



U.S. Department
of Transportation

GARVEE Guidance: Implementing 23 U.S.C 122; Payments to States for Bond and Other Debt Instrument Financing

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OFFICE OF INNOVATIVE PROGRAM DELIVERY



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1 Purpose of This Document

The Federal Highway Administration (FHWA) Center for Innovative Finance Support (CIFS), part of the Office of Innovative Program Delivery (OIPD), provides guidance and technical assistance to the States and FHWA Division Offices for the administration of the Grant Anticipation Revenue Vehicle (GARVEE) Program. This guidance document, updated in 2018, provides a summary of stewardship practices for managing the GARVEE Program and summarizes legislative requirements. The document also includes recommendations based on previous GARVEE Guidance and best practices identified by field practitioners in FHWA-sponsored roundtable discussions held in 2017.

Copies of this document are available for download at the following URL: https://www.fhwa.dot.gov/ipd/finance/resources/federal_debt/

This guidance incorporates the following significant changes and additions to the previous GARVEE Guidance, published in 2014:

- ▶ New procedures for entering new GARVEE funded projects in FMIS
- ▶ New guidance on reconciling debt service payments in FMIS
- ▶ Updated resource links, including the user manual for the GARVEE database
- ▶ New guidance on the treatment of bond premiums
- ▶ Inclusion of best practices identified by field practitioners

Questions regarding the information in this document should be directed to:

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The Center for Innovative Finance Support will evaluate and update this guidance to incorporate new best practices and lessons learned. We encourage, therefore, the users of this document to provide constructive feedback to the program manager listed above.

2 Introduction to GARVEEs

2.1 Statutory Authority

United States Code, title 23, section 122 (23 U.S.C. 122), “Reimbursements to States for Bond and Other Debt Instrument Financing Costs,” was revised by the National Highway System Designation Act of 1995 (NHS Act), section 311, to expand the eligibility of debt-related costs for Federal reimbursement. The NHS Act also revised the definition of “construction” in 23 U.S.C. 101, to include bond-related costs, including principal and interest payments, issuance costs, insurance, and other costs incidental to the sale of eligible financing instruments. This expanded program is referred to as the GARVEE Program.

2.2 “GARVEE” Definition

A GARVEE¹ is a bond, note, certificate, mortgage, lease, bank loan (including a State Infrastructure Bank loan), private placement, or other debt financing instrument issued by a State, a political subdivision of a State, or a public authority, the proceeds of which are used to fund a project eligible for assistance under title 23, U.S.C.

For purposes of this document, the term “bond” is used generically to mean an eligible debt financing instrument.

The term “Indirect GARVEE” has been adopted by the public finance community to describe municipal bonds backed by FHWA reimbursements for standard, pay-as-you-go Federal-aid projects (rather than for an eligible debt financing instrument). This guidance does not address such bonds, which do not require any special treatment by FHWA as Federal reimbursements owed to the State are State revenues.

2.3 “GARVEE Project” Definition

A “GARVEE project” is a Federal-aid project subject to 23 U.S.C. 122, where the State or local government requests that Federal-aid highway funds participate in debt-related costs as a ‘cost of construction’ with Federal reimbursements occurring when the debt-related costs are incurred, in lieu of reimbursements on a progress basis as construction costs are incurred.

Debt-related costs include payment of principal and interest, issuance costs, and other eligible costs recognized under section 122. The definition above clarifies that a GARVEE project is a Federal-aid construction project eligible under title 23, U.S.C. that is financed in whole or in part by a bond or another credit instrument. The bond issue itself is not the project, but is a finance source for an eligible Federal-aid project or projects. In order to ensure eligibility of Federal-aid reimbursements for debt-related costs, Federal-aid recipients must obtain an FHWA Division Administrator’s written approval *prior to* the incurrence of these debt-related costs. Such treatment is consistent with 23 CFR 1.9(a) which states, in part, “Federal funds shall not be paid on account of any cost incurred prior to authorization of the Administrator...”.

¹ Federal statute and regulation do not contain or define the term “Grant Anticipation Revenue Vehicle” or its acronym “GARVEE”. FHWA created the term to describe debt instruments used to finance certain transportation projects as defined in 23 U.S.C. 122.

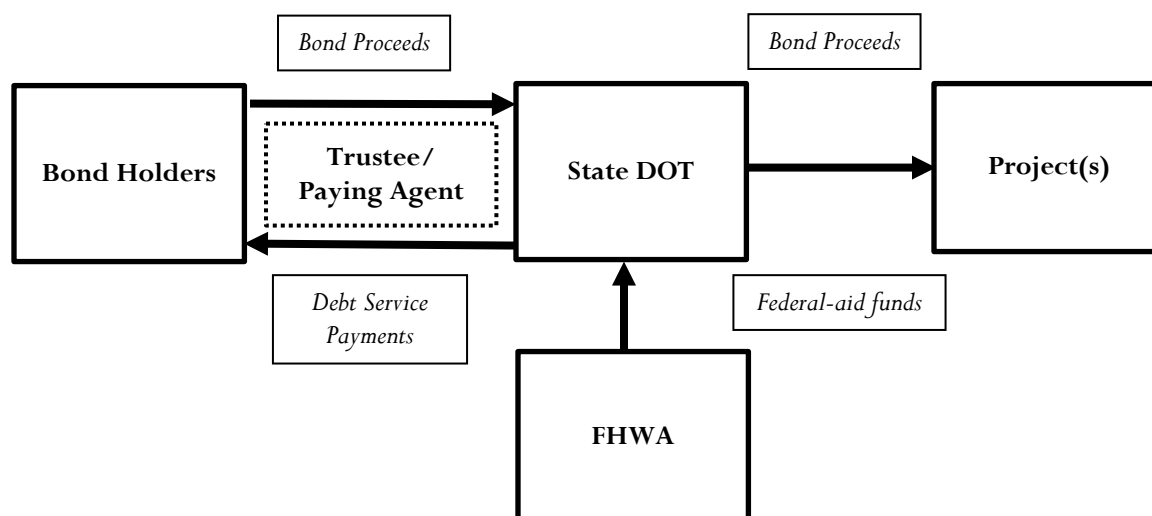


2.4 How GARVEEs Work

A GARVEE is a debt-financing instrument (commonly a ‘bond’) authorized to receive Federal reimbursement of debt service and related financing costs. Except for the reimbursement process described in 23 U.S.C. 122(c), projects funded with the proceeds of a GARVEE bond are subject to the same requirements as other Federal-aid projects. Instead of reimbursing construction costs as they are incurred, the costs financed by the GARVEE bonds are reimbursed when debt service is due. These projects may allow for a more effective use of obligation authority by authorizing the project as advance construction (AC) (see section 4.6). The AC amount is then partially converted to obligated Federal-aid funds to coincide with the debt service payments. (Partial conversions refer to the practice of converting AC projects in stages, in lieu of a single conversion, so that the amounts obligated and reimbursed on the project may coincide with the fiscal year in which the funds are needed.)

The following chart illustrates a GARVEE financing. The proceeds from the GARVEE bonds are used to pay project costs as the construction costs are incurred. Rather than seek reimbursement on a progress basis as construction costs are incurred, the State Department of Transportation (DOT) will bill FHWA for the Federal share of debt service payments over the term of the bonds. While the bond proceeds and the debt service payments may be administered by an agent other than the State DOT, both the bond proceeds and the Federal funds that are committed to reimburse debt service generally flow through the State DOT.

Figure 1. Illustration of GARVEE Financing



Appendix A includes project illustrations providing more detail as to how GARVEE projects are administered.

2.5 Benefits of GARVEEs

GARVEE bonds, like other municipal bonds issued by a public agency, generate up-front capital for highway projects at generally tax-exempt interest rates, enabling a State to construct a project earlier than if the State or local government was required to rely upon pay-as-you-go grant resources or State revenues. Unlike traditional municipal bonds, however, the interest costs and other bond-related costs of a GARVEE bond may be eligible for Federal reimbursement as a cost of construction, which for some States has provided expanded access to the capital markets. By financing Federal-aid highway construction using bonds, the State can distribute the cost of a project over a period of time that more closely relates to the useful life of the facility, rather than incur the up-front cost within the construction period.



While the projects financed with GARVEE proceeds incur interest costs and other bond-related costs, these costs may be offset by lower construction costs due to the impact of inflation or by avoiding the additional costs associated with continued deterioration of a facility that requires reconstruction. Perhaps most important is that earlier construction advances the project's economic, congestion mitigation, and safety benefits to the public.

2.6 How GARVEEs Are Used

Candidate projects for GARVEE bonds are typically large projects (or programs of projects) that have the following characteristics:

- ▶ The cost of delaying the project outweighs the cost of financing.
- ▶ Other borrowing approaches may not be feasible or are limited in capacity.
- ▶ The project does not have access to a revenue stream, and other forms of repayment are not feasible.
- ▶ The sponsors are willing to reserve a portion of future year Federal-aid highway funds to satisfy debt service requirements.

GARVEEs may be an attractive financing mechanism to bridge funding gaps and to accelerate construction of major projects.



3 General Provisions Governing GARVEE Use

3.1 Not a Federal Guarantee

The eligibility of a GARVEE bond's debt service costs for reimbursement with future Federal-aid funds, to the extent such funding may be available, does not constitute a commitment, guarantee, or other obligation by the United States to provide for payment of principal or interest, or create any right of a third party against the U.S. Government for payment (23 U.S.C. 122(e)). GARVEE issuers should seek the expert advice of bond counsel regarding the tax status of these debt instruments. An additional best practice is to include a statement in the bond documents that the GARVEE bond is not guaranteed by the Federal Government.

3.2 Treasury Offset Program

Under the Treasury Offset Program (Code of Federal Regulations, title 31, part 285.5 (31 CFR 285.5)), the U.S. Treasury may withhold part or all of a debtor's Federal payment to satisfy the debtor's delinquent debt owed to the U.S. Government. While transportation funds are rarely affected by offsets, it is possible for an FHWA payment to be intercepted by the U.S. Treasury to satisfy a delinquent debt of the State or territory owed on another Federal program. This could be problematic for a State or territory if a payment for GARVEE debt service is intercepted, and such a situation would have to be resolved by the State or territory working with the creditor agency.

3.3 Eligible Issuers

GARVEEs may be issued by any Federal-aid recipient, including a State or a political subdivision of a State, such as a city, county, or public authority (23 U.S.C. 122(a)).

If a State Infrastructure Bank (SIB) is serving as the issuer of GARVEE bonds for purposes of capitalization, the reimbursement of debt service costs with Federal-aid funds will not be treated as SIB capitalization grants. The SIB capitalization grants refer to the Federal and State funds used to establish the SIB.

If GARVEE bonds are issued by a local entity, the State DOT (as the State agency accountable to FHWA for Federal-aid expenditures) should enter into an agreement with the local agency responsible for administering the project(s) to ensure compliance with Federal requirements relating to GARVEE projects.

3.4 Memorandum of Understanding (MOU)

To document administrative and oversight roles, the State and FHWA Division counterpart should execute a GARVEE Memorandum of Understanding (MOU) describing how the State's GARVEE bond program will be administered as facilitating effective internal control consistent with 2 CFR 200.303. An MOU template is provided in Appendix B of this guidance. During development of the MOU, the FHWA Division should direct questions to the Innovative Finance Program Manager, Center for Innovative Finance Support (CIFS).

Once the MOU is drafted, the FHWA Division will submit it to CIFS for FHWA headquarters review and approval, and advises the FHWA Division when the review is complete.

The best practice is to maintain a single MOU covering the State's GARVEE bond program general policies, procedures, requirements, and the pertinent expectations of the parties involved in carrying out the program. This MOU should be amended, as necessary, to reflect additional GARVEE bond issuances and adjustments to the State's GARVEE bond program, including refunding bonds (see section 5.2).



3. General Provisions Governing GARVEE Use

While key program administration provisions are intended to remain largely unchanged over time, supplemental appendices may be attached to the MOU for each GARVEE bond issuance indicating the specific projects approved by FHWA for Federal debt service cost reimbursement under 23 U.S.C. 122. If a local entity is responsible for the administration of a GARVEE project(s) and the enforcement of Federal requirements, this should be reflected in the MOU. More detailed project-related data may be tracked by other means, as agreed upon by the State and the FHWA Division Office.

3.5 Percentage of Federal-aid Dedicated to Debt Service Payments

While the amount of Federal funds dedicated to GARVEE bond debt service is a State decision, it is a best practice for the State to establish legal or administrative fiscal policies regarding its GARVEE issuances and the percentage of annual Federal-aid Highway Program apportionments/allocations or obligation limitation that may be used for debt service. Financial markets may also influence a State on the amount of Federal-aid dedicated to debt service payments.

