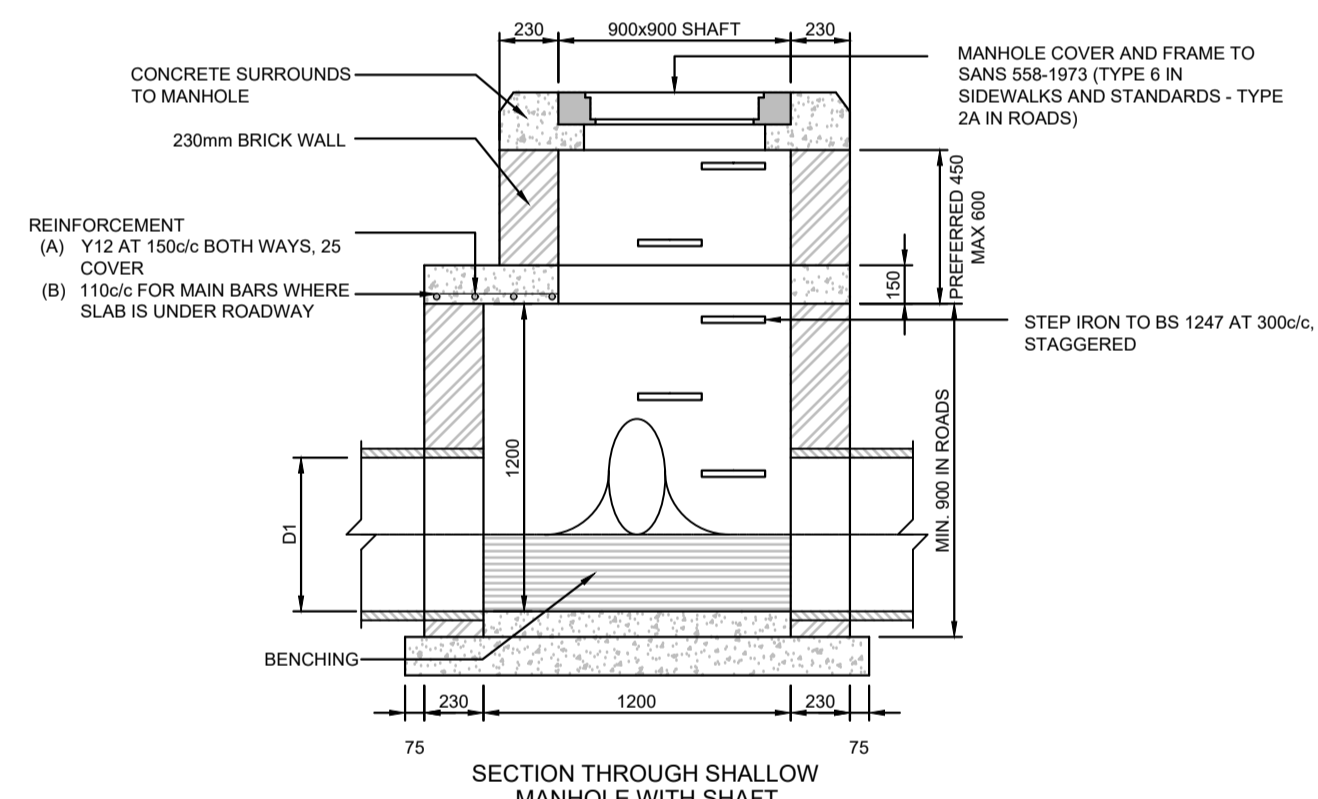
TYPE 1: SMALL SIDE DRAIN ALLOWING ERF ACCESS  
SCALE 1:20



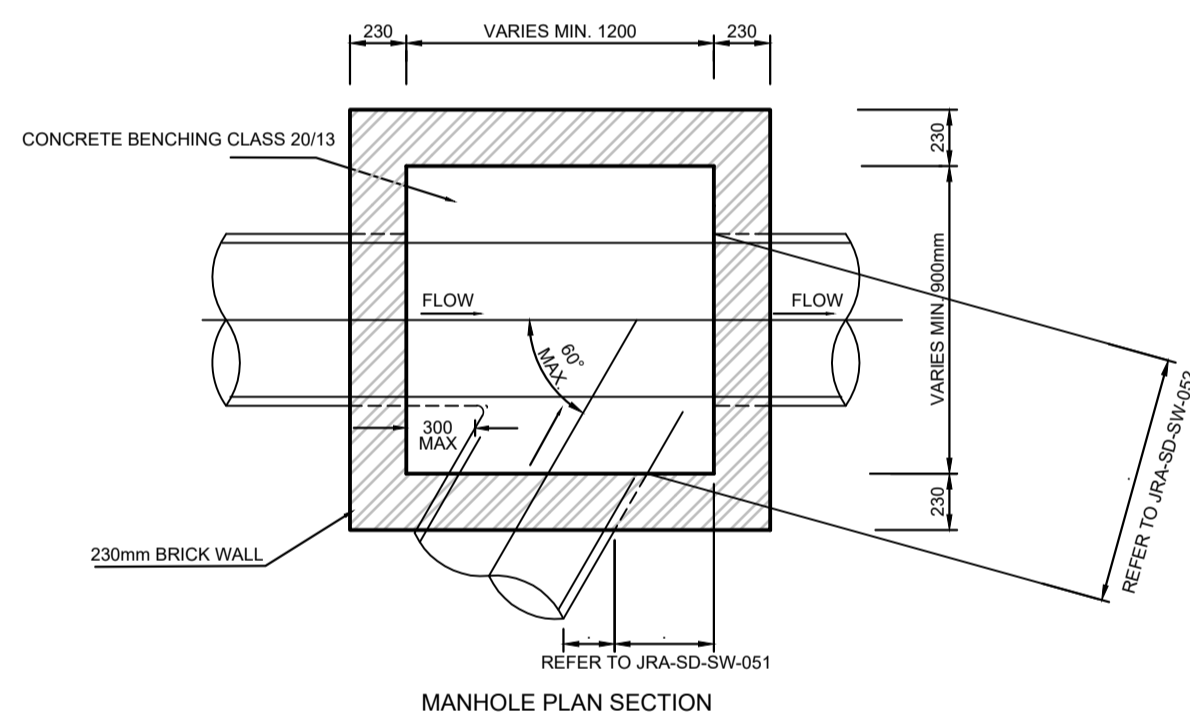
PLAN OF KERB INLET  
SCALE 1:20



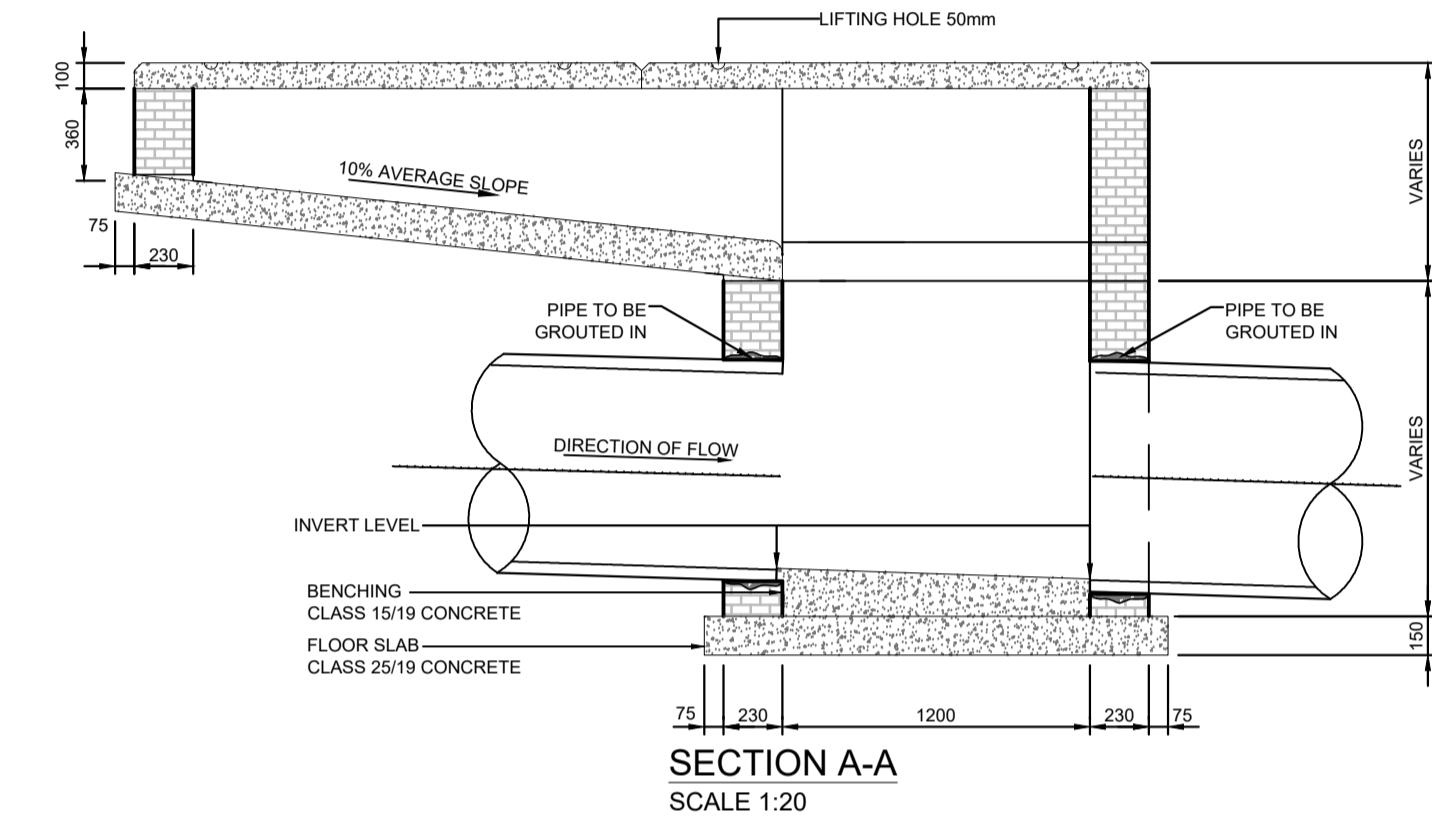
REINFORCED DETAIL FOR COVER SLAB



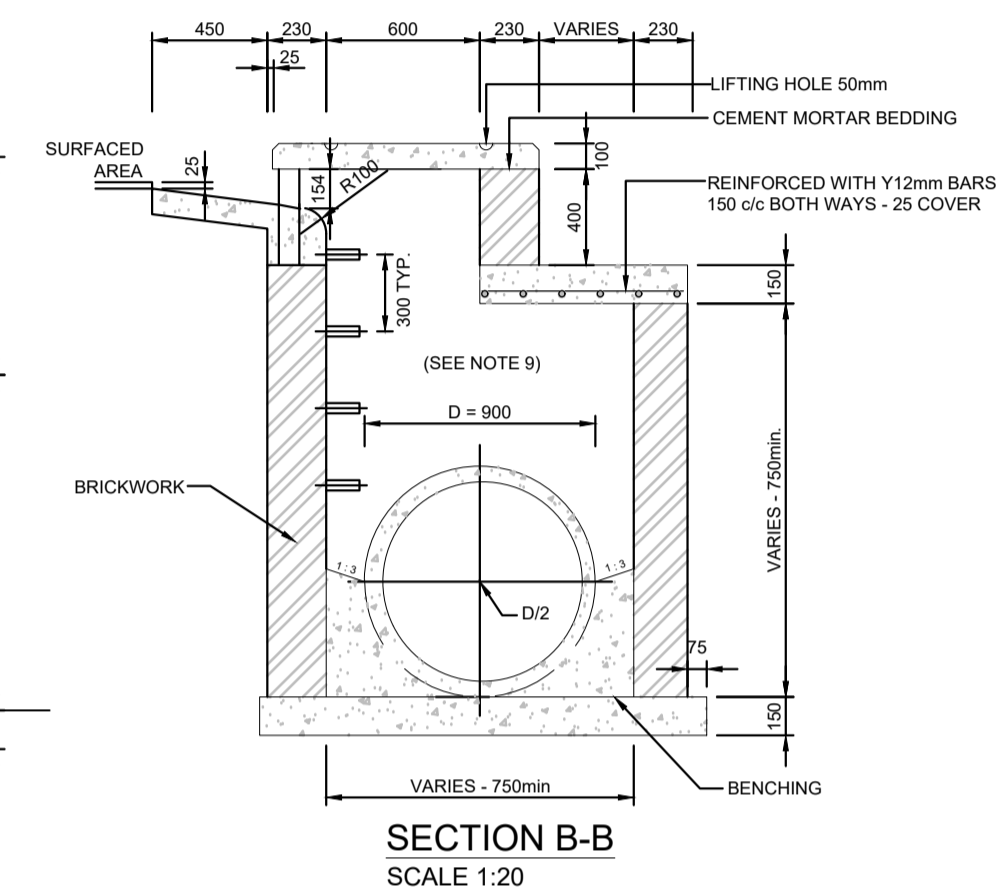
SECTION THROUGH SHALLOW MANHOLE WITH SHAFT



