



IMAGE SOURCE: BING MAPS 2024

BALDWIN AIRPORT IMPROVEMENTS

CIVIL GRADING - PRELIMINARY DESIGN

NOT FOR CONSTRUCTION

DRAWING LIST		
DRAWING NO.	DESCRIPTION	ISSUE
C001	COVER PAGE AND DRAWING INDEX	0
C002	PROPOSED SITE LAYOUT OVERVIEW	0
C003	PLAN AND PROFILE SHEET 1 OF 2	0
C004	PLAN AND PROFILE SHEET 2 OF 2	0
C005	GRADING PLAN SHEET 1 OF 2	0
C006	GRADING PLAN SHEET 2 OF 2	0
C007	EROSION AND SEDIMENT CONTROL PLAN SHEET 1 OF 2	0
C008	EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 2	0
C009	DETAILS SHEET 1 OF 3	0
C010	DETAILS SHEET 2 OF 3	0
C011	DETAILS SHEET 3 OF 3	0

GENERAL NOTES

1. SCOPE OF WORKS
 - 1.1. DRAWINGS PROVIDE A CIVIL GRADING PRELIMINARY DESIGN IN SUPPORT OF THE OWNER'S SITE IMPROVEMENTS.
 - 1.1.1. RUNWAY AND TAXIWAY GRADES TO COMPLY WITH TP 312 5TH EDITION. OPERATIONS TO BE NON-INSTRUMENT, AIRCRAFT GROUP NUMBER II.
 - 1.1.2. ROADWAY GRADES TO COMPLY WITH TOWN OF GEORGINA DESIGN CRITERIA, MINISTRY OF TRANSPORTATION ONTARIO SUPPLEMENT TO THE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADWAYS; TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADWAYS.
 - 1.2. PAVEMENT – RUNWAY, TAXIWAY, HANGAR, RAMPED AREA AND ROADWAY PAVEMENT STRUCTURE TO BE DESIGNED BY OTHERS.
 - 1.3. RETAINING WALLS TO BE DESIGNED BY OTHERS.
2. TOPOGRAPHIC AND LEGAL BOUNDARY SURVEY
 - 2.1. TOPOGRAPHIC SURVEY UNDERTAKEN BY GEOVERRA DATED JUNE 29, 2020.
 - 2.2. PROJECTION: 6 DEGREE UTM ZONE 17 (CENTRAL MERIDIAN 81 DEGREES WEST LONGITUDE)
 - 2.3. HORIZONTAL DATUM: NAD83 CSRS
 - 2.4. VERTICAL DATUM: CGVD28:1978
 - 2.5. LEGAL BOUNDARY INFORMATION DERIVED FROM SURVEY UNDERTAKEN BY R.G. MCKIBBON LIMITED, ONTARIO LAND SURVEYORS DATED FEBRUARY 14, 2012. THE AUTHOR NOTES THAT THIS IS NOT A PLAN OF SURVEY; THEREFORE, LEGAL SURVEY SHOULD BE UNDERTAKEN FOR FUTURE DESIGN.

1	20/12/24	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/24	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

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Client
2686570 ONTARIO INC.
 o/a IPCF BALDWIN AIRPORT

Job Title
BALDWIN AIRPORT IMPROVEMENTS

Key Plan

Drawing Title
COVER PAGE AND DRAWING LIST

Scale **NOT TO SCALE**

File Name 287943-ARUP-XX-XX-DR-C-XX-C001.DWG

Drawing Status

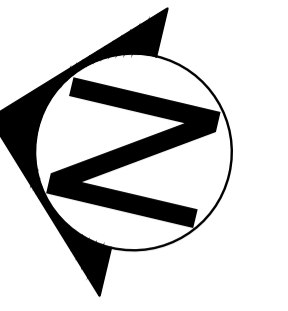
FOR REVIEW

Job No	Drawing No	Issue
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A1V

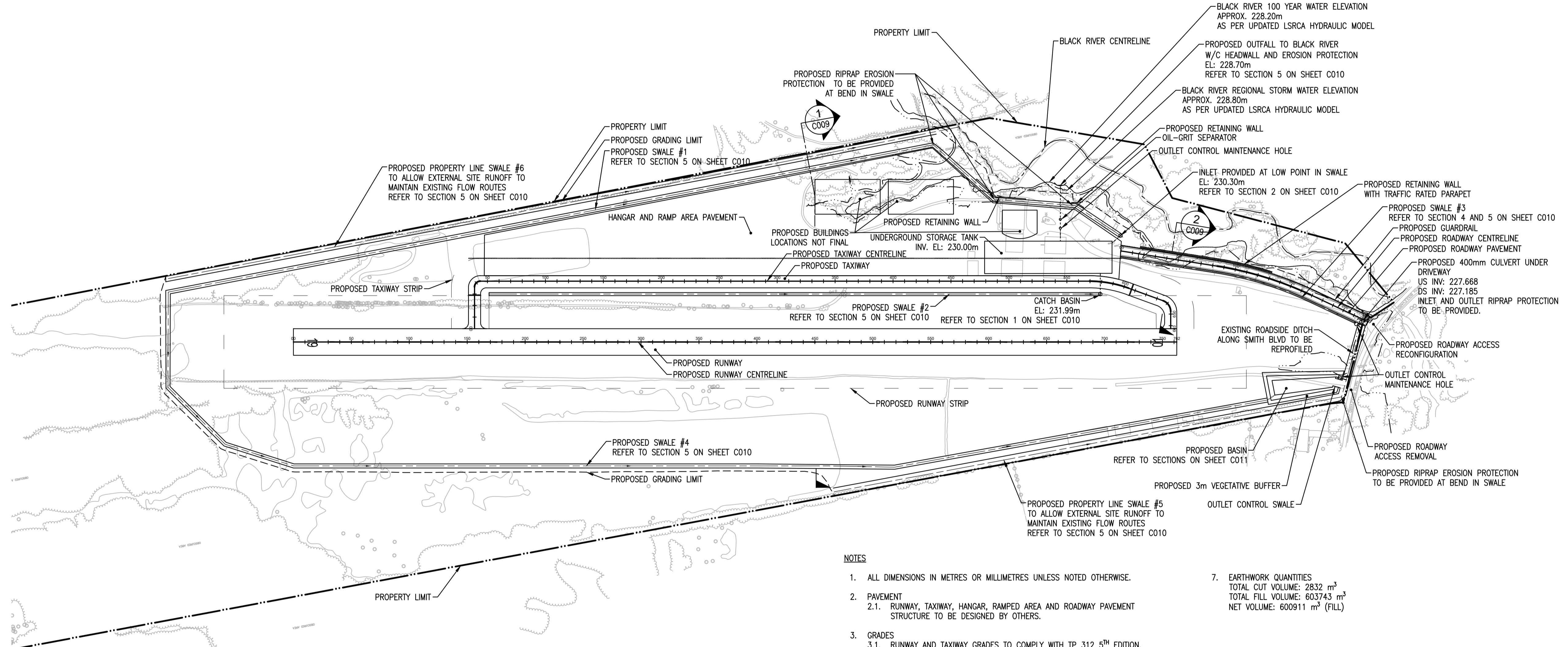
A B C D E F G H I J K L M N

1
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11



LEGEND

- PROPERTY LIMIT
- - - - RUNWAY/TAXIWAY STRIP
- - - - GRADING LIMIT



NOTES

1. ALL DIMENSIONS IN METRES OR MILLIMETRES UNLESS NOTED OTHERWISE.
2. PAVEMENT
 - 2.1. RUNWAY, TAXIWAY, HANGAR, RAMPED AREA AND ROADWAY PAVEMENT STRUCTURE TO BE DESIGNED BY OTHERS.
3. GRADES
 - 3.1. RUNWAY AND TAXIWAY GRADES TO COMPLY WITH TP 312 5TH EDITION. OPERATIONS TO BE NON-INSTRUMENT. AIRCRAFT GROUP NUMBER II.
 - 3.2. ROADWAY GRADES TO COMPLY WITH TOWN OF GEORGINA DESIGN CRITERIA, MINISTRY OF TRANSPORTATION ONTARIO SUPPLEMENT TO THE TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADWAYS, TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADWAYS.
4. RETAINING WALL
 - 4.1. RETAINING WALL TO BE DESIGNED BY OTHERS.
5. HANGAR AND RAMP AREA
 - 5.1. BUILDING LOCATIONS ARE INDICATIVE AND NOT FINAL. THEY ARE SUBJECT TO CHANGE BASED ON DESIGN DEVELOPMENT.
6. DRAINAGE
 - 6.1. APPROXIMATE 100 YEAR WATER LEVEL IN BLACK RIVER IS 228.20m. OUTFALL TO BLACK RIVER TO FOLLOW CITY OF BARRIE STANDARD OUTFALL EROSION PROTECTION TYPICAL DETAIL BSD-82. DETAIL INCLUDES RIPRAP APRON, CONCRETE HEADWALL AND GRATE PER OPSD. EXACT LOCATION AND DETAIL TO BLACK RIVER TO BE CONFIRMED WITH LAKE SIMCOE REGION CONSERVATION AUTHORITY.
 - 6.2. STORMWATER PIPES WITH REDUCED COVER (LESS THAN 1.7m) TO CONSIDER INSULATION AND CONCRETE ENCASUREMENT FOR STRENGTH PROTECTION.
 - 6.3. SWALES HAVE REDUCED SLOPES DUE TO CONSTRAINTS FOR THE RUNWAY, TAXIWAY, AND RUNWAY END SAFETY AREA. SWALE DESIGN TO BE DISCUSSED WITH LOCAL AUTHORITIES.
 - 6.4. SWALE INLET AND OUTFALL RIPRAP PROTECTION TO BE PROVIDED.
 - 6.5. REFER TO DRAINAGE DETAILS SHEET FOR SWALE DIMENSIONS AND DEPTH.
 - 6.6. CULVERT INLET AND OUTFALL RIPRAP PROTECTION TO BE PROVIDED.
7. EARTHWORK QUANTITIES
 - TOTAL CUT VOLUME: 2832 m³
 - TOTAL FILL VOLUME: 603743 m³
 - NET VOLUME: 600911 m³ (FILL)

1 PLAN
SCALE HORIZ. 1:2000

1	20/12/24	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/2024	MT	NK/BS	JD
FOR REVIEW				
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Job Title
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Key Plan

Drawing Title
PROPOSED SITE LAYOUT OVERVIEW

Scale
AS INDICATED

File Name
287943-ARUP-XX-XX-DR-C-XX-C002.DWG

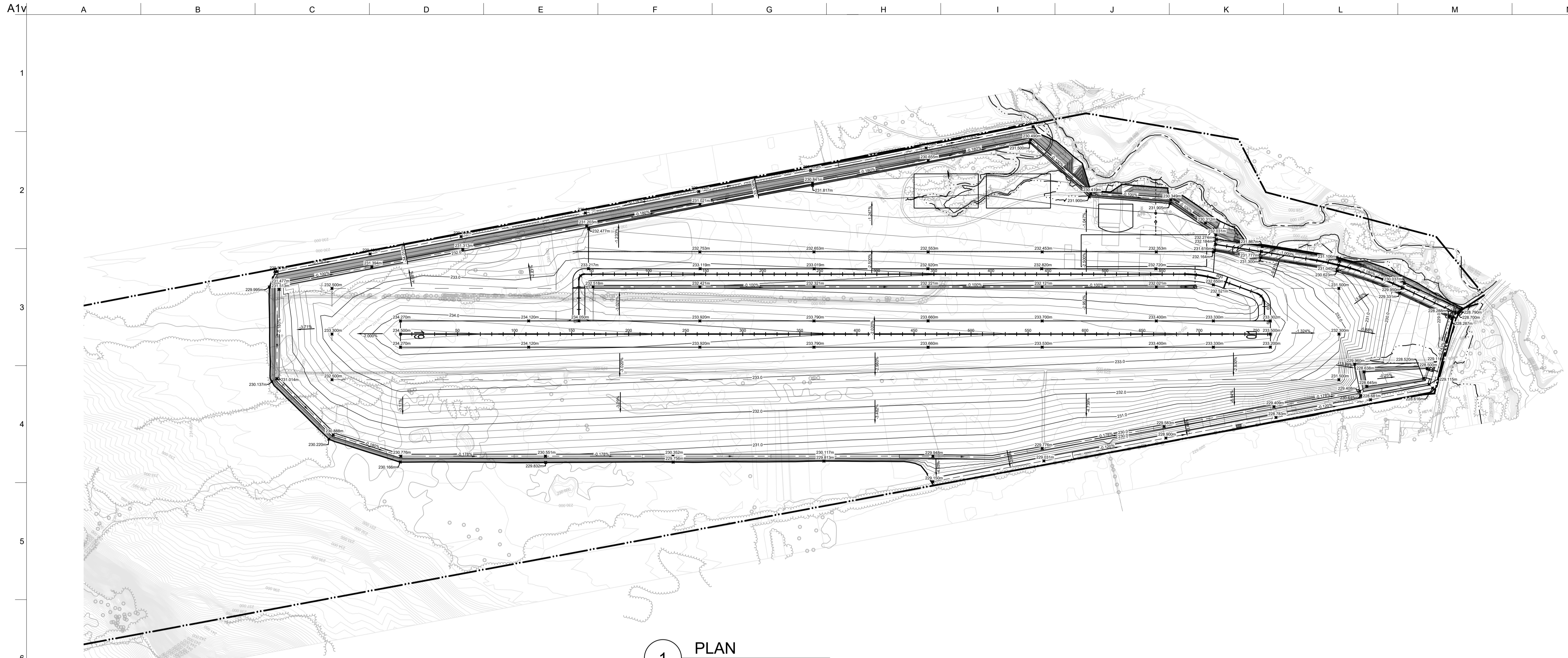
Drawing Status

FOR REVIEW

Job No 287943-01	Drawing No C002	Issue 1
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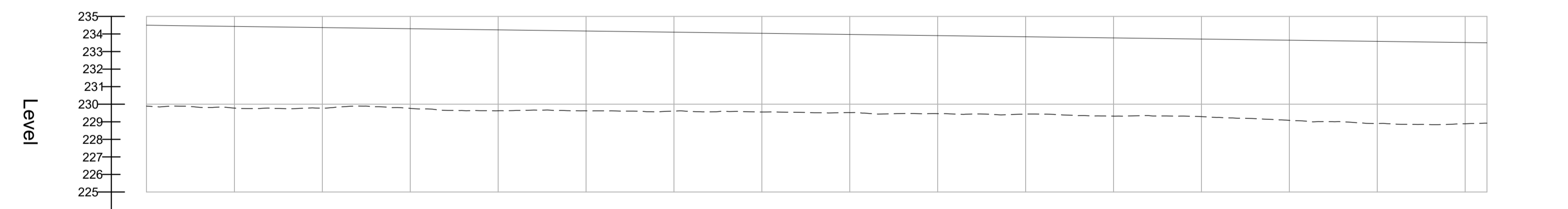