Many issuers of GARVEE bonds have established policies limiting GARVEE debt service to a specified percentage (generally not exceeding 20%) of their annual Federal-aid program.



4 Project Requirements

4.1 Transportation Improvement Program

As with any Federal-aid project, a GARVEE project is included in the metropolitan Transportation Improvement Program (TIP) (23 U.S.C. 134(j)) and the Statewide Transportation Improvement Program (STIP) (23 U.S.C. 135(g)).

For a GARVEE-funded project, the Federal share of the debt-related costs anticipated to be reimbursed with Federal-aid funds over the life of the bonds must be designated as AC (see section 4.6) in the transportation plan/program document showing GARVEE bond proceeds as the funding source. The State must document, by year, the Federal and non-Federal funds needed to reimburse the debt service costs.¹

Prior to Federal authorization of a project as AC, the project must be included in the Federally-approved STIP (see 23 CFR 630.705 and 23 CFR 450.216). The project will be demonstrated as supporting the fiscally constrained element of the STIP using all or some combination of State, local, and private funds. The financial limit on the amount of AC is set by the State's or MPO's ability to demonstrate fiscal constraint of the STIP or TIP respectively.

Generally, when an AC project is converted to a federally funded project, the STIP will document the full or partial conversion of the project as an individual project or as part of a project grouping. This project or group of projects must meet all STIP/TIP requirements, including the designation of the Federal funding categories that are intended to be used for the conversion. In accordance with 23 CFR 450.216(m), the State must demonstrate fiscal constraint for the individual categories of Federal-aid funds. The amount of conversion is limited by the amount of apportioned Federal funds available in the category to be converted and the amount of obligation authority available at the time of the conversion. As with any project, it should be noted that the State is not bound to the category of funds identified in the approved STIP/TIP. However, should the approved AC conversion substantially change the current STIP/TIP's fiscal constraint determination, the STIP/TIP may need to be amended. The fiscal constraint determination should be supported by demonstrating the individual project or group of project conversions in the STIP/TIP or by showing the total amount and source(s) of Federal funds to be converted as part of the financial plan for the STIP/TIP.

4.2 Funding Eligibility

A GARVEE project must be eligible for Federal-aid funding from one or more program categories as set forth in title 23, U.S.C. Likewise, any reimbursements of debt-related costs must be made with obligations of eligible categories of Federal-aid funds. The AC amount designated at the time of project approval will consist of one or more eligible Federal funding categories, although the State retains the flexibility to decide which category to obligate via the AC conversion process each year. The State also retains the right to use non-Federal funds in lieu of Federal-aid funds for debt service costs.

4.3 GARVEE Project Approval

Once a project (or projects) is selected for bond financing, the project is submitted to the FHWA Division Office for approval as an AC project under 23 U.S.C. 115 (see section 4.6). The approved project agreement

¹ 23 CFR 450.216(m)



4. Project Requirements

defines the terms of the project and ensures that the project will follow all applicable Federal requirements. The AC authorization makes the project eligible for Federal reimbursement. To federally reimburse for debt service payments, AC amounts are converted to Federal funds. If multiple projects are funded with the proceeds of a bond issue, each project must be allocated a prorated share of the debt-related costs.²

It is important to note that FHWA approves only the underlying project(s) to be debt-financed in order for the State to receive debt service reimbursements, not the bond issue, which is under State authority.

4.4 Obligating Federal Funds for GARVEE Debt Service Payments

States should obligate Federal funds by converting a portion of the designated AC amount for the project at the beginning of a Federal fiscal year in the amount needed to make debt service payments scheduled for the remainder of the year. Obligating funds early in the fiscal year for the entire year's debt service payments may provide additional assurance to bond investors regarding the State's commitment of Federal funds to the GARVEE project(s) and may be a positive consideration for the credit quality of the bonds.

However, there are occasions where Federal obligation authority is limited due to a delayed appropriation bill or a continuing resolution, in which case, it may be reasonable to delay the AC conversions, provided the State can ensure that funds will be obligated prior to the scheduled debt service payments, and the State is not required by the bond provisions to obligate early in the year.

Recognizing that obligation authority may be limited due to legislative delays or restrictions, it is considered a best practice for States to avoid scheduling debt service payments in the early months of the Federal fiscal year.

4.5 Federal Share

The maximum Federal share of the eligible costs associated with a GARVEE project is the applicable Federal share for the type of project under 23 U.S.C. 120 (23 U.S.C. 122(d)). The Federal share is established at the time of authorization of the project agreement (23 CFR 630.106(f)) and may be revised when the construction contract is awarded. For GARVEE projects, the Federal share is applied to all eligible costs available for reimbursement including the amount of bond proceeds applied to the project, and payments of bond-related costs such as capitalized interest, issuance expenses, and credit enhancement fees.

GARVEE projects must comply with established FHWA policies and procedures in calculating the Federal share. For example, the non-Federal share may include "in-kind" contributions, such as the value of donated property, or soft match, such as toll credits (23 U.S.C. 120(i) and 323).

If the State desires to use non-Federal funds to pay for actual construction costs, resulting in an increase in the non-Federal match in the early years of the project, then the FHWA Division Office should coordinate with the Center for Innovative Finance Support and the Office of Financial and Management Programs (OFMP), part of the Office of the Chief Financial Officer (HCF), for appropriate concurrences with the process. The construction costs paid with non-Federal funds cannot not be included in the bond financing of the project.

² 2 CFR 200.405



4.6 Advance Construction

States should request FHWA authorization of a GARVEE project as an AC project under the provisions of 23 U.S.C. 115. An AC authorization enables the project to be eligible for Federal funds, but no Federal funds are required to be obligated until the State seeks a Federal reimbursement.³ When a project is first authorized, the amount of AC designated on a GARVEE project is the estimated Federal share of eligible project costs. When Federal funds are obligated on a partial conversion basis to coincide with debt service payments, the AC amount is adjusted to reflect the estimated Federal share of the eligible project costs less the amount of Federal funds obligated on the project to date.

The Federal-aid project agreement will be revised as needed to reflect changes in the AC amount consistent with 23 CFR 630.110(a):

1. when a State issues its GARVEE bonds and determines its annual principal and interest payments and any other bond-related costs; and
2. when additional Federal funds are obligated on the project to reflect the Federal share amount for payments coming due during the year.

Obligating Federal funds in order to reimburse periodic debt service payments on the bonds would represent conversions of designated AC amounts. The State could obligate Federal funds annually over the life of the bonds to help retire permanent financing, or the State could make the conversion in one lump sum upon project completion to help take out construction financing.

The FHWA makes no commitment to fund the portion of the project approved as AC. Funding is only committed when Federal-aid funds are obligated. States should not consider the designated AC amounts as accounts receivable in their accounting systems and financial reports.

4.7 Fiscal Management Information System Data Entry

In accordance with FHWA accounting requirements, GARVEE projects will be entered into the Fiscal Management Information System (FMIS) like any other Federal-aid project.⁴ To identify GARVEE projects in FMIS, a detail line item using improvement type 45, “Debt Service”, is included on each project showing the debt-related costs of the project. The debt-related costs shown on this line include interest, issuance costs, insurance, and other costs incidental to the financing. Debt-related costs under improvement type 45 *do not* include repayment of bond principal. The costs related to preliminary engineering, right-of-way, construction, etc., are shown as separate line items using the appropriate coding. Any proposed variation to FMIS procedures should be submitted to HCF for approval. If bond premium proceeds are gained as a result of a bond issuance over the par amount, the net interest costs should be reflected in FMIS. For more information on this topic refer to Appendix E, “Treatment of Bond Premium Proceeds in FMIS.”

Issuances that include more than one GARVEE project should be linked in FMIS using the “Related Projects” field.

It is a best practice for the FHWA Division or State DOT to enter the total amount of anticipated debt service costs (principal and interest) allocated to the project in a State/Division Defined Field (screen number FSPR0020) named “GARVEE Debt Service.” This amount would reflect the amount shown in Attachment A of the MOU and should be revised if the amount of debt service allocated to the project changes.

³ 23 CFR 630.705(a)(2)

⁴ 23 CFR 630.705(a)



4.8 Federal-aid Reimbursements

States may seek Federal-aid reimbursements on authorized Federal-aid projects for eligible bond-related costs as these costs are incurred. Issuance costs, debt service payments, redemption payments for term bonds, and incidental costs (such as paying agent/trustee fees) represent costs incurred that may be reimbursed with Federal-aid funds to the extent such costs are deemed eligible, without regard to the construction status of the project.⁵

If the GARVEE bond proceeds are not the only source of funding for the project, Federal funds may be used to pay for actual construction costs as they are incurred, provided that GARVEE bond proceeds are not being used to pay for those same costs.

States may receive Federal payments in a manner consistent with their GARVEE bond documents and Federal-aid project agreements, while minimizing the time between receipt of Federal-aid reimbursements and debt service payment dates. Federal payments should be made to a State in sufficient time to ensure that debt service payments are made as scheduled in accordance with Cash Management Improvement Act requirements, 31 CFR part 205.

States should distribute debt service costs to GARVEE projects on an allocable basis in accordance with Federal cost principles (2 CFR 200 Subpart E), and as established in the MOU between the State and FHWA, if applicable. See Appendix D for a detailed example of cost allocation between GARVEE projects in FMIS.

Issuance and other bond-related costs funded from bond proceeds and eligible for reimbursement under 23 U.S.C. 122(b)(3)-(5) will be reimbursed as part of the debt service payments. Other bond-related costs funded directly by the State (such as annual trustee or paying agent expenses) are eligible for separate reimbursement. In determining which costs are eligible for reimbursement, the State DOTs and FHWA Division Offices will rely on established FHWA policies and Federal cost principles, 2 CFR 200 Subpart E. For additional guidance, section 5.4 contains a discussion of certain allowable and unallowable debt-related costs.

The State must maintain adequate documentation to establish eligibility of costs consistent with 2 CFR 200.333 and the government-wide cost regulations within 2 CFR 200 Subpart E.

4.9 Locally Administered Projects

The GARVEE projects may be administered by a local government, including the submission of claims by the local government for debt service reimbursements under 23 U.S.C. 122. However, regardless of the entity administering the GARVEE project, the State DOT, as the recipient of Federal-aid, is responsible for ensuring that projects are carried out in accordance with Federal requirements.

As previously stated in section 3.3, if GARVEE bonds are issued by a local entity, it is a best practice for the State to enter into an agreement with the local agency responsible for administering the project(s) to ensure compliance with Federal requirements.

Local government recipients authorized to issue GARVEE bonds are any entities receiving sub-allocations of Federal-aid funds, including cities, counties, and Metropolitan Planning Organizations. Issuance of such GARVEE bonds is subject to State concurrence as well as legal authority for the subrecipient to issue debt.⁶

⁵ See 23 U.S.C. 122(b) for a list of eligible costs.

⁶ See 23 CFR 1.3



4.10 GARVEE Project Closeout

For accounting purposes, a GARVEE project remains active until the GARVEE bonds have been fully retired (i.e., the last debt service payment reimbursement has been made) and any adjustments to the Federal share of project costs have been finalized. The GARVEE bonds may be fully retired at final maturity or via early defeasance or full repayment.

Other closeout processes related to physical construction/completion of the underlying project, such as final inspection reports, material certifications, etc., would occur when construction is completed under normal Federal-aid procedures. The State DOT is also required to maintain all payment and construction documentation related to the Federal-aid project for three years after final payment of the bond and project closeout.⁷

⁷ 2 CFR 200.333



5 Bond Issuance

5.1 Eligible Debt Financing Instruments

As defined in 23 U.S.C. 122(a), an eligible debt financing instrument is a bond, note, certificate, mortgage, lease, or other debt financing instrument issued by a State, political subdivision of a State, or a public authority, the proceeds of which are used to fund a project eligible for assistance under title 23, U.S.C.

A current or advance refunding issue also would be considered an eligible debt financing instrument, if the issue was a refunding of an outstanding GARVEE bond issue approved under the provisions of 23 U.S.C. 122 and conforms to the limitations in section 5.2.

5.2 Refunding Bonds¹

The 2017 Tax Cuts & Jobs Act signed December 22, 2017 (Pub. L. 115-97), eliminated state and local governments' ability to use tax-exempt bonds to advance refund outstanding bonds, as of January 1, 2018.

A refunding bond issue may be an eligible debt financing instrument if the issue is a refunding of an outstanding GARVEE bond issue approved under the provisions of 23 U.S.C. 122. Refunding is a procedure whereby an issuer refinances outstanding bonds by issuing new. A State might choose to undertake a refunding of GARVEE bonds to achieve savings on debt service costs, restructure outstanding debt, and/or change bond covenants.

