Defense Adjustment Infrastructure Bonds:

Credit Enhancement Grants Make Affordable Capital Available

Commonwealth Development Associates, Inc.
Scott M. Reznick, President

December 1998

ECONOMIC DEVELOPMENT ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

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The statements, findings, conclusions and recommendations in this publication are those of the authors and do not necessarily reflect the views of the Economic Development Administration.

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EXECUTIVE SUMMARY

Converting a closed or downsized military base to civilian use often requires Local Redevelopment Authorities (LRAs) to make substantial early investment in infrastructure. The money available for infrastructure investment has, however, been inadequate. Reliance on limited grants and current income to fund investment has hobbled LRAs working to seize today's redevelopment opportunities.

Municipal bonds can bridge this funding gap. Bond issuers borrow capital to pay for base infrastructure. They repay their bonds with future income or revenues created as new or upgraded facilities stimulate redevelopment.

- A long-term capital asset, infrastructure is ordinarily paid for with income or revenues generated over the facility's useful life.
- Municipal bonds--particularly at today's low tax-exempt interest rates--are an affordable, prudent way to invest in priority base reuse infrastructure projects.

States, counties, and municipalities may issue their own general obligation or revenue bonds to finance defense adjustment infrastructure. These bond proceeds may be granted or loaned to LRAs for infrastructure investment.

Or LRAs may issue bonds secured with real estate income, user fees, or tax increments. However, these LRA bonds will ordinarily be rated below investment grade and, if marketable to prospective bondholders, will pay higher "junk bond" interest rates.

States, counties, and municipalities may credit enhance LRA bonds to achieve investment-grade credit ratings and lower interest costs. Credit enhancement assures bondholders of timely principal and interest payments if a borrower is delinquent or in default. States, counties, and/or municipalities may:

- assume all the risk of LRA bond default with full faith and credit guarantees;
- limit their liability with specific tax revenue or moral obligation pledges;
- use grants to fund bond reserves; or
- buy bond insurance or letters of credit if commercially available.

The Economic Development Administration (EDA) can make credit enhancement grants to fund multiyear debt service reserves or subsidized interest accounts for LRA bonds.

The cash cushion provided by multiyear reserves should enable public or private credit enhancers to confidently protect LRA bondholders against default. Only an LRA's inability to pay debt service for several years would exhaust reserves and trigger third-party enhancement.

Credit enhancement grants will help LRAs:

- secure third-party credit enhancement,

- issue investment-grade bonds, and
- raise the low-cost capital they need for immediate infrastructure investment.

State, County, and Municipal Infrastructure Bonds

State, county, and local governments may directly issue municipal bonds to pay for defense adjustment infrastructure. General obligation and revenue bond proceeds may be granted or loaned to LRAs.

General obligation (GO) bonds are secured with the issuing government's full faith and credit, i.e., it pledges to use all its revenues, funds and taxing powers to pay bondholders on time. GO bonds are subject to statutory and constitutional restraint and ordinarily require voter approval.

Revenue bonds are commonly used by governments, authorities, and service districts.

- Repaid with specific, dedicated tax revenues or user fees, revenue bonds ordinarily do not require voter approval and are not subject to as many legal restraints as GO bonds.
- Less secure than GO bonds, revenue bonds ordinarily carry lower credit ratings and pay higher interest rates.

GO and revenue bonds that draw upon large, existing tax or rate bases are secured with stable sources of revenues or user fees and are commonly rated investment grade. They may then be sold to individual and institutional investors at competitive interest rates.

The use of GO or revenue bonds to finance infrastructure may require a willingness to pay on the part of tax or rate payers who do not directly benefit from base conversion.

- Interest costs may seem prohibitive.
- Repayment liabilities may be seen as excessively burdensome.
- Bond issuance may be legally or financially restrained.
- There may be higher priority uses for available bond proceeds.