MANHOLE PLAN SECTION



SECTION A-A  
SCALE 1:20



SECTION B-B  
SCALE 1:20

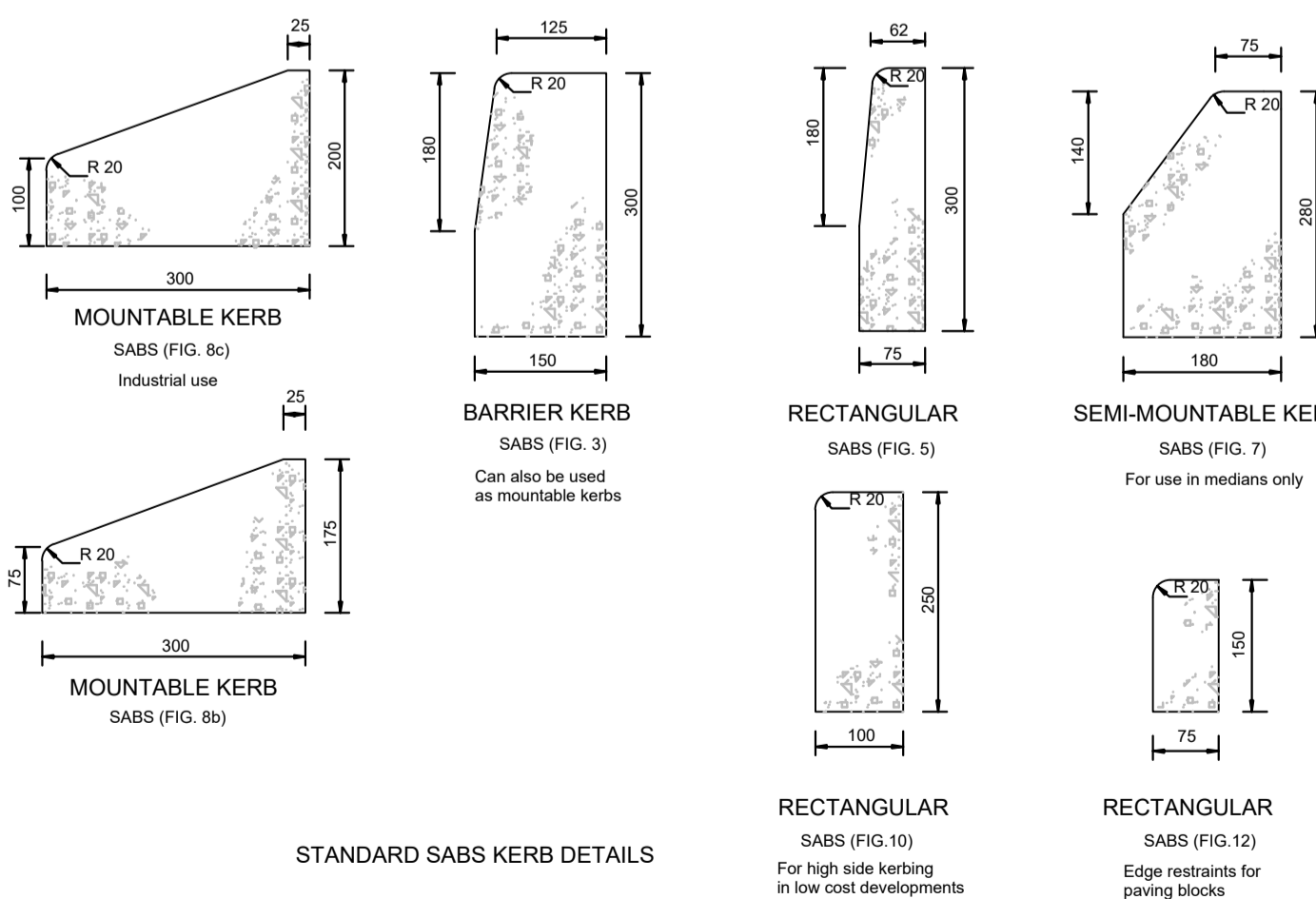
TABLE A: PRECAST COVER SLAB REINFORCEMENT DETAILS

Span (mm)	Thickness (mm)	Main Reinforcement	
		b = 450	b = 600
Up to 500	125	4 Y 12 - 125	5 Y 12 - 125
Up to 1000	150	5 Y 12 - 100	5 Y 12 - 125
Up to 1250	150	4 Y 16 - 125	5 Y 12 - 125
Up to 1500	175	4 Y 16 - 125	5 Y 12 - 125
Up to 1750	175	4 Y 16 - 125	5 Y 12 - 125
Up to 2000	200	4 Y 16 - 125	5 Y 16 - 125
Up to 2250	200	4 Y 16 - 125	5 Y 16 - 125
Up to 2500	200	5 Y 16 - 100	5 Y 16 - 125
Up to 2750	225	5 Y 16 - 100	5 Y 16 - 125
Up to 3000	225	5 Y 16 - 100	6 Y 16 - 125

Distribution reinforcement: Y10 bars @ 125 c/c for all spans  
Refer to notes for bending details

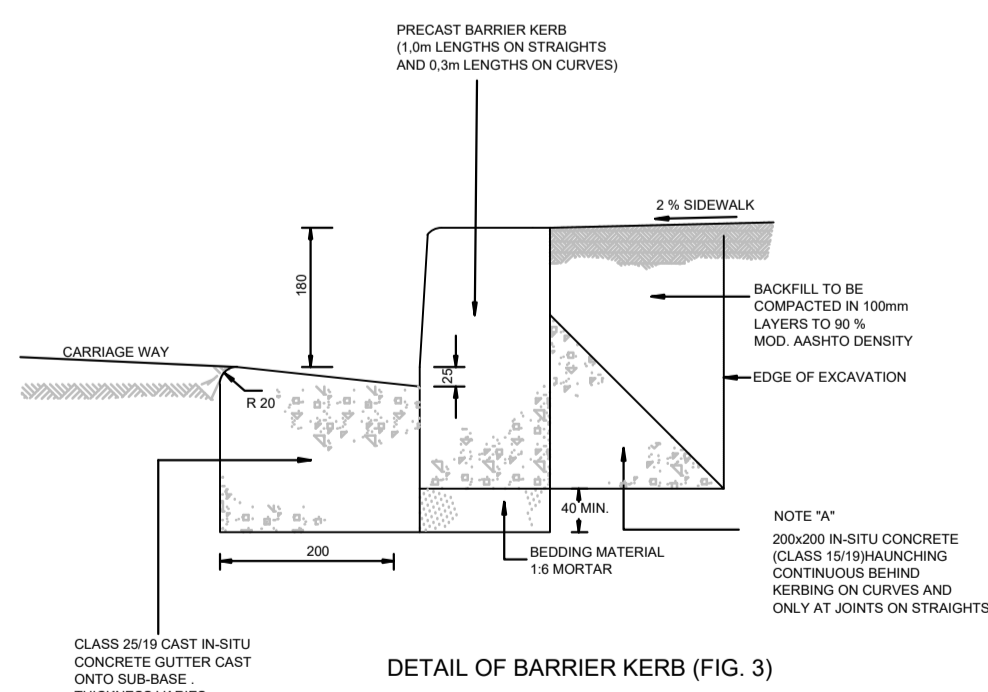
PRECAST COVER SLAB FOR JUNCTION BOXES

MANHOLE DETAILS

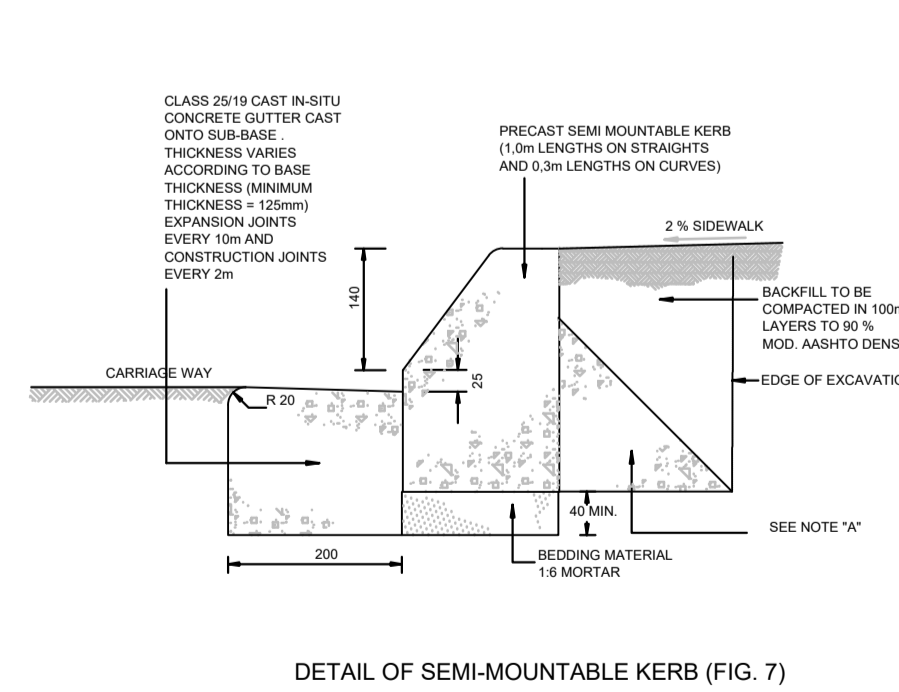


STANDARD SABS KERB DETAILS

- NOTES:
- MOUNTABLE KERBS TO BE FIG. 8B UNLESS OTHERWISE SPECIFIED
  - ALL KERB SHAPES AND STRENGTH TO COMPLY WITH SABS 927
  - ALL KERBING ON CURVES TO BE CONTINUOUSLY HAUNCHED. KERBS ON STRAIGHT SECTIONS HAUNCHED ONLY AT JOINTS.
  - REFLECTIVE KERBING TO BE USED WHERE EXTRA SAFETY IS REQUIRED

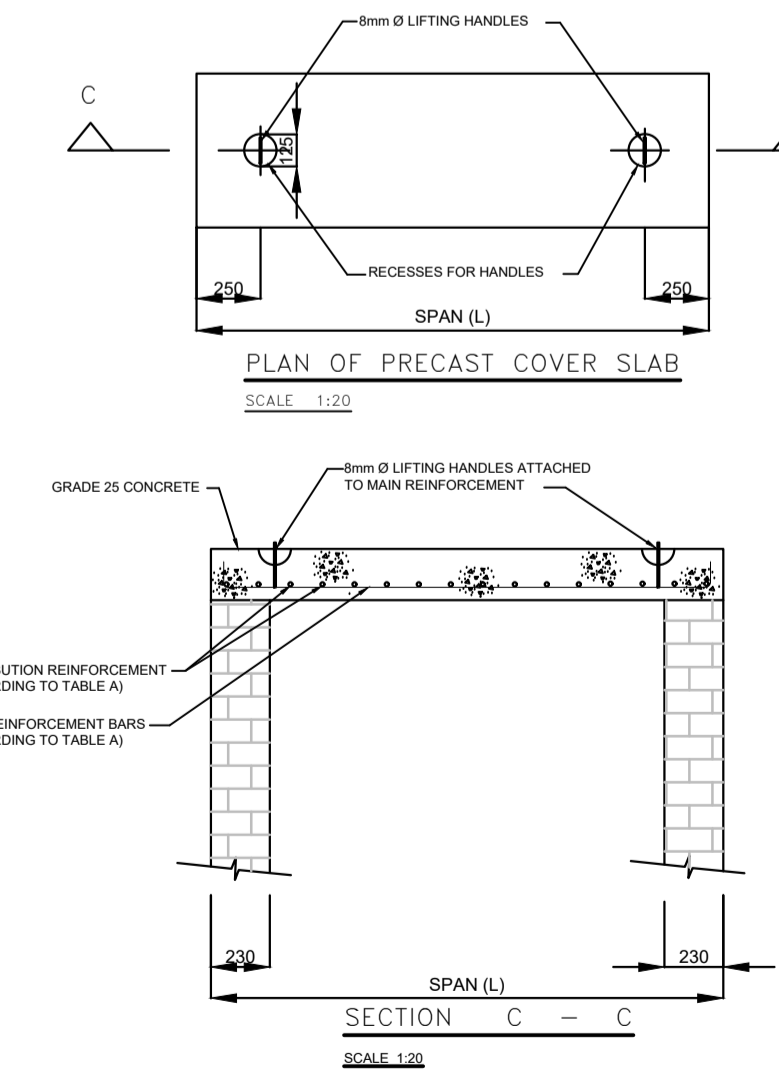


DETAIL OF BARRIER KERB (FIG. 3)