States may issue a GARVEE refunding bond if there are debt service cost savings on a net present value basis (a standard industry practice), or if the aggregate nominal debt service cost scheduled to be reimbursed with Federal funds is reduced. States must consult with FHWA prior to issuing any GARVEE refunding bond to obtain approval for Federal participation in the revised debt service costs. Any fees or other costs associated with early bond redemptions are factored into the refunding decision. If the refunding bond results in debt service cost savings and reduces the Federal reimbursements, then such fees or costs may be deemed appropriate. Generally, advance refunding extending the debt service period without a demonstrated cost savings can make issuance costs and net higher interest costs ineligible for Federal reimbursement.²

If a State seeks to refund GARVEE bonds to restructure debt service or change bond covenants and the refunding will not generate present value savings and will increase the Federal reimbursements, the FHWA Division Office should consult with the CIFS to determine whether the State has sufficiently demonstrated and properly documented its need to increase the Federal funding participation in the GARVEE project(s) prior to issuance of the refunding bonds. If the State proceeds with these refunding bonds without FHWA concurrence, any additional costs associated with the bonds, including the cost of the bond refunding, may not be eligible costs for Federal participation.

Following issuance of a GARVEE refunding bond for any eligible purpose, the State DOT must submit to FHWA a Federal-aid project agreement modification as required by 23 CFR 630.110 for each GARVEE project. State DOTs should attach a new debt service payment schedule to the project agreement modification

¹ This section of the guidance is relevant to advance refunding actions taken before January 1, 2018.

² 2 CFR 200.404



and must include the schedule in a supplemental appendix to the MOU between the State and FHWA governing the administration of the GARVEE bond program.

A State may decide to refund multiple series of bonds, including non-GARVEE bonds, as part of a single debt issuance transaction. Since GARVEE bonds are approved for specific projects, the costs of refunding the bonds must be properly allocated among the GARVEE and non-GARVEE series of bonds and related projects.³ In submitting the modified Federal-aid project agreement(s) and debt service payment schedule(s) to the FHWA Division Office, it is considered a best practice for the State to clearly demonstrate that the refunding costs associated with multiple bond series have been properly allocated.

5.3 Variable Rate Debt

It is a best practice to issue all GARVEE bonds on a fixed interest rate basis. Issuing GARVEE bonds on a fixed interest rate basis enhances program management and integrity by removing significant sources of uncertainty about project costs and Federal reimbursements for debt service.

If a State seeks to issue variable rate GARVEE debt (including synthetic fixed rate debt created by combining variable rate debt with a floating to fixed rate swap), the FHWA Division Office should consult with the CIFS to ensure that proper procedures are in place to review and approve variable project costs and Federal reimbursements in a timely manner, and that the State is aware of current Federal policies and regulations concerning the use of derivative and hedging instruments common to variable rate debt. Costs associated with such instruments (such as swap termination fees) are not eligible for Federal reimbursement.

5.4 Allowable and Unallowable Debt-Related Costs

In accordance with 23 U.S.C. 122, allowable bond-related costs eligible for reimbursement include:

- ▶ Interest payments and retirement of principal under an eligible debt financing instrument (including any capitalized interest);
- ▶ Issuance costs and credit enhancement fees, as further described below; and
- ▶ Any other cost incidental to the sale of an eligible debt financing instrument (as determined by the Secretary of the United States Department of Transportation). These can include on-going paying agent/trustee fees and audit costs.

Issuance costs include the following: underwriters discount; rating agency fees; printing, publication, or advertising expenses with respect to the bonds; all fees, expenses, and costs of registrars and paying agents; and all fees, expenses, and costs of attorneys, financial advisors, bond counsel, accountants, feasibility consultants, or other experts employed to aid in the sale and issuance of bonds. Credit enhancement fees include bond insurance premiums, letter of credit fees, and standby bond purchase agreement fees. All these costs must be allocable to the Federal-aid projects or otherwise the State is required to pro-rate the costs between Federal-aid projects and other benefiting cost objectives in accordance with the cost principles of 2 CFR 200 Subpart E.

The capitalization from bond proceeds of a debt service reserve fund or contingency fund required by (or incidental to) the debt issuance is considered an eligible Federal-aid expense, but only to the extent proceeds are allocable to Federal-aid projects. In accordance with bond covenants, the funds deposited in such a reserve account, along with any interest earnings, must be used for project costs - either on a current basis (including

³ 2 CFR 200.205

interest) or as a final payment to the bondholders. Funds in a reserve account cannot be released and disbursed to any other party for any other purpose. If the reserve account is to be liquidated to make the final debt service payment, the final debt service payment will not be eligible for Federal-aid reimbursement. Likewise, if unused bond proceeds are applied to pay principal and/or interest, such payments will not be eligible for Federal reimbursement.

If a debt service reserve fund is used to make timely debt service payments due bondholders because of an interruption or insufficiency of pledged Federal-aid funds, the State may request reimbursement for the debt service payment when Federal-aid funds become available in order to replenish the debt service reserve fund directly, consistent with 23 U.S.C. 121(c) and 122(b). If the debt service reserve fund supports GARVEE and non-GARVEE debt, then Federal reimbursement will be limited to the GARVEE portion of the debt.

If a surety provider, including a bond insurer, makes the debt service payment under the surety agreement, reimbursement of the debt service payment depends upon the terms and conditions of the surety agreement between the surety provider and the issuer. To the extent that an issuer is required to repay the debt service payment to the surety provider, reimbursement with Federal-aid funds is a cost incurred relating to a principal and interest payment. In such case, reimbursement may be made either to the State or the surety provider consistent with 23 U.S.C. 121(c) and 122(b). If the surety provider supports GARVEE and non-GARVEE debt, then Federal reimbursements will be limited to the GARVEE portion of the debt.

To the extent that the surety provider simply insures the risk of non-payment or late payment and makes a third-party payment to the bond trustee, and the State does not have a legal obligation to reimburse the surety, there is no cost incurred for Federal reimbursement. In either case, any interest or penalties associated with the surety payment are not reimbursable under 23 U.S.C. 122 because the risk of nonpayment or interrupted payment of Federal-aid funds lies with the State.

Costs associated with fines and penalties related to noncompliance with Federal, State, local or Tribal laws or regulations (such as arbitrage penalties) are unallowable for Federal reimbursement⁴. The FHWA Division Office should consult with CIFS/OFMP regarding any questions about the Federal reimbursement eligibility of costs associated with financing instruments or fines and penalties.

Costs identified in this section as allowable or unallowable are not all-inclusive. The FHWA may determine the status of additional cost items as they arise.

5.5 Allowable Uses of Excess GARVEE Bond Proceeds, including Proposing Substitute Projects

If the cost of the project(s) planned to be funded with the GARVEE bond proceeds is less than anticipated and excess GARVEE bond proceeds result, the issuer of the GARVEE bonds should consult with bond counsel, the bond trustee, and other advisors to ensure compliance with Internal Revenue Service requirements. The State must also confer with FHWA with respect to compliance with specific requirements for GARVEE bonds, which may be addressed in the MOU between the State and FHWA governing the administration of the GARVEE bond program. The issuer should comply with the financing agreement (bond resolution or trust indenture) provisions that direct the application of excess bond proceeds.

In some cases, the MOU may list potential “substitute projects” in the event the original planned project or projects is delayed. The use of any substitute projects must be approved by the pertinent Division Office. In

⁴ 2 CFR 200.441

any case, Federal reimbursements to a State will always be based on the amount of bond proceeds used to fund eligible Federal-aid projects.

5.6 Interest Income on Bond Proceeds

Interest earned on the investment of GARVEE bond proceeds is not treated as Federal funding. The State may use interest earnings (including interest earned on sinking funds) subject to the financing agreement provisions that typically govern the use of interest earnings associated with bond issuances.

6 Oversight

6.1 GARVEE Program Review

The FHWA Division Office will conduct a periodic review of the State's GARVEE bond program. These reviews ensure that the program and projects are being administered in accordance with Federal requirements, ensure that only costs allocable to the Federal-aid highway program are charged to Federal-aid funds, and determine if certain processes can be improved in accordance with identified best practices. Appendix C contains a list of sample questions that may be included in a review program.



7 Important Links

7.1 Financial Management FAQs

GARVEE-related financial management FAQs are located at:
https://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/garvees/faqs.aspx

7.2 GARVEE Database User Guide

The GARVEE database user guide is located on the SharePoint landing page for the database,
<https://collaboration.fhwa.dot.gov/garvee-sib/SitePages/Home.aspx>.



Appendix A GARVEE Project Illustrations

A.1 Purpose

The use of GARVEEs to finance surface transportation projects enables Federal reimbursement of certain costs incurred on a debt-financed project. The eligibility of these costs is authorized in 23 U.S.C 122, which also recognizes a debt service payment as a cost incurred for the purpose of Federal reimbursement. The FHWA developed this document as an appendix to the *GARVEE Guidance* to illustrate the calculation and presentation of certain financial information on GARVEE projects.

A.2 Illustrations

Three illustrations are portrayed: a major project funded by GARVEE bonds; a program of multiple projects funded by GARVEE bonds; and a project that is initiated as a pay-as-you-go project but converted to a GARVEE project during the first year of construction.

Illustration 1: GARVEE-Financed Major Project

For a major Federal-aid project with estimated construction costs of \$500.0 million, the State will develop a financial plan pursuant to 23 U.S.C. 106(h). This illustration highlights elements of that plan for a project financed with GARVEE bonds.

Illustration 2: GARVEE-Financed Program of Projects

States often issue bonds that will finance multiple projects. This illustration describes a process for allocating the debt service costs among several Federal-aid projects and shows how the allocation is impacted by a cost overrun on one of the projects. This illustration also recognizes that bond proceeds may be used to finance both Federal-aid and non-Federal projects.

Illustration 3: Combination Pay-Go/GARVEE-Financed Project

This illustration focuses on a project that was initially authorized to be funded as a pay-as-you-go Federal-aid project but was revised during the first year of construction to be a GARVEE-financed project. This illustration describes the calculation of advance construction (AC) prior to and following the GARVEE issuance as well as the calculation of State and Federal shares with multiple sources of funds.

A.3 GARVEE Bond Issuances

While GARVEE projects may be financed with various types of debt instruments, they typically are financed with publicly-offered tax-exempt bonds. Therefore, each GARVEE illustration is presented as being financed with bonds. For the sake of simplicity, the bonds are assumed to be issued in September with debt service payments due in March and September of subsequent years, but the debt service payments are shown as a total annual amount.

Transaction costs (sometimes referred to as costs of issuance) in the illustrations are assumed to equal 2 percent of the bond issuance amount. Transaction costs are typically paid from the bond proceeds and reimbursed as part of the debt service payments along with interest costs. Interest costs in the illustrations are 3 percent per year.

A.4 Fiscal Management Information System (FMIS)

The FMIS identifies GARVEE projects by including the Improvement Type 45, "Debt Service." For the purposes of the illustrations, the costs shown in FMIS on the Debt Service line are referred to as "debt-related



expenses” that include eligible bond-related costs other than the principal amount used to pay for construction costs. The only debt-related expenses identified in this document are transaction costs and interest costs. Also, note that for simplicity, the sample FMIS entries in this document show all other costs (not debt-related expenses) as “construction” costs although in reality these costs would likely include other activities such as preliminary engineering, right-of-way acquisition, etc.

A.5 Advance Construction (AC)

An important tool for GARVEE projects is the use of AC authority with partial conversions. The AC amount is the planned Federal share of the project costs that is not obligated.

A.6 Illustration Figures

The amounts shown in the figures represent end-of-year, annual amounts. The numbers are rounded to the nearest hundred thousand dollars, resulting, in some cases, in slight distortions to calculations such as Federal share.



ILLUSTRATION 1: GARVEE-FINANCED MAJOR PROJECT

Illustration Objectives

The following concepts are illustrated:

- ▶ Presentation of project costs and cash flows in the FHWA Major Project Financial Plan for a project financed with GARVEEs
- ▶ AC calculation for cash flows including GARVEE debt service

Project Description

The project is a bridge replacement on an Interstate Highway with eligible upfront capital costs, referred to simply as “construction costs,” estimated at \$500.0 million and with transaction costs of the GARVEE issuance equivalent to 2 percent of bond proceeds (\$10.0 million). The project will be constructed over a four-year period using Federal National Highway Performance Program (NHPP) funds at a 90 percent Federal share.

Financing

The project is financed entirely with GARVEE bonds on a 10-year level debt service basis, with FHWA and the State contributing to each debt service payment on a 90/10 ratio. The bonds are issued in September of fiscal year (FY) 0 with debt service payments beginning in FY 1. The simplified sources and uses of funds for this GARVEE example are shown in Figure 1.