PLOT BY: Michael Tran (N) PLOT TIME: 12/20/2024 2:04 PM



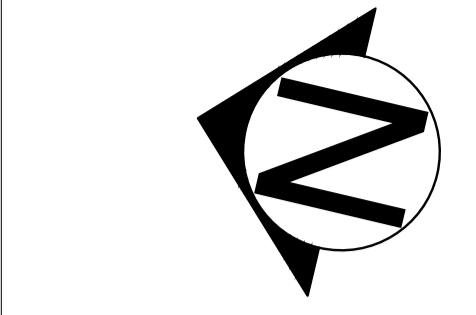
1 PLAN
SCALE 1:2000

CL - Runway - LONGSECTION
SCALE: H 1:2000,V 1:200. DATUM: 225.000



Chainage	Vertical Alignment	Proposed Ground Levels	Existing Ground Levels	Level Difference (Pr. - Ex.)
00.000	G = -0.162% L = 12.378	234.500	229.891	4.609
10.000		234.484	229.865	4.619
20.000	G = -0.131% L = 750.000	234.470	229.888	4.582
30.000		234.457	229.821	4.636
40.000	234.444	229.828	4.616	
50.000	234.431	229.779	4.652	
60.000	234.418	229.751	4.667	
70.000	234.405	229.775	4.630	
80.000	234.392	229.744	4.646	
90.000	234.379	229.773	4.606	
100.000	234.366	229.783	4.582	
110.000	234.352	229.648	4.504	
120.000	234.339	229.898	4.442	
130.000	234.326	229.859	4.468	
140.000	234.313	229.807	4.506	
150.000	234.300	229.762	4.538	
160.000	234.287	229.733	4.554	
170.000	234.274	229.662	4.622	
180.000	234.261	229.637	4.624	
190.000	234.248	229.633	4.615	
200.000	234.235	229.630	4.605	
210.000	234.222	229.644	4.578	
220.000	234.209	229.665	4.543	
230.000	234.196	229.659	4.536	
240.000	234.183	229.634	4.549	
250.000	234.170	229.625	4.544	
260.000	234.156	229.624	4.532	
270.000	234.143	229.606	4.535	
280.000	234.130	229.604	4.526	
290.000	234.117	229.570	4.547	
300.000	234.104	229.607	4.497	
310.000	234.091	229.588	4.503	
320.000	234.078	229.566	4.512	
330.000	234.065	229.591	4.474	
340.000	234.052	229.577	4.475	
350.000	234.039	229.558	4.481	
360.000	234.026	229.554	4.472	
370.000	234.013	229.537	4.476	
380.000	234.000	229.513	4.486	
390.000	233.987	229.508	4.479	
400.000	233.974	229.524	4.450	
410.000	233.960	229.479	4.481	
420.000	233.947	229.448	4.499	
430.000	233.934	229.472	4.463	
440.000	233.921	229.458	4.464	
450.000	233.908	229.461	4.447	
460.000	233.895	229.437	4.458	
470.000	233.882	229.442	4.440	
480.000	233.869	229.423	4.446	
490.000	233.856	229.408	4.448	
500.000	233.843	229.441	4.402	
510.000	233.830	229.432	4.398	
520.000	233.817	229.399	4.417	
530.000	233.804	229.348	4.455	
540.000	233.791	229.333	4.457	
550.000	233.778	229.323	4.455	
560.000	233.764	229.336	4.428	
570.000	233.751	229.354	4.397	
580.000	233.738	229.332	4.406	
590.000	233.725	229.323	4.402	
600.000	233.712	229.294	4.418	
610.000	233.699	229.245	4.454	
620.000	233.686	229.205	4.481	
630.000	233.673	229.183	4.490	
640.000	233.660	229.136	4.524	
650.000	233.647	229.081	4.566	
660.000	233.634	229.032	4.602	
670.000	233.621	229.012	4.609	
680.000	233.608	229.001	4.607	
690.000	233.595	228.942	4.652	
700.000	233.582	228.900	4.682	
710.000	233.569	228.872	4.697	
720.000	233.555	228.850	4.705	
730.000	233.542	228.841	4.701	
740.000	233.529	228.846	4.681	
750.000	233.516	228.889	4.628	
760.000	233.503	228.916	4.587	

2 LONGSECTION
SCALE HORIZ. 1:2000, VERT. 1:200



- LEGEND**
- — — — — PROPERTY LIMIT
 - — — — — RUNWAY/TAXIWAY STRIP
 - — — — — GRADING LIMIT
 - 232.500m PROPOSED ELEVATION
 - 230.000 EXISTING ELEVATION
 - 232.0 — PROPOSED MAJOR CONTOUR
 - — — — — PROPOSED MINOR CONTOUR
 - — — — — PROPOSED GROUND
 - — — — — EXISTING GROUND

1	20/12/2024	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/2024	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

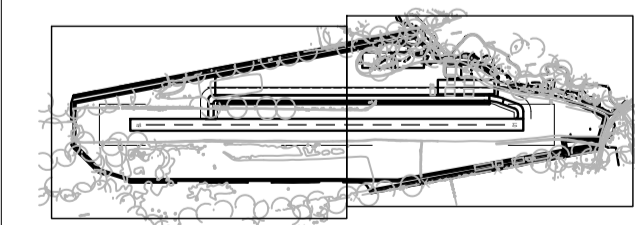
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Client
2686570 ONTARIO INC.
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Job Title
BALDWIN AIRPORT IMPROVEMENTS

Key Plan



Drawing Title
PLAN AND PROFILE SHEET 1 OF 2

Scale AS INDICATED

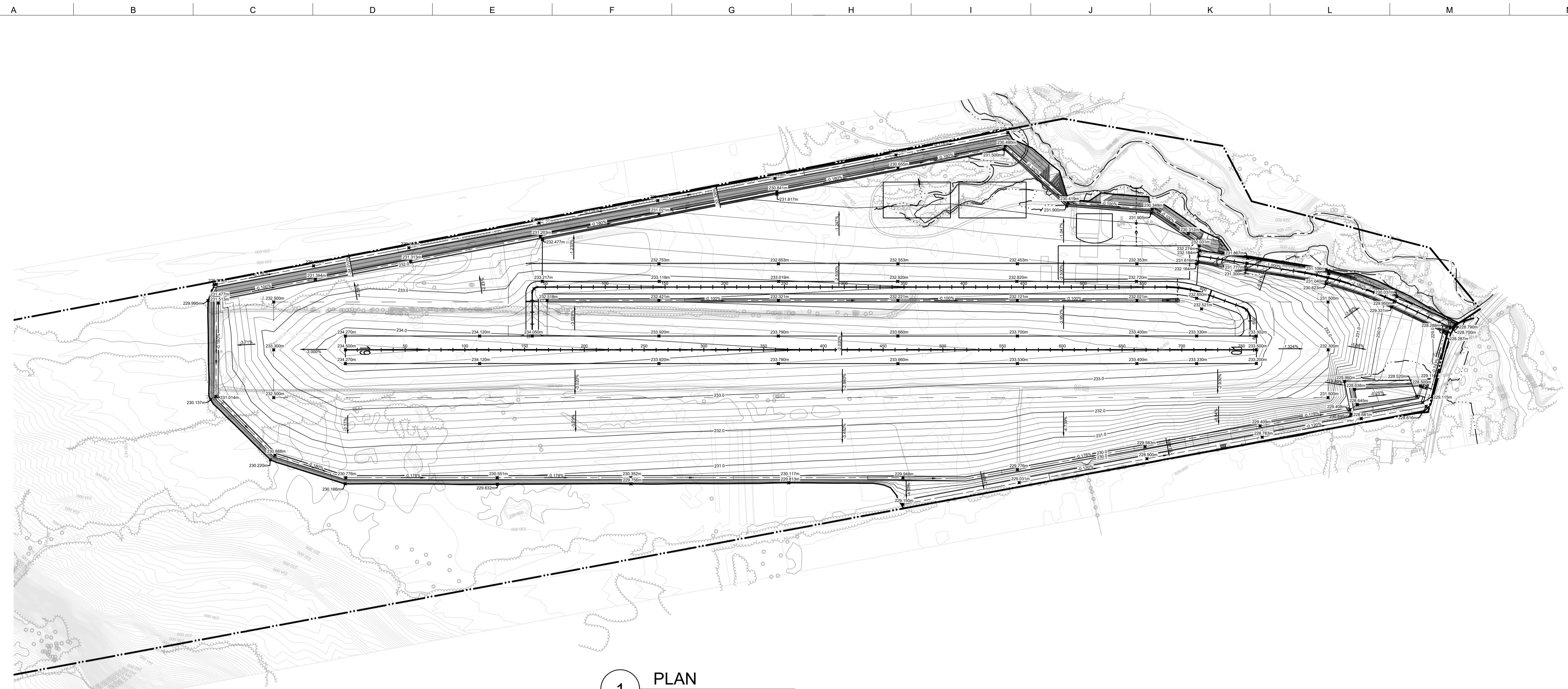
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Drawing Status
FOR REVIEW

Job No	Drawing No	Issue
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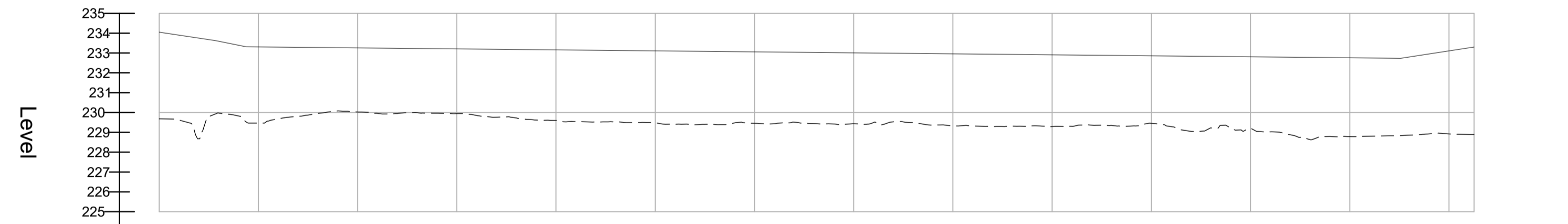
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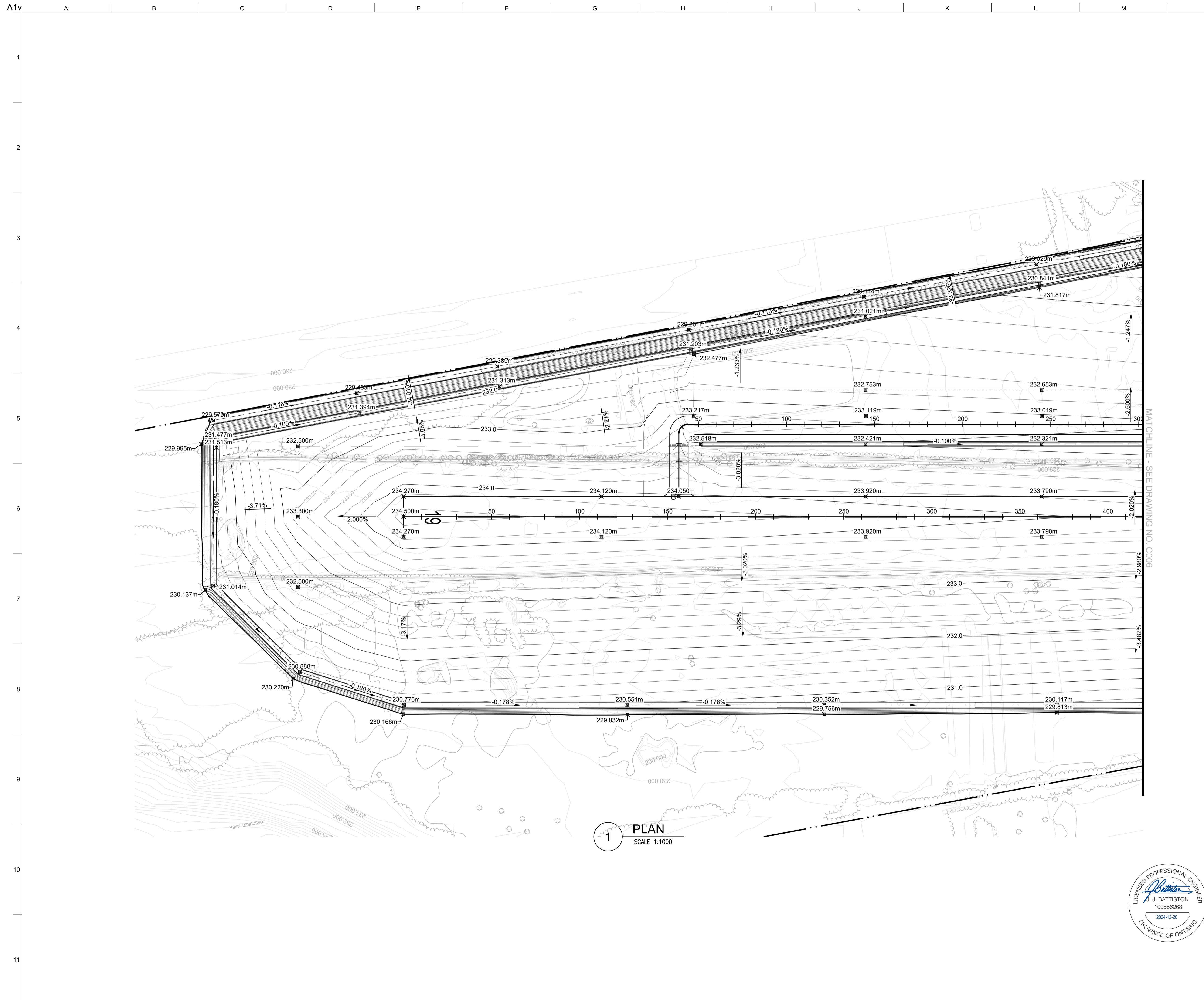
1 PLAN
SCALE 1:2000

- LEGEND**
- PROPERTY LIMIT
 - RUNWAY/TAXIWAY STRIP
 - GRADING LIMIT
 - 232.500m PROPOSED ELEVATION
 - 230.000 EXISTING ELEVATION
 - 232.0 PROPOSED MAJOR CONTOUR
 - PROPOSED MINOR CONTOUR
 - PROPOSED GROUND
 - EXISTING GROUND