Local Redevelopment Authority Infrastructure Bonds

LRAs ordinarily have only limited authority to issue infrastructure bonds on their own credit, or to issue bonds on their own credit "on behalf of" state, county, or local governments:

- Special purpose district revenue bonds may be secured with LRA real estate sales, lease and impact fee income, tax increments, or special assessments.
- Airport or port authorities, or LRAs operating utility service facilities, may issue user fee revenue bonds.
- LRAs may borrow from state infrastructure banks capitalized with GO bonds and/or appropriations.

Bonds secured with LRA real estate income, user fee, tax increment, or assessment revenues ordinarily would not achieve investment-grade credit ratings because:

- LRA revenues are fragile, speculative, and subject to redevelopment timing.

- LRAs cannot establish consistent, revenues without commercial, industrial, or residential development.
- And they cannot galvanize development without the infrastructure their bonds would finance.

LRAs ordinarily do not have the revenue history to support investment-grade ratings:

- Many LRAs are just beginning to implement their reuse plans, and have little historical revenue data.
- LRAs ordinarily do not project revenues at a rating agency level of confidence.
- Few base reuse plans have fully considered financial components.

LRAs would ordinarily require credit enhancement to issue investment-grade debt publicly marketable to institutional investors.

State, County, Municipal, and Private Credit Enhancements

Credit enhancements furnish bondholders with additional security against borrower delinquency and default.

Credit enhancements give state, county, and local governments an alternative to directly issuing defense adjustment bonds.

States, counties, and municipalities may credit enhance revenue bonds issued by LRAs; utility, airport, or port authorities; infrastructure banks; or lower levels of government with:

- Grants to capitalize debt service or supplemental reserve funds or subordinate bonds;
- Full faith and credit guarantees subject to constitutional and statutory limitations;
- Double-barreled pledges of specific, limited revenues obligated by the legislature; or
- Moral obligation pledges of legislative intent, but not obligation, to appropriate.

Private credit enhancements, if available, include bond insurance and letters of credit. Public and private credit enhancements are ordinarily cumulative in their effect.

The choice of grant, pledge, or guarantee ordinarily reflects:

- The inherent credit risk of the borrowing;
- The importance of base revitalization to the public credit enhancer;
- Its available budgetary or contingent liability resources; and
- Its willingness to absorb the risk that the LRA will become delinquent or default.

The type of credit enhancement available for a defense adjustment bond also depends upon a state’s constitution and statutes, and should be determined following legal review.

EDA Credit Enhancement Grants

Eligible credit enhancement grantees could include LRAs; states, counties, municipalities and authorities; and state infrastructure banks.

EDA credit enhancement grants could fund debt service or supplemental reserves.

- Debt service reserves absorb first loss liability, i.e., if a borrower is delinquent or in default, reserves are drawn upon first to pay bond principal and interest on time.
- Supplemental reserves replenish draws against a debt service reserve. They may be capitalized at one or more years of bond debt service, significantly reducing the risk of delinquency and default.
- Multiyear reserves would provide a debt service cushion, giving public and private credit enhancers comfort to furnish additional enhancements against default.
- Only a borrower's continuing inability to pay, even after multiyear reserves had been exhausted, would trigger payments from public or private credit enhancers.

EDA's liability would be limited to the amount of its grant. Bondholders and borrowers could not legally assign responsibility for bond repayment to EDA or the Federal government.

Credit enhancement grants should realize the highest financial leverage and lowest interest and credit enhancement costs for borrowers:

- Borrowers could expect bond proceeds to leverage EDA's grant up to twenty times.
- Credit enhancement grants would provide defense adjustment communities with extra cash when credit risk is highest.
- Other agencies could augment EDA credit enhancement grants.

EDA credit enhancement grants would not effect the tax exemption of defense adjustment infrastructure bonds.

