

How to Determine Grassing and Mulching Pay Items & Quantities

AREAS USED FOR QUANTITIES	
Area	Description
Total Area	Area within R/W to R/W. ¹
Disturbed Area	Total Area minus existing pavement being retained.
Permanent Grassing Area	Total Area minus existing pavement being retained, proposed pavement and impervious areas.
Temporary Grassing Area	50% of Permanent Grassing Area.
Sod	Acreage of final graded sod

Pay Item	Units	Pay Item Description	Application Rates				
			Permanent Grassing	Temporary Grassing	Disturbed Areas	Sod	Additional Spring Application
163-0232	AC	TEMPORARY GRASSING		0.5 x Permanent Grassing Acreage			
163-0240	TN	MULCH	2.00 TN/AC ²	2.00 TN/AC ²	10.00 TN/AC ²		
700-6910	AC	PERMANENT GRASSING	Acreage of Final Grade Grassed Areas				
700-7000	TN	AGRICULTURAL LIME	2.00 TN/AC ³				
700-8000	TN	FERTILIZER MIXED GRADE	0.20 TN/AC ⁴	0.20 TN/AC ⁴			0.10 TN/AC ⁵
700-8100	LB	FERTILIZER NITROGEN CONTENT	50 LB/AC ⁶			50 LB/AC ⁶	
700-9300	SY	SOD				Acreage of Final Grade Sodded Areas	

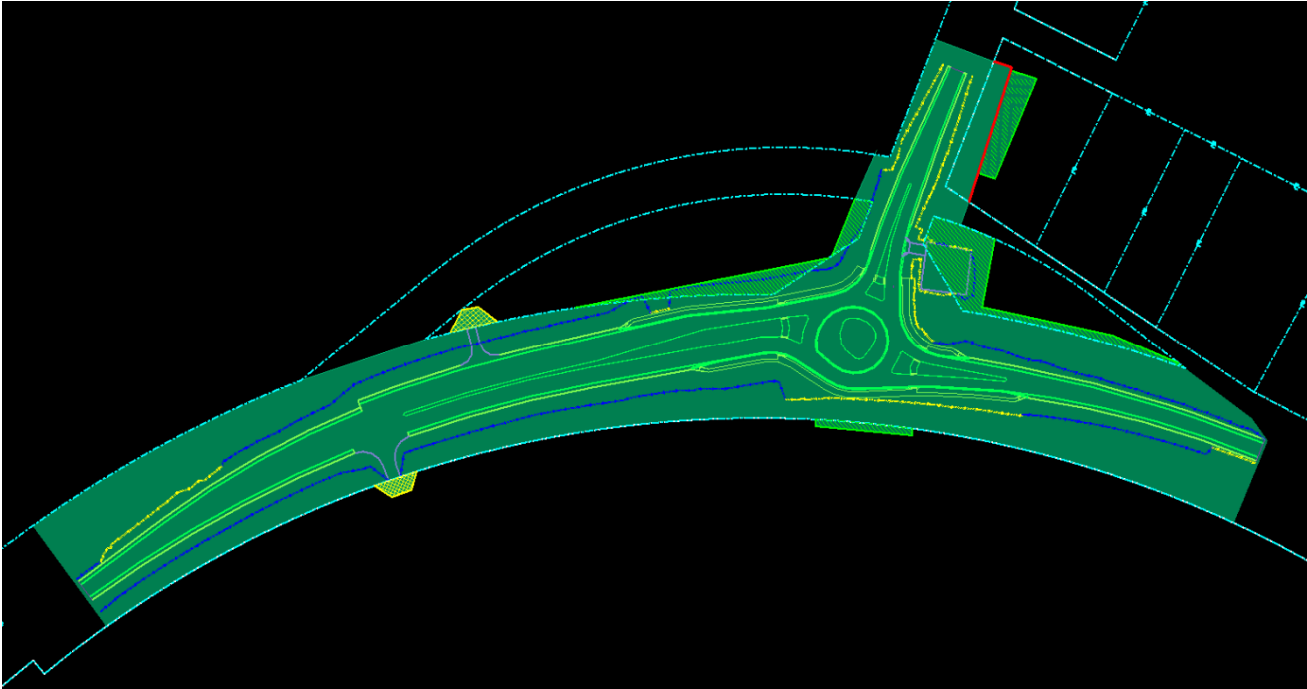
NOTES:

