

Interoffice Memo

DATE: July 31st, 2020 FROM: Meg B. Pirkle, P.E., Chief Engineer

TO: Divisions of Engineering, Permits/Operations, Local Grants/Field Districts, Construction, TIA and P3/Program Delivery and Maintenance

SUBJECT: GDOT Cast-in-Place Concrete Barrier Construction Standards

The GDOT MASH LRFD Single Slope Concrete Barriers (median/side) and Parapet Retaining Walls have completed the Federal Highway Administration (FHWA) approval process and are now available as GDOT Standards on the <u>ROADS Page</u>.

The following GDOT Construction Standards have been published:

- GDOT Standard: 4941A (Concrete Median Barrier Types S1, S2, S3)
- GDOT Standard: 4941B (Concrete Median Barrier Types S-3A, S-3B)
- GDOT Standard: 4949B (Concrete Side Barrier Type 2S)
- GDOT Standard: 4949C (Concrete Side Barrier Type 6S)
- GDOT Standard: 4949D (Parapet Retaining Wall)

These standards supersede the special details implemented with the January 2018 letting. Effective with the <u>February 2021 Letting</u>, the Georgia Department of Transportation requires that the above noted GDOT Construction Standards are to be used on state routes in Georgia. These standards may be used before the February 2021 letting if the Engineer of Record elects to do so.

Special Detail 4949A (Type 7S Side Barrier) is still considered a "Special Detail" and is not a Standard. It is available and may be requested from the following address: <u>StandardsAndDetails@dot.ga.gov</u>

As a reminder, "Jersey Barriers" will no longer be accepted for new installations on projects let after December 31, 2017. The "Jersey Barrier" Standard(s) for concrete median barrier and concrete side barrier (GA STD 4940 and 4948A-C) are available for maintenance and repairs only.

As with all Standards, variances will be considered on a project by project basis.

This policy may affect other GDOT published documents on the subject. Therefore, I am directing all Divisions to review and, if necessary, modify or remove any existing policies or documents that may be inconsistent with this policy.

MBP:RCR:FBF:GMP:HAC

cc: Federal Highway Administration, Georgia Division American Council of Engineering Companies (ACEC)/Georgia Chapter Georgia Highway Contractors Association (GHCA)



SUMMARY OF NEW GEORGIA CONSTRUCTION STANDARDS

July 20, 2020

NEW STANDARDS: Concrete Median Barrier

GDOT Construction Standard 4941A (Concrete Median Barrier Types S1, S2, S3) GDOT Construction Standard 4941B (Concrete Median Barrier Types S-3A, S-3B)

- The 4941A Concrete Median Barrier Types S1, S2, S3 and the 4941B Concrete Median Barrier Types S-3A and S-3B meet MASH (Manual for Assessing Safety Hardware) and LRFD (Load and Resistance Factor Design) requirements.
- Reinforcement is (Grade 60) and Class of Concrete is AA (3500 PSI).
- The barrier details and table values reflect LRFD and MASH dimensions for Structural and Height requirements to ensure Structural Adequacy.
- Tables reflect "Max Factored Bearing Pressure (KSF)" values.
- A concrete glare screen detail is provided for use when applicable.

NEW STANDARDS: Concrete Side Barrier

GDOT Construction Standard 4949B (Concrete Side Barrier Type 2S) GDOT Construction Standard 4949C (Concrete Barrier Type 6S)

- The 4949B Concrete Side Barrier Type 2S and the 4949C Concrete Barrier Type 6S meet MASH (Manual for Assessing Safety Hardware) and LRFD (Load and Resistance Factor Design) requirements.
- Reinforcement is (Grade 60) and Class of Concrete is AA (3500 PSI).
- Table values reflect LRFD and MASH dimensions for Structural and Height requirements to ensure Structural Adequacy.
- Table reflects "Max Factored Bearing Pressure (KSF)" values.



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NEW STANDARD: Parapet Retaining Wall

Note: The above noted Standard is currently a Construction Detail named PW-1. This Detail will be replaced with the <u>4949D Construction Standard</u>. The original PW-1 is for use as Maintenance and Repairs only. In the interim – a Special Detail named PRW-1 is used until the Standard 4949D is approved.

GDOT Construction Standard 4949D (Parapet Retaining Wall)*

- The 4949D Parapet Retaining Wall meets MASH (Manual for Assessing Safety Hardware) and LRFD (Load and Resistance Factor Design) requirements.
- Reinforcement is (Grade 60) and Class of Concrete is A (3000 PSI).
- Table values reflect LRFD and MASH dimensions for Structural and Height requirements to ensure Structural Adequacy.
- The column for max factored bearing pressure and associated values were added.
- The footing dimensions for the P1 sections are modified so that the toe is a more logical length compared to the next taller section.
- The sidewalk slope is 2%.
- Revised General Notes Section.
- Added Drainage Details.
- Revised End of Parapet and Guardrail Attachment Details.

* Please note: The Single Pipe Aluminum Handrail and 2" Steel Handrail have been eliminated, leaving only the 42" parapet available for use.