EDA Grant Requirements

EDA's grants have frequently been the critical early dollars invested in defense adjustment infrastructure projects. Changing their use from construction to credit enhancement would not change EDA's critical role:

- "But for" EDA's credit enhancement grant, project financing, and, hence, the project, would not be undertaken.
- EDA's involvement would continue to spark interest in the project among public and private credit enhancers and bondholders.

EDA's evaluation of credit enhancement grants would continue to review prospective grantee and area eligibility and the expected economic impact of the projects funded with the proceeds of the enhanced bonds. EDA would review applicants' proposed financing and the availability of other credit enhancements.

EDA's grant agreement would direct grantees to deposit grant funds with bondholders' trustee to be used as debt service.

Federal regulations and construction requirements would extend to all bond-funded projects. The nonfederal matching share could be met with cash or credit enhancements.

EDA could also make technical assistance (TA) grants available to facilitate financial planning and help defense adjustment communities use infrastructure bonds and credit enhancements.

Harmonizing Financial Options with Financial Needs

The lower the demand for LRA real estate, the higher its need for financial support to raise affordable, investment-grade debt capital:

- When demand is very high, an LRA may be able to issue investment-grade bonds on its own credit.
- With high demand, an EDA credit enhancement grant equal to one year's debt service may be sufficient, or may be combined with a state, county, or municipal moral obligation pledge, private bond insurance, or letter of credit.
- Moderate demand may require an EDA grant covering several years of debt service and a state, county or municipal double-barreled pledge or guarantee.
- When demand is low, states, counties, or municipalities may issue GO or revenue bonds and loan LRAs the proceeds rather than provide credit enhancement.
- When demand for LRA property is very low, EDA, states, counties, or localities may continue to directly pay for infrastructure with construction grants.

EDA credit enhancement grants--with a state, county or municipal pledge or guarantee, or bond insurance or letter of credit--will help LRAs access affordable, investment-grade capital to immediately invest in infrastructure and galvanize redevelopment and conversion.

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I. Financial Issues and Solutions

The Base Realignment and Closure (BRAC) process has enabled the Department of Defense (DoD) to close or downsize hundreds of military facilities across the Nation. Closing or downsizing a military base may result in major economic dislocation to a municipality, county, and state. Bases are ordinarily large employment centers in defense adjustment communities and provide significant demand for local goods and services.

Redeveloping a closed base—converting it to civilian use—creates business and job opportunities, diversity and growth, and contributes to government revenues. Local Redevelopment Authorities (LRAs) are mandated by state, county, and local governments with the mission of base redevelopment and conversion.

Modernizing infrastructure—roads, bridges, and interchanges; sewer and water lines and treatment plants; gas, electric, and telecommunications lines; piers, docks, and wharves; runways, hangers, and warehouses; site preparation—is often the key early investment that:

- opens LRA real estate for sale or lease to site developers and end users;
- spurs business growth and job creation;
- yields sale proceeds, rents, user fees, and tax revenues.

A recent study of Economic Development Administration (EDA) defense adjustment grants illustrates the importance of infrastructure. On average, $1 million of EDA funding has produced 18 construction jobs, 124 permanent jobs and leveraged $2.2 million in private sector investment. (Rutgers University, *Defense Adjustment Program Performance Evaluation,* November 1997, p. 4.) (hereinafter: *Rutgers*)

Reuse plans developed by LRAs frequently identify constructing or upgrading infrastructure as a first, indispensable step in base redevelopment. In a 1997 survey of LRAs by the Military Base Redevelopment Project at the Massachusetts Institute of Technology (MIT):

- 86% of respondents indicated that upgrading infrastructure was an economic development strategy of major importance, second only to reuse planning (88%).
- 95% of respondents indicated prior experience in using infrastructure as an economic development strategy. (Lois Stanley, MIT Department of Urban Studies and Planning, unpublished summary of results, Summer 1997, p. 5.) (hereinafter: *MIT*)

Infrastructure is expensive to develop and modernize. California, for example, with 24 of 115 major base closings and realignments, projects initial infrastructure needs at over $2.15 billion.