Figure 1

GARVEE Sources and Uses of Funds (dollars in millions)	
Sources	
Bond Proceeds	510.0
Uses	
Construction Costs	500.0
Transaction Costs	10.0
	510.0

Major Project Financial Plan

The financial plan shows the estimated cost of the Federal-aid project as \$510.0 million as shown in Figure 2.

Figure 2

Annual Bond Proceeds Cash Flow (dollars in millions)					
	FY1	FY2	FY3	FY4	Total
Sources					
Bond Proceeds	60.0	200.0	200.0	50.0	510.0
Uses					
Construction Costs	50.0	200.0	200.0	50.0	500.0
Transaction Costs	10.0	-	-	-	10.0
	60.0	200.0	200.0	50.0	510.0

In this illustration, the financial plan includes a copy of the debt service schedule. Figure 3 shows the amount of Federal and State funds needed to pay debt service each year. Figure 3 also includes the amount of AC



authorized at the end of each year (the unobligated or unconverted Federal share of project costs, discussed further below).

Figure 3

Debt Service Schedule – State and Federal Share; AC Amounts (dollars in millions)				
Fiscal Year	Annual Debt Service	State Funds 10%	Federal Funds 90%	Advance Construction
0	—	-	-	538.0
1	59.8	6.0	53.8	484.2
2	59.8	6.0	53.8	430.4
3	59.8	6.0	53.8	376.6
4	59.8	6.0	53.8	322.8
5	59.8	6.0	53.8	269.0
6	59.8	6.0	53.8	215.2
7	59.8	6.0	53.8	161.4
8	59.8	6.0	53.8	107.6
9	59.8	6.0	53.8	53.8
10	59.8	6.0	53.8	—
TOTAL	598.0	60.0	538.0	

Advance Construction

As shown in Figure 3, the initial amount of AC approved on the project is \$538.0 million. This amount reflects the total nominal amount of the Federal share of GARVEE debt service costs over the life of the bonds, including payment of principal and interest. The AC amount is decreased each year as Federal funds are obligated and used to reimburse 90 percent of the annual debt service payments.

Fiscal Management Information System (FMIS) Entries

The ‘Construction’ line item in FMIS includes the actual construction costs of the project of \$500.0 million and the ‘Debt Service’ line item includes the debt-related expenses (interest costs and transaction costs) of \$98.0 million, the sum of these equaling the total amount of debt service payments as depicted in Figure 3.

Figure 4 shows the initial entry in FMIS with the 90 percent Federal share of the Construction costs (\$450.0 million) and the 90 percent Federal share of the debt-related expenses (\$88.0 million) authorized as AC.

Figure 4

Initial FMIS Entry (dollars in millions)				
	Total	Federal Funds	State Funds	Advance Construction
Construction	500.0	—	50.0	450.0
Debt Service	98.0	—	10.0	88.0
TOTAL	598.0	—	60.0	538.0

Figure 5 shows that at the end of FY 1, the Federal share of the first debt service payment of \$53.8 million is obligated by converting AC. The Debt Service line reflects the Federal share of debt-related expenses included in the debt service payment of \$14.7 million. (Debt-related expenses were \$15.3 million of interest cost and \$1.0 million of transaction cost for a total of \$16.3 million with the Federal share of \$14.7 million. The interest cost will decline each year as shown in Figure 14-A of Illustration 2.) The remaining portion of the debt service payment is shown on the Construction line.

Figure 5

FMIS Entry FY 1 (dollars in millions)				
	Total	Federal Funds	State Funds	Advance Construction
Construction	500.0	39.1	50.0	410.9
Debt Service	98.0	14.7	10.0	73.3
TOTAL	598.0	53.8	60.0	484.2

Statewide Transportation Improvement Program (STIP) Entries

Since the State has authority to issue GARVEE bonds, the proceeds of the bonds used to finance the Federal-aid project are “reasonably expected to be available” in accordance with STIP requirements and can, therefore, be included in the STIP as a funding source. The Federal funds needed to pay debt service should not exceed a reasonable percentage of the State’s Federal-aid apportionments currently available in order to provide a reasonable expectation that sufficient Federal funds will be available to pay the Federal portion of the debt service over the life of the bonds. As shown in Figure 6, the STIP indicates that GARVEE bonds will finance project construction costs with \$358.8 million (\$322.8 million of Federal NHPP funds and \$36.0 million of State funds) needed in the first six years (period covered by the STIP) to pay debt service costs. Beyond FY 6, Federal share costs are shown as AC amounts.

Figure 6

STIP Entry (dollars in millions)				
Fiscal Year	Annual Debt Service	State Funds 10%	Federal NHPP Funds 90%	Beyond FY 6 Advance Construction
1	59.8	6.0	53.8	
2	59.8	6.0	53.8	
3	59.8	6.0	53.8	
4	59.8	6.0	53.8	
5	59.8	6.0	53.8	
6	59.8	6.0	53.8	
TOTAL	358.8	36.0	322.8	215.2

Eligible Costs

With the GARVEE designation, the direct project costs paid from the bond proceeds are not eligible costs for Federal participation. Instead, the debt service payments will be costs incurred for the purpose of Federal-aid reimbursement. It is customary for underwriting fees and other transaction costs to be paid with bond issue proceeds. As shown in this illustration, the debt service costs are eligible for reimbursement “as a cost incidental to construction” (23 U.S.C. 101(a)(4)) even though they exceed the physical construction costs (as shown in Figures 2 and 3, for example, the FY 1 eligible debt service costs are \$59.8 million while physical construction costs total \$50.0 million).

FHWA Approvals

While FHWA does not approve the terms of the bond issue, it does approve the project and the eligibility of the associated debt service payments for reimbursement with Federal-aid funds. Any action proposed by the State to obligate additional Federal funds on the project will need FHWA approval.

ILLUSTRATION 2: GARVEE-FINANCED PROGRAM OF PROJECTS

Illustration Objectives

The following concepts are illustrated:

- ▶ Calculation of State/Federal debt service shares using actual project costs funded from bond proceeds (versus budgeted costs) to allocate debt service among projects
- ▶ Impact of a cost overrun on one of the projects

Project Description

This illustration involves a program of three highway improvement projects including two Federal-aid projects and one non-Federal project. The total cost of the three projects is \$100.0 million.

Financing

The Federal share of the Federal-aid projects is 80 percent, with matching funds provided by the State. The projects, including the non-Federal project, will be funded from the proceeds of a ten-year bond issue to be repaid with level debt service.

Construction Costs

Figure 7 shows the actual construction costs incurred for each project by year.

Figure 7

Actual Costs Incurred (dollars in millions)				
Fiscal Year	Fed-Aid Project A	Fed-Aid Project B	State Project C	Total
1	5.0	5.0	—	10.0
2	20.0	15.0	5.0	40.0
3	15.0	20.0	5.0	40.0
4	—	10.0	—	10.0
TOTAL	40.0	50.0	10.0	100.0

Allocation of Debt Service Costs to Projects

The bonds are issued by the State in September of Fiscal Year (FY) 0 with construction beginning on Projects A and B in FY 1. Construction on Project C begins in FY 2. All project costs are paid from the bond proceeds. For reimbursement purposes, the costs incurred on the two Federal-aid GARVEE projects are the debt service costs of the bonds allocated to those projects. The bond proceeds are provided to projects on a first-come basis. The formula used to allocate the debt service costs to projects is shown in Figure 8.



Figure 8

Allocation Formula:

$$\text{Debt service allocation for Project X in Year Y} = \frac{\text{Cumulative total debt service through Year Y} * (\text{Cumulative costs for Project X through Year Y} \div \text{Cumulative total costs for all projects through Year Y}) - \text{Cumulative debt service allocated to Project X through Year Y-1}}$$

Debt service costs are only allocated to projects that have been authorized. As shown in Figure 9, in FY 1, the debt service costs are fully allocated only to Projects A and B based on the amount of bond proceeds applied to those projects (which equals construction costs in this case). Each year (beginning with FY 1) the total amount of debt service is allocated among all active/authorized projects such that the cumulative amount of debt service allocated to a project through that year corresponds to that project’s share of cumulative costs actually incurred through that year.

Each year the debt service allocation is adjusted to reflect the cumulative utilization of bond proceeds among the projects up through that point in time. The annual allocations required to make the cumulative adjustments will depend on the expenditure patterns of the various projects. As shown in Figure 9, the allocation formula will result in the appropriate amount of debt service charged to each project over the term of the bonds.

Figure 9

Debt Service Allocations by Project (dollars in millions)						
Fiscal Year	Annual DebtService	Fed–Aid ProjectA	Fed–Aid ProjectB	State ProjectC	Federal	State
0	—	—	—	—	—	—
1	12.0	6.0	6.0	—	9.6	2.4
2	12.0	6.0	3.6	2.4	7.7	4.3
3	12.0	4.0	6.4	1.6	8.3	3.7
4	12.0	3.2	8.0	0.8	9.0	3.0
5	12.0	4.8	6.0	1.2	8.6	3.4
6	12.0	4.8	6.0	1.2	8.6	3.4
7	12.0	4.8	6.0	1.2	8.6	3.4
8	12.0	4.8	6.0	1.2	8.6	3.4
9	12.0	4.8	6.0	1.2	8.6	3.4
10	12.0	4.8	6.0	1.2	8.6	3.4
TOTAL	120.0	48.0	60.0	12.0	86.2	33.8

Impact of a Cost Overrun

Figure 10 shows a cost overrun of \$5 million in FY 3 on Project A, resulting in a revised allocation of debt service costs starting in FY 3, as shown in Figure 11. To accommodate the cost overrun on Project A, \$5.0 million in bond proceeds originally to be allocated to Project B in FY 4 is reallocated to Project A. As a result, the amount of bond proceeds provided to Projects A and B to pay for construction costs is now equal at \$45.0 million for each project. In order to complete Project B, the State must come up with \$5.0 million of additional funding to supplement the bond proceeds.

Figure 10

Actual Costs Incurred with Overrun on Project A (dollars in millions)				
Fiscal Year	Fed-Aid Project A	Fed-Aid Project B	State Project C	Total
1	5.0	5.0	—	10.0
2	20.0	15.0	5.0	40.0
3	20.0	20.0	5.0	45.0
4	—	*10.0	—	10.0
TOTAL	45.0	50.0	10.0	105.0

* Funded with \$5.0 million of GARVEE bond proceeds and \$5.0 million of pay-go funding.

As a result of the bond proceeds reallocation discussed above, Project A and Project B receive an equal allocation of debt service of \$54.0 million, as shown in Figure 11. The Federal share of the debt service remains the same as the original estimate (shown in Figure 9), with the 20 percent State share of Projects A and B plus the full cost of Project C equaling \$33.8 million.

Figure 11

Debt Service Allocations by Project - Revised (dollars in millions)						
Fiscal Year	Annual Debt Service	Fed-Aid Project A	Fed-Aid Project B	State Project C	Federal Share	State Share
0	—	—	—	—	—	—
1	12.0	6.0	6.0	—	9.6	2.4
2	12.0	6.0	3.6	2.4	7.7	4.3
3	12.0	5.1	5.5	1.4	8.5	3.5
4	12.0	4.5	6.5	1.0	8.8	3.2
5	12.0	5.4	5.4	1.2	8.6	3.4
6	12.0	5.4	5.4	1.2	8.6	3.4
7	12.0	5.4	5.4	1.2	8.6	3.4
8	12.0	5.4	5.4	1.2	8.6	3.4
9	12.0	5.4	5.4	1.2	8.6	3.4
10	12.0	5.4	5.4	1.2	8.6	3.4
TOTAL	120.0	54.0	54.0	12.0	86.2	33.8

As a result of the cost overrun on Project A, there will be insufficient bond proceeds to complete Project B (since Projects A and C are completed with the bond proceeds in FY 3), requiring an additional \$4.0 million of Federal and \$1.0 million of State funds to complete Project B in FY 4 (this assumes the State will claim Federal funds for these additional costs). These funds are used to pay for construction costs incurred in FY 4 with Federal reimbursements occurring in FY 4. The total Federal share for Project A and Project B, therefore, equals \$90.2 million, as shown in Figure 12.

Figure 12

Total Federal Spending with Overrun on Project A (dollars in millions)		
Year	Project A / B Debt Service	Project B Pay-Go
0	—	—
1	9.6	—
2	7.7	—
3	8.5	—
4	8.8	4.0
5	8.6	—
6	8.6	—
7	8.6	—
8	8.6	—
9	8.6	—
10	8.6	—
TOTAL	86.2	4.0

The construction costs of the three projects originally total \$100.0 million. The debt-related expenses of \$20.0 million are allocated among the projects based on the amount of bond proceeds provided to each of the projects. The overrun on Project A results in a change to the allocation of debt service costs and, therefore, the debt-related expenses as shown in Figure 13. The debt-related expenses for Project A and Project B will be reflected in FMIS on the Debt Service line.