1. If tasked with reducing impacts, this area could be taken as the construction limits plus 10-feet. The designer will need to make applicable notes in the plans to clearly identify the limits of clearing and grubbing if the total area used is not the area within R/W to R/W.
2. Application rates for mulch was provided by the State Construction Office.
3. 2021 GDOT Standard Specifications Section 700.3.05.D.1 – Agricultural Lime spread rate should be determined by laboratory soil test. 2 TN/AC can be used for estimating purposes.
4. 2021 GDOT Standard Specifications Section 700.3.05.D.2
5. This application is intended for projects with considerable contract time length where additional applications of the mixed grade fertilizer would be warranted until final grade can be reached. Refer to the GDOT Standard Specification 700.3.07.B concerning information on additional applications of Mixed Grade Fertilizers.
6. 2021 GDOT Standard Specifications Section 700.3.05.I

Example of how to obtain areas used for grassing quantities.

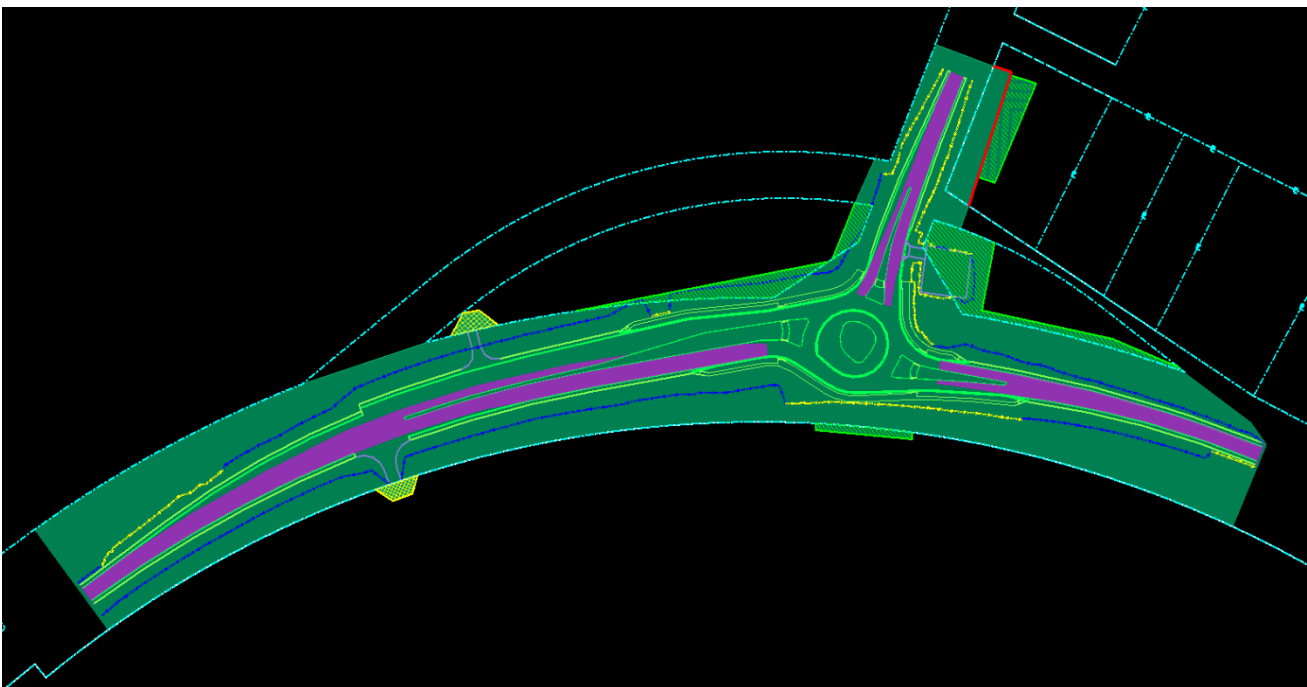
Roundabout with a proposed construction time of 30 months.