A. Pay-As-You-Go or Pay-As-You-Use

1. Pay-As-You-Go

Defense adjustment communities have been investing in infrastructure pay-as-you-go, i.e., buying it with current cash. The available funds have not been sufficient:

- Infrastructure construction has largely been paid for with direct grants from EDA, other Federal agencies, state, county, and local governments; and with sales proceeds, impact fees and rents from LRA land and facilities.
- LRA land and facilities have generally had lower real estate values when acquired by businesses and families than foreseen when closure was announced.

EDA is "the only federal agency that provides flexible discretionary funding to communities to implement reuse plans, most of which are heavily reliant on redevelopment of the old military infrastructure systems to support new uses." (*Rutgers,* p. 10.)

From Fiscal Year 1992 through July of Fiscal Year 1997, EDA obligated $500 million in Defense Adjustment Program grants in 36 states:

- $348 million in 88 defense adjustment infrastructure construction projects;
- $93 million to increase state and local planning, organizational and technical capacity;
- $59 million in revolving loan fund capitalization. (*Rutgers,* p. 12.)

EDA's Fiscal Year 1998 appropriation for its Defense Adjustment Program was $89 million; its Fiscal Year 1999 appropriation is $84.8 million.

EDA's construction grants have been used for demolition and site preparation; to develop and modernize industrial and business parks, technology centers and business development incubators, tradeports, commercial and governmental buildings, airfields, ports and shipyards, and educational and recreational facilities.

The median EDA defense adjustment construction project had a total cost of $3.39 million, of which $2.03 million, or 60%, was paid with an EDA grant. (*Rutgers,* p. 27.)

EDA is ordinarily the "but for" source of defense adjustment funding, i.e., its dollars are the critical first dollars invested in a project. (*Rutgers,* p. 18.)

"EDA's defense adjustment activities are often more risky than traditional EDA public works efforts." (*Rutgers,* p. 11.)

The 1997 MIT Military Base Redevelopment Project survey indicates that 83% of 42 LRA respondents will be seeking Federal grant assistance as a strategic economic development tool of major importance; 67% will be seeking state grant assistance. (*MIT,* p. 6.)

LRAs need infrastructure to enable redevelopment of their closed and realigned bases. But, they cannot afford it. The cash currently available--from LRA real estate operations, property tax increments and construction grants from EDA, state, county, and local agencies--is significantly less than the cost of needed infrastructure. Funding may not be available when it is most needed, i.e., when market opportunities may best be realized.

2. Pay-As-You-Use

Defense adjustment infrastructure facilities are capital assets with multiyear useful lives. Their construction and modernization may prudently be funded pay-as-you-use, i.e., with borrowed capital repaid over their useful lives by those who benefit from their use.

- Debt financing leverages today's investment with tomorrow's rents, fees, and revenues. Communities may use these new dollars to repay bonds that make investment possible.
- "Everyday operating expenses of state and local governments are paid for out of current tax and other revenues. Municipal debt is used generally to finance capital projects." (Public Securities Association, *Fundamentals of Municipal Bonds, 4th Ed.,* 1990, p. 55.)

A community that pays for infrastructure with current cash is assuming a burden that should be shared with future ratepayers or taxpayers:

- Pay-as-you-go is inefficient; capital assets are ordinarily too expensive to pay for only with current cash. Too little infrastructure is purchased.
- Pay-as-you-go is inequitable. It requires today's taxpayers to pay for benefits future taxpayers enjoy over the many years facilities are in service.

Pay-as-you-use distributes the costs of a facility over all those who actually benefit; as new residents and businesses come into a community, they pay their fair share of the facility's cost.

Infrastructure investment adds value to surrounding property. It stimulates business development and expansion, and helps create and retain jobs. Infrastructure investment generates the rents, user fees, and tax revenues that pay for it over time. It also generates intangible public benefits, e.g., cleaner water, reduced traffic congestion and air pollution, and safer travel.