Figure 13

Allocation of Debt-Related Expenses (dollars in millions)						
	Project A		Project B		Project C	
	Costs	Allocation	Costs	Allocation	Costs	Allocation
Initial	40.0	8.0	50.0	10.0	10.0	2.0
Revised	45.0	9.0	45.0	9.0	10.0	2.0

Figure 14-A shows the breakdown each year of the debt service payments (\$12.0 million annually as shown in Figure 11) between the amounts of bond proceeds provided to the projects for construction costs (totaling \$100.0 million) and the debt-related expenses (totaling \$20.0 million and comprised of \$18.0 million of interest cost and \$2.0 million of transaction cost). The allocation between construction and debt-related expenses is proportional to the amount of debt service associated with principal (less transaction costs) and interest/transaction expense, and reflects the fact that interest costs decline each year under the assumed level debt service structure (interest expense in FY 1 is \$3.1 million and declines annually to \$0.3 million in FY 10 with added transaction costs of \$0.2 million each year). The Federal share amounts shown in Figure 14-B (80 percent of the total cost amounts shown in Figure 14-A) are the amounts obligated each year in FMIS. As the interest costs decline each year, the amount of debt-related expenses obligated in FMIS on the Debt Service line would also decline.

Figure 14-A

Total Debt Service (dollars in millions)							
Year	Construction	Project A		Project B		Project C	
		Debt-Related Expenses	Construction	Debt-Related Expenses	Construction	Debt-Related Expenses	Construction
0	—	—	—	—	—	—	—
1	4.4	1.6	4.4	1.6	—	—	12.0
2	4.5	1.5	2.7	0.9	1.8	0.6	12.0
3	3.9	1.2	4.2	1.3	1.1	0.3	12.0
4	3.6	0.9	5.1	1.4	0.8	0.2	12.0
5	4.4	1.0	4.4	1.0	1.0	0.2	12.0
6	4.6	0.8	4.6	0.8	1.0	0.2	12.0
7	4.7	0.7	4.7	0.7	1.0	0.2	12.0
8	4.8	0.6	4.8	0.6	1.1	0.1	12.0
9	5.0	0.4	5.0	0.4	1.1	0.1	12.0
10	5.1	0.3	5.1	0.3	1.1	0.1	12.0
TOTAL	45.0	9.0	45.0	9.0	10.0	2.0	120.0

Figure 14-B

Federal Debt Service (dollars in millions)					
Year	PROJECT A		PROJECT B		TOTAL
	Construction	Debt-Related Expenses	Construction	Debt-Related Expenses	
0	—	—	—	—	—
1	3.5	1.3	3.5	1.3	9.6
2	3.6	1.2	2.2	0.7	7.7
3	3.1	1.0	3.3	1.1	8.5
4	2.9	0.7	4.1	1.1	8.8
5	3.5	0.8	3.5	0.8	8.6
6	3.7	0.6	3.7	0.6	8.6
7	3.8	0.5	3.8	0.5	8.6
8	3.8	0.5	3.8	0.5	8.6
9	4.0	0.3	4.0	0.3	8.6
10	4.1	0.2	4.1	0.2	8.6
TOTAL	36.0	7.1	36.0	7.1	86.2

Fiscal Management Information System (FMIS) Entries

Figure 15 shows the FMIS entries for the first four years. The initial FMIS entry shows each project authorized as AC with no Federal funds obligated. In FY 1, the first year debt service is paid and split between the two Federal-aid projects, AC is reduced by the amount of Federal funds obligated. In FY 2, State Project C is authorized and the debt service is allocated to the three projects. In FY 3, Project A incurs an overrun of \$5.0 million which changes the construction cost for the project, and the debt-related expenses are reallocated among the projects. In FY 4, the bond proceeds are exhausted and Project B obligates an additional \$4.0 million (80 percent share of \$5.0 million) of Federal funds to cover remaining costs.

The amounts obligated each year under the Federal funds column for Construction and Debt Service (debt-related expenses) are derived from Figure 14-B. In each year, the amount of AC at the end of the year represents the unobligated balance of the estimated Federal share.

Figure 15

FMIS Entries (dollars in millions)								
	Total	Project A			Total	Project B		
		Federal Funds	State Funds	Advance Construction		Federal Funds	State Funds	Advance Construction
Initial FMIS Entry in FY 0								
Construction	40.0	—	8.0	32.0	50.0	—	10.0	40.0
Debt Service	8.0	—	1.6	6.4	10.0	—	2.0	8.0
TOTAL	48.0		9.6	38.4	60.0		12.0	48.0
Revised Entry in FY 1								
Construction	40.0	3.5	8.0	28.5	50.0	3.5	10.0	36.5
Debt Service	8.0	1.3	1.6	5.1	10.0	1.3	2.0	6.7
TOTAL	48.0	4.8	9.6	33.6	60.0	4.8	12.0	43.2
Revised Entry in FY 2								
Construction	40.0	7.1	8.0	24.9	50.0	5.7	10.0	34.3
Debt Service	8.0	2.5	1.6	3.9	10.0	2.0	2.0	6.0
TOTAL	48.0	9.6	9.6	28.8	60.0	7.7	12.0	40.3
Revised Entry in FY 3								
Construction	*45.0	10.2	9.0	25.8	50.0	9.0	10.0	31.0
Debt Service	**9.0	3.5	1.9	3.6	9.0	3.1	1.9	4.0
TOTAL	54.0	13.7	10.9	29.4	59.0	12.1	11.9	35.0
Revised Entry in FY 4								
Construction	45.0	13.1	9.0	22.9	50.0	***17.1	10.0	22.9
Debt Service	9.0	4.2	1.9	2.9	9.0	4.2	1.9	2.9
TOTAL	54.0	17.3	10.9	25.8	59.0	21.3	11.9	25.8

*\$5.0 million cost overrun on Project A revises construction costs

**Debt service allocation is increased on Project A and decreased on Project B

***\$4.0 million of Federal funds obligated on Project B to supplement bond proceeds

For Project A, the Federal share was initially \$38.4 million, which is the total amount of Federal Funds and AC in FY 1 and FY 2. In FY 3, the \$5.0 million overrun resulted in a \$1.0 million increase in debt-related expenses for a total revised cost of \$54.0 million. The Federal share increased to \$43.1 million (\$36.0 million for Construction and \$7.1 million for Debt Service) which is shown in the revised total of Federal Funds and AC for FY 3 and FY 4.

For Project B, the Federal share was initially \$48.0 million which is the total amount of Federal Funds and AC in FY 1 and FY 2. In FY 3, the total cost of the project was reduced to \$59.0 million as a result of the reallocation of debt-related expenses. The Federal share decreased to \$47.1 million (\$40.0 million for Construction and \$7.1 million for Debt Service) which is shown in the revised total of Federal Funds and AC for FY3 and FY 4. The Federal Funds for Construction costs increased by \$4.0 million in FY 4 when the additional amount was obligated to pay for current year construction costs.



ILLUSTRATION 3: COMBINATION PAY-GO/GARVEE-FINANCED PROJECT

Illustration Objectives

The following concepts are illustrated:

- ▶ AC calculation prior to GARVEE issuance
- ▶ AC adjustment for GARVEE issuance
- ▶ Calculation of State/Federal shares with multiple sources of funds

Initial Project Description and Funding Plan

The project involves a highway safety improvement with construction costs estimated at \$50.0 million. Initially, the project was to be constructed over a three-year period and was intended to be funded with State and Federal Surface Transportation Program (STP) funds at an 80 percent Federal share on a pay-as-you-go basis as shown in Figure 16.

Figure 16

Construction Costs and Sources of Funds (dollars in millions)						
Fiscal Year	Uses of Funds Construction Costs	SOURCES OF FUNDS				
		Initial Plan		Revised Plan		
		State Funds	Federal STP Funds	State Funds	Federal STP Funds	GARVEE Proceeds
1	10.0	2.0	8.0	2.0	8.0	—
2	20.0	4.0	16.0	9.2	0.8	10.0
3	20.0	4.0	16.0	—	—	20.0
TOTAL	50.0	10.0	40.0	11.2	8.8	30.0

Revised Funding Plan

During the first year of construction, the State decided to use GARVEE bond proceeds to complete the project. This instance, as all instances, of tapered match should be submitted to FHWA for prior approval. As shown in Figure 16, State and Federal STP funds are used to pay for actual construction costs of \$20.0 million during the first two years of the project. GARVEE bond proceeds then are used to finance the remaining \$30.0 million of project costs in the second and third years. The State contributes its required 20 percent match upfront during construction so that 100 percent of the debt service of the GARVEE bonds, which are issued in September of FY 1, can be paid with Federal Highway Safety Improvement Program (HSIP) funds (the FHWA Division Office should coordinate the upfront match proposal with the CIFS and the CFO’s Office of Financial and Management Programs). This revised funding plan requires additional State funds in FY 2 to satisfy the 20 percent match requirement of the increased total project cost of \$56.0 million (\$20.0 million of construction costs covered with pay-as-you-go funding in FY 1-2 and \$36.0 million of debt service costs associated with the \$30.0 million of GARVEE bond proceeds used to fund construction costs in FY 2-3). Thus, the total State funding contribution increases from \$10.0 million to \$11.2 million.

GARVEE Bonds Debt Service

GARVEE bonds are issued in September of FY 1 with debt service payments beginning in FY 2. As shown in Figure 17, the additional cost associated with the \$30.0 million bond issuance (debt-related expenses) is \$6.0 million. This includes transaction costs of \$0.6 million and interest costs of \$5.4 million. The bonds are issued for a ten-year term with level debt service of \$3.6 million per year.

Figure 17

Project Costs by Source of Funds and Advance Construction (dollars in millions)					
Year	State Funds		Federal Funds		Advance Construction
		STP (Pay-GO)	HSIP (Debt Service)	Total	
0	—	—	—	—	*40.0
1	2.0	8.0	—	8.0	**36.8
2	9.2	0.8	3.6	4.4	32.4
3	—	—	3.6	3.6	28.8
4	—	—	3.6	3.6	25.2
5	—	—	3.6	3.6	21.6
6	—	—	3.6	3.6	18.0
7	—	—	3.6	3.6	14.4
8	—	—	3.6	3.6	10.8
9	—	—	3.6	3.6	7.2
10	—	—	3.6	3.6	3.6
11	—	—	3.6	3.6	—
TOTAL	11.2	8.8	36.0	44.8	

* Reflects the Federal share amount of \$40.0 million prior to issuance of GARVEEs

**Reflects additional Federal share amount of \$4.8 million (\$44.8 million) less \$8.0 million obligation

Advance Construction (AC)

The initial amount of AC approved on the project is \$40.0 million, reflecting the 80 percent Federal share of the \$50.0 million project. When the GARVEE bonds are issued at the end of FY 1, the project costs are revised to \$56.0 million, revising the Federal share to \$44.8 million. Figure 17 shows the AC amount at the end of each year as Federal funds are obligated to pay for construction costs in FY 1-2 and debt service costs in FY 2-11.

The amount of AC in FY 1 is reduced by the obligation of \$8.0 million of STP funds and increased by the \$4.8 million Federal share of \$6.0 million in debt-related expenses associated with the GARVEE bonds. In FY 2, AC is decreased by the obligation of \$0.8 million of STP funds and \$3.6 million of HSIP funds for the payment of debt service.

Fiscal Management Information System (FMIS) Entries

The initial FMIS entry as shown in Figure 18 reflects the pay-as-you-go project authorized as AC. At this point, the State anticipates using STP funds for 80 percent of the construction costs.

Figure 18

Initial FMIS Entry in FY 0 (dollars in millions)				
	Total	Federal Funds	State Funds	Advance Construction
Construction-STP	50.0	—	10.0	40.0
TOTAL	50.0	—	10.0	40.0

As shown in Figure 19, FMIS is modified in FY 1 to reflect the issuance of GARVEE bonds at the end of the fiscal year and the State's decision to pay 100 percent of debt service with Federal HSIP funds. Two line items are added to FMIS showing the State's intent to use HSIP funds to pay debt service. The breakdown of total debt service payments is \$30.0 million to pay construction costs and \$6.0 million for debt-related expenses.