DETAIL OF SEMI-MOUNTABLE KERB (FIG. 7)

STANDARD KERB HAUNCHING DETAILS



PLAN OF PRECAST COVER SLAB  
SCALE 1:20

SECTION C-C  
SCALE 1:20

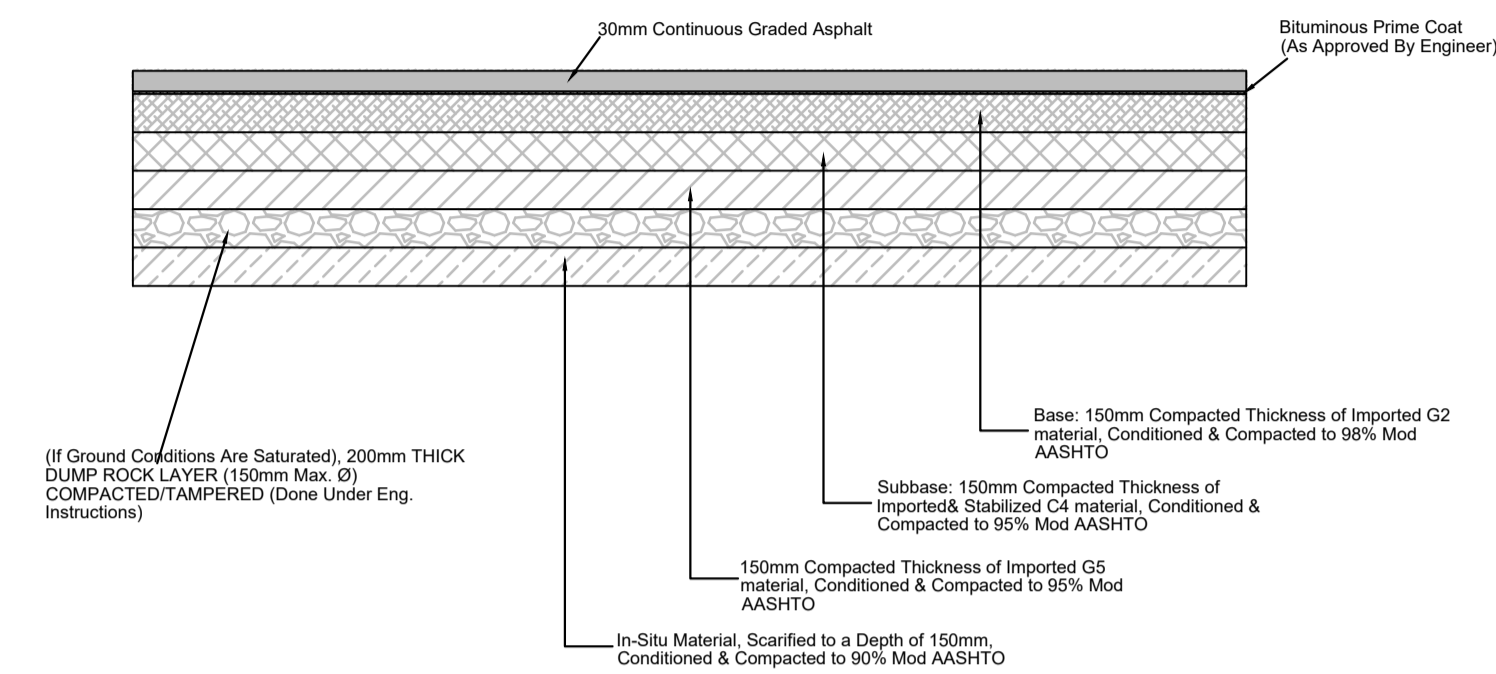
NOTES AND SPECIFICATIONS

- GENERAL
- CONCRETE STRENGTH TO BE AS FOLLOWS:  
A) MANHOLE SURROUNDS AND BENCHING: CLASS 15/19  
B) CAST IN-SITU DECK SLABS & FOUNDATION: CLASS 25/19  
C) PRECAST COVER SLABS & OTHER ITEMS: CLASS 25/19  
D) CAST IN-SITU KERBS, APRONS ETC.: CLASS 25/19
  - ALL FLOORS AND BENCHING TO BE STEEL TROWELLED WITH A SMOOTH FINISH.
  - ALL BRICKS TO BE FB30 TO SABS 227-1986 WITH WATER ABSORPTION < 14% AND EFFLORESCENCE OF 10.
  - ALL BRICKWORK TO BE IN ENGLISH BOND.
  - MANHOLE & KERB INLET WIDTHS AND DEPTHS:  
WIDTH:  
750mm PIPES AND LESS = 900mm  
825mm PIPES AND MORE = 1200mm  
SOME JUNCTION MANHOLE SIZES TO BE DETERMINED ON SITE.  
DEPTH:  
THE DEPTH INDICATED SHOULD BE INCREASED IF NECESSARY FOR MANHOLES TO PERMIT SUFFICIENT DISCHARGE HEAD TO DEVELOP. MANHOLE DEPTH > 1.75m.  
WIDTH OF BRICKWORK TO BE INCREASED TO 330mm.
  - KERB INLET - THE APRON OVER THE LENGTH OF THE KERB INLET AND THE TRANSITION TO BE LOWERED BY 25mm.
  - NO BACKFILL TO BE DONE UNTIL MORTAR IS SEVEN DAYS OLD.
  - PROVIDE STEP IRONS WHEN DEPTH > 1.200m
  - PIPES AT INLET AND OUTLET TO BE LAID SOFFIT TO SOFFIT
  - SHOULD THERE BE A CHANGE IN PIPE DIAMETER THE GREATER OF THE TWO SHOULD BE USED TO DETERMINE THE POSITIONING OF THE PIPES.
  - CONTRACTOR TO MAKE GOOD ALL KERB INLET STRUCTURES ALONG ALL THE ROADS

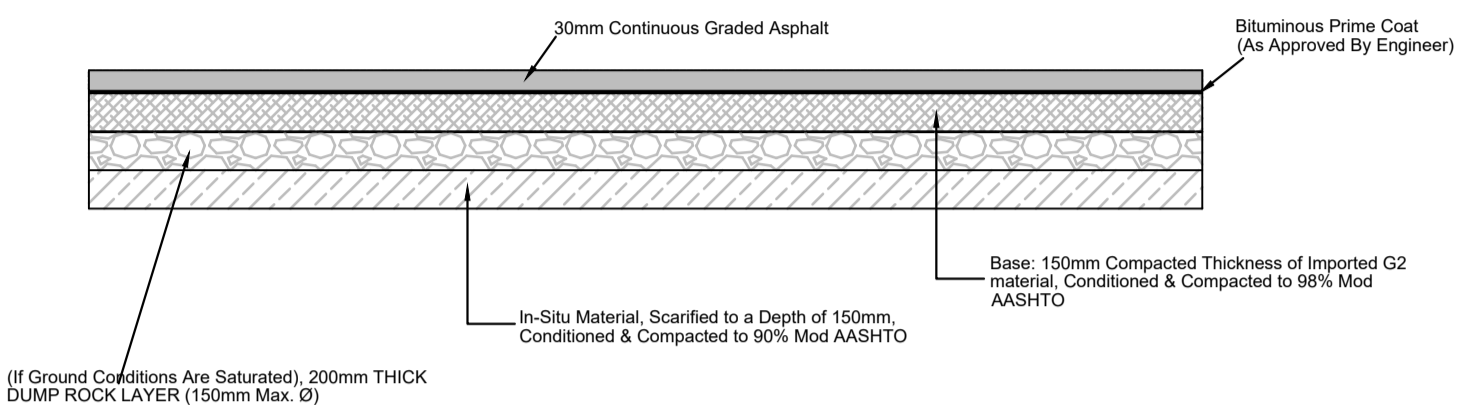
FOR TENDER

DRAWING TYPE <b>TENDER DRAWINGS</b>				DRAWN BY <b>S. Shoko</b>				CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>				CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>				FILE No -				TYPE OF PLANNING TENDER DRAWINGS							
DRAWING APPROVAL				DRAWING CHECKED <b>S. Mathabula</b>				<b>AJA</b> CONSULTING CIVIL ENGINEERS P O Box 2890 FAERIE GLEN 0043 Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za				<b>JDA</b> JOHANNESBURG DEVELOPMENT AGENCY P O Box 51877 MARSHALL TOWN 2001 Tel: (011) 688 7851 info@jda.org.za www.jda.org.za				DIEPSLOOT DEVELOPMENT PROJECT				AGREEMENT No -				CONTRACT No -			
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)				DESIGNED BY <b>S. Mathabula</b>				Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za				Tel: (011) 688 7851 info@jda.org.za www.jda.org.za				ROAD No.s -				SCALE AS INDICATED				REVISION <b>0</b>			
DATE: <b>FEB 2024</b> ECSA Pr. No. <b>200870199</b>				DESIGN CHECKED <b>M. Jantjies</b>												DISTRICT JOHANNESBURG				2021-009-TN-TD-002							
DATE				DATE				DATE				DATE				DATE				DATE							
AMENDMENTS																											