CL - Taxiway - LONGSECTION
SCALE: H 1:2000, V 1:200. DATUM: 225.000



Chainage	00.000 10.000 20.000 30.000 40.000 50.000 60.000 70.000 80.000 90.000 100.000 110.000 120.000 130.000 140.000 150.000 160.000 170.000 180.000 190.000 200.000 210.000 220.000 230.000 240.000 250.000 260.000 270.000 280.000 290.000 300.000 310.000 320.000 330.000 340.000 350.000 360.000 370.000 380.000 390.000 400.000 410.000 420.000 430.000 440.000 450.000 460.000 470.000 480.000 490.000 500.000 510.000 520.000 530.000 540.000 550.000 560.000 570.000 580.000 590.000 600.000 610.000 620.000 630.000 640.000 650.000 660.000 662.618
Horizontal Alignment	L=36.001 R: 5.000 L: 7.854 L=525.558 R: 100.000 L: 34.555 L=31.713 R: 10.000 L: 12.216
Vertical Alignment	G=-1.500% L=28.600 G=-2.000% L=15.355 G=-0.100% L=581.827 G=1.542% L=36.937
Proposed Ground Levels	234.050 233.900 233.750 233.600 233.450 233.300 233.150 233.000 229.800 229.650 229.500 229.350 229.200 229.050 228.900 228.750 228.600 228.450 228.300 228.150 228.000 227.850 227.700 227.550 227.400 227.250 227.100 226.950 226.800 226.650 226.500 226.350 226.200 226.050 225.900 225.750 225.600 225.450 225.300 225.150 225.000
Existing Ground Levels	229.684 229.618 229.574 229.530 229.487 229.443 229.400 229.357 229.314 229.271 229.228 229.185 229.142 229.099 229.056 229.013 228.970 228.927 228.884 228.841 228.798 228.755 228.712 228.669 228.626 228.583 228.540 228.497 228.454 228.411 228.368 228.325 228.282 228.239 228.196 228.153 228.110 228.067 228.024 227.981 227.938 227.895 227.852 227.809 227.766 227.723 227.680 227.637 227.594 227.551 227.508 227.465 227.422 227.379 227.336 227.293 227.250 227.207 227.164 227.121 227.078 227.035 226.992 226.949 226.906 226.863 226.820 226.777 226.734 226.691 226.648 226.605 226.562 226.519 226.476 226.433 226.390 226.347 226.304 226.261 226.218 226.175 226.132 226.089 226.046 226.003 225.960 225.917 225.874 225.831 225.788 225.745 225.702 225.659 225.616 225.573 225.530 225.487 225.444 225.401 225.358 225.315 225.272 225.229 225.186 225.143 225.100 225.057 225.014 224.971 224.928 224.885 224.842 224.799 224.756 224.713 224.670 224.627 224.584 224.541 224.498 224.455 224.412 224.369 224.326 224.283 224.240 224.197 224.154 224.111 224.068 224.025 223.982 223.939 223.896 223.853 223.810 223.767 223.724 223.681 223.638 223.595 223.552 223.509 223.466 223.423 223.380 223.337 223.294 223.251 223.208 223.165 223.122 223.079 223.036 222.993 222.950 222.907 222.864 222.821 222.778 222.735 222.692 222.649 222.606 222.563 222.520 222.477 222.434 222.391 222.348 222.305 222.262 222.219 222.176 222.133 222.090 222.047 222.004 221.961 221.918 221.875 221.832 221.789 221.746 221.703 221.660 221.617 221.574 221.531 221.488 221.445 221.402 221.359 221.316 221.273 221.230 221.187 221.144 221.101 221.058 221.015 220.972 220.929 220.886 220.843 220.800 220.757 220.714 220.671 220.628 220.585 220.542 220.499 220.456 220.413 220.370 220.327 220.284 220.241 220.198 220.155 220.112 220.069 220.026 219.983 219.940 219.897 219.854 219.811 219.768 219.725 219.682 219.639 219.596 219.553 219.510 219.467 219.424 219.381 219.338 219.295 219.252 219.209 219.166 219.123 219.080 219.037 218.994 218.951 218.908 218.865 218.822 218.779 218.736 218.693 218.650 218.607 218.564 218.521 218.478 218.435 218.392 218.349 218.306 218.263 218.220 218.177 218.134 218.091 218.048 218.005 217.962 217.919 217.876 217.833 217.790 217.747 217.704 217.661 217.618 217.575 217.532 217.489 217.446 217.403 217.360 217.317 217.274 217.231 217.188 217.145 217.102 217.059 217.016 216.973 216.930 216.887 216.844 216.801 216.758 216.715 216.672 216.629 216.586 216.543 216.500 216.457 216.414 216.371 216.328 216.285 216.242 216.199 216.156 216.113 216.070 216.027 215.984 215.941 215.898 215.855 215.812 215.769 215.726 215.683 215.640 215.597 215.554 215.511 215.468 215.425 215.382 215.339 215.296 215.253 215.210 215.167 215.124 215.081 215.038 214.995 214.952 214.909 214.866 214.823 214.780 214.737 214.694 214.651 214.608 214.565 214.522 214.479 214.436 214.393 214.350 214.307 214.264 214.221 214.178 214.135 214.092 214.049 214.006 213.963 213.920 213.877 213.834 213.791 213.748 213.705 213.662 213.619 213.576 213.533 213.490 213.447 213.404 213.361 213.318 213.275 213.232 213.189 213.146 213.103 213.060 213.017 212.974 212.931 212.888 212.845 212.802 212.759 212.716 212.673 212.630 212.587 212.544 212.501 212.458 212.415 212.372 212.329 212.286 212.243 212.200 212.157 212.114 212.071 212.028 211.985 211.942 211.899 211.856 211.813 211.770 211.727 211.684 211.641 211.598 211.555 211.512 211.469 211.426 211.383 211.340 211.297 211.254 211.211 211.168 211.125 211.082 211.039 210.996 210.953 210.910 210.867 210.824 210.781 210.738 210.695 210.652 210.609 210.566 210.523 210.480 210.437 210.394 210.351 210.308 210.265 210.222 210.179 210.136 210.093 210.050 210.007 209.964 209.921 209.878 209.835 209.792 209.749 209.706 209.663 209.620 209.577 209.534 209.491 209.448 209.405 209.362 209.319 209.276 209.233 209.190 209.147 209.104 209.061 209.018 208.975 208.932 208.889 208.846 208.803 208.760 208.717 208.674 208.631 208.588 208.545 208.502 208.459 208.416 208.373 208.330 208.287 208.244 208.201 208.158 208.115 208.072 208.029 207.986 207.943 207.900 207.857 207.814 207.771 207.728 207.685 207.642 207.599 207.556 207.513 207.470 207.427 207.384 207.341 207.298 207.255 207.212 207.169 207.126 207.083 207.040 206.997 206.954 206.911 206.868 206.825 206.782 206.739 206.696 206.653 206.610 206.567 206.524 206.481 206.438 206.395 206.352 206.309 206.266 206.223 206.180 206.137 206.094 206.051 206.008 205.965 205.922 205.879 205.836 205.793 205.750 205.707 205.664 205.621 205.578 205.535 205.492 205.449 205.406 205.363 205.320 205.277 205.234 205.191 205.148 205.105 205.062 205.019 204.976 204.933 204.890 204.847 204.804 204.761 204.718 204.675 204.632 204.589 204.546 204.503 204.460 204.417 204.374 204.331 204.288 204.245 204.202 204.159 204.116 204.073 204.030 203.987 203.944 203.901 203.858 203.815 203.772 203.729 203.686 203.643 203.600 203.557 203.514 203.471 203.428 203.385 203.342 203.299 203.256 203.213 203.170 203.127 203.084 203.041 202.998 202.955 202.912 202.869 202.826 202.783 202.740 202.697 202.654 202.611 202.568 202.525 202.482 202.439 202.396 202.353 202.310 202.267 202.224 202.181 202.138 202.095 202.052 202.009 201.966 201.923 201.880 201.837 201.794 201.751 201.708 201.665 201.622 201.579 201.536 201.493 201.450 201.407 201.364 201.321 201.278 201.235 201.192 201.149 201.106 201.063 201.020 200.977 200.934 200.891 200.848 200.805 200.762 200.719 200.676 200.633 200.590 200.547 200.504 200.461 200.418 200.375 200.332 200.289 200.246 200.203 200.160 200.117 200.074 200.031 199.988 199.945 199.902 199.859 199.816 199.773 199.730 199.687 199.644 199.601 199.558 199.515 199.472 199.429 199.386 199.343 199.300 199.257 199.214 199.171 199.128 199.085 199.042 198.999 198.956 198.913 198.870 198.827 198.784 198.741 198.698 198.655 198.612 198.569 198.526 198.483 198.440 198.397 198.354 198.311 198.268 198.225 198.182 198.139 198.096 198.053 198.010 197.967 197.924 197.881 197.838 197.795 197.752 197.709 197.666 197.623 197.580 197.537 197.494 197.451 197.408 197.365 197.322 197.279 197.236 197.193 197.150 197.107 197.064 197.021 196.978 196.935 196.892 196.849 196.806 196.763 196.720 196.677 196.634 196.591 196.548 196.505 196.462 196.419 196.376 196.333 196.290 196.247 196.204 196.161 196.118 196.075 196.032 195.989 195.946 195.903 195.860 195.817 195.774 195.731 195.688 195.645 195.602 195.559 195.516 195.473 195.430 195.387 195.344 195.301 195.258 195.215 195.172 195.129 195.086 195.043 194.999 194.956 194.913 194.870 194.827 194.784 194.741 194.698 194.655 194.612 194.569 194.526 194.483 194.440 194.397 194.354 194.311 194.268 194.225 194.182 194.139 194.096 194.053 194.010 193.967 193.924 193.881 193.838 193.795 193.752 193.709 193.666 193.623 193.580 193.537 193.494 193.451 193.408 193.365 193.322 193.279 193.236 193.193 193.150 193.107 193.064 193.021 192.978 192.935 192.892 192.849 192.806 192.763 192.720 192.677 192.634 192.591 192.548 192.505 192.462 192.419 192.376 192.333 192.290 192.247 192.204 192.161 192.118 192.075 192.032 191.989 191.946 191.903 191.860 191.817 191.774 191.731 191.688 191.645 191.602 191.559 191.516 191.473 191.430 191.387 191.344 191.301 191.258 191.215 191.172 191.129 191.086 191.043 190.999 190.956 190.913 190.870 190.827 190.784 190.741 190.698 190.655 190.612 190.569 190.526 190.483 190.440 190.397 190.354 190.311 190.268 190.225 190.182 190.139 190.096 190.053 190.010 189.967 189.924 189.881 189.838 189.795 189.752 189.709 189.666 189.623 189.580 189.537 189.494 189.451 189.408 189.365 189.322 189.279 189.236 189.193 189.150 189.107 189.064 189.021 188.978 188.935 188.892 188.849 188.806 188.763 188.720 188.677 188.634 188.591 188.548 188.505 188.462 188.419 188.376 188.333 188.290 188.247 188.204 188.161 188.118 188.075 188.032 187.989 187.946 187.903 187.860 187.817 187.774 187.731 187.688 187.645 187.602 187.559 187.516 187.473 187.430 187.387 187.344 187.301 187.258 187.215 187.172 187.129 187.086 187.043 186.999 186.956 186.913 186.870 186.827 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181.408 181.365 181.322 181.279 181.236 181.193 181.150 181.107 181.064 181.021 180.978 180.935 180.892 180.849 180.806 180.763 180.720 180.677 180.634 180.591 180.548 180.505 180.462 180.419 180.376 180.333 180.290 180.247 180.204 180.161 180.118 180.075 180.032 179.989 179.946 179.903 179.860 179.817 179.774 179.731 179.688 179



LEGEND

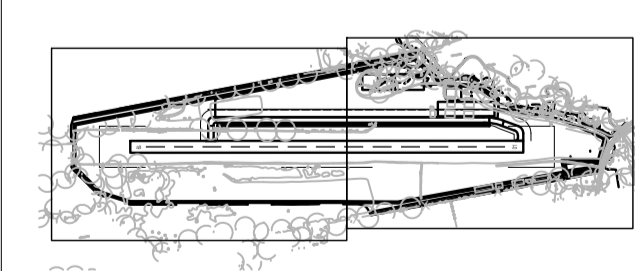
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- - - RUNWAY/TAXIWAY STRIP
- GRADING LIMIT
- 232.500m * PROPOSED ELEVATION
- 230.000 * EXISTING ELEVATION
- 232.0--- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR

1	20/12/2024	MT	NK/BS	JD
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0	07/08/2024	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

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Job Title
BALDWIN AIRPORT IMPROVEMENTS

