

REVISION DATE 12/29/16

Sample Plan

IMPACT ATTENUATOR PLAN AND DETAILS ----- NARRATIVE

References:

- Design Scene: Chapter 14 - Guardrail and Barriers
- Road Design Manual: Chapter 10-8
- Spec. Book: 2554
- Miscellaneous: Metro District's Electronic Detail Library
Standards Office's Electronic Detail Library
AASHTO's Roadside Design Guide
<http://www.dot.state.mn.us/products/> Approved Products List

General Information:

When selecting an attenuator system, consideration should be given to location, appearance, maintenance, potential hits, cost, etc.

If the designer wishes to provide for a permanent proprietary impact attenuator, at least three acceptable options from different manufacturers must be specified in the plan, unless there is a Public Interest Finding which would dictate otherwise.

If a concrete base is required for installation of an attenuator, the designer should note that it is incidental.

Specific impact attenuator details are not generally required for proprietary items. It is the Contractor's responsibility to obtain those details, including concrete base and grading.

Impact attenuators are normally shown with the traffic barriers.

Impact attenuators and traffic barriers can be shown on the Construction Plan sheets.

Cross reference the impact attenuators to the details sheet. Include impact attenuators on the traffic barrier tabulation sheet.

Send a copy of the plan sheets to the Maintenance Operations Engineer for use in updating Metro's inventory.

Indicate the test level and require steel posts for the impact attenuator. Also indicate whether it's a permanent or temporary installation.

The designer should consider grading requirements for the installation of the attenuator and the approach to it.

Specify a SMART Cushion attenuator for hazards 2' or narrower. If permanent impact attenuators for the project are different test levels, each attenuator will need a separate pay item.

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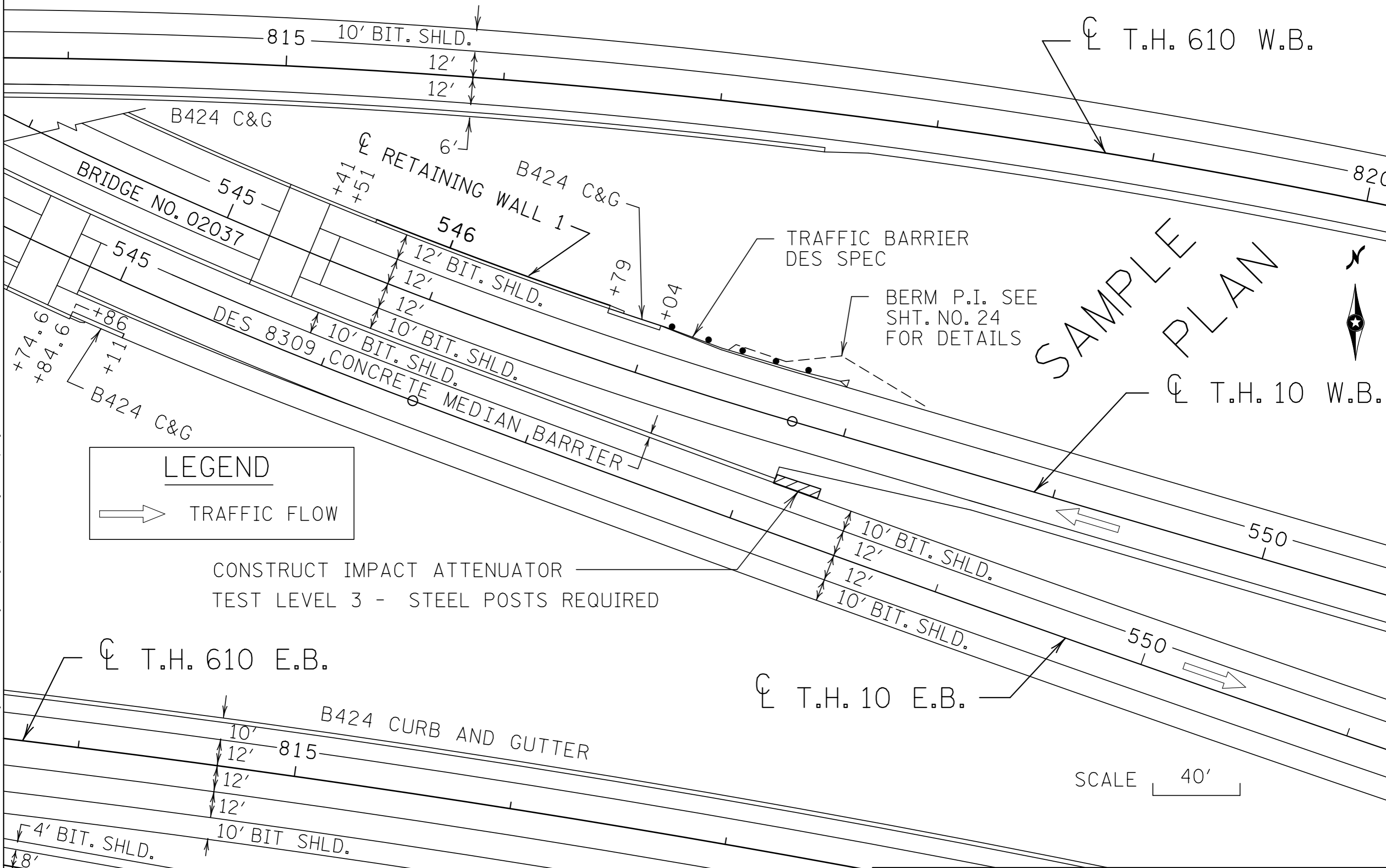
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IMPACT ATTENUATOR PLAN AND DETAILS ----- CHECKLIST

- ___ 1. Impact Attenuator type labeled
- ___ 2. Roadways labeled
- ___ 3. North Arrow
- ___ 4. Bar Scale
- ___ 5. Label 500' Station Increments
- ___ 6. See Construction Plan Sheet, if applicable
- ___ 7. Specify Test Level and Steel Posts for Attenuator
- ___ 8. Cross references to other sheets (as applicable)
- ___ 9. Drawn by: and Checked by: Initials and Engineer's signature

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DISTRICT #: METRO
PLOT NAME: spdfenplan
FILENAME: Projects\DM_R0S\Non_Proj\Design\SamplePlan\Eng\Tsh\attenuplan.dgn



SAMPLE PLAN

LEGEND

→ TRAFFIC FLOW

CONSTRUCT IMPACT ATTENUATOR
TEST LEVEL 3 - STEEL POSTS REQUIRED

IMPACT ATTENUATOR PLAN AND DETAILS