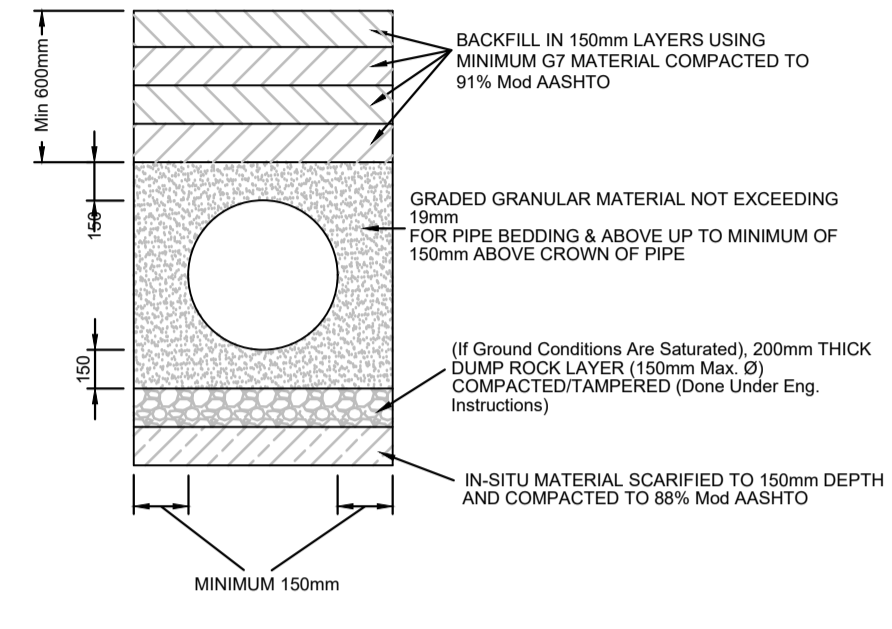




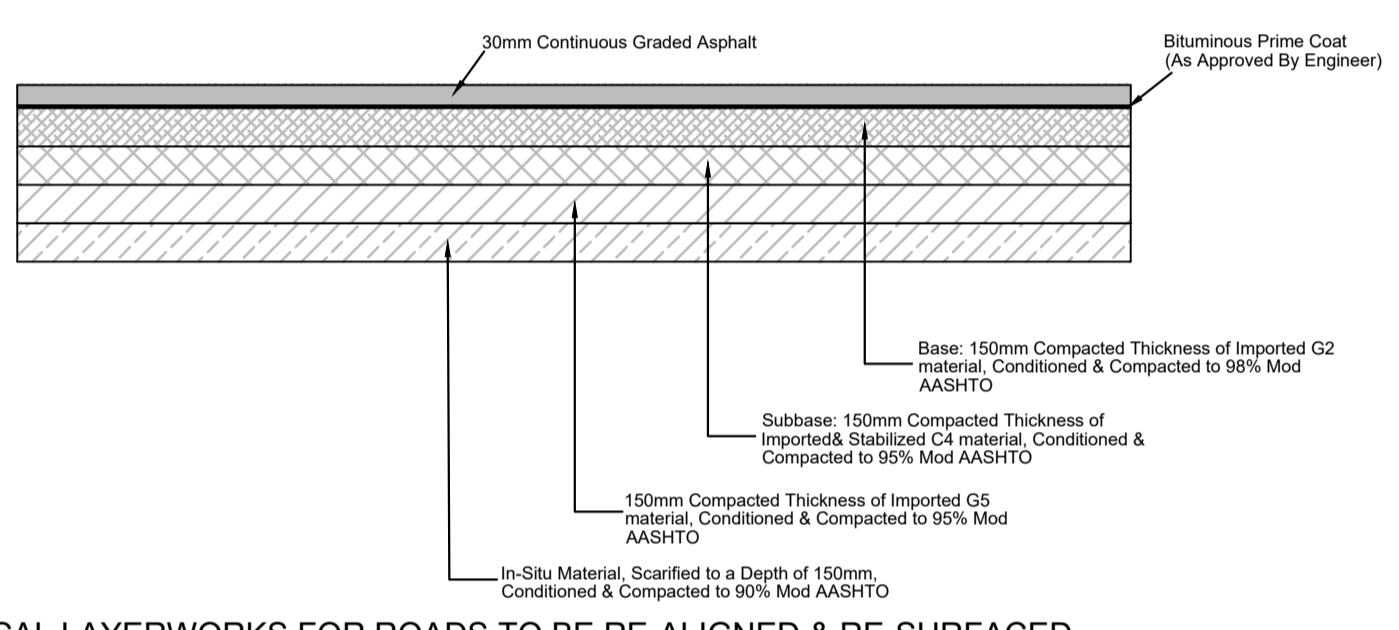
TYPICAL LAYERWORKS FOR ROADS TO BE RE-ALIGNED & RE-SURFACED FOR SATURATED CONDITIONS ONLY  
Scale 1:20



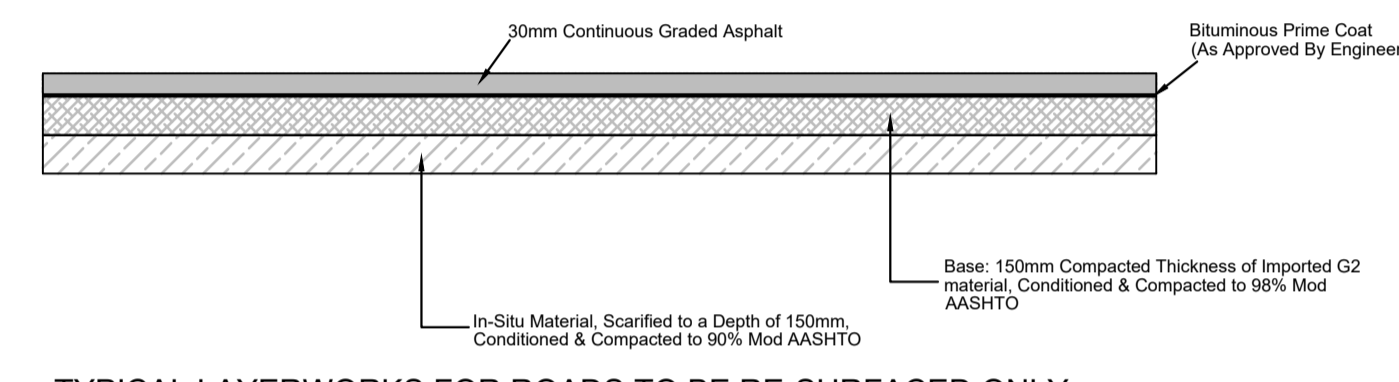
TYPICAL LAYERWORKS FOR ROADS TO BE RE-SURFACED ONLY FOR SATURATED CONDITIONS ONLY  
Scale 1:20



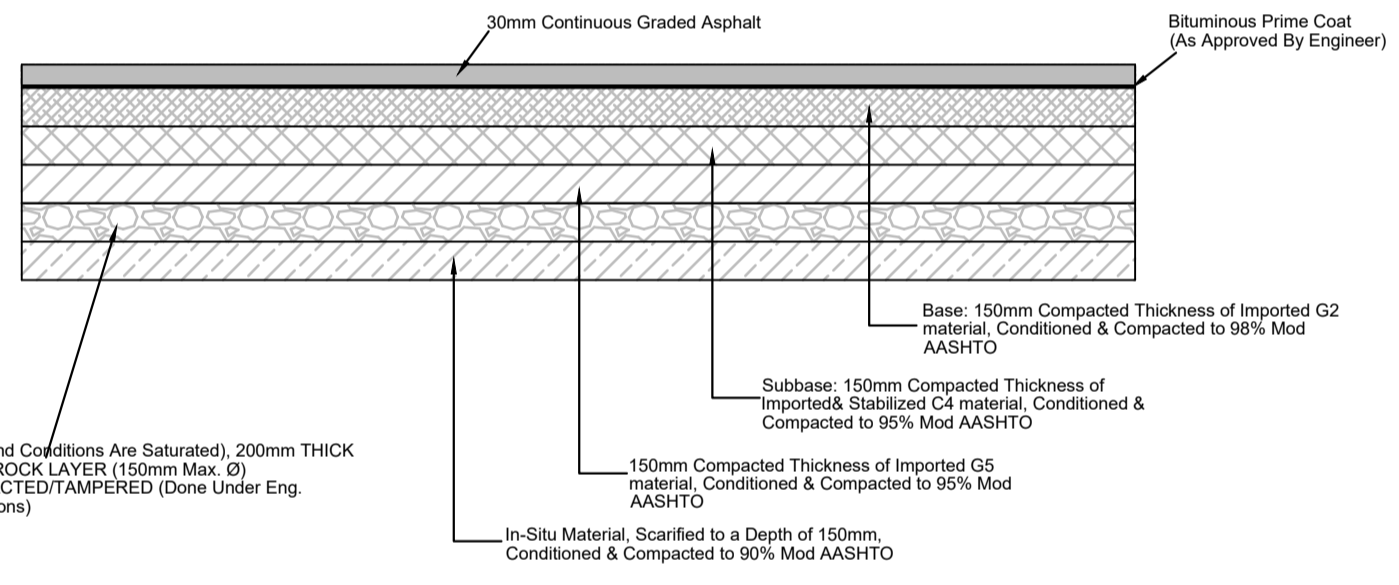
TYPICAL PIPE BEDDING DETAILS  
SCALE: NTS



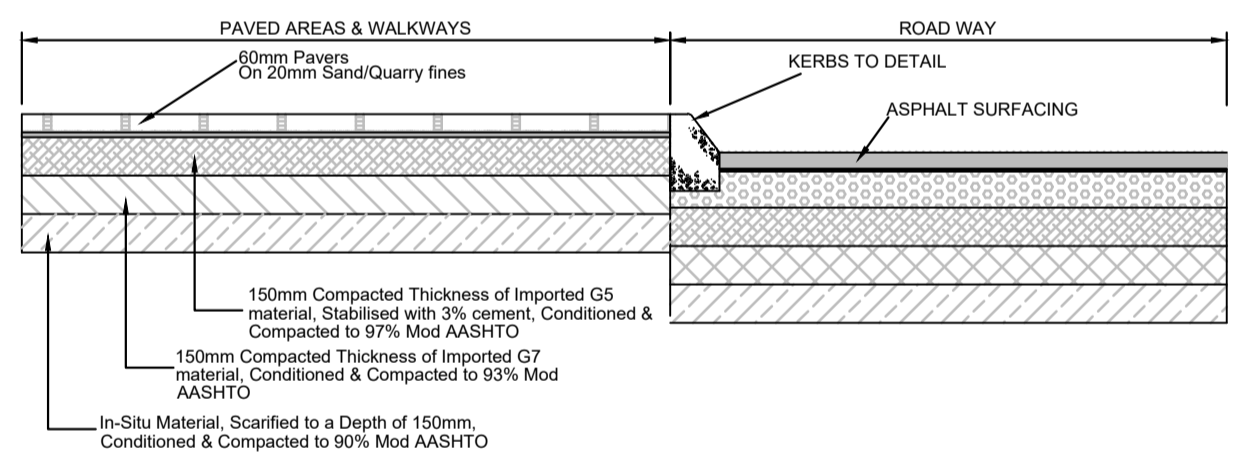
TYPICAL LAYERWORKS FOR ROADS TO BE RE-ALIGNED & RE-SURFACED FOR DRY CONDITIONS ONLY  
Scale 1:20



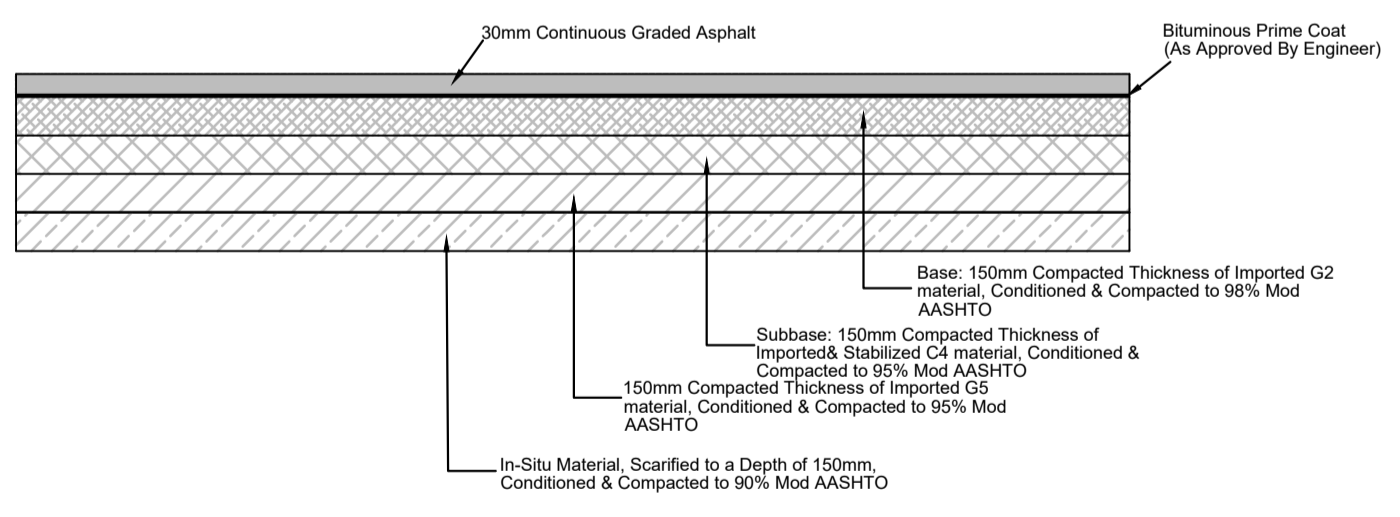
TYPICAL LAYERWORKS FOR ROADS TO BE RE-SURFACED ONLY FOR DRY CONDITIONS ONLY  
Scale 1:20