Key Plan



Drawing Title
PROPOSED GRADING AND DRAINAGE SHEET 1 OF 2

Scale AS INDICATED

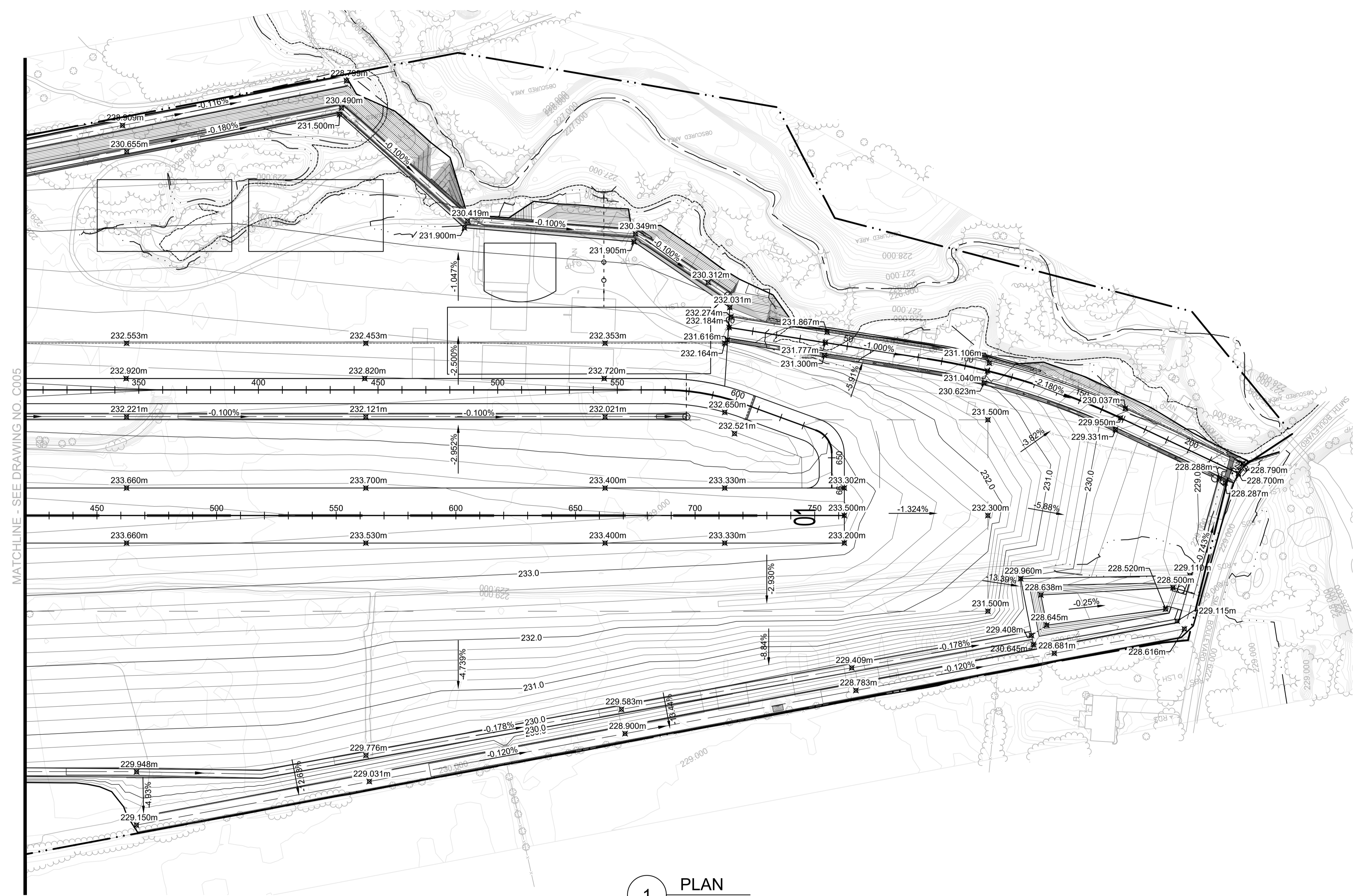
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Drawing Status
FOR REVIEW

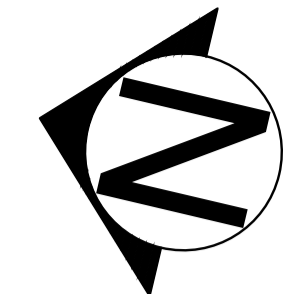
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1 PLAN
 SCALE 1:1000





1 PLAN
SCALE 1:1000



LEGEND

- — — — — PROPERTY LIMIT
- - - - - RUNWAY/TAXIWAY STRIP
- - - - - GRADING LIMIT
- 232.500m ✕ PROPOSED ELEVATION
- 230.000 ✕ EXISTING ELEVATION
- 232.0 — PROPOSED MAJOR CONTOUR
- — — — — PROPOSED MINOR CONTOUR

1	20/12/2024	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/2024	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

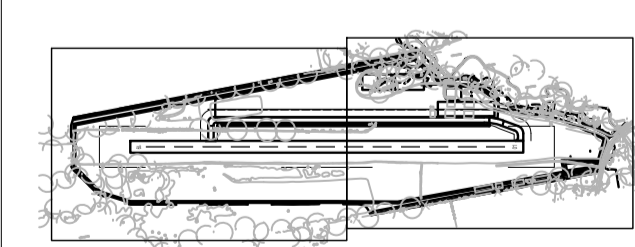
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Key Plan



Drawing Title
PROPOSED GRADING AND DRAINAGE SHEET 2 OF 2

Scale AS INDICATED

File Name 287943-ARUP-XX-XX-DR-C-XX-C006.DWG

Drawing Status
FOR REVIEW

Job No	Drawing No	Issue
287943-01	C006	1



A1V A B C D E F G H I J K L M N

NOTES

SEQUENCE OF ACTIVITIES

- STAGE 1: TOPSOIL STRIPPING, GRADING AND RE-STABILIZATION
1. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PER PLAN DRAWINGS. INSTALL SILT FENCE AROUND THE DOWNHILL SLOPE WORK AREA AND INLET SEDIMENT PROTECTION. THE SILT FENCE WILL BE CONSTRUCTED PRIOR TO COMMENCEMENT OF SITE WORKS AND IT SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE TOWN ENGINEERING DEPARTMENT.
 2. CLEAR EXISTING VEGETATION AREA WITHIN SILT FENCE
 3. STRIP TOPSOIL AND STOCKPILE
 4. REMOVE ALL UTILITIES AS REQUIRED
 5. FILL EXISTING DITCHES AND CONSTRUCT PROPOSED DITCHES

STAGE 2: SITE SERVICING

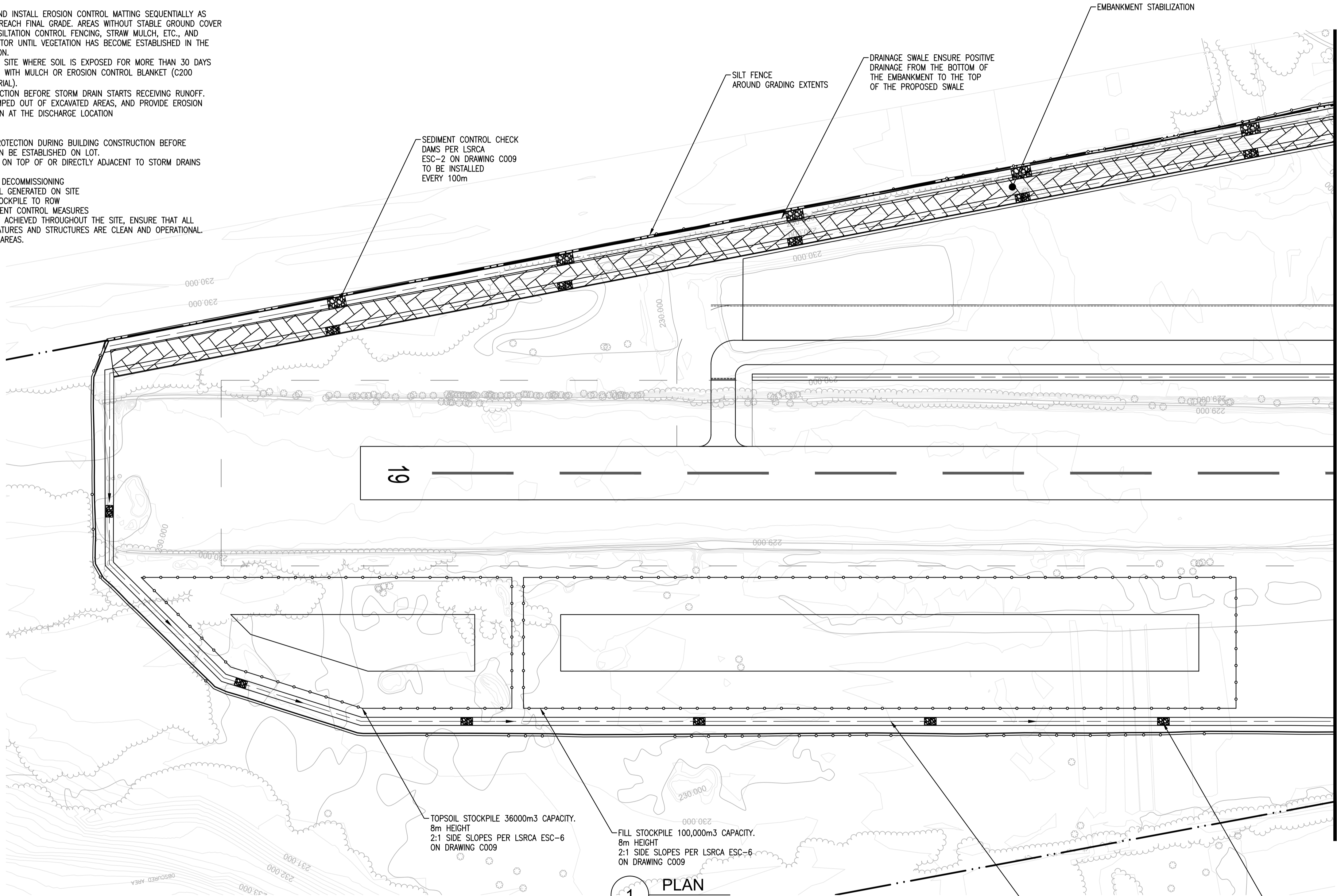
1. COMMENCE IMPORTING OF FILL AND EARTHWORK
2. EXTEND ACCESS ROAD TO EXCAVATED MATERIAL AREA
3. GRADING OF PONDS
4. PLACE SOIL COVER, SEED, AND INSTALL EROSION CONTROL MATTING SEQUENTIALLY AS EXCAVATED MATERIAL AREAS REACH FINAL GRADE. AREAS WITHOUT STABLE GROUND COVER SHALL BE PROTECTED WITH SILTATION CONTROL FENCING, STRAW MULCH, ETC., AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BECOME ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
5. ANY AREA OF CONSTRUCTION SITE WHERE SOIL IS EXPOSED FOR MORE THAN 30 DAYS WILL HAVE TO BE STABILIZED WITH MULCH OR EROSION CONTROL BLANKET (C200 COCONUT DOUBLE NET MATERIAL).
6. INSTALL STORM DRAIN PROTECTION BEFORE STORM DRAIN STARTS RECEIVING RUNOFF.
7. TREAT ANY STORMWATER PUMPED OUT OF EXCAVATED AREAS, AND PROVIDE EROSION PROTECTION/FLOW DISPERSION AT THE DISCHARGE LOCATION

STAGE 3: BUILDING CONSTRUCTION

1. MAINTAIN EFFECTIVE INLET PROTECTION DURING BUILDING CONSTRUCTION BEFORE VEGETATIVE STABILIZATION CAN BE ESTABLISHED ON LOT.
2. DO NOT LOCATE STOCKPILES ON TOP OF OR DIRECTLY ADJACENT TO STORM DRAINS

STAGE 4: FINAL STABILIZATION AND DECOMMISSIONING

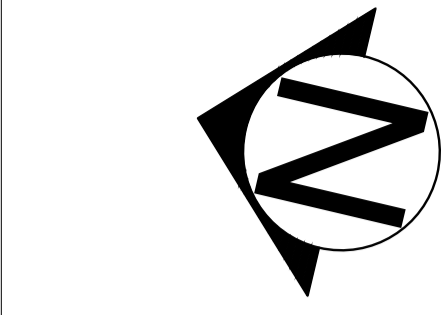
1. DISPOSAL OF WASTE MATERIAL GENERATED ON SITE
2. RESTORE TOP SOIL FROM STOCKPILE TO ROW
3. REMOVE EROSION AND SEDIMENT CONTROL MEASURES
4. WHEN FINAL STABILIZATION IS ACHIEVED THROUGHOUT THE SITE, ENSURE THAT ALL PERMANENT STORMWATER FEATURES AND STRUCTURES ARE CLEAN AND OPERATIONAL.
5. RESTORATION OF DISTURBED AREAS.



1 PLAN SCALE 1:1000

NOTES

1. THE ACCOMPANYING PLANS SET OUT THE MEASURES THAT WILL BE TAKEN BY THE DEVELOPER AND ITS CONTRACTORS TO CONTROL DOWNSTREAM SEDIMENT TO THE LOWEST LEVEL PRACTICALLY ACHIEVABLE. THE CONDITIONS AND TECHNIQUES SET OUT ARE TO BE FOLLOWED UNLESS APPROVED OTHERWISE BY THE CONTRACT ADMINISTRATOR AND/OR MUNICIPALITY.
2. THE CONTRACTOR MUST USE MATERIALS, CONSTRUCTION PRACTICES, AND MITIGATION TECHNIQUES IN ORDER TO PREVENT THE UNAUTHORIZED HARMFUL ALTERATION, DISRUPTION OR DESTRUCTION OF VEGETATION, OR THE IMPAIRMENT OF WATER QUALITY.
3. TECHNIQUES FOR EROSION AND SEDIMENT CONTROLS ARE TO ADHERE TO ACCEPTED ENGINEERING PRACTICE AND MUNICIPAL STANDARD SPECIFICATIONS AND DRAWINGS.
4. EROSION AND SEDIMENT CONTROL PRACTICES TO BE ANALYZED AND RE-ADJUSTED BY CONTRACTOR FOR EACH PHASE OF CONSTRUCTION.
5. ALL SEDIMENTATION CONTROLS ARE TO BE INSPECTED REGULARLY (MINIMUM WEEKLY), AS WELL AS AFTER EVERY RAINFALL EVENT AND ANY DAMAGED SILT CONTROL AND EROSION PROTECTION DEVICES SHALL BE PROMPTLY REPAIRED OR REPLACED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES.
7. ELEVATION CONTOURS REPRESENT THE PROPOSED FINISHED GRADE ELEVATION FOR THE SITE.
8. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30 METERS AWAY FROM ANY WATERCOURSE AND FILTERED. FILTERING METHODS MUST BE APPROVED BY THE SITE INSPECTOR.
9. ALL SITE DRAINAGE IS TO BE DIRECTED TO THE SEDIMENT BASINS AND OTHER CHECK DAMS VIA SHEET DRAINAGE, BERMS, OR SWALES (AS NECESSARY) TO FACILITATE THE COMPLETION OF GRADING WORKS. THE CONTRACTOR SHALL CONSTRUCT ANY ADDITIONAL SWALES OR BERMS THAT MAY BE NECESSARY TO DIRECT RUNOFF IN A CONTROLLED MANNER OF SUITABLE QUALITY.
10. THE SITE TRAILER LOCATION, EQUIPMENT STORAGE, REFUELLING AREA AND HYDROCARBON STORAGE ARE TO BE LOCATED OUTSIDE OF THE REGULATED AREA LIMIT.
11. THE TOPSOIL STOCKPILE SHALL BE FENCED WITH SILT FENCE AND SUFFICIENT SIGNAGE SHALL BE PLACED IN THE VICINITY DESIGNATING THE AREA AS PROTECTED DURING THE CONSTRUCTION.
12. CONTRACTOR SHALL INSPECT ALL STORMWATER STRUCTURES AND FEATURES PERIODICALLY AND MAINTAIN THEM TO BE OPERATIONAL. CONTRACTOR SHALL REMOVE SEDIMENT AND SILT WHEN NECESSARY.
13. CONTRACTOR SHALL CLEAN AND REMOVE ALL SILT AND SEDIMENT FROM ALL STORMWATER STRUCTURES AND FEATURES INCLUDING SWALES, CULVERTS, SEDIMENT TRAPS, AND SEDIMENT BASIN UPON COMPLETION OF PROJECT. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP, PROPER OFF-SITE DISPOSAL OF ESC MATERIALS, AND RESTORATION, INCLUDING ALL COSTS DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.