Figure 19

Revised FMIS Entry in FY 1 (dollars in millions)				
	Total	Federal Funds	State Funds	Advance Construction
Construction-STP	20.0	8.0	11.2	0.8
Construction-HSIP	30.0	—	—	30.0
Debt Service-HSIP	6.0	—	—	6.0
TOTAL	56.0	8.0	11.2	36.8

As shown in Figure 20, FMIS is modified in FY 2 to reflect the obligation of \$8.8 million of STP funds and \$3.6 million of HSIP funds. The STP funds were reduced to \$8.8 million to allow the State to provide its full share of \$11.2 million (20 percent of \$56.0 million total cost). HSIP funds are used to pay 100 percent of the first debt service payment of \$3.6 million, with \$2.6 million allocated to Construction and \$1.0 million to Debt Service (reflecting proportional amounts of debt service costs associated with principal repayment, less transaction costs, and interest/transaction expense). The \$1.0 million of debt-related expenses includes the first-year interest costs of \$0.94 million and transaction costs of \$0.06 million. The interest costs will decline each year as was shown in Figure 14-A for Illustration 2.

Figure 20

Revised FMIS Entry in FY 2 (dollars in millions)				
	Total	Federal Funds	State Funds	Advance Construction
Construction-STP	20.0	8.8	11.2	—
Construction-HSIP	30.0	2.6	—	27.4
Debt Service	6.0	1.0	—	5.0
TOTAL	56.0	12.4	11.2	32.4

Appendix B GARVEE Memorandum of Understanding (MOU) Template

B.1 Template Instructions

The State DOT and the FHWA Division Office should execute a GARVEE Memorandum of Understanding (MOU) to document how the GARVEE program in that State will be administered as facilitating effective internal control consistent with 2 CFR 200.303. The MOU may conform to the format provided in this template, recognizing that the MOU details will be modified to conform to the particular circumstances of the State's program. This template identifies some items likely to be modified by inserting them within [brackets]. Any provisions not applicable to the State's GARVEE program may be removed while other information deemed pertinent for a clear understanding of the State's GARVEE program may be added.¹ The MOU is intended to facilitate State implementation and FHWA oversight of the GARVEE program.

Another best practice is to use a single MOU covering the State GARVEE program's general policies, procedures, and requirements. This single MOU should be amended, as necessary, to reflect additional GARVEE issuances and adjustments to the State's GARVEE program. While the key GARVEE program administration provisions of the MOU are intended to remain largely unchanged over time, brief supplemental appendices should be attached to the MOU for each GARVEE bond issuance indicating (at a minimum) the specific projects approved by FHWA for Federal debt service cost reimbursements under title 23 U.S.C., section 122. Other, more detailed, project-related data may be tracked by other means (apart from the MOU as appended) as agreed upon by the State and the FHWA Division Office. The State and FHWA Division Office should periodically review the MOU to determine if revisions are needed.

¹ The FHWA Division Office and State should review the GARVEE Program Stewardship Practices document when developing the MOU to identify additional provisions that should be included.



GARVEE Bond Program (Grant Anticipation Revenue Vehicle) Memorandum of Understanding

PURPOSE AND AUTHORITY

This Memorandum of Understanding (MOU) is entered into between the Federal Highway Administration [State name] Division (FHWA) and the [State name] (the State) (collectively, the Parties) on [date]. [This MOU supersedes the MOU executed on (date)].

The State intends to finance the construction of certain Federal-aid projects or a single Federal-aid project (the Projects or Project) through the sale of one or more series of Grant Anticipation Revenue Vehicle (GARVEE) Bonds (the Bonds). The purpose of this MOU is to document the procedures for managing the Bonds and their proceeds to be used for the purpose of financing all or a portion of the costs of transportation projects eligible for Federal-aid assistance under title 23 of the United States Code (23 U.S.C.).

The Bonds will be issued by [entity authorized to issue bonds]. The State [DOT office] will have primary responsibility for ensuring compliance with this MOU.

The Federal legal authority enabling reimbursement of eligible debt service, issuance, and certain other bond-related costs is set forth in 23 U.S.C. 122. The State legal authority supporting the issuance of the Bonds is provided in [insert statutory reference].

THE BONDS

General Provisions

The Projects to be financed from the Bond proceeds are identified in **Attachment A**. The State may revise the Projects by submitting a revised Attachment A to FHWA.

Subject to available funding and obligation authority, FHWA will participate in the payment of debt-related costs associated with the Projects under the following conditions:

- The State will provide a final Debt Service Schedule at the close of any new Bond series. The schedule must fully allocate the debt obligations (principal, interest, cost of issuance, and other eligible costs) by project (Project Allocations) and show the final maturity date for the respective series of bonds. FHWA will withhold approval and payment of debt service until the final debt service schedule is submitted and accepted. **Attachment B** provides the Debt Service Schedules and Project Allocations for all of the State's GARVEE bonds.
- The Project Allocations, as may be amended from time to time, will serve as the ceilings on the amounts that may be billed against the Projects for payment of debt obligations.

The final maturity dates on the project allocation schedules will be the final dates by which any debt obligations may be reimbursed by FHWA for a project and may not be extended unless the State issues additional bonds with a new final maturity date to finance additional eligible project costs that have not been previously funded.



The Project Allocations may be amended by the State to adjust for overruns or shortages in projects based on actual expenditures as well as for the purpose of substituting or adding Federally-eligible projects. The State will submit any Project Allocation amendment to FHWA for approval.

The State acknowledges that the eligibility of a GARVEE Bond issuance for Federal-aid reimbursement shall not constitute a commitment, guarantee, or obligation on the part of the United States to provide for payment of principal or interest on the Bonds, nor create a right of a third party against the United States for payment of the Bonds. This statement will be included in any Bond official offering document relating to GARVEE Bond issuance.

Additional Bonds / Refunding Bonds

Prior to the issuance of additional Bonds, including Bonds used to refund outstanding Bonds, the State and FHWA will amend all necessary attachments to this MOU with Debt Service Schedules and Project Allocations (**Attachment B**) as may be needed to reflect any such additional Bonds.

Prior to the sale of refunding Bonds, the State will certify and demonstrate to FHWA that (i) there are debt service cost savings on a net present value basis or (ii) the aggregate nominal debt service costs scheduled to be reimbursed with Federal funds are reduced.

[If the State seeks to refund GARVEE Bonds to restructure debt service or change bond covenants, or for another purpose, and the refunding will not generate positive net present value savings, the FHWA Division Office will consult with the CIFS to ensure that the State has sufficiently demonstrated and properly documented its need to increase the amount of Federal funding in the GARVEE project(s) prior to issuance of the refunding bonds. The MOU will be modified to address this situation.]

The State will obtain FHWA approval prior to issuing any GARVEE refunding Bond and will modify the relevant project agreement(s) to reflect the revised project cost and Federal share based on the revised debt service payment schedule. Following the issuance of a GARVEE refunding Bond for any purpose, the State will promptly submit to FHWA a Federal-aid project agreement modification for each project along with a new debt service payment schedule and updated project allocation, as an amended **Attachment B** to this MOU, to ensure the continued eligibility of Federal reimbursements of bond costs.

Bonds Issued by Local Governments

[If GARVEE Bonds are issued by a local entity, the State agrees to execute an agreement with the local entity that sets forth the State and local responsibilities for administering the project(s) to ensure compliance with Federal requirements relating to GARVEE projects. The State is responsible as the recipient of Federal-aid highway funds for ensuring that any projects assisted through the local program are carried out in accordance with Federal requirements as provided by 23 U.S.C. 302, 23 CFR 1.3 and 2 CFR 200.331.

THE PROJECTS

General Provisions

The Projects will be administered in accordance with the laws, regulations, and procedures applying to Federally-assisted projects.

The Federal-aid project agreement(s) will include a statement that the Project authorization is requested under the provisions of 23 U.S.C 115 and 122.



The State will enter the Projects in the Fiscal Management Information System (FMIS) in accordance with normal FMIS procedures provided that the additional costs associated with the Bonds (interest, issuance, and other bond related costs) will be entered as Improvement Type 45, “Debt Service.” The Projects entered in FMIS should reconcile with the Projects listed in Attachment A.

The Projects will be authorized using Federal advance construction (AC) procedures and the State’s current Federal-aid authorization process. The use of AC procedures as permitted by 23 U.S.C. 115 will preserve eligibility for the Projects without providing a commitment, guarantee, or obligation on the part of the United States, acting by and through the FHWA to provide for payment of project costs. The AC amount for each project will reflect the unobligated Federal share of the project including the project’s estimated share of additional costs associated with the Bonds that have been issued.

Project Accounting

The State will maintain a system that accurately allocates eligible debt service payments, issuance costs, and other bond-related costs back to the Projects. This process is described in **Attachment B**.

The State affirms that procedures and expenditure controls are in place to ensure that all construction and Bond-related costs are eligible for Federal-aid funding.

Any interest earned from deposited bond proceeds will be used on projects eligible under title 23.

Billing and Reimbursement

In lieu of seeking Federal reimbursement for project costs funded from bond proceeds, the State will submit requests for Federal reimbursement of debt service payments and other eligible costs for Bonds issued under the provisions of 23 U.S.C. 122. These costs will be considered costs incurred at the time the State is required to make payment. Costs not included in the debt service payment are reimbursable at the time the State pays the costs. The State may request Federal reimbursement in sufficient time to make debt service payments in accordance with the provisions of the Cash Management Improvement Act.

Issuance and other bond-related costs are Federal-aid eligible to the extent they are reasonable, necessary, customary, and allocable to the Federal project. In any case, costs are subject to FHWA approval.

Subject to Federal-aid funds and obligation authority availability, the State will obligate and convert the amount of AC necessary to pay the Federal share of debt service (principal and interest), issuance costs, and other bond-related costs scheduled for that fiscal year. The conversion of AC for debt service on the Bonds will be obligated [describe the process for AC conversion such as “in October for each Project’s share of the debt service payments scheduled during the fiscal year.”]

[The State has authorized FHWA to make payments directly to [specify a paying agent]. As such, the State will submit a separate billing to FHWA for the debt service reimbursements.]

Reimbursement of Debt Service Advances by the State

In the event that anticipated Federal payments from FHWA are insufficient or late, the State may use other State resources or draw upon Project reserves, including the debt service reserve fund should one exist, to make debt service payments on the Bonds. In such a case, subsequent Federal payments may be used to reimburse the State or replenish the reserve for those draws.



It should be noted that under the Treasury Offset Program (31 CFR 285.5), the U.S. Treasury may withhold part or all of a debtor's Federal payment to satisfy the debtor's delinquent debt owed to the U.S. Government. While transportation funds are rarely affected by offsets, it is possible for an FHWA payment to be intercepted by the U.S. Treasury to satisfy a delinquent debt incurred on another Federal program. This could be problematic for the State if a payment for GARVEE debt service were intercepted. Such a situation would have to be resolved by the State working with the creditor agency and Treasury.

The debt service reserve fund, including any interest earnings on fund balances, will be used in accordance with [the financing agreement (bond resolution or trust indenture) provisions that typically govern the use of such funds associated with bond issuances].

Project Close-Out

The Projects will remain open until all underlying contracts have been closed and all payments for debt service, issuance costs, and other bond-related costs have been made and audited in accordance with the State's audit requirements. Conventional project closeout documentation will be submitted to FHWA for each project. The State will maintain documentation of individual project costs for not less than three (3) years after closeout of the Project and final payment in accordance with 2 CFR 200.333.

STEWARDSHIP AND OVERSIGHT

The State acknowledges i) FHWA's authority under 23 U.S.C. 106(g)(2) to perform an annual assessment of the adequacy of the State's accounting procedures and processes in order to ensure that the State's financial management system properly supports the allocation of eligible debt service (principal and interest), issuance costs, and other bond-related costs back to the Projects; and ii) . FHWA may authorize an audit of the Federal-aid projects being financed under 23 U.S.C. 122, the State's allocation of debt service expense, and bond-related costs thereto, by an independent auditor at the expense of the State apportionments.

From issuance to maturity of the bond, the State and Division will provide updated information into the FHWA Center for Innovative Finance Support's GARVEE database annually, or at any change in the terms of the bond agreement.

In accordance with the Division Office Stewardship and Oversight Plan, FHWA will perform reviews and assessments of the GARVEE program as needed to ensure compliance with Federal requirements. If the Division Office Stewardship and Oversight plan does not include such provisions, the State and Division will amend the Plan to include review and assessment roles for both the Division and State.

The State will include programming of debt service and related costs in the Statewide Transportation Improvement Program (STIP) submitted to FHWA for review and approval.

The State will provide FHWA with an electronic copy of the Official Statement or other offering document for each GARVEE Bond issuance.

AMENDMENTS TO THE MOU

This MOU shall not be altered, modified, or amended except by an instrument in writing and executed by the Parties below. The Parties will amend this MOU as needed to reflect material changes and will review it at least every five years to determine if changes are needed.