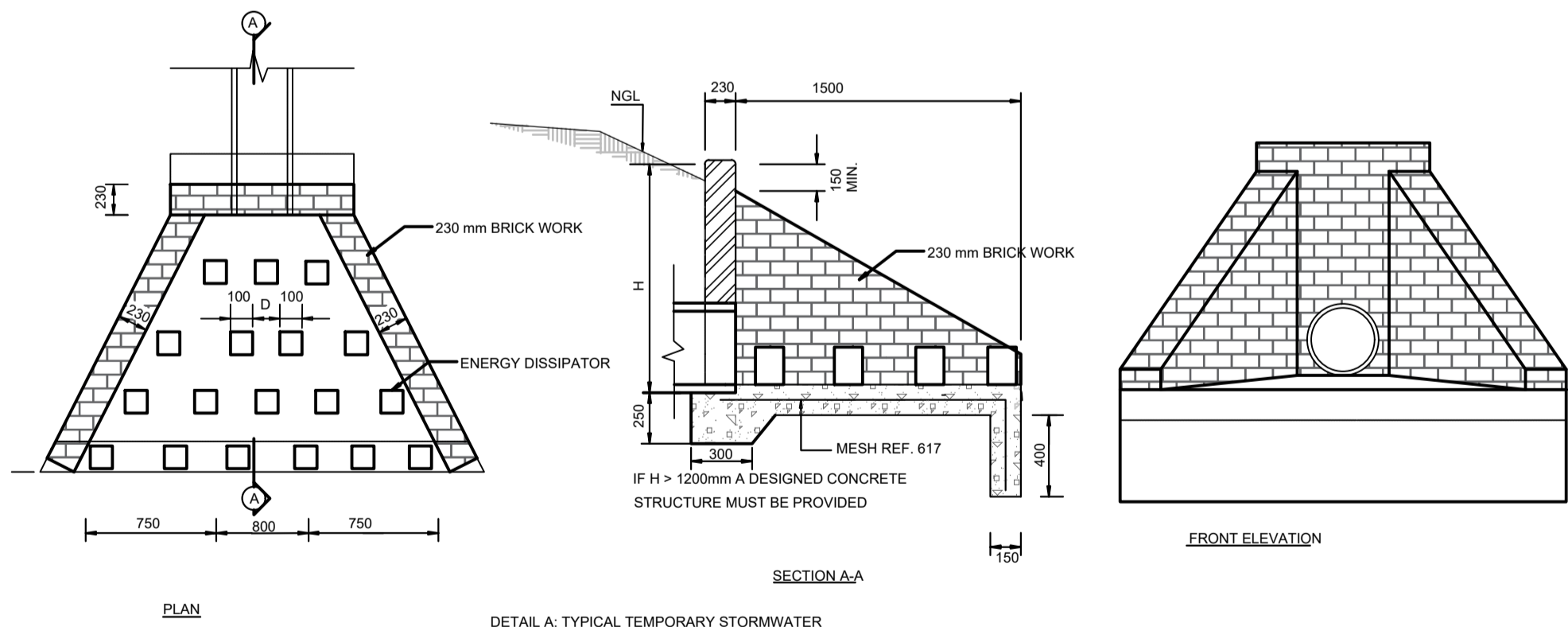
TYPICAL LAYERWORKS FOR UN-SURFACED BELLMOUTHS (AT INTERSECTIONS) FOR SATURATED CONDITIONS ONLY  
Scale 1:20



TYPICAL LAYERWORKS FOR WALKWAYS  
Scale NTS



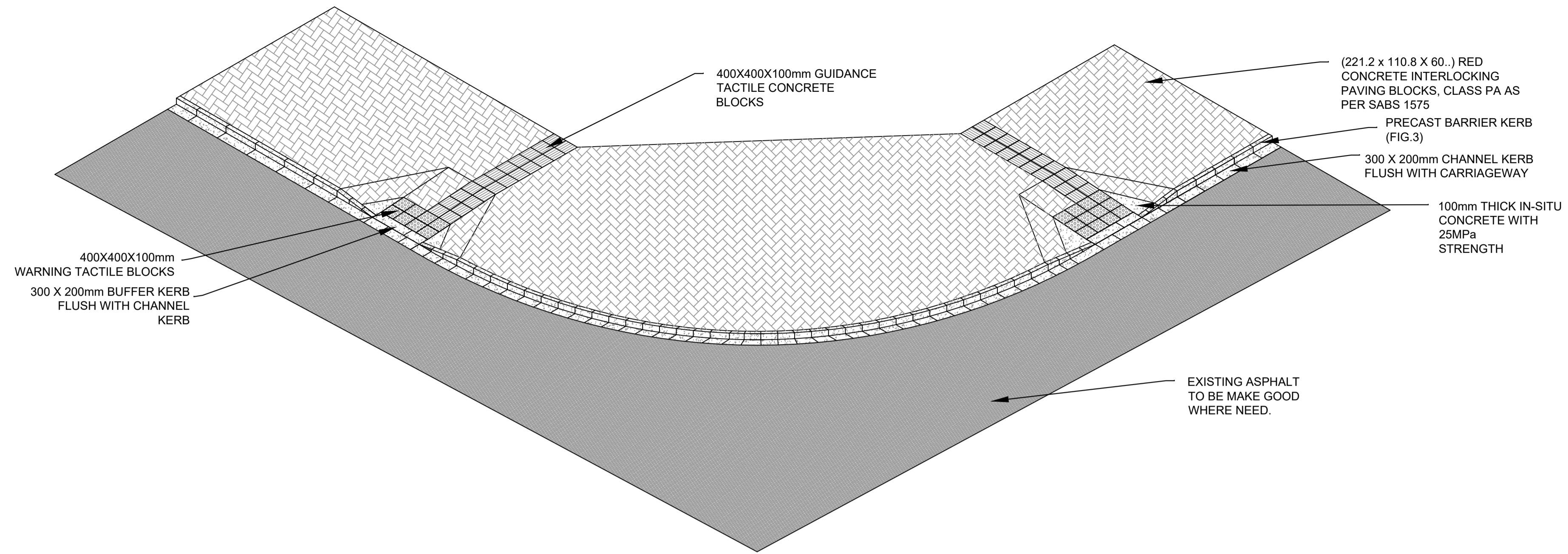
TYPICAL LAYERWORKS FOR UN-SURFACED BELLMOUTHS (AT INTERSECTIONS) FOR DRY CONDITIONS ONLY  
Scale NTS



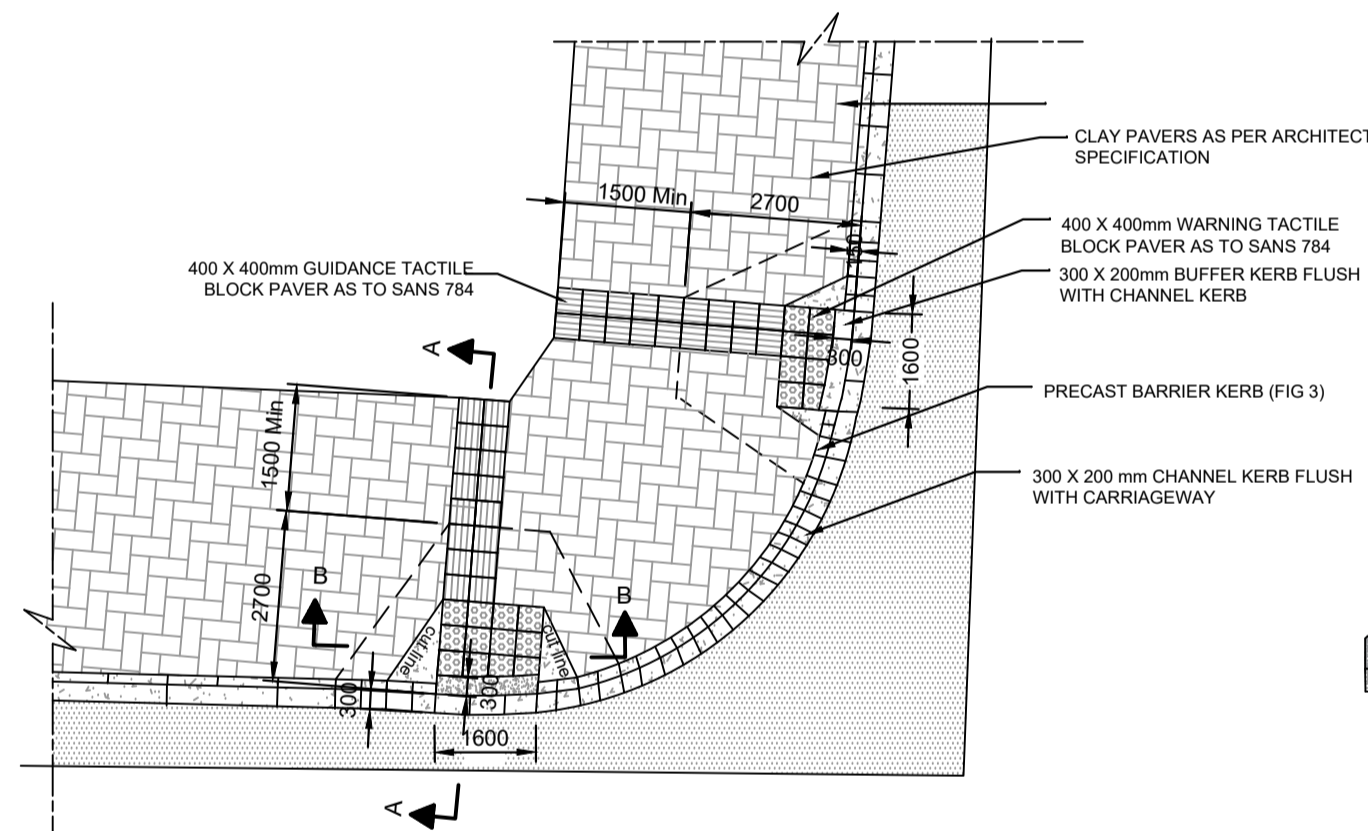
PLAN  
SECTION A-A  
DETAIL A: TYPICAL TEMPORARY STORMWATER OUTLET DETAIL (WITH ENERGY DISSIPATORS)

**FOR TENDER**

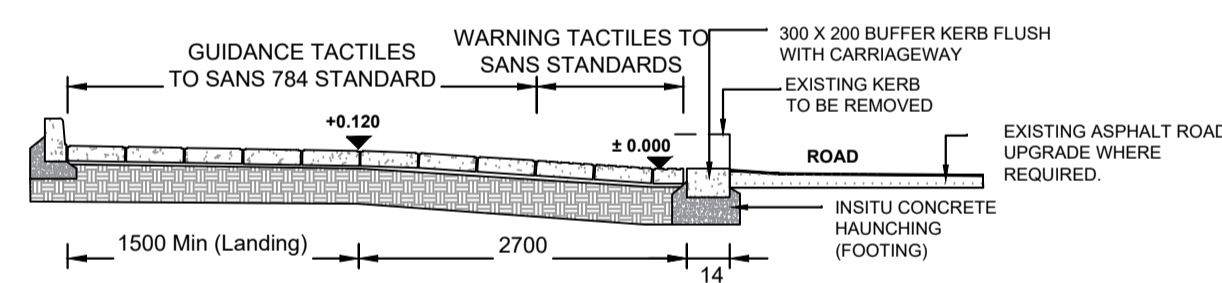
DRAWING TYPE <b>TENDER DRAWINGS</b>				DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL				DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2101		AGREEMENT No -		CONTRACT No -	
M. JANTJIES				DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024		ECSA Pr. No. 200870199		DATE: 02/02/2024		ISSUED FOR TENDER		DESIGN CHECKED M. Jantjies		DISTRICT JOHANNESBURG		REVISION 0	
		No		DATE		AMENDMENTS				Dwg No		2021-009-TN-TD-003	
										DIEPSLOOT DEVELOPMENT PROJECT		TENDER DRAWINGS	
										TYPICAL ROAD AND STORMWATER DETAILS 02			