LEGEND

- PROPERTY LIMIT
- - - RUNWAY/TAXIWAY STRIP
- SILT FENCE
- 232.500m PROPOSED ELEVATION
- 230.000 EXISTING ELEVATION
- 230.20 PROPOSED MAJOR CONTOUR
- 230.0 PROPOSED MINOR CONTOUR
- [Hatched Box] STABILIZATION AREA

CONTINGENCY PLAN

1. IF UNFORESEEN EVENTS CAUSE THE STRATEGIES SET OUT IN THIS PLAN TO BE INSUFFICIENT OR INAPPROPRIATE TO MEET THE OBJECTIVE, THE CONTRACTOR IS EXPECTED TO RESPOND IN A TIMELY MANNER WITH ALL REASONABLE MEASURES CONSISTENT WITH SAFETY, TO PREVENT, COUNTERACT, OR REMEDY DOWNSTREAM SEDIMENTATION AND EROSION.
2. IF A SPILL OCCURS, IT SHALL BE REPORTED TO THE MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE AND THE MINISTRY OF NATURAL RESOURCES. THE TOWN OF GEORGINA SHOULD ALSO BE NOTIFIED AT THE PHONE NUMBER 905-476-4301.
3. IF APPROVAL AGENCIES DETERMINE THAT LONG-TERM DAMAGE TO THE NATURAL ENVIRONMENT HAS OCCURRED DUE TO FAILURE OF THIS PLAN TO CONTROL SEDIMENTS, A RESTORATION PLAN WILL BE DEVELOPED BY THE CONTRACTOR, IN CONSULTATION WITH AND APPROVAL FROM THE APPROPRIATE AGENCIES, FOR IMPLEMENTATION BY THE CONTRACTOR.

HYDRO SEEDING

1. ALL TEMPORARY EROSION AND SEDIMENT CONTROL SWALES, BERMS, AND SEDIMENT PONDS ARE TO BE HYDRO SEEDED IMMEDIATELY FOLLOWING CONSTRUCTION.
2. ALL AREAS STRIPPED OF VEGETATIVE COVER FOR LONGER THAN 30 DAYS SHALL BE HYDRO SEEDED AS DIRECTED BY THE ENGINEER.
3. HYDRO SEED MIX TO BE 48% ANNUAL RYE GRASS, 48% FALL RYE, AND 4% RED CLOVER (100 KG/HA) WITH FIBRATAC TACTIFIER OR APPROVED EQUIVALENT.

1	20/12/2024	MT	NK/BS	JD
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0	07/08/2024	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

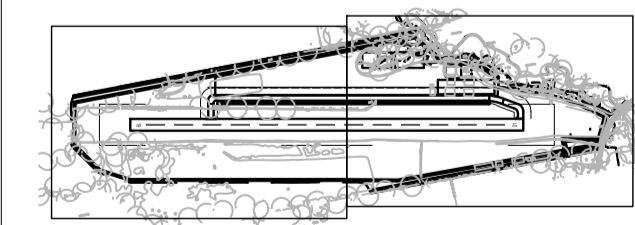
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Job Title
BALDWIN AIRPORT IMPROVEMENTS

Key Plan

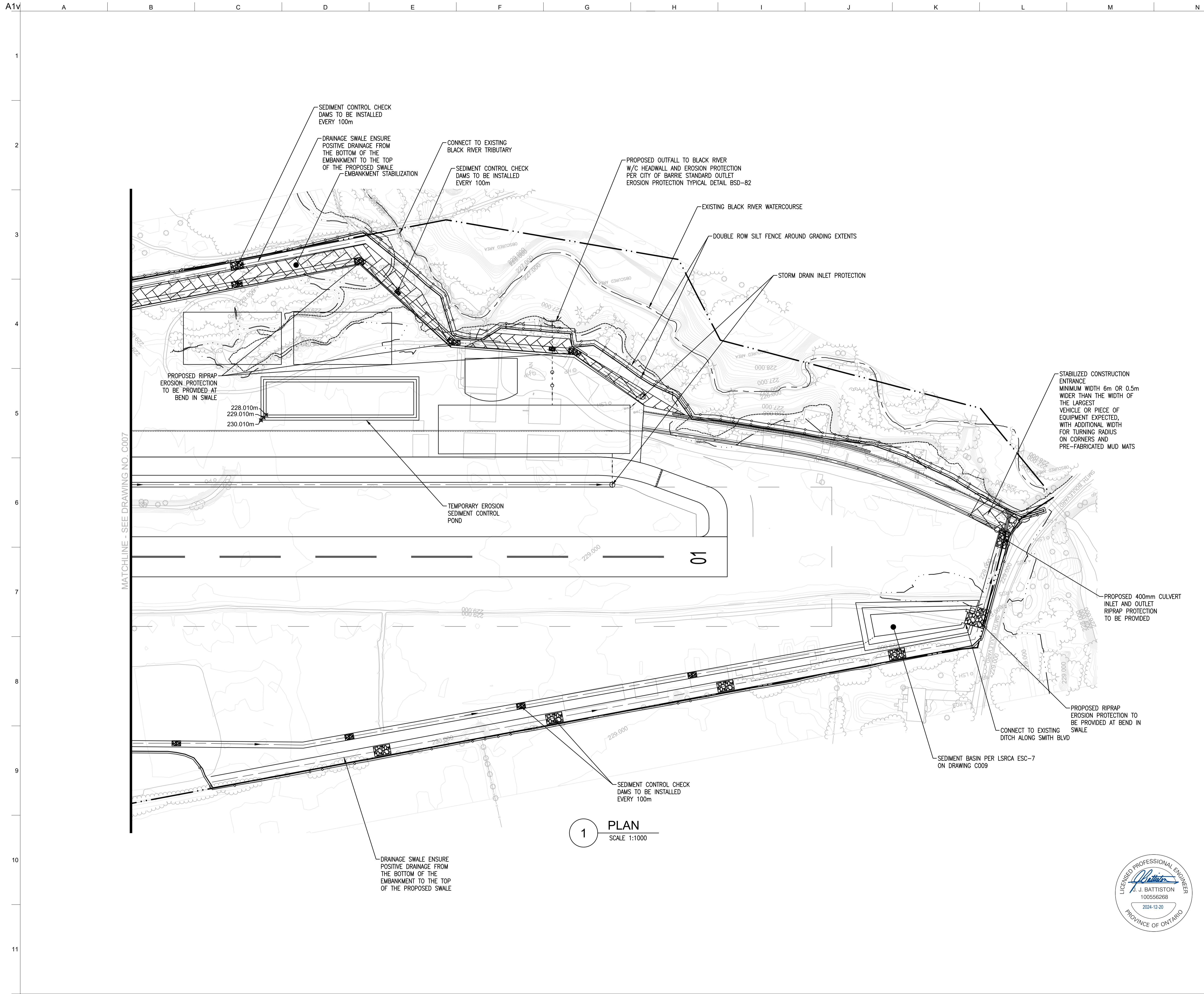


Drawing Title
PROPOSED EROSION AND SEDIMENT CONTROL SHEET 1 OF 2

Scale AS INDICATED
File Name 287943-ARUP-XX-XX-DR-C-XX-C007.DWG

Drawing Status		
FOR REVIEW		
Job No	Drawing No	Issue
287943-01	C007	1





LEGEND

- — — — — PROPERTY LIMIT
- - - - - RUNWAY/TAXIWAY STRIP
- — — — — SILT FENCE
- 232.500m x PROPOSED ELEVATION
- 230.000 EXISTING ELEVATION
- 230.20 PROPOSED MAJOR CONTOUR
- 230.0 PROPOSED MINOR CONTOUR
- [Hatched Box] STABILIZATION AREA

1	20/12/2024	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/24	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

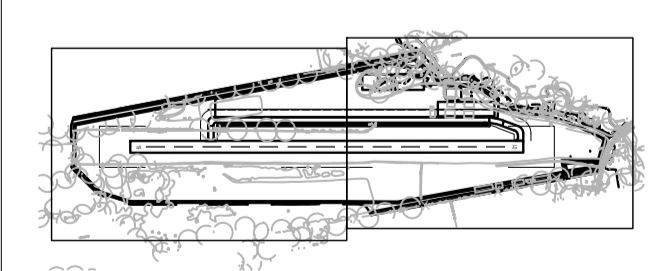
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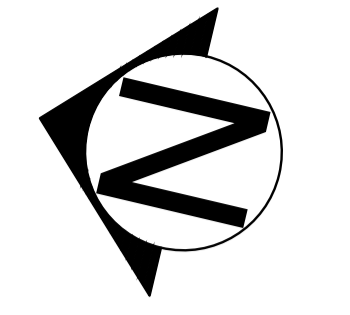
Job Title
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Key Plan



Drawing Title
PROPOSED EROSION AND SEDIMENT CONTROL SHEET 2 OF 2

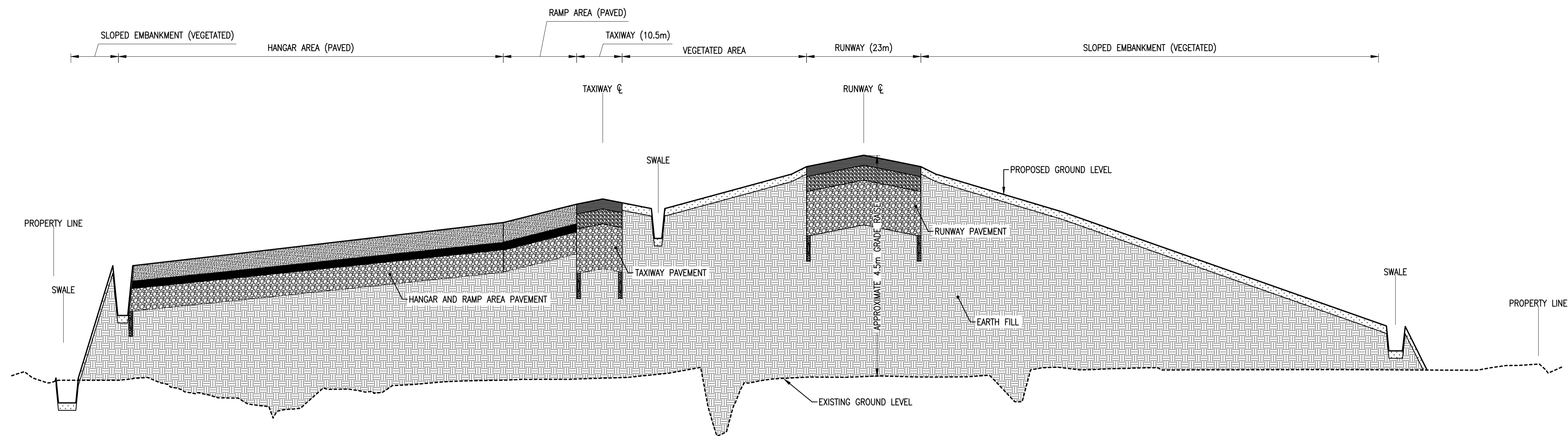
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Drawing No	C008
Issue	1



