

MWS Stormwater Grading Permit Technical Review Requirements (TRR) - Version 2 - 5/23/2023

THE TRR IS TO BE INCLUDED WITH ALL TECHNICAL REVIEW SUBMITTALS, INCLUDING REVISIONS

Project Name: _____ Permit # (NS if new): _____ Date: _____

Submittal #: 1st 2nd (Fees due prior to submittal) 3rd >3 (Fees due prior to each submittal)

Introduction:
 Metro Nashville is experiencing high levels of growth and demand for permitting services. In order to provide a productive review, basic elements of the stormwater plan are necessary. The TRR represents the **minimum requirements** which must be met for Metro Water Development Services staff to perform a full plan review. Failure to meet one or more of these requirements will result in the submittal being deemed **incomplete** and returned to the design engineer. Design engineer must **fill out TRR completely Each Time** it is submitted with **updated page numbers**. A full development package is required with each submittal.

Directions:
 Review the requirements below, and include this sheet with each submittal. In the "Design Engineer" column note if the requirement is "N/A". If requirement is applicable, note the file name and page number of where the information can be located. Example: If item is on the plans, list 'Plans - page number of PDF'. Once completed, fill out the certification statement and include in the submittal.

General Requirements:	Example: Calcs - pg.1			These Columns For MWS & Contracted Reviewers Use Only			
	N/A	Plans / Calcs / Project Docs - Page #		Yes	No	N/A	MWS & Contracted Reviewer Comments
1 One Water Application and Fee Sheet shall be provided and completely filled out.							
2 Plans and calculations shall be PE stamped, signed, and dated by a TN registered PE Landscape plans shall be stamped by TN registered LA. - 2nd SUBMITTAL							
3 Comment response letter or response mark-up - RESUBMITTALS ONLY							
4 Provide PE signed revision letter stating what specifically has changed and where (list sheet numbers in plans and calculations) - REVISIONS ONLY							
5 Provide a USGS Soils Map or alternative classification certified by a Soil Scientist/Geotech.							
6 Provide accurate Geotechnical test results for bedrock & groundwater with the following items: a. Location Map (must be overlaid onto site layout plan) b. Elevations (must report depths as NAVD88 elevations) c. Table of Results							
7 Provide accurate infiltration test results with the following items: a. Location Map (must be overlaid onto site layout plan) b. Elevations (must report depths as NAVD88 elevations) c. Table of Results							
8 Decision letter shall be included for sites granted an LID waiver.							
9 Decision letter shall be included for sites granted a SWMC variance. - 2nd SUBMITTAL							
10 CSEP Directive letter shall be included for projects within the CSS.							
11 Provide an Aquatic Resources Alternation Permit (ARAP) tracking number as required.							
Plan Requirements:	Example: Calcs - pg.1			These Columns For MWS & Contracted Reviewers Use Only			
	N/A	Plans / Calcs / Project Docs - Page #		Yes	No	N/A	MWS & Contracted Reviewer Comments
12 Cover sheets shall be provided with the following items: a. Vicinity map with all adjacent streets shown & labeled with North arrow b. Parcel IDs c. Table of Contents d. Council Person & District e. FEMA Map, Panel Number, Date, & Flood Zone f. Total site acreage with total disturbed area							
13 All applicable plan sheets shall be to scale with a graphical scale bar and North arrow (vertical and horizontal).							
14 Show the horizontal datum (NAD83) and vertical datum (NAVD88) reference on the plans.							
15 Clearly show & label: existing and proposed property lines, easements (recorded / prescriptive), and right-of-way limits.							
16 Existing and proposed contours must be shown at 2 foot intervals (maximum).							
17 Provide appropriate easement documentation for offsite grading. - (2nd submittal)							
18 Existing contours shall extend through adjacent right(s)-of-way or 25 feet outward from the property limits where roads are not present.							
19 Provide an existing conditions / demo plan indicating existing features, tree lines, and infrastructure to be removed, abandoned, or remain.							
20 Sinkhole limits shall be shown appropriately, and applicable permit(s) shall be applied for.							
21 For sites within the floodplain / floodway, show and provide the following: a. 2-Year Elevation (in the plan & profile) b. 100-Year Elevation (in the plan & profile) c. Cut/Fill Cross-section(s) (with a minimum of 3 stations every 50' or at changes in topography) d. Cut/Fill Calculations (average end area)							
22 Buffers shall be shown correctly or Hydrologic Determination (HD) approved by TDEC.							