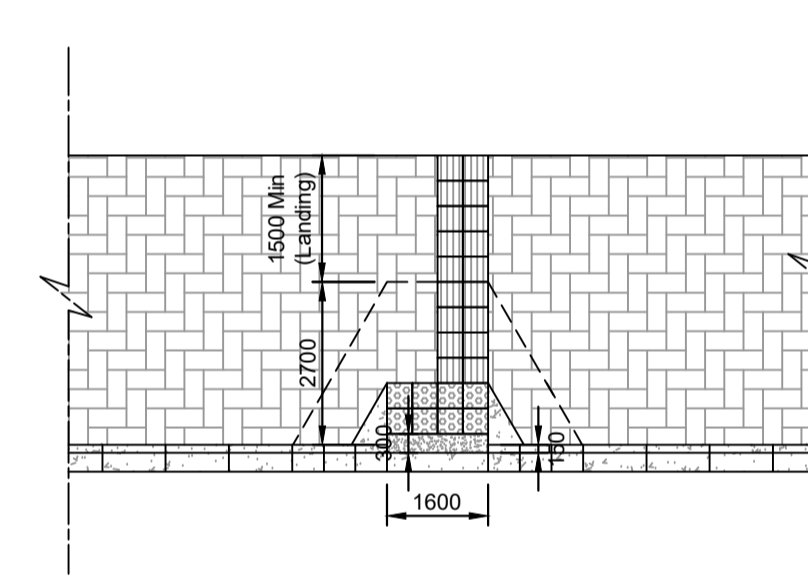
ISOMETRIC VIEW OF PEDESTRIAN RAMP (1:15 SLOPE)



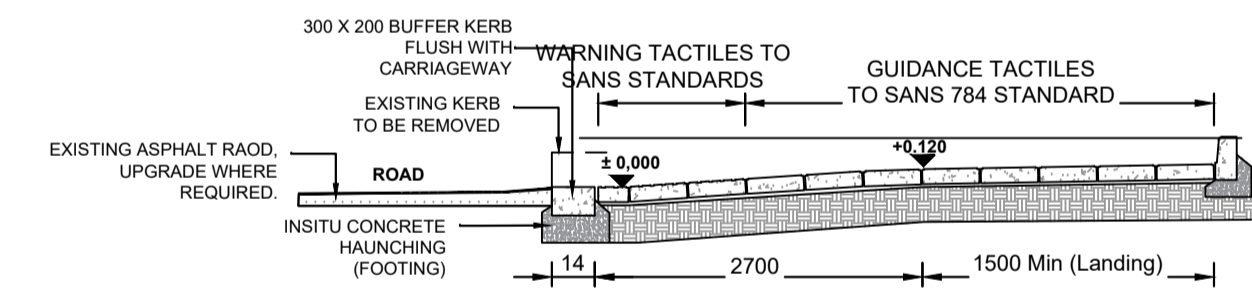
PLAN VIEW: TWO PEDESTRIAN CROSSING AT EACH STREET CORNER



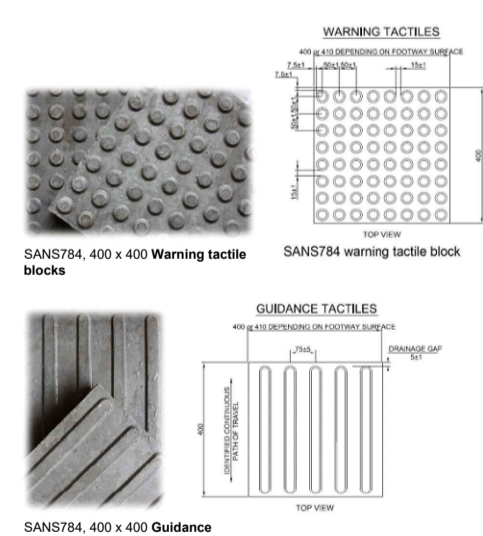
SECTION A-A: PEDESTRIAN RAMP AT 1:15 SLOPE



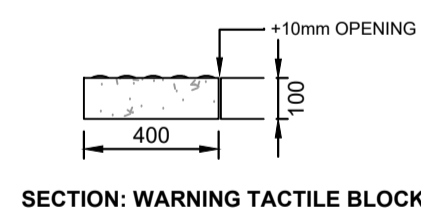
PLAN VIEW: TACTILE BLOCK PAVERS DETAILS



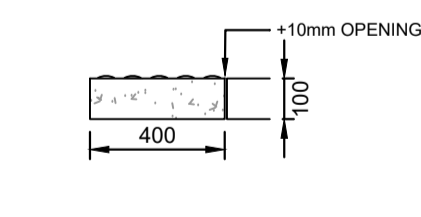
SECTION A-A: PEDESTRIAN RAMP AT 1:15 SLOPE