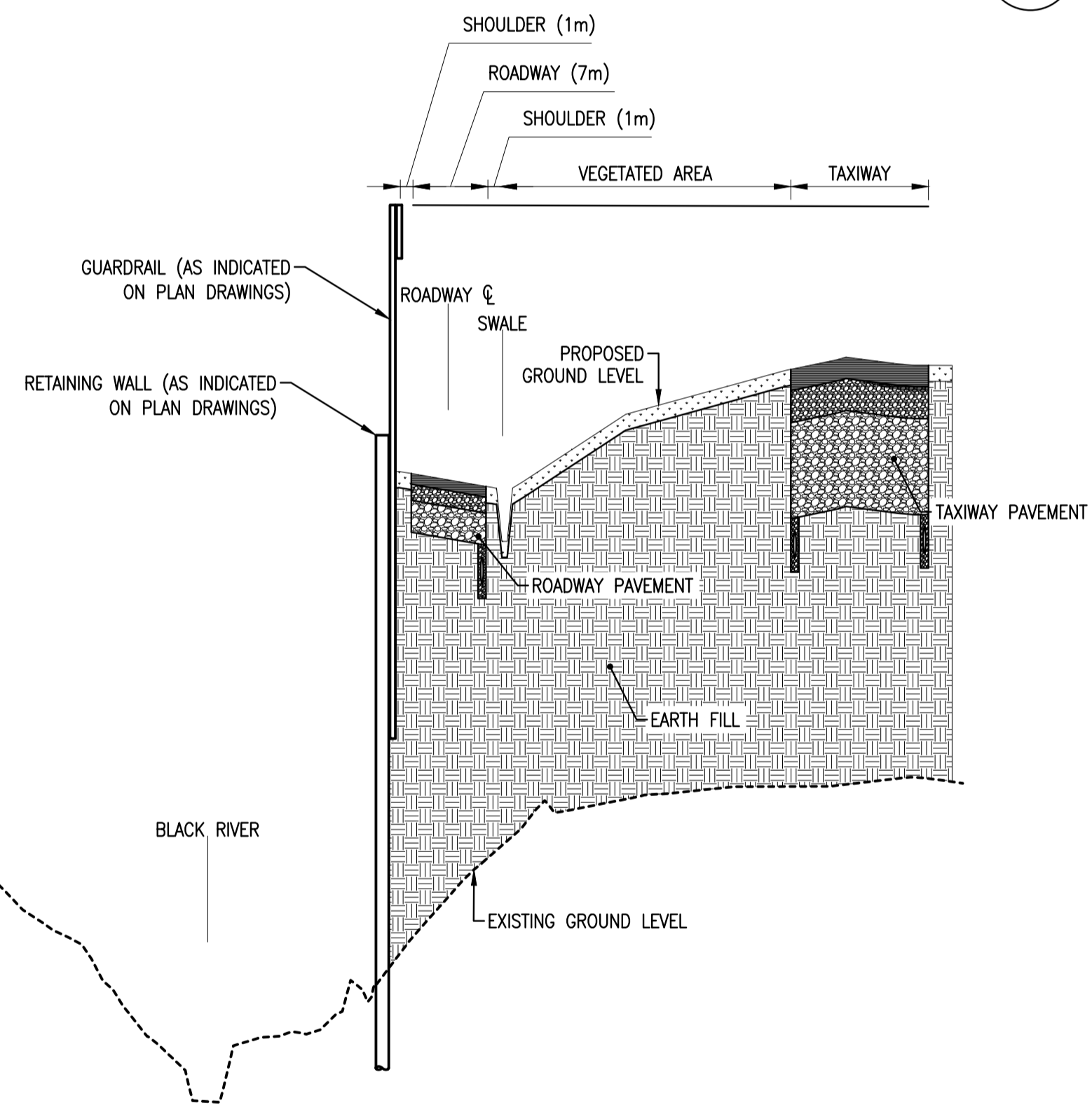
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1 PLAN
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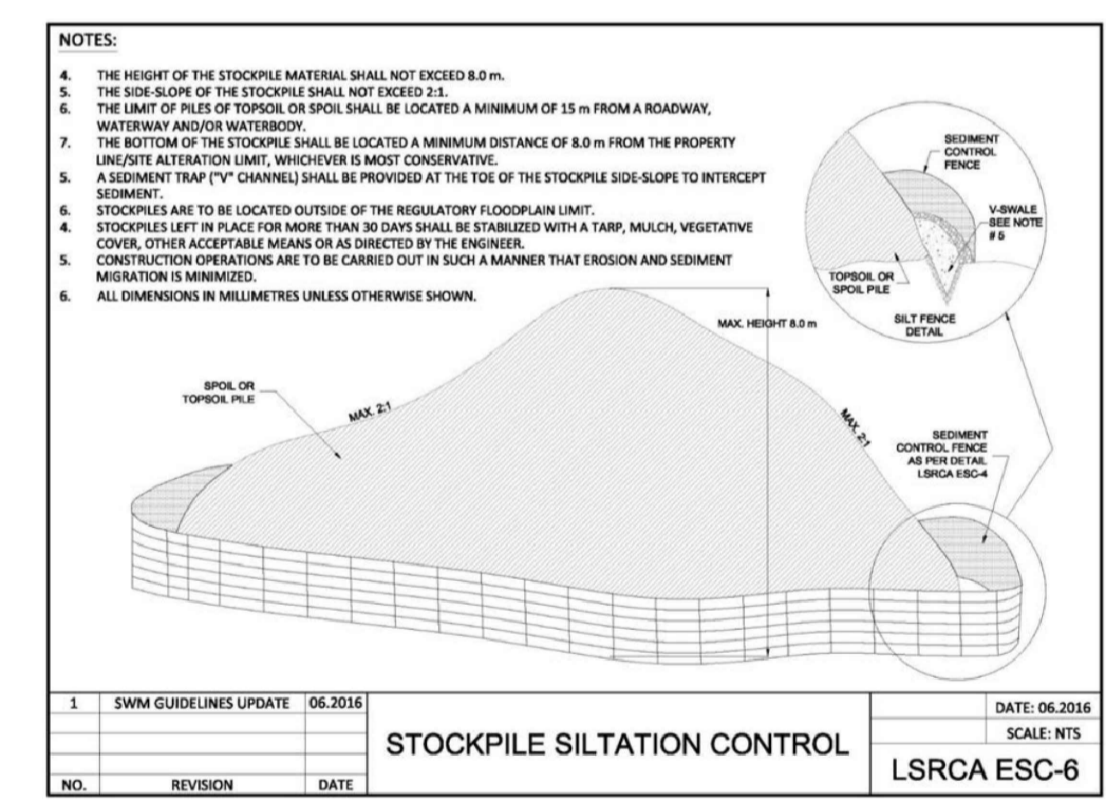
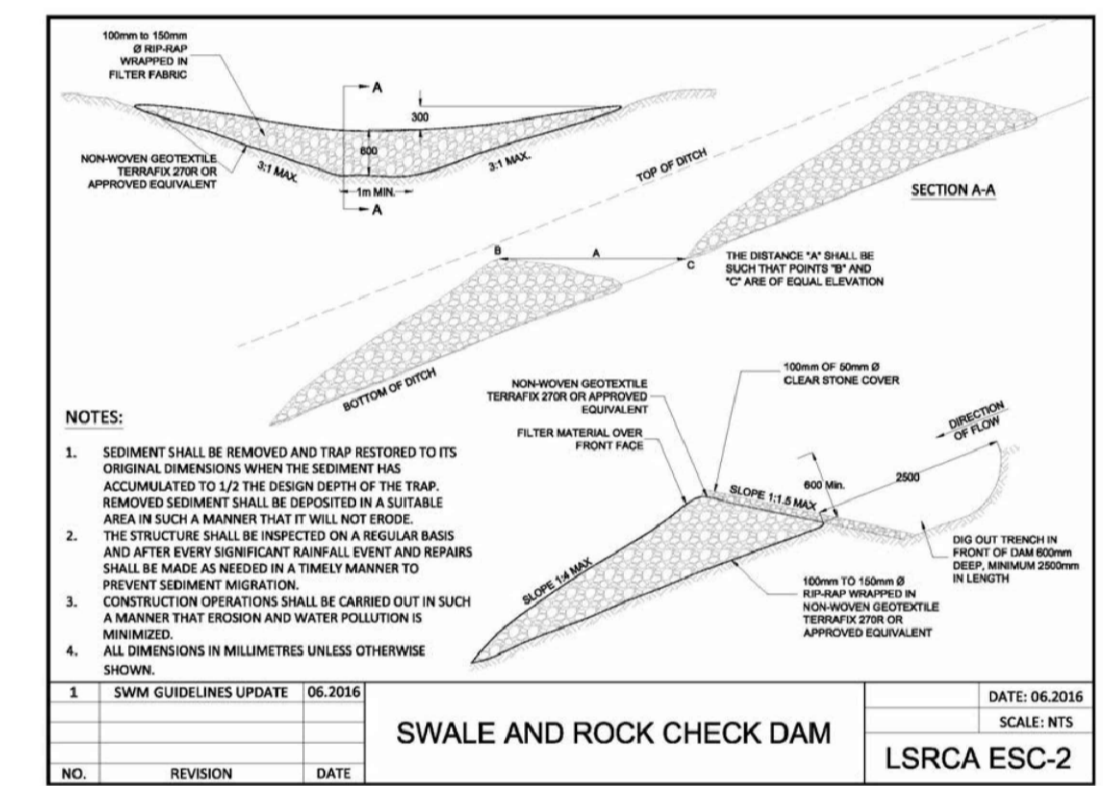
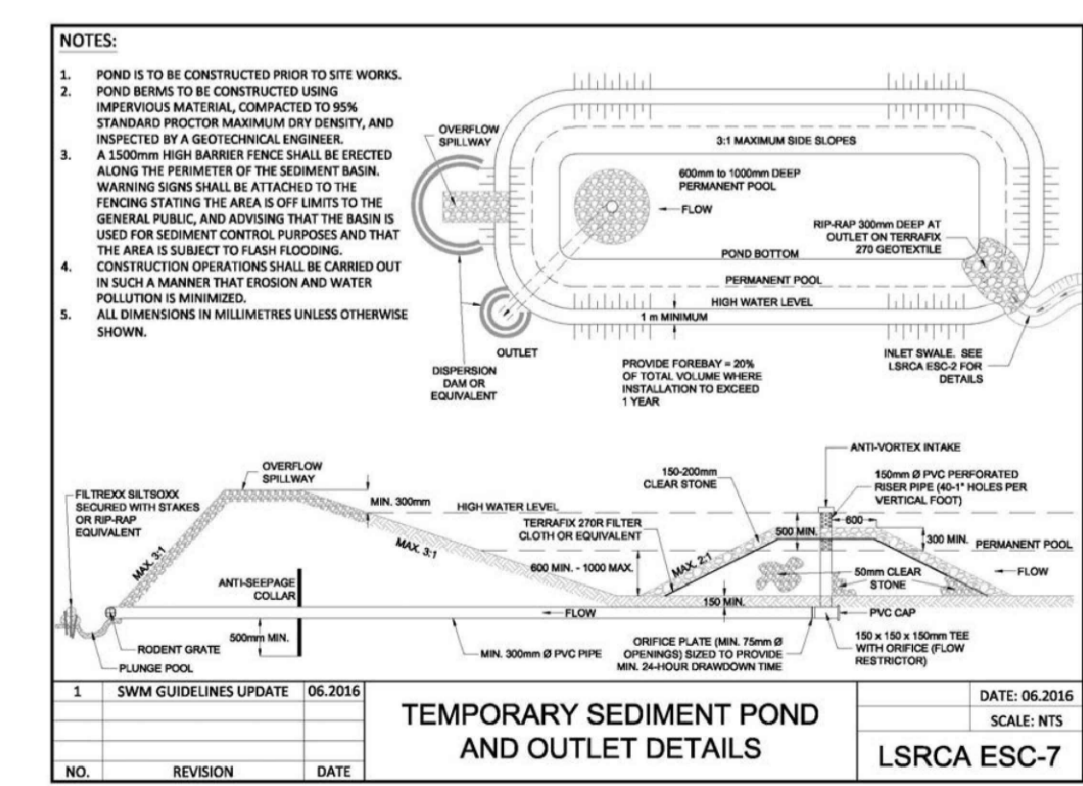
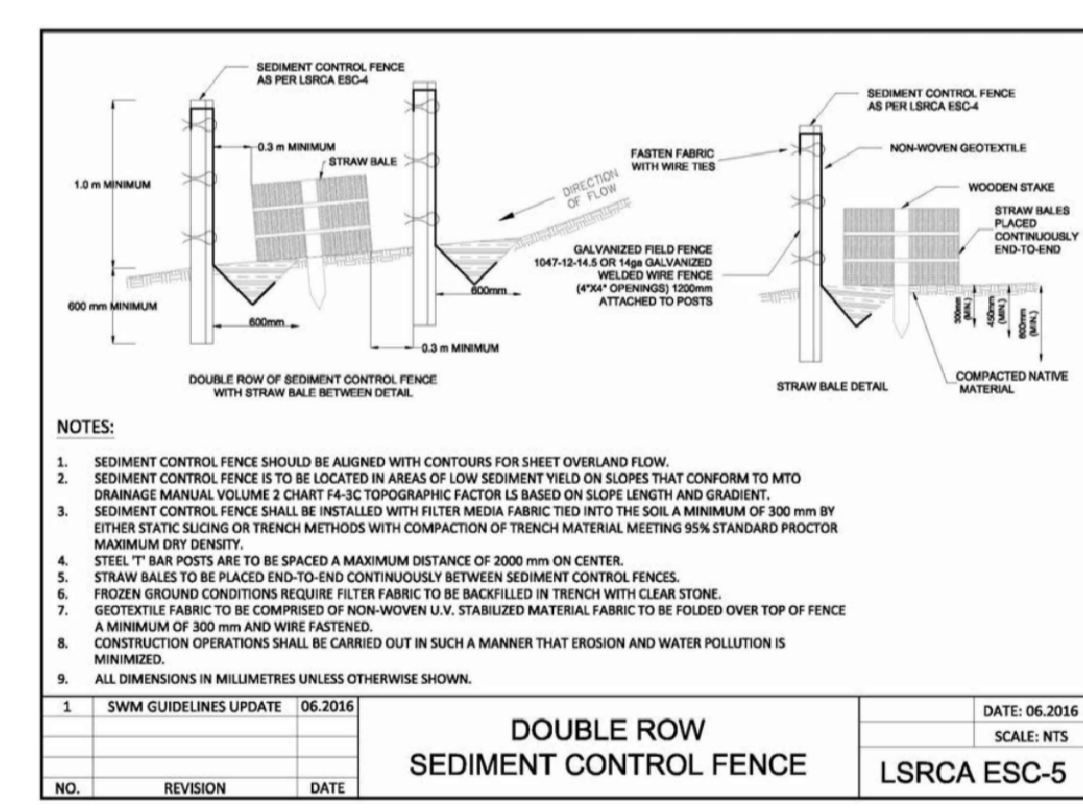


1 SECTION
 RUNWAY, TAXIWAY, RAMP AREA, AND APRON - NOT TO SCALE



2 SECTION
 ACCESS ROADWAY - NOT TO SCALE

- NOTES**
- GRADES
 - 1.1. RUNWAY AND TAXIWAY GRADES TO COMPLY WITH TP 312 5TH EDITION. OPERATIONS TO BE NON-INSTRUMENT, AIRCRAFT GROUP NUMBER II.
 - PAVEMENT
 - 2.1. RUNWAY, TAXIWAY, HANGAR, RAMPED AREA AND ROADWAY PAVEMENT STRUCTURE TO BE DESIGNED BY OTHERS.
 - RETAINING WALLS
 - 3.1. RETAINING WALLS TO BE DESIGNED BY OTHERS.