Total Area: Area within construction limits plus 10' OR r/w to r/w (green area). Total area for this project was 13.78 AC.



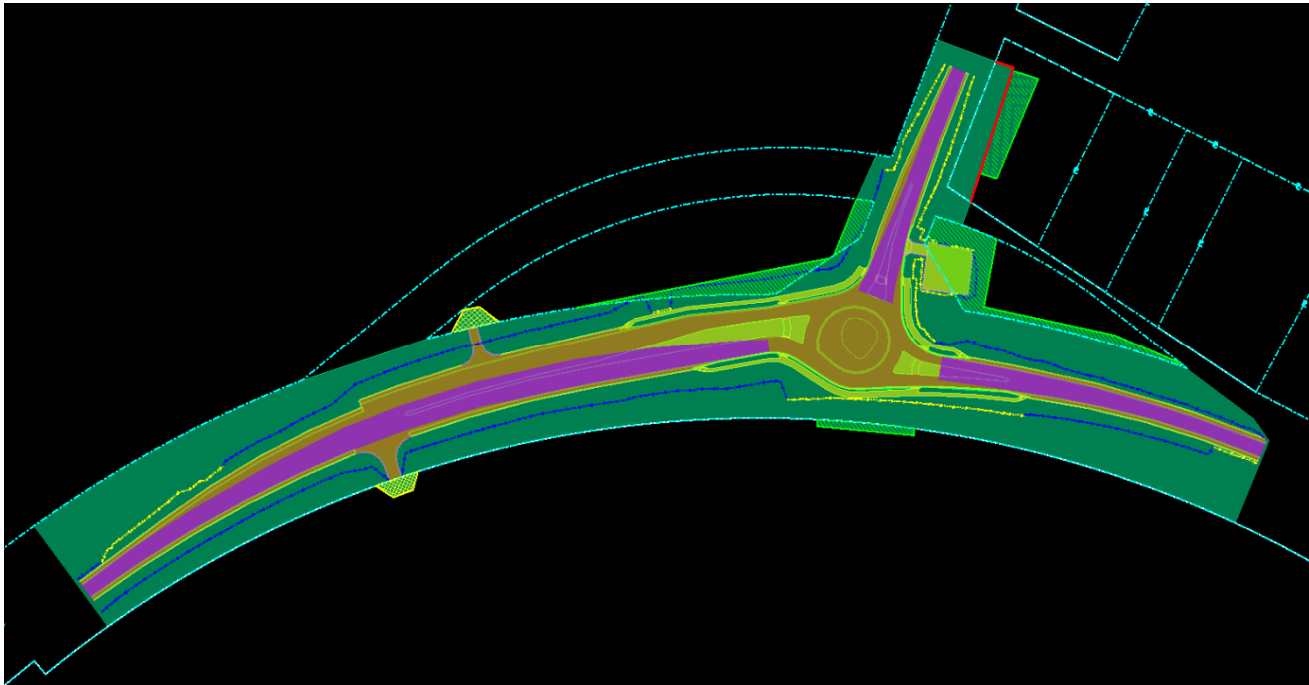
Disturbed Area: Total Area minus existing pavement being retained (magenta).

$$13.78 \text{ AC} - 1.60 \text{ AC} = 12.18 \text{ AC of disturbed area.}$$



Permanent Grassing Area: Total area minus existing pavement being retained, proposed pavement (orange) & impervious areas (yellow).

$$13.80 \text{ AC} - 1.60 \text{ AC} - 2.38 \text{ AC} = 9.80 \text{ AC of permanent grassing.}$$