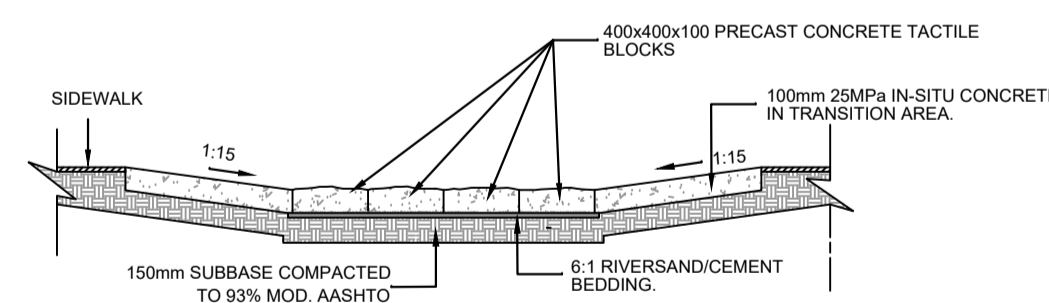
PLAN VIEW: TACTILE BLOCK PAVERS DETAILS



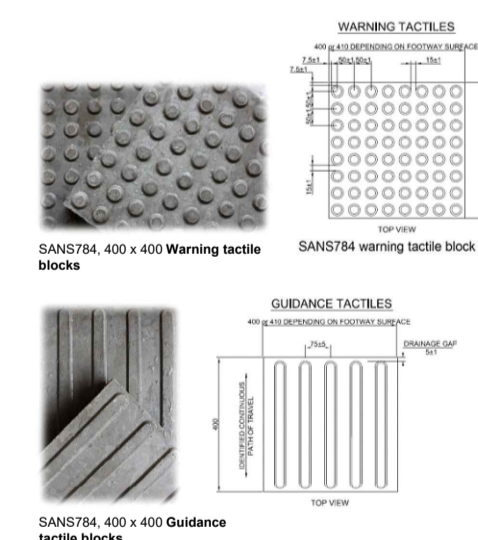
SECTION: WARNING TACTILE BLOCK



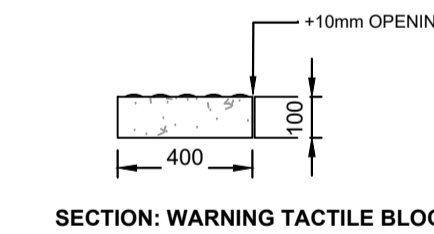
SECTION: WARNING TACTILE BLOCK



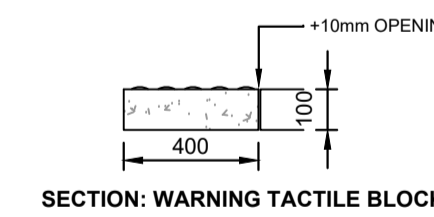
SECTION B-B



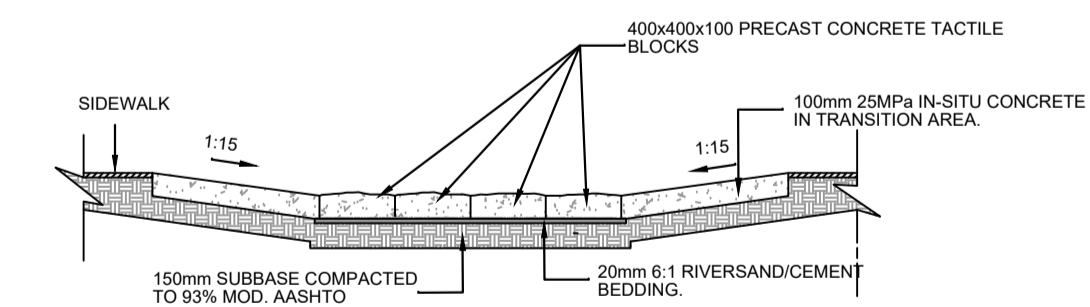
PLAN VIEW: TACTILE BLOCK PAVERS DETAILS



SECTION: WARNING TACTILE BLOCK



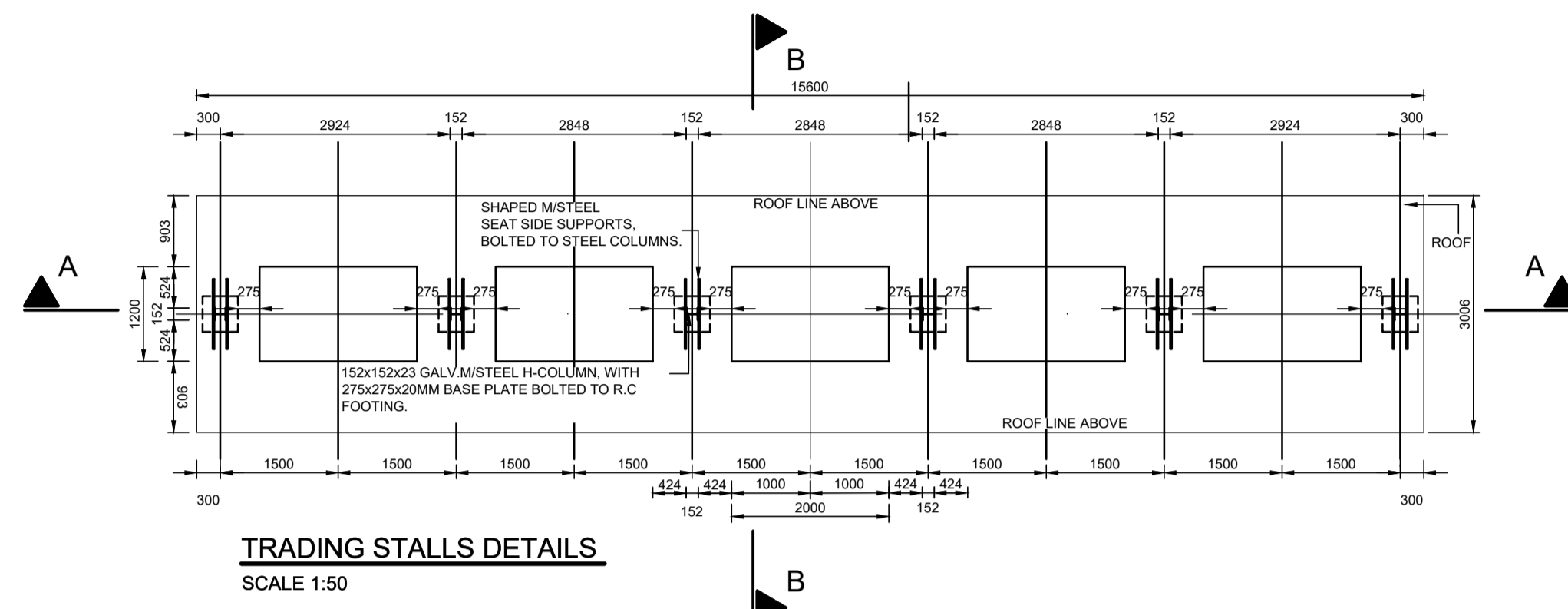
SECTION: WARNING TACTILE BLOCK



SECTION B-B

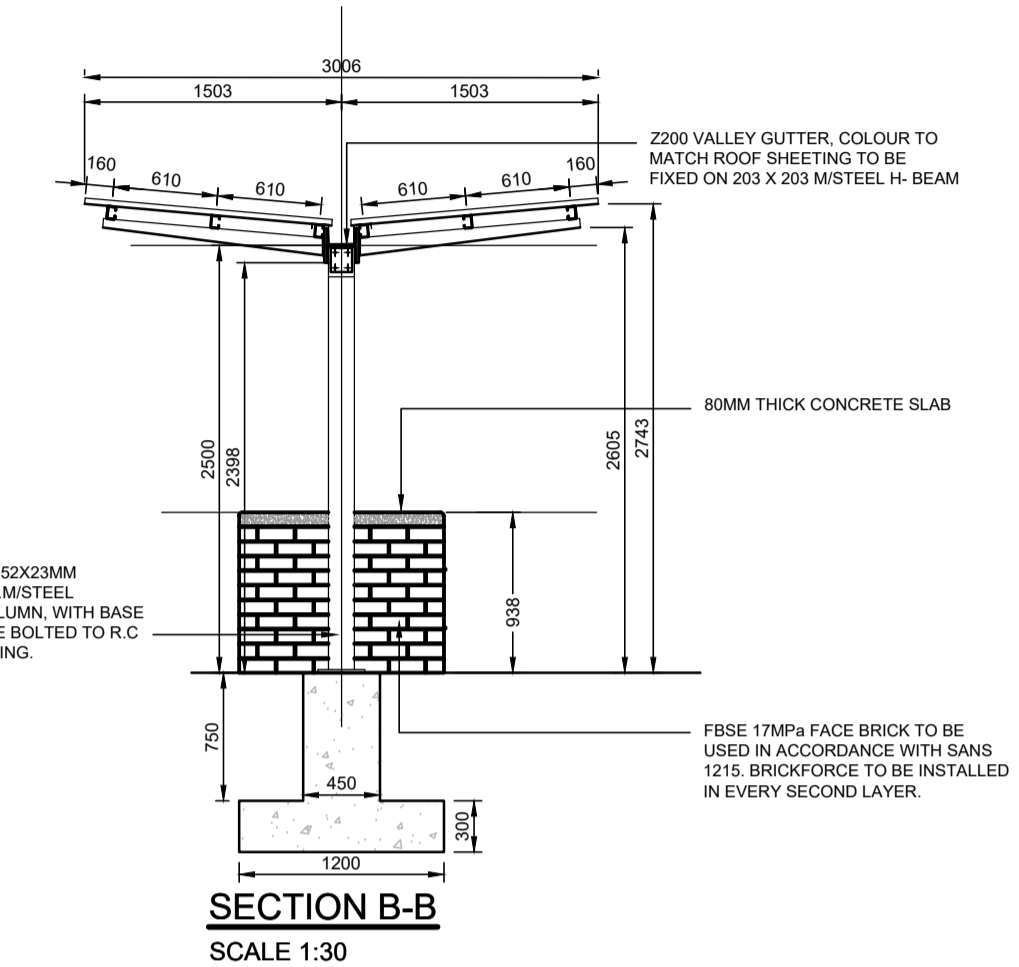
**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathabula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2101		AGREEMENT No -		CONTRACT No -	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathabula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DATE: 02/02/2024		DESIGN CHECKED M. Jantjies		UNIVERSAL ACCESS DETAILS		DISTRICT JOHANNESBURG		REVISION 0	
		No DATE AMENDMENTS						Dwg No		2021-009-TN-TD-004	



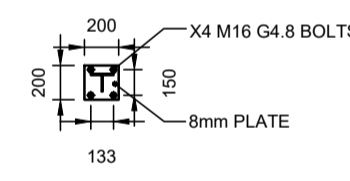
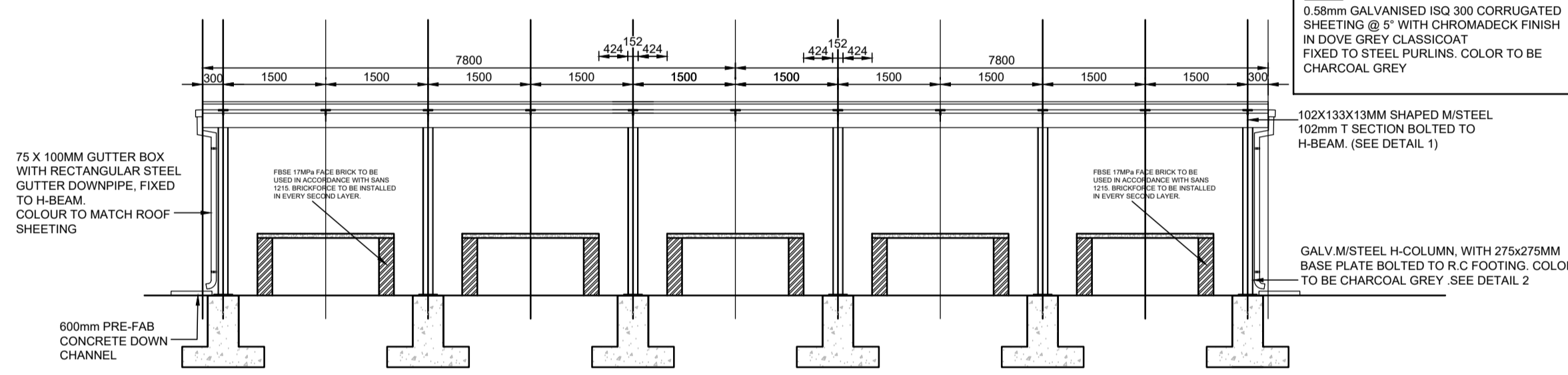
**ROOF:**

- FINISH TO ALL NEW STEEL WORKS TO BE PAINTED IN COLOUR CHARCOAL GREY.
- CORRUGATED ISQ300 CHROMADEK SHEETING COLOUR DARK DOLPHIN ON UPPER SIDE OF SHEETING, PEBBLE GREY TO UNDERSIDE OF SHEETING.
- PROVISION OF RAIN WATER GOODS & GUTTER, 75MM X 100MM GUTTER BOX AND RECTANGULAR DOWNPIPE, COLOUR TO MATCH ROOF SHEETING.



**ROOF:**  
BROWN BUILT SHEETING @ 5° FINISHED WITH STANDARD CHROMADEK Z200. IN DOVE GREY N 13639 ON UNDER SIDE & DARK DOLPHIN ON TOP SIDE. FIXED TO STEEL PURLINS. COLOR TO BE CHARCOAL GREY.

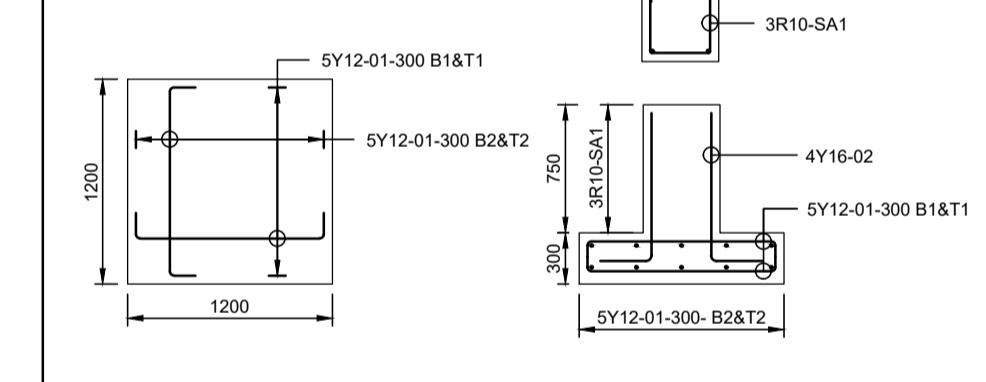
**ROOF:**  
0.58mm GALVANISED ISQ 300 CORRUGATED SHEETING @ 5° WITH CHROMADEK FINISH IN DOVE GREY CLASSIC OAT. FIXED TO STEEL PURLINS. COLOR TO BE CHARCOAL GREY.



**NOTE:**

- T SECTION WELDED TO 8mm BASE PLATE WITH 6mm FILLET WELD.
- BASE PLATE BOLTED TO H SECTION WITH X4 M16 GRADE 4.8 GALVANISED BOLTS.

MEMBER	No OF	BARS PER MEMB	DIA	LENGTH	TOTAL NUM-BER	MARK	S C	BENDING						
								A	B	C	D	Et		
CANOPY BASE	6	20	12	1300	120	01	35	1100						
	4	16	R10	1200	24	02	37	900						
	3	18	SA1	1550	18	SA1	60	350						