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Drawing Title
DETAILS SHEET 1 OF 3

Scale
 NOT TO SCALE

File Name
 287943-ARUP-XX-XX-DR-C-XX-C009.DWG

Drawing Status
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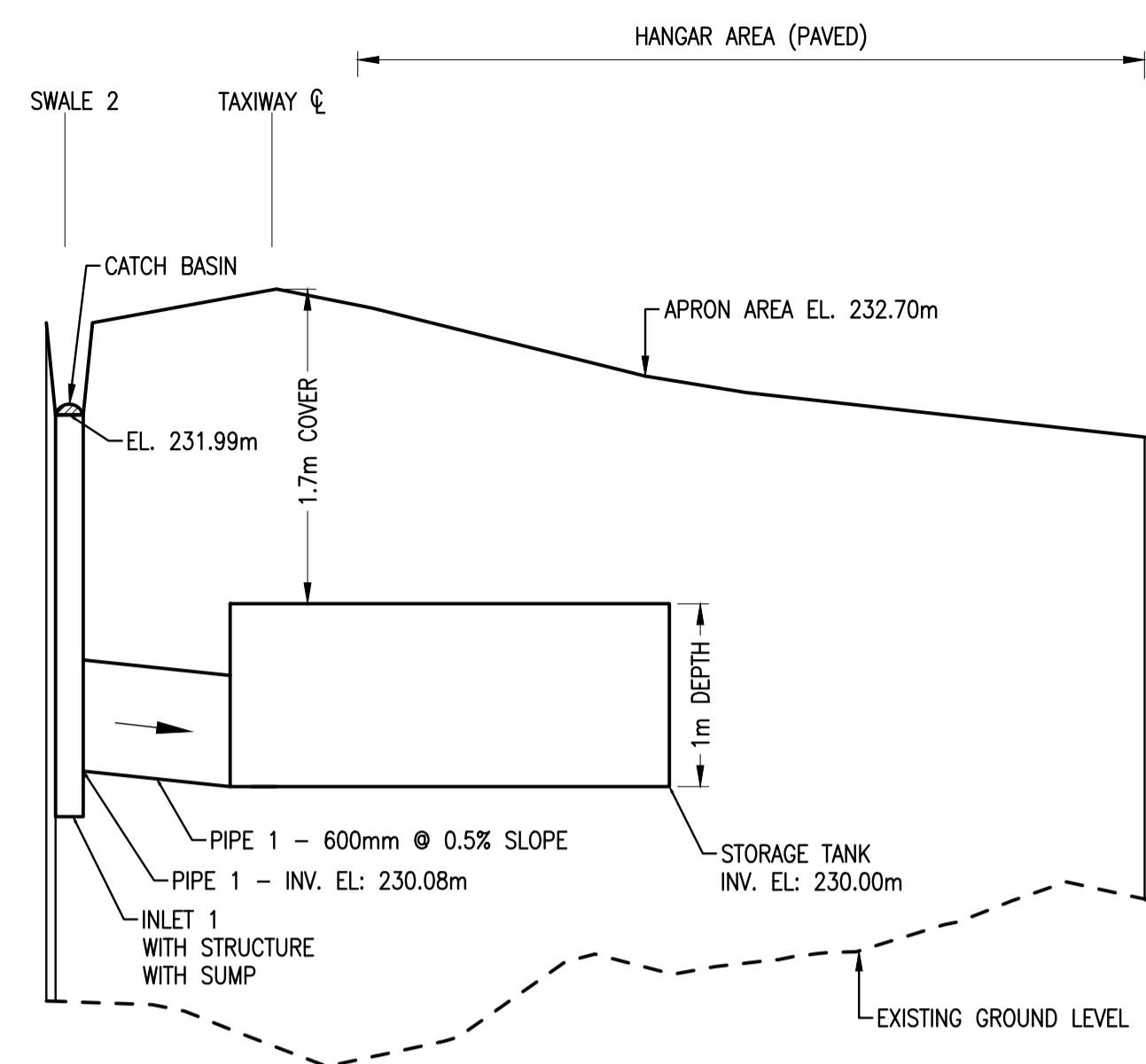
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Drawing No
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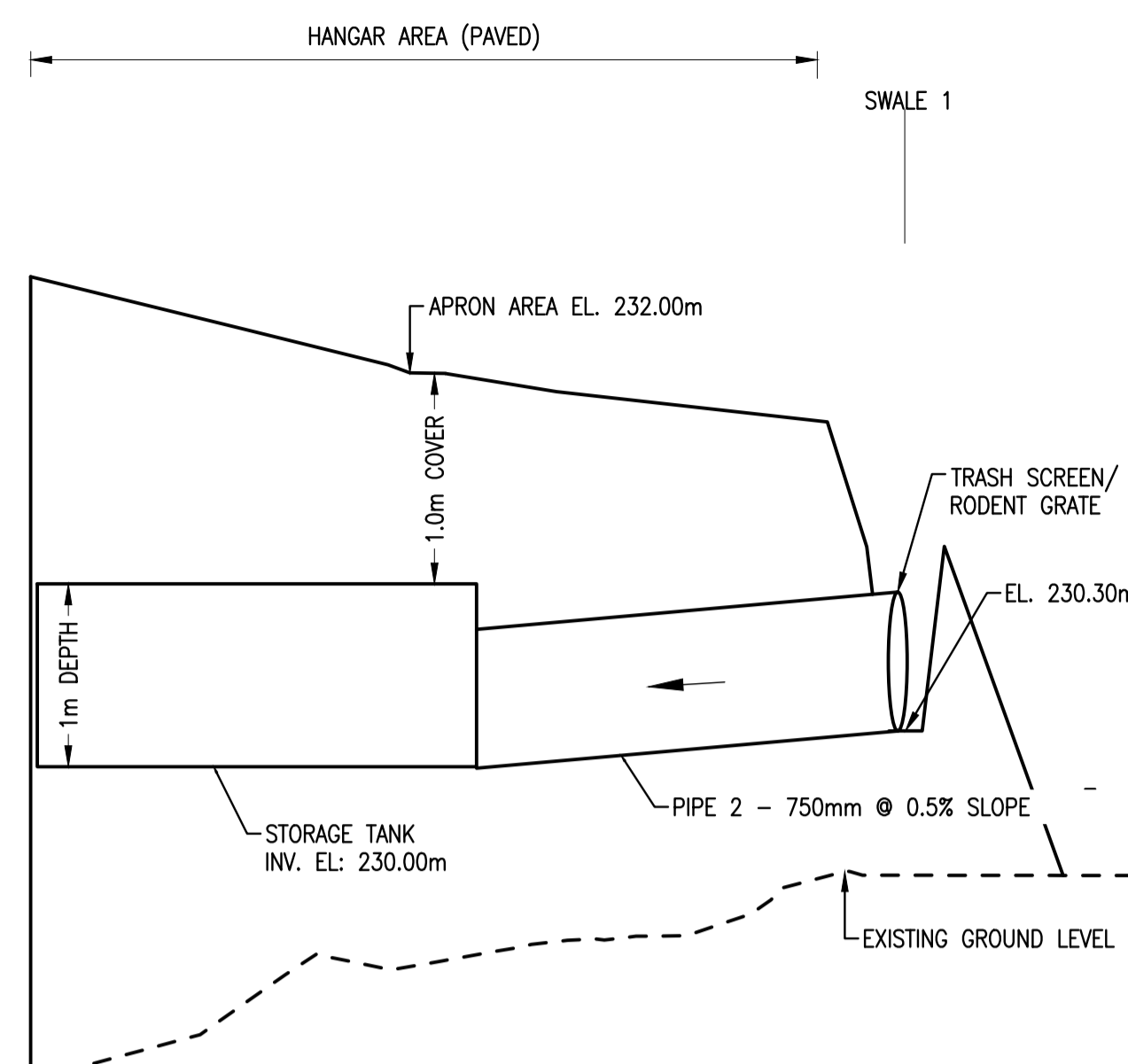
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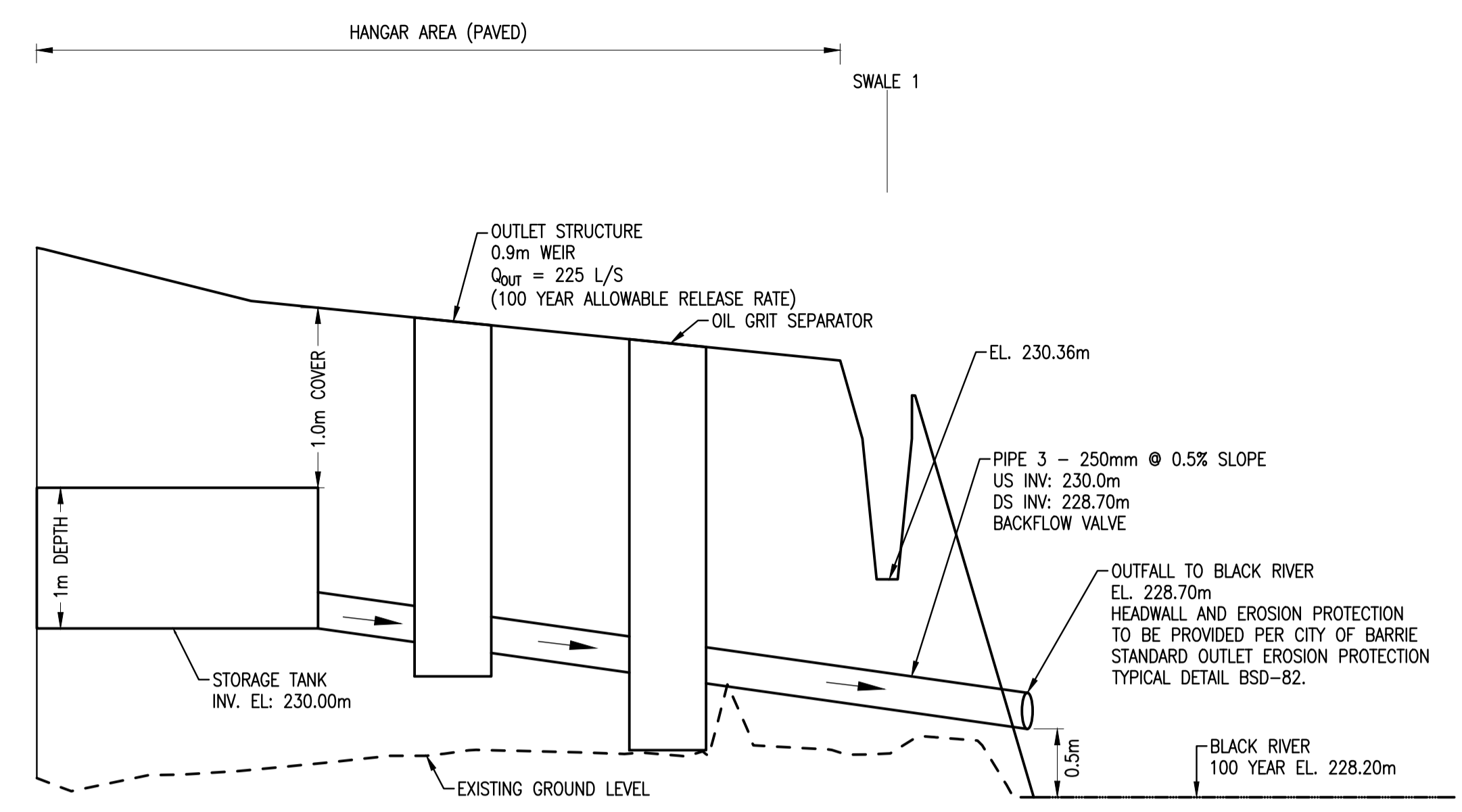
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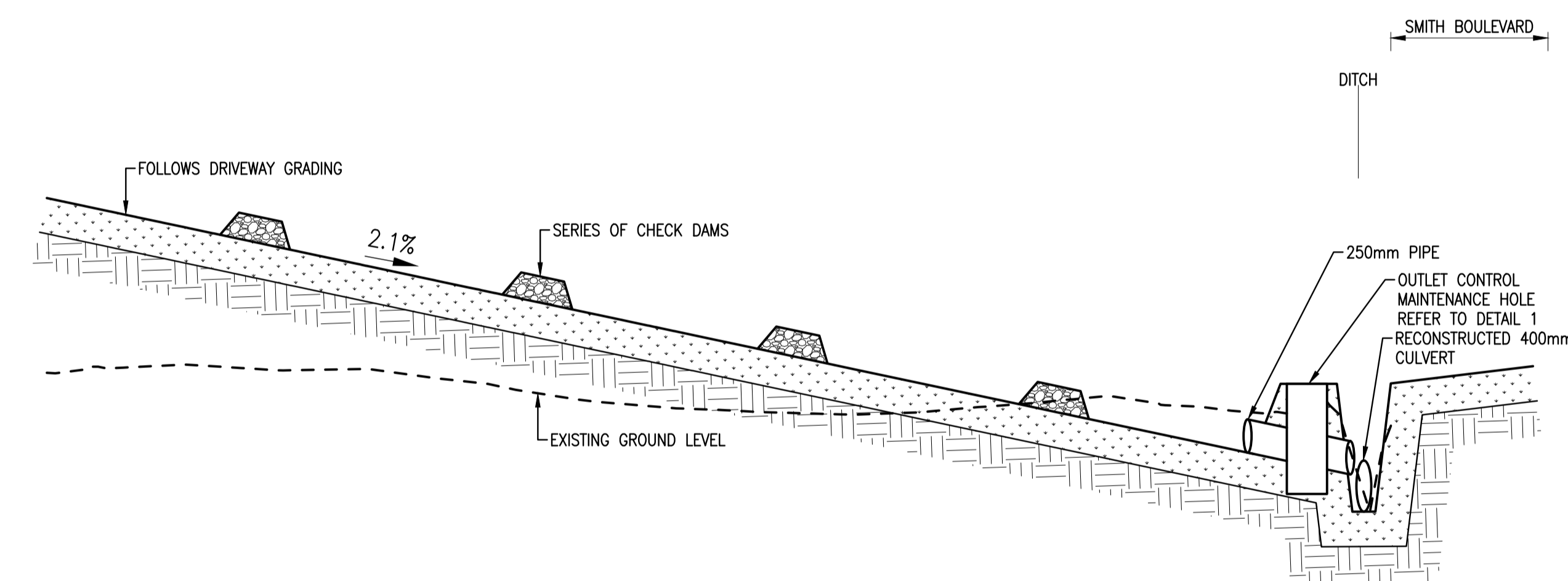
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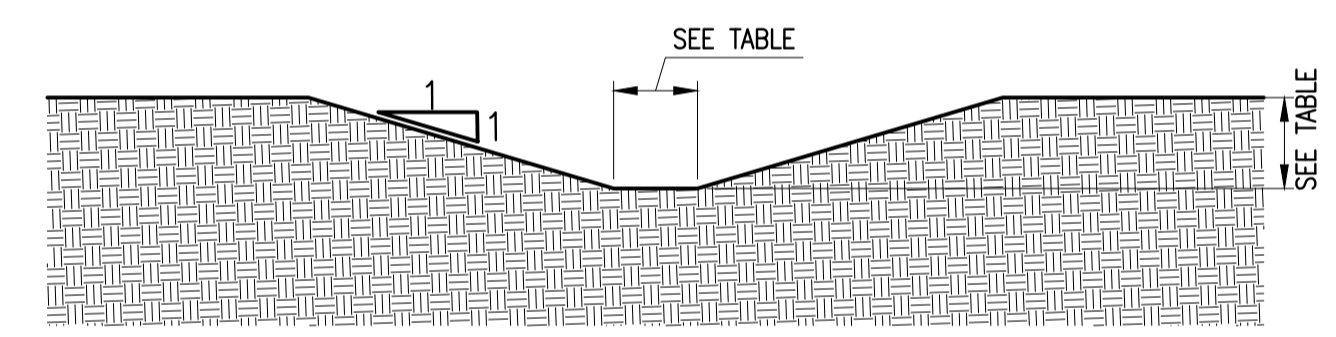
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TANK INLET 2 - NOT TO SCALE