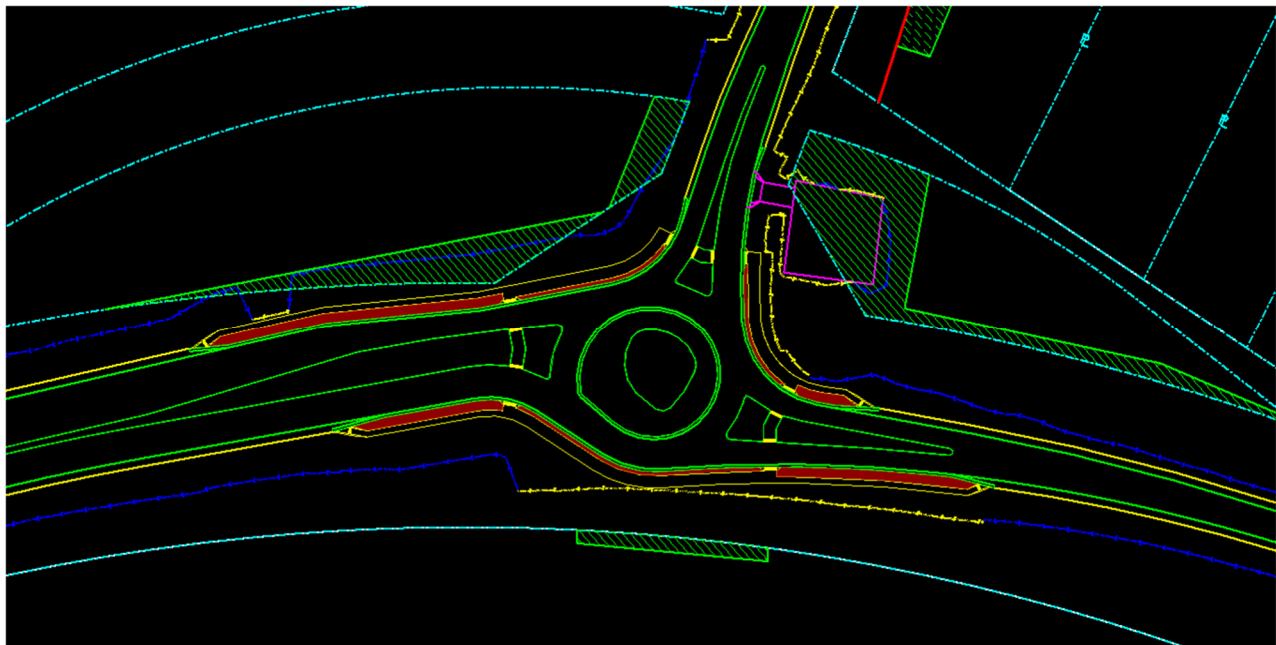


Temporary Grassing is half of the permanent grassing area.

$$9.80 \text{ AC} \times 50\% = 4.90 \text{ AC of temporary grassing.}$$

Sod area is in red below with a quantity of 645 SY. Convert area to acres for grassing calculations.

$$645 \text{ SY} \times 9 \text{ SF/SY} \div 43,560 \text{ SF/AC} = 0.13 \text{ AC of sod.}$$



Example of calculating grassing & mulch quantities.

Using the areas measured and the application rates given on the first page, you can calculate the necessary grassing items.

Area	Measured areas used for grassing quantities
Total Area	13.78 AC
Disturbed Area	12.18 AC
Permanent Grassing Area	9.80 AC
Temporary Grassing Area	4.90 AC
Sod	0.13 AC

Pay Item	Units	Pay Item Description	Permanent	Temporary	Disturbed	Sod	Additional Spring Application
163-0232	AC	TEMPORARY GRASSING		4.90 TN			
163-0240	TN	MULCH	19.60 TN	9.80 TN	121.80 TN		
700-6910	AC	PERMANENT GRASSING	9.80 AC				
700-7000	TN	AGRICULTURAL LIME	19.60 TN				
700-8000	TN	FERTILIZER MIXED GRADE	1.96 TN	0.98 TN			0.49 TN ¹
700-8100	LB	FERTILIZER NITROGEN CONTENT	490.00 LB			6.66 LB	
700-9300	SY	SOD				645 SY	

1. Since the contract time is 30 months for this project, assumed one additional spring application.