**NOTE:**

M20 GR. 4.8 GALVANIZED ANCHOR BOLTS 100mm THREADED

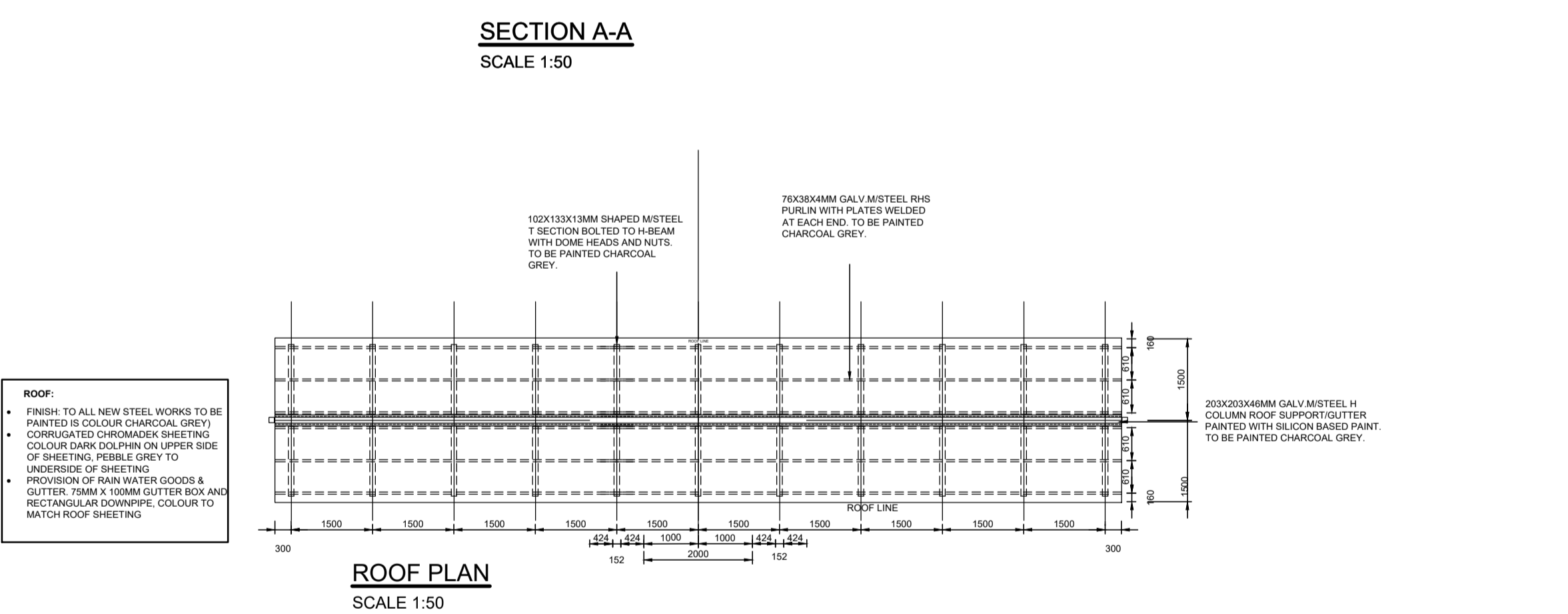
M20 NUT & WASHER 30mm NON-SHRINK GROUT

150mm DEEP x750mm POCKET

M20 NUT 80x80x12 THK PLATE

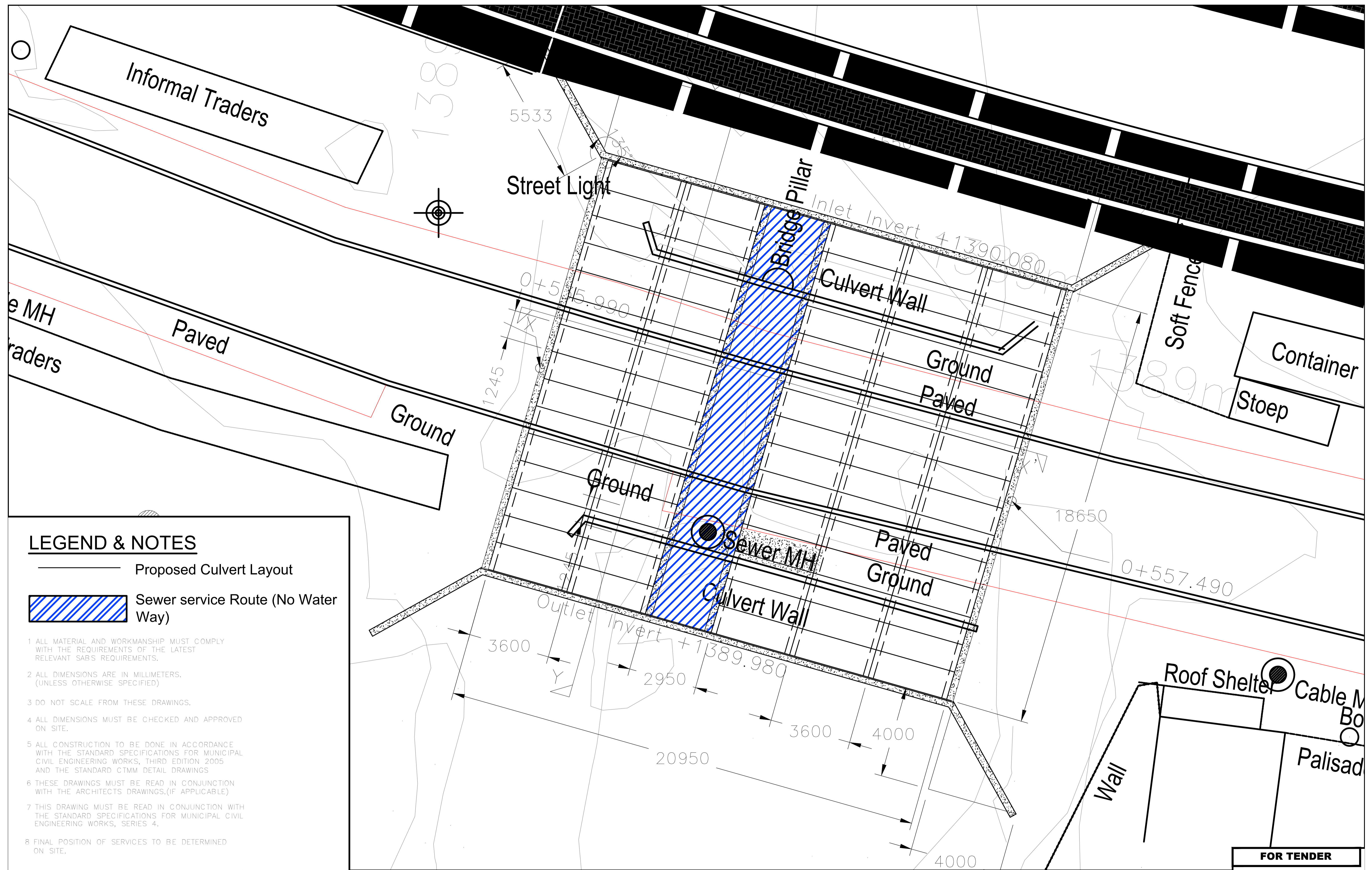
**CONCRETE:** 30mPa MAX AGGREGATE SIZE :19mm

DETAIL 2		REVISION	
8	10	12	16
20	25	32	40
TOT			


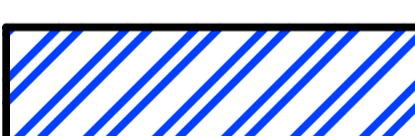


**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S. Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 61877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No -	
M. JANTJES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr. No. 200870199		DESIGN CHECKED M. Jantjies		AJA CONSULTING CIVIL ENGINEERS		JDA JOHANNESBURG DEVELOPMENT AGENCY		DISTRICT JOHANNESBURG		REVISION 0	
DATE: 02/02/2024		No		ISSUED FOR TENDER		TRADING STALLS DETAILS		2021-009-TN-TD-005		Dwg No	
DATE: 02/02/2024		No		AMENDMENTS							



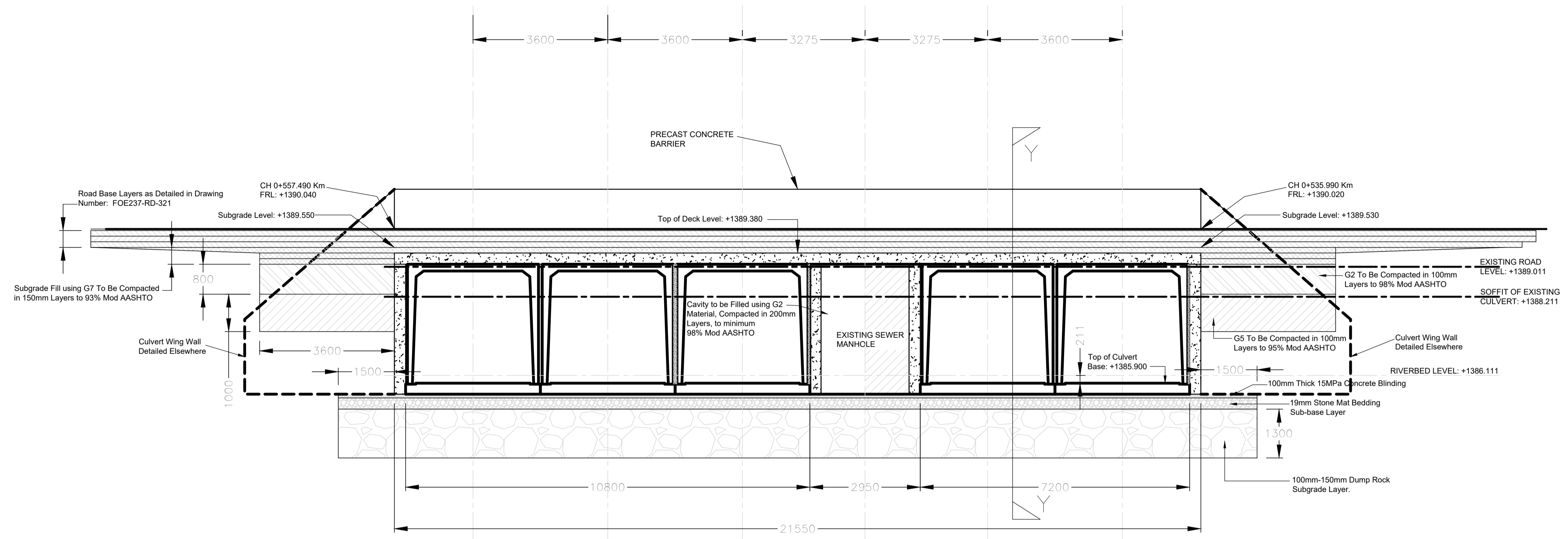
**LEGEND & NOTES**

-  Proposed Culvert Layout
-  Sewer service Route (No Water Way)

- 1 ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
- 2 ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)
- 3 DO NOT SCALE FROM THESE DRAWINGS.
- 4 ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
- 5 ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD CTMM DETAIL DRAWINGS
- 6 THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS.(IF APPLICABLE)
- 7 THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4.
- 8 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.

**FOR TENDER**

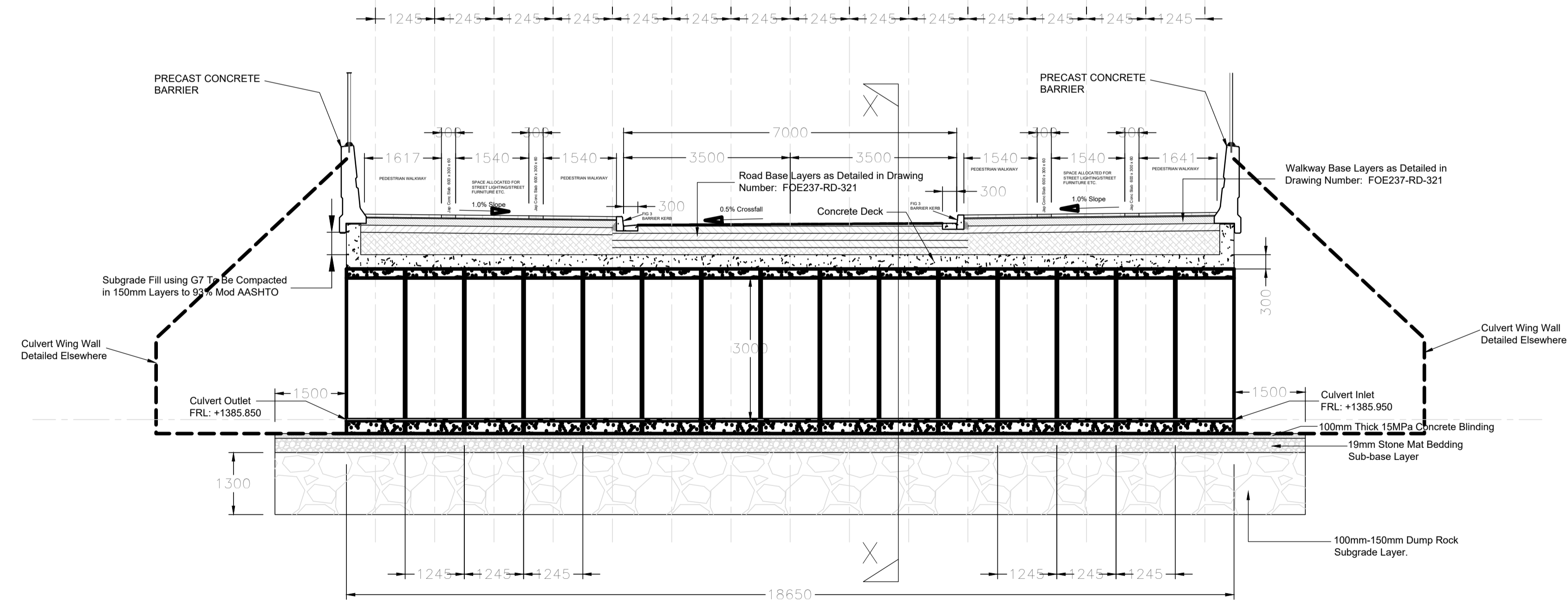
DRAWING TYPE <b>TENDER DRAWINGS</b>		DRAWN BY S Shoko		CONSULTANTS <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL		DRAWING CHECKED S Mathebula		P O Box 2890 FAERIE GLEN 0043		P O Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No -	
M. JANTJIES for CONSULTANT (NAME AND SIGNATURE)		DESIGNED BY S Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7045 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024 ECSA Pr No. 200870199		DATE		AMENDMENTS		DESIGN CHECKED M Jantjies		DISTRICT JOHANNESBURG		REVISION 0	
								DIEPSLOOT DEVELOPMENT PROJECT		Dwg No 2021-009-TN-TD-006	
								JB MARKS CULVERT LAYOUT			



SECTION X - X' - JB MARKS CULVERT

## LEGEND & NOTES

- 1 ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS.
- 2 ALL DIMENSIONS ARE IN MILLIMETERS. (UNLESS OTHERWISE SPECIFIED)
- 3 DO NOT SCALE FROM THESE DRAWINGS.
- 4 ALL DIMENSIONS MUST BE CHECKED AND APPROVED ON SITE.
- 5 ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, THIRD EDITION 2005 AND THE STANDARD CTMM DETAIL DRAWINGS
- 6 THESE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTS DRAWINGS.(IF APPLICABLE)
- 7 THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE STANDARD SPECIFICATIONS FOR MUNICIPAL CIVIL ENGINEERING WORKS, SERIES 4.
- 8 FINAL POSITION OF SERVICES TO BE DETERMINED ON SITE.



SECTION Y - Y' - JB MARKS CULVERT

**FOR TENDER**

DRAWING TYPE <b>TENDER DRAWINGS</b>				DRAWN BY S. Shoko		CONSULTANTS: <b>AJA CONSULTING CIVIL ENGINEERS</b>		CLIENT: <b>JOHANNESBURG DEVELOPMENT AGENCY</b>		FILE No -		TYPE OF PLANNING TENDER DRAWINGS	
DRAWING APPROVAL				DRAWING CHECKED S. Mathebula		P. O. Box 2890 FAERIE GLEN 0043		P. O. Box 51877 MARSHALLTOWN 2001		AGREEMENT No -		CONTRACT No -	
M. JANTJES				DESIGNED BY S. Mathebula		Tel: (012) 991 1993 Fax: (086) 763 7046 info@ajacce.co.za www.ajacce.co.za		Tel: (011) 688 7851 info@jda.org.za www.jda.org.za		ROAD No.s -		SCALE AS INDICATED	
DATE: FEB 2024		ECSA Pr. No. 200870199		DATE: 02/02/2024		ISSUED FOR TENDER		JB MARKS CULVERT SECTION		DISTRICT JOHANNESBURG		REVISION 0	
		No		DATE		AMENDMENTS						Dwg No 2021-009-TN-TD-007	