SIGNATURES

_____ Department of Transportation

 (Name, Title) Date

FHWA _____ Division

 (Name, Title) Date

ATTACHMENT A

For each GARVEE bond series, provide the following:

- Name(s) and description(s) of the Project(s) financed
- Total amount of each GARVEE bond series
- Sources and uses for each GARVEE bond series

Include as much detail as necessary to help the State and the FHWA Division Office manage the program and understand the GARVEE financings and associated projects. For example:

GARVEE Series 2012

- Project A Name:** Transportation Avenue Freeway Extension
Description: 10-mile extension of Transportation Avenue Freeway and four grade-separated interchanges
- Project B Name:** Reconstruction of Midtown Parkway
Description: Reconstruction of 5 miles of Midtown Parkway from Business Center Intersection to Shopping Central Intersection including widening from two lanes to four lanes

Sources and Uses:

Sources of Funds

Proceeds of the Series 2012 GARVEE Bonds	\$000,000,000.00
Net Original Issue Discount or Premium	\$0,000,000.00
TOTAL SOURCES	\$000,000,000.00

Uses of Funds

Deposit to Project A Account	\$000,000,000.00
Deposit to Project B Account	\$000,000,000.00
Deposit to Debt Service Reserve Fund Account	\$00,000,000.00
Underwriters' Discount	\$0,000,000.00
Other Costs of Issuance	\$0,000,000.00
TOTAL USES	\$000,000,000.00

ATTACHMENT B

Debt Service Schedules

For each GARVEE bond series provide the final Debt Service Schedules.

Project Allocations

For each project, show the anticipated share of debt service costs.

Project Allocations Process

Describe the process and calculations used to allocate debt service, issuance costs, and other bond-related costs to individual projects. See Appendix A for a sample transaction involving the allocation of debt service costs.



Appendix C GARVEE Program Review – Sample Questions

The purpose of this document is to assist FHWA officials in reviewing a State’s GARVEE Program. Included are example questions from which FHWA officials may select those determined to be relevant in undertaking a GARVEE review, depending on the circumstances of the State program. This appendix is not intended to be a complete program review guide or a billing review guide.

C.1 Review Financing Documents

Note: It is a best practice for the FHWA Division Office to obtain a copy of the final offering document (typically referred to as an Official Statement (OS) for each GARVEE bond issuance). The Division Office also is encouraged to obtain (from the State DOT or the GARVEE bond issuer) a copy of the Transcript Documents, which are pulled together by bond counsel and typically made available electronically (e.g. on a CD) and include:

- ▶ Official Statement or other offering document
- ▶ Bond documents (trust indentures, bond purchase agreement, disclosure agreement)
- ▶ Certificates (issuer, tax, feasibility consultant, consulting engineer)
- ▶ Trustee documents
- ▶ Legal opinions
- ▶ Rating agency letters
- ▶ Background documents (various other agreements providing context relevant to the transaction)

The finance documents listed above may be source materials which shall be kept at minimum by the bond issuer and made available upon request. Not all of these documents may be relevant to the program review, it is up to the reviewer to determine the applicability of the bond financing documents to the type of review.

1. Does each GARVEE bond issuance (financing) document (official statement or other offering document) include a statement that the bonds are not an obligation of the Federal Government?
2. Do the financing documents include a statement regarding the timing of Federal fund obligations for debt service payments?
3. Do the financing documents include provisions addressing the timing of debt service billings to FHWA (when FHWA outlays or transmits funds)? If so, are the provisions consistent with the Cash Management Improvement Act?
4. Were the initial credit ratings investment grade and have the ratings changed since issuance?
5. Were any GARVEEs issued as variable-rate debt? If so, was FHWA consulted as to the advisability of this approach, as articulated in the *GARVEE Guidance*?
6. For any refunding bonds, do the GARVEEs provide a net present value savings to Federal-aid projects?
7. If the State refunded multiple series of bonds, including non-GARVEE bonds, as a single debt issuance transaction, were the costs of refunding the bonds properly allocated among GARVEE and non-GARVEE projects?



C.2 MOU and Project Authorization Review Sample Questions

1. Have FHWA and the State executed a GARVEE Program MOU?
2. Does the MOU identify each project to be funded with bond proceeds and the estimated cost of each project?
3. Does the MOU contain a current debt service schedule for each bond issuance that reflects any refunded bonds?
4. If an authorized GARVEE project did not advance as planned or was completed under budget, were the debt service costs properly reallocated and Attachments A and B of the MOU revised?
5. Does the Federal-aid project agreement identify the project as a GARVEE project?
6. Is the current debt service schedule included in the project agreement?
7. If refunding bonds were issued, was the project agreement modified to reflect changes in project costs and debt service schedule(s)?
8. Is the project properly identified in the State Transportation Improvement Program / Metropolitan Transportation Plan (including the planned amount of advance construction conversions)?
9. Is each project properly established in FHWA's FMIS with a line item for "Debt Service"?
10. If a major project financial plan is required, does the plan identify the additional costs associated with the issuance of bonds? Is the availability of future Federal funding authorizations identified as a risk factor for the project?

C.3 Review Project Reimbursements

1. Do Federal reimbursements of debt service costs properly reflect the approved Federal share of the debt service payments?
2. If multiple projects are funded from bond proceeds, is the amount of each debt service payment allocated to each project based on the amount of bond proceeds used for the project? If not, how are debt service payments allocated to projects?
3. Does the timing of FHWA reimbursements (debt service payments) comply with the Cash Management Improvement Act?
4. Are debt-related costs incurred that are not included in the debt service payments? If so, are these eligible costs reimbursed when they are incurred, and properly allocated among projects?
5. If FHWA reimbursements are made to a debt service fund in advance of the date of scheduled debt service payment, was the fund authorized in the bond issuance documents and are the invested funds, including interest earnings, compliant with the bond issuance documents?
6. If FHWA reimbursements are made to replenish a debt service reserve fund (or contingency fund), are the payments consistent with the flow of funds outlined in the bond issuance documents?
7. Is each debt service payment limited to the Federal share?

C.4 Review Local Government Participation

1. Are State policies and procedures in place to ensure that any locally administered GARVEE project complies with Federal requirements?



2. If GARVEE bonds are issued by a local government, has the State entered into an agreement with the local government that properly documents how the program will be administered?

C.5 Review GARVEE Program Oversight

1. Have any audits been conducted on the GARVEE Program? If so, what were the findings, and what is the status of resolving the findings?
2. Have other assessments been conducted of the GARVEE Program? If so, what were the findings?



Appendix D Fiscal Management Information System (FMIS) Transactions Guidance

D.1 New and Refunded GARVEE Issuances

Important Points

1. This guidance contains separate steps for projects in FMIS that are funded by GARVEE proceeds and steps to process debt service payments for GARVEEs that support a program, or group of projects.
2. The MOU, between state DOT, state treasury and FHWA Division office (reviewed and supported by CIF\$ before finalized), is in place and is the source reference behind any obligations in the FHWA FMIS system.
3. Detail line item 045-Debt Service: will be used to obligate all related debt service costs (interest, associated bond costs), not principal. Principal debt service costs should be obligated on their project specific line item. These lines should have, as its source document, a state-DOT provided/maintained debt service schedule which included the total dollar amount of principal, interest, and associated bond costs in advance of project modification requests in FMIS to convert Advance Construction, as well as to support semi-annual current bill reimbursements in accordance with payment schedule.
4. Any prior authorized obligations and previously incurred project costs arising from existing PE/ROW/CONS activity will be entered in FMIS and processed as a normal Federal Aid project, using the appropriate line items when obligating funds.
5. Review of project costs and general project oversight roles will follow the Stewardship & Oversight Agreement between FHWA and the state DOT. The steps described here outline recommended FMIS process for GARVEE debt service.
6. Advance Construction (AC): will reflect the total debt service payments, and **is entered in FMIS at the time of project authorization** to avoid any potential instances of “reverse AC” whereby deobligation of Federal funds is undertaken and moved to the AC category to capture additional project costs. In the event the bond issuance covers multiple projects; a pro rata portion of the debt service will be applied to each project based on their respective share of the issuance.

Example (simplified)

4 Projects selected A, B, C, D

Ten Year Bond Issuance: 100m

Total Debt Service Amount (@ 3% and 1m issuance costs):\$118,402,812/\$11,840,281 per annum

Estimated Project Costs:

A 25m
 B 25m
 C 25m
 D 25m

AC Authorized per Project:

A. $(118,402,812 * .25) = 29,600,703.00$
 B 29,600,703.00
 C 29,600,703.00
 D 29,600,703.00

D.2 Transaction Steps for GARVEE FUNDED PROJECTS IN FMIS

Step 1

(1-x) project(s) identified as recipient of GARVEE bond proceeds.

If Project(s) not yet authorized in FMIS:

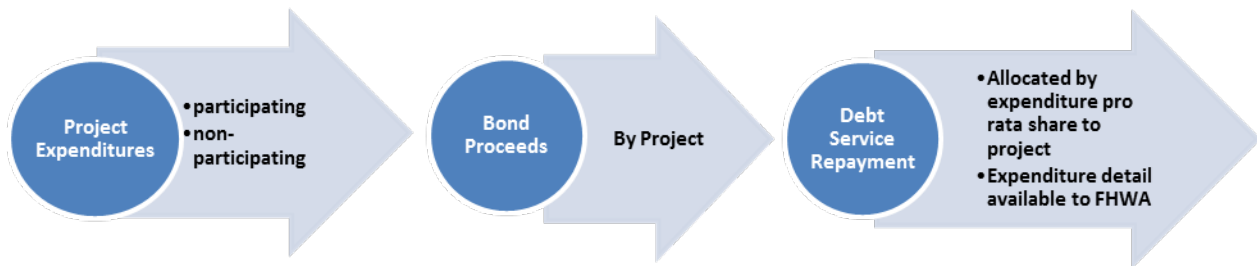
Projects Authorized by Phase (PE/ROW/CONST.) and AC'd, following normal AC procedures.

If project previously authorized in FMIS.

1. Retain original line item(s) using formula funds for all previously reimbursed expenses and deobligate remaining balances.
2. New line item(s) AC'd following normal procedures.

Step 2

The Division office has previously reviewed the state's accounting system and state process to ensure project costs paid by bond proceeds are Federal Aid eligible. Since project expenditure records will remain solely in the state systems, the division office should have appropriate assurances that the state system can trace the flow of:



Step 3

At the beginning of each Federal fiscal year¹ all projects convert their AC portion of Debt Service to reflect their estimated pro rata share. The estimate is used until actual expenditures are available to use for pro rata calculation.

EXAMPLE (100% federal share assumed for clarity)

Project	Fed Share Costs to date (9/1/2017)	Debt Service Payment due (10/15/2017)	Pro Rata Share (project cost/total costs)	Debt Service Share
A	400,000	—	21.62%	756,700.00
B	250,000	—	13.51%	472,850.00
C	100,000	—	5.41%	189,350.00
D	1,100,000	—	59.46%	2,081,100.00
TOTAL	1,850,000	3,500,000	100.00%	3,500,000.00

¹ Conversion schedule may be further outlined in the MOA.



Step 4

When all projects are completed and all expenditures accounted for, the state will provide a certification of GARVEE project activity which will serve to identify the actual share of bond proceeds per FMIS project. This would be similar to what is normally “certified” by a state in its process of closing out, and *accepting*, projects of Division or Corporate interest (PoDIs, PoCIs)

Step 5

Once the certification is accepted by the FHWA Division office, the following debt service payment can adjust accordingly to finalize each project’s actual share of debt service. The division office will file the certification within the official project record(s).

This step is important to occur after completion of all projects and before final debt service payment. The rationale is that all future debt service payments will have the same pro rata share applied for remaining repayment term which will assist state and division staff in managing the projects for the duration.

Step 6

When the final Debt Service Payment is made and the FMIS project has no AC balance and no unexpended federal aid obligation balance, the State will provide proof from the bond issuer that the debt is relieved and the normal FMIS project closeout process can begin.



Appendix E Treatment of Bond Premiums in FMIS

What is a premium bond?

A premium bond is a bond that is trading above its par, or stated, value. A bond will trade at a premium when it offers a coupon rate that is higher than prevailing interest rates for similar bonds.

Why is a premium bond issued?

A premium bond is issued when an investment bank chooses, as a marketing strategy, to “price” an issuer’s GARVEE bond at a higher coupon rate than prevailing interest rates for similar bonds. This is done in order to attract investors seeking higher yield. As a result of this marketing strategy, additional proceeds (often called the bond premium) are generated, and are available for the construction of eligible Federal-aid projects.