Plan Requirements (continued):		Example: Calcs - pg.1		These Columns For MWS & Contracted Reviewers Use Only			
		N/A	Plans / Calcs / Project Docs - Page #	Yes	No	N/A	MWS & Contracted Reviewer Comments
23	For public storm infrastructure, provide a profile that includes the following:						
	a. Horizontal & vertical scales						
	b. Existing & proposed grades						
	c. Location of all utility crossings with clearances called out						
	d. All structures / appurtenances uniquely labeled						
	e. All structures / appurtenances properly stationed						
	f. Top of casting (TC) elevations listed						
	g. Invert in and out elevations listed						
	h. Existing upstream and downstream structures / appurtenances shown						
	i. Pipe segments labeled with segment length, size, material, and slope						
24	Provide accurate Pipe and Structure tables for proposed drainage features and appurtenances with the following:						
	a. Size & Length (pipe)						
	b. Material (pipe)						
	c. Slope (pipe)						
	d. Elevations: invert & top of casting (structures)						
	e. NDOT / TDOT Standard Drawing Numbers (structures)						
	f. Unique Labels (structures)						
25	Provide standard details that include the following for EPSC, SCM, and/or public infrastructure:						
	a. Callout detail locations with pg. number(s) & detail number(s)						
	b. MWS GIP details with As-Built Tables						
	c. Standard notes						
26	Provide initial, intermediate (if > 1 Acre), and final EPSC sheets included with NOC note.						
Stormwater Calculations: Water Quality, Detention, and Infrastructure:		Example: Calcs - pg.1		These Columns For MWS & Contracted Reviewers Use Only			
N/A	GP / GPCalcs / Project Docs - Page #	Yes	No	N/A	MWS & Contracted Reviewer Comments		
27	Provide a project narrative that includes a summary of pre and post flows.						
28	Provide accurate pre & post water quality maps, shall be color coded & include the following:						
	a. Area Amounts						
	b. Curve Numbers						
	c. Surface Conditions & Soil Types						
29	Provide accurate pre & post LID spread sheets (latest edition).						
30	Provide correct SCM sizing calculations.						
31	SCM shall conform to MSWMM required specifications.						
32	Provide accurate pre & post drainage area maps (include scale no greater than 1" = 60') that include the following:						
	a. Area Amounts						
	b. Corresponding Cover & Soil Types						
	c. Flow Paths w/ Accurate Time of Concentrations						
	d. Curve Numbers						
	e. Uniquely Labeled Outfalls						
33	Provide correct pre & post peak flow analysis using the SCS Type II method for all design storms.						
34	Provide accurate infrastructure / inlet maps (including downstream) that contain the following:						
	a. Area Amounts						
	b. c-factors						
	c. Accurate Time of Concentrations						
	f. Uniquely Labeled Outfalls						
35	Provide accurate calculations for drainage conveyance that includes/meets the following requirements:						
	a. Pipe Conveyance & Ditch Calculations						
	b. Spread Calculations For ROW Improvements						
	c. Model Downstream As A System						
	d. Graphical HGLS						
36	Provide accurate EPSC calculations (routing calculations required for traps & basins)						

Engineer's Statement:
 In addition to the items listed on the Transmittal Form, I hereby certify that this submittal provides all items listed on the Technical Review Requirements and the location of these items are correctly noted.

Reviewed by Engineer: _____ Checked by Engineer: _____

TO BE COMPLETED BY MWS DS: A technical review of the subject project has been performed by MWS DS. This submittal has been deemed: _____ TR# _____

MWS Reviewer: _____ Email: _____