3 SECTION
TANK OUTLET MH 1 - NOT TO SCALE



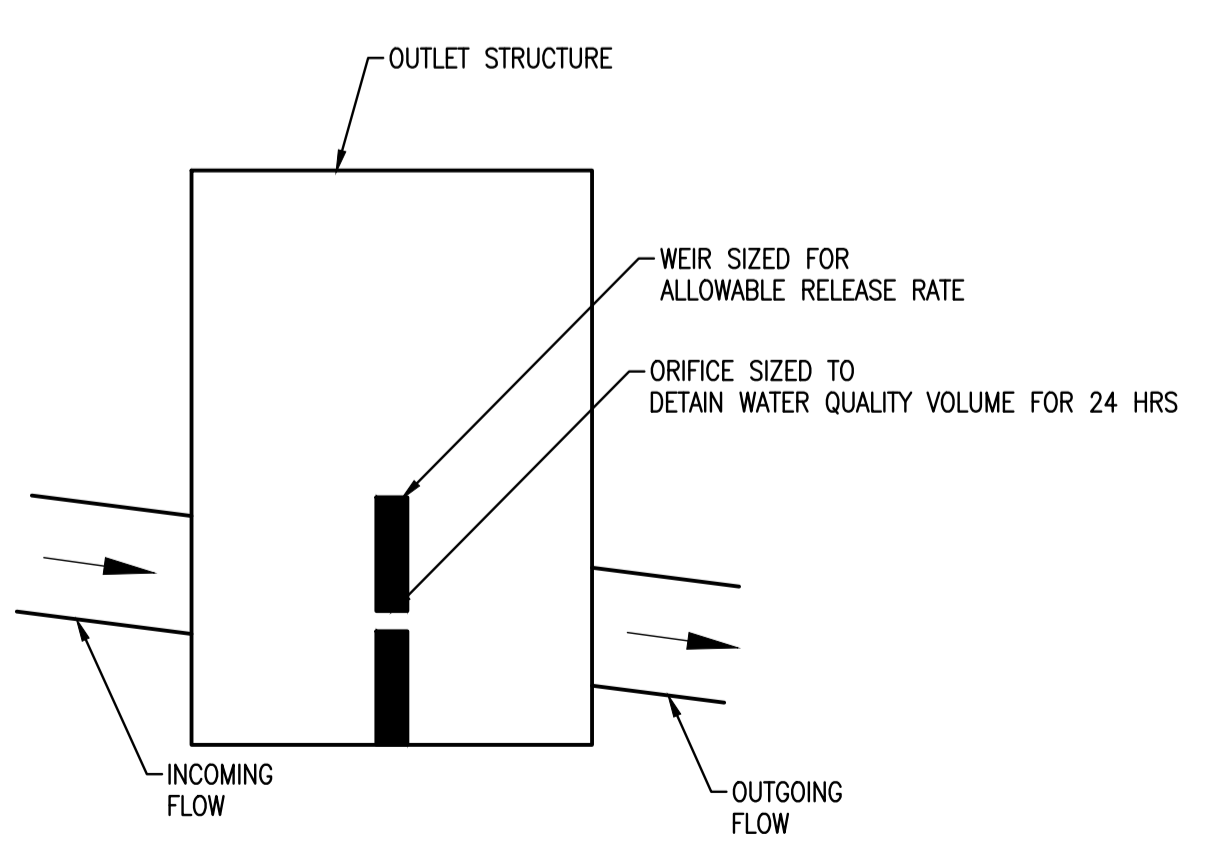
4 SWALE 3 SECTION
SECTION THROUGH OUTLET STRUCTURE - NOT TO SCALE



5 TYPICAL SWALE SECTION
NOT TO SCALE

- NOTES**
1. GRASS-LINED SWALE WITH A MINIMUM LONGITUDINAL SLOPE OF 0.1%
 2. RETURN PERIOD: 100 YEAR DESIGN STORM EVENT

SWALE DIMENSIONS			
SWALE NO.	LONG. SLOPE (%)	BOTTOM WIDTH (m)	MINIMUM DEPTH (m)
1	0.18	2.00	1.00
2	0.10	1.50	0.60
3	1.00	0.50	0.50
4	0.16	2.75	0.50
5	0.15 - ASSUMED CONSISTENT SLOPE	5.50	0.60
6	0.15 - ASSUMED CONSISTENT SLOPE	3.50	0.60



1 DETAIL
OUTLET STRUCTURE - NOT TO SCALE



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Drawing Title
DETAILS SHEET 2 OF 3

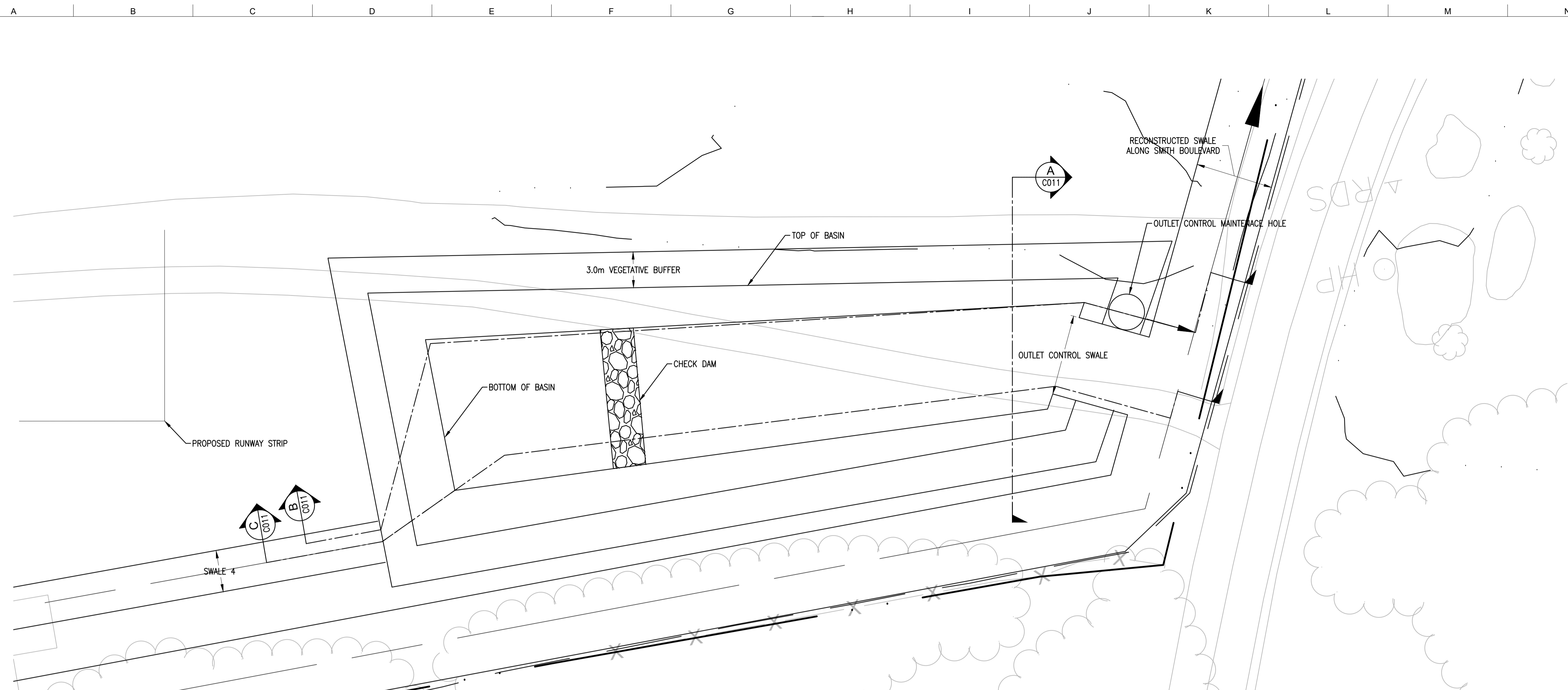
Scale
NOT TO SCALE

File Name
287943-ARUP-XX-XX-DR-C-XX-C010.DWG

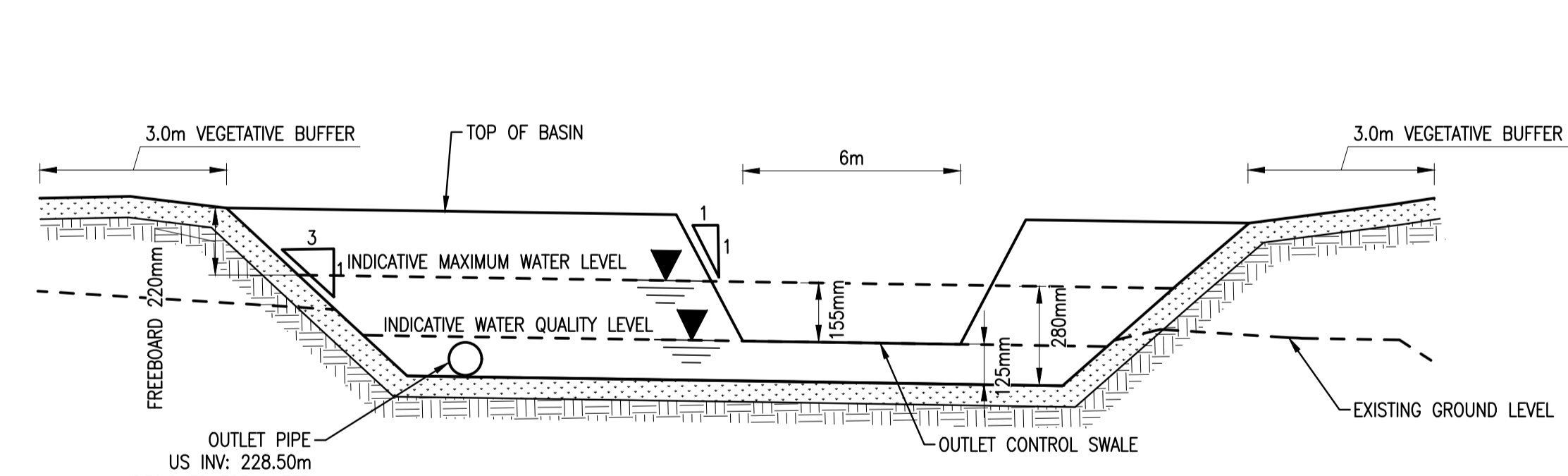
Drawing Status
FOR REVIEW

Job No	Drawing No	Issue
287943-01	C010	1

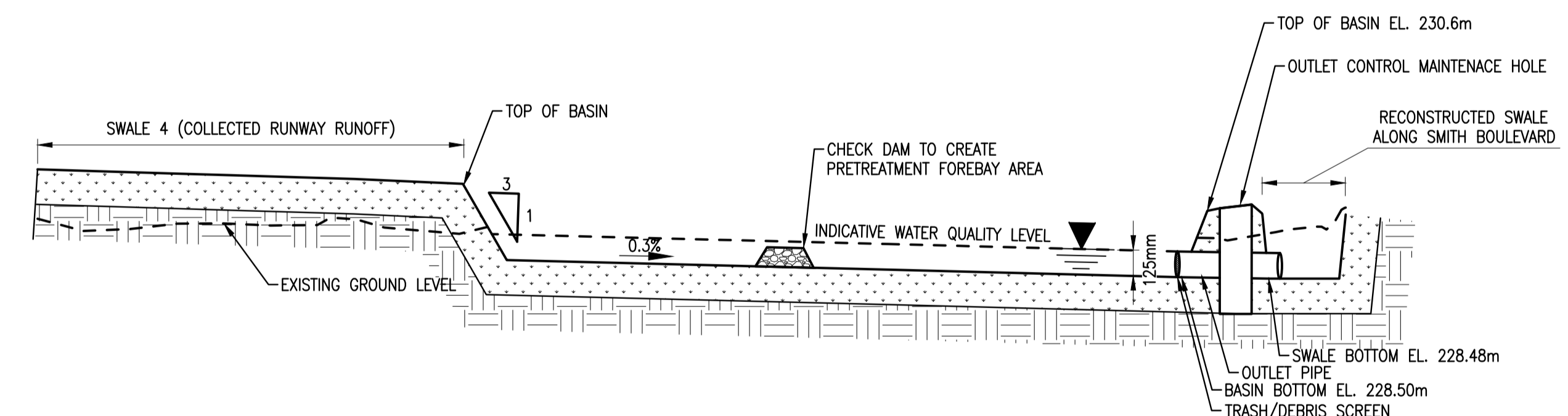
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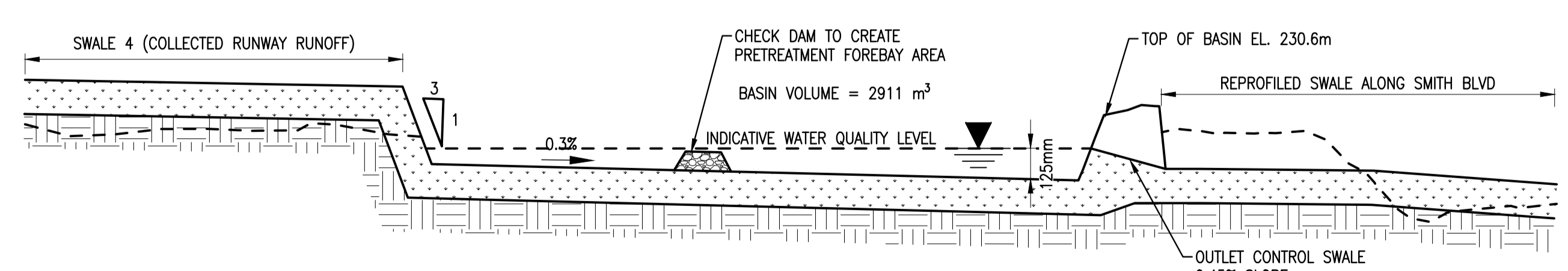
1 PLAN
SCALE HORIZ. 1:200



A LONG SECTION A
STORMWATER BASIN SECTION - NOT TO SCALE



B LONG SECTION B
THROUGH OUTLET CONTROL STRUCTURE - NOT TO SCALE



C LONG SECTION C
THROUGH OUTLET CONTROL SWALE - NOT TO SCALE



LEGEND

- — — — — PROPERTY LIMIT
- - - - - RUNWAY/TAXIWAY STRIP
- - - - - GRADING LIMIT

1	20/12/2024	MT	NK/BS	JD
FOR SAP APPROVAL				
0	07/08/24	MT	NK/BS	JD
FOR REVIEW				
Issue	Date	By	Chkd	Appd

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Client
2686570 ONTARIO INC.
o/a IPCF BALDWIN AIRPORT

Job Title
BALDWIN AIRPORT IMPROVEMENTS

Key Plan

Drawing Title
DETAILS SHEET 03 OF 03

Scale AS INDICATED

File Name 287943-ARUP-XX-XX-DR-C-XX-C011.DWG

Drawing Status
FOR REVIEW

Job No 287943-01	Drawing No C011	Issue 1
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