What strategy must be employed for FMIS purposes?

To accurately reflect FHWA’s participation in debt service repayments, all bond premiums must be applied to Federal-aid eligible costs in FMIS. Obligating both the principal and premiums in FMIS, along with the debt service interest costs from the original debt service schedule, without making an adjustment to net interest costs will result in overstating the eligible debt service.

For example, if the total debt service on a bond was \$1,100,000, Federal reimbursements would not exceed 80% of \$1,100,000.

Debt Service Total = \$1,100,000 (\$1,000,000 principal + \$100,000 interest costs at par)

If the bond sold at a premium of \$250,000, that premium would also be applied to project costs.

FMIS Construction Line Item \$1,350,000 + \$100,000 interest costs at par.

But if we include the premium along with the principal on a construction line item, FHWA would be participating in cost exceeding the total debt service.

To correct this in FMIS, the state DOT and division must calculate a debt service schedule based on the **NET INTEREST COSTS**. This debt service schedule is only used to reflect participating net interest costs and proceeds in FMIS, and does not supersede or supplant a borrower’s agreed upon debt service schedule with bond holders. There will be slight fluctuations in the FMIS reimbursements of debt service reimbursements caused by the slight adjustments in interest, but the FMIS schedule and the debt service schedule total repayments will equal. Because of these slight variations, the FHWA division and state should discuss the FMIS entries beforehand.

The basic premise is to:

Apply all proceeds to Project/Construction Costs:

$$(\text{Principal proceeds} + \text{Premium Proceeds} - \text{Underwriter's Discount})^1$$

And Net Interest Costs to 045 Debt Service (interest).

Then divide the costs by the number of debt service payment years to produce the schedule.²

¹ This is also referred to as Target Value.

² To further break out semiannual payments, follow the original debt service schedule to match principal/Interest only schedules to coincide with actual payment amounts.



Please see the following tables that compare a bond offering's original debt service schedule and the Net Interest Cost debt service schedule. The schedule's purpose is to best match the borrower's liability to HWA's participation in eligible costs.

Original/Official Debt Service Schedule vs Net Interest Debt Schedule for FMIS

Original Debt Schedule			
Period	principal	coupon rate	debt service
9/1/2017	8,515,000.00	5.00%	10,361,058.33
9/1/2018	8,120,000.00	5.00%	10,363,250.00
9/1/2019	8,525,000.00	5.00%	10,362,250.00
9/1/2020	8,950,000.00	5.00%	10,361,000.00
9/1/2021	9,400,000.00	5.00%	10,363,500.00
9/1/2022	9,870,000.00	5.00%	10,363,500.00
	53,380,000		62,174,558.33

FMIS Treatment of Premium and net interest costs			
Period	principal+premium - underwriter's discount for FMIS project costs ((53,380,000+4,832,715.50-169,653.01)/6)	Net Interest (4,131,495.84/6)	debt service
9/1/2017	9,673,843.75	688,582.64	10,362,426.39
9/1/2018	9,673,843.75	688,582.64	10,362,426.39
9/1/2019	9,673,843.75	688,582.64	10,362,426.39
9/1/2020	9,673,843.75	688,582.64	10,362,426.39
9/1/2021	9,673,843.75	688,582.64	10,362,426.39
9/1/2022	9,673,843.75	688,582.64	10,362,426.39
	58,043,062.49	4,131,495.84	62,174,558.33

FMIS Reimbursement = Total Debt Service

This is referred to on Bond Summary as Target Value



EXAMPLE BOND SUMMARY

SOURCES AND USES OF FUNDS

Surface Transportation Improvements Special Obligation
Notes, Series 2016 A Final Pricing Numbers

Dated Date 12/22/2016

Delivery Date 12/22/2016

Sources:

Bond Proceeds:	
Par Amount	53,380,000.00
Premium	4,832,715.50
	<hr/>
	58,212,715.50

Uses:

Project Fund Deposits:	
Project Fund	57,799,999.68
Delivery Date Expenses:	
Cost of Issuance	240,000.00
Underwriter's Discount	169,653.01
	409,653.01
Other Uses of Funds:	
Additional Proceeds	3,062.81
	<hr/>
	58,212,715.50

BOND SUMMARY STATISTICS**Surface Transportation Improvements Special Obligation
Notes, Series 2016 A Final Pricing Numbers**

Dated Date	12/22/2016
Delivery Date	12/22/2016
Last Maturity	09/01/2022
Arbitrage Yield	2.115652%
True Interest Cost (TIC)	2.210940%
Net Interest Cost (NIC)	2.348893%
All-In TIC	2.346442%
Average Coupon	5.000000%
Average Life (years)	3.295
Duration of Issue (years)	3.095
Par Amount	53,380,000.00
Bond Proceeds	58,212,715.50
Total Interest	8,794,558.33
Net Interest	4,131,495.84
Total Debt Service	62,174,558.33
Maximum Annual Debt Service	10,363,500.00
Average Annual Debt Service	10,923,787.70
Underwriter's Fees (per \$1000)	
Average Takedown	2.300604
Other Fee	0.877609
Total Underwriter's Discount	3.178213
Bid Price	108.735599



Appendix E

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Serial Bonds	53,380,000.00	109.053	5.000%	3.295	17,889.55
	53,380,000.00			3.295	17,889.55

	TIC	All-In TIC	Arbitrage Yield
Par Value	53,380,000.00	53,380,000.00	53,380,000.00
+ Accrued Interest			
+ Premium (Discount)	4,832,715.50	4,832,715.50	4,832,715.50
- Underwriter's Discount	-169,653.01	-169,653.01	
- Cost of Issuance Expense		-240,000.00	
- Other Amounts			
Target Value	58,043,062.49	57,803,062.49	58,212,715.50
Target Date	12/22/2016	12/22/2016	12/22/2016
Yield	2.210940%	2.346442%	2.115652%



BOND PRICING**Surface Transportation Improvements Special
Obligation Notes, Series 2016 A Final Pricing Numbers**

Bond Component	Maturity Date	Amount	Rate	Yield	Price	Premium (-Discount)	Takedown
Serial Bonds:							
	09/01/2017	8,515,000	5.000%	1.100%	102.678	228,031.70	1.250
	09/01/2018	8,120,000	5.000%	1.450%	105.909	479,810.80	2.500
	09/01/2019	8,525,000	5.000%	1.750%	108.506	725,136.50	2.500
	09/01/2020	8,950,000	5.000%	2.030%	110.509	940,555.50	2.500
	09/01/2021	9,400,000	5.000%	2.270%	112.081	1,135,614.00	2.500
	09/01/2022	9,870,000	5.000%	2.460%	113.410	1,323,567.00	2.500
		53,380,000				4,832,715.50	

Dated Date	12/22/2016	
Delivery Date	12/22/2016	
First Coupon	03/01/2017	
Par Amount	53,380,000.00	
Premium	4,832,715.50	
Production	58,212,715.50	109.053420%
Underwriter's Discount	-169,653.01	-0.317821%
Purchase Price Accrued Interest	58,043,062.49	108.735599%
Net Proceeds	58,043,062.49	



BOND DEBT SERVICE

Surface Transportation Improvements Special Obligation
Notes, Series 2016 A Final Pricing Numbers

Period Ending	Principal	Coupon	Interest	Debt Service
09/01/2017	8,515,000	5.000%	1,846,058.33	10,361,058.33
09/01/2018	8,120,000	5.000%	2,243,250.00	10,363,250.00
09/01/2019	8,525,000	5.000%	1,837,250.00	10,362,250.00
09/01/2020	8,950,000	5.000%	1,411,000.00	10,361,000.00
09/01/2021	9,400,000	5.000%	963,500.00	10,363,500.00
09/01/2022	9,870,000	5.000%	493,500.00	10,363,500.00
	53,380,000		8,794,558.33	62,174,558.33

BOND DEBT SERVICE

Surface Transportation Improvements Special Obligation
Notes, Series 2016 A Final Pricing Numbers

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
03/01/2017			511,558.33	511,558.33	
09/01/2017	8,515,000	5.000%	1,334,500.00	9,849,500.00	10,361,058.33
03/01/2018			1,121,625.00	1,121,625.00	
09/01/2018	8,120,000	5.000%	1,121,625.00	9,241,625.00	10,363,250.00
03/01/2019			918,625.00	918,625.00	
09/01/2019	8,525,000	5.000%	918,625.00	9,443,625.00	10,362,250.00
03/01/2020			705,500.00	705,500.00	
09/01/2020	8,950,000	5.000%	705,500.00	9,655,500.00	10,361,000.00
03/01/2021			481,750.00	481,750.00	
09/01/2021	9,400,000	5.000%	481,750.00	9,881,750.00	10,363,500.00
03/01/2022			246,750.00	246,750.00	
09/01/2022	9,870,000	5.000%	246,750.00	10,116,750.00	10,363,500.00
	53,380,000		8,794,558.33	62,174,558.33	62,174,558.33



FORM 8038 STATISTICS

**Surface Transportation Improvements Special
Obligation Notes, Series 2016 A Final Pricing Numbers**

Dated Date 12/22/2016

Delivery Date 12/22/2016

Bond Component	Date	Principal	Coupon	Price	Issue Price	Redemption at Maturity
Serial Bonds:						
	09/01/2017	8,515,000.00	5.000%	102.678	8,743,031.70	8,515,000.00
	09/01/2018	8,120,000.00	5.000%	105.909	8,599,810.80	8,120,000.00
	09/01/2019	8,525,000.00	5.000%	108.506	9,250,136.50	8,525,000.00
	09/01/2020	8,950,000.00	5.000%	110.509	9,890,555.50	8,950,000.00
	09/01/2021	9,400,000.00	5.000%	112.081	10,535,614.00	9,400,000.00
	09/01/2022	9,870,000.00	5.000%	113.410	11,193,567.00	9,870,000.00
		53,380,000.00			58,212,715.50	53,380,000.00

	Maturity Date	Interest Rate	Issue Price	Stated Redemption at Maturity	Weighted Average Maturity	Yield
Final Maturity	09/01/2022	5.000%	11,193,567.00	9,870,000.00		
Entire Issue			58,212,715.50	53,380,000.00	3.3523	2.1157%

Proceeds used for accrued interest	0.00
Proceeds used for bond issuance costs (including underwriters' discount)	409,653.01
Proceeds used for credit enhancement	0.00
Proceeds allocated to reasonably required reserve or replacement fund	0.00

PROOF OF ARBITRAGE YIELD

**Surface Transportation Improvements Special
Obligation Notes, Series 2016 A Final Pricing Numbers**

Date	Debt Service	Present Value to 12/22/2016 @ 2.1156517890%
03/01/2017	511,558.33	509,499.01
09/01/2017	9,849,500.00	9,707,165.17
03/01/2018	1,121,625.00	1,093,845.45
09/01/2018	9,241,625.00	8,918,394.42
03/01/2019	918,625.00	877,216.20
09/01/2019	9,443,625.00	8,923,539.79
03/01/2020	705,500.00	659,668.12
09/01/2020	9,655,500.00	8,933,739.77
03/01/2021	481,750.00	441,072.83
09/01/2021	9,881,750.00	8,952,668.23
03/01/2022	246,750.00	221,210.55
09/01/2022	10,116,750.00	8,974,695.96
	62,174,558.33	58,212,715.50

Proceeds Summary

Delivery date	12/22/2016
Par Value	53,380,000.00
Premium (Discount)	4,832,715.50
Target for yield calculation	58,212,715.50



COST OF ISSUANCE

**Surface Transportation Improvements Special
Obligation Notes, Series 2016 A Final Pricing Numbers**

Cost of Issuance	\$/1000	Amount
Jackson Kelly	0.84301	45,000.00
Spilman	0.44961	24,000.00
PRAG	1.31135	70,000.00
S&P	0.91795	49,000.00
Moody's	0.56201	30,000.00
ImageMaster	0.04683	2,500.00
BNY Mellon	0.05620	3,000.00
DAC	0.23417	12,500.00
Miscellaneous	0.07493	4,000.00
	4.49607	240,000.00

UNDERWRITER'S DISCOUNT**Surface Transportation Improvements Special
Obligation Notes, Series 2016 A Final Pricing Numbers**

Underwriter's Discount	\$ / 1000	Amount
Average Takedown	2.30060	122,806.25
Underwriters Counsel	0.65568	35,000.00
IPREO (Inc. Wire System and NY Sales Tax)	0.08484	4,528.75
Day Loan	0.01510	806.01
DTC	0.01499	800.00
CUSIP	0.00865	462.00
ImageMaster	0.07025	3,750.00
Miscellaneous	0.02810	1,500.00
	3.17821	169,653.01