86% of 42 respondents in the MIT Military Base Redevelopment Project survey indicated that they are "fairly" or "very" likely to rely upon the "leveraging of public and private resources" as an economic development tool. (*MIT,* p. 7.)

Debt financing can speed investment, but it is not without financial and budgetary cost:

- Borrowers bear interest, transaction, and, often, credit enhancement costs. Due to inflation, however, the purchasing power of the dollars that pay these costs in the future may be less than their present day value. Borrowers like inflation; lenders do not.
- Borrowers also bear delinquency and default risk, credit risks that may be mitigated and then distributed among bondholders and credit enhancers.
- Debt service on infrastructure bonds may put pressure on a community's operating budget, particularly in times of economic downturn when revenues may be lower.

Infrastructure that is debt-financed should reflect a community's highest investment priorities. Debt-financed infrastructure is prudent and appropriate when the social return on investment exceeds its financial and budgetary costs and risks, and the borrowing is financially efficient.

On a former military base with substandard infrastructure or open land without facilities, infrastructure makes land available for residential, commercial, or industrial development:

- Debt financing enables communities to immediately raise capital to build or upgrade infrastructure facilities essential to implement their base reuse plans.
- It provides the financial resources needed to speed redevelopment and conversion.
- Putting facilities in use more quickly avoids project inflation costs and accelerates project-generated job creation and economic activity.

- Infrastructure investment can create the stream of revenues—rents, user fees, and taxes—that repay the capital borrowed to make the investment.
- Those who benefit—including new owners and tenants—pay for the benefits they enjoy.

3. Municipal Bonds

As capital assets with multiyear useful lives, infrastructure is ordinarily debt financed by state, county, and local governments through the sale of municipal bonds. These bonds are repaid with government revenues generated over the useful life of the infrastructure constructed or upgrade. For example:

- User fees are often used to pay debt service on municipal bonds issued to pay the construction cost of water and sewer facilities.
- Road building and upgrading are frequently funded with municipal bonds whose debt service is paid with dedicated gas taxes, tolls, or special assessments.

The Federal government supports state and local infrastructure financing with an exemption from taxation for the interest paid on municipal bonds. Historically, this Federal tax exemption has reduced the interest cost on municipal bonds by one-fifth when equated with comparably rated, taxable corporate bonds. States and municipalities also ordinarily exempt interest payments on their own bonds from bondholders' taxable income.

The *Internal Revenue Code* (*IRC*) contains three very specific sets of requirements governing the availability of the Federal tax exemption for municipal bonds that may impact upon the issuance of defense adjustment infrastructure bonds:

- General Restrictions include a requirement that tax-exempt bonds may only be issued by a state or political subdivision, i.e., a local government unit with sovereign police and taxing powers and, particularly, the power of eminent domain.

  If an LRA has not been authorized by its state or local enabling legislation to exercise sufficient sovereign powers to be considered a political subdivision under the *IRC*, it may not directly issue tax-exempt bonds.

  An LRA may, however, subject to fairly stringent *IRC* limitations, directly issue tax-exempt bonds for public purposes "on behalf of" its state or local government.

  The redevelopment of a former military facility is a public purpose under the *IRC* that would ordinarily justify tax exemption for LRA infrastructure bonds issued "on behalf of" its authorizing state or local government.

- Arbitrage Prohibitions are limitations on the size of debt service reserves that may be funded with bond proceeds. Arbitrage rules also restrict the interest rate that the investment of debt service reserves may earn. They may not exceed the interest rate the borrower is paying on the bonds the reserve secures.
- Private Activity Limitations deny tax exemption to bonds that satisfy the private loan financing test or both of the private business tests.

  The private loan financing test is satisfied if more than 5% of bond proceeds (or $5 million, if less) are used to make a loan to a nongovernmental person.

  The private business tests are satisfied if more than 10% of proceeds or the facilities financed are used for private business and more than 10% of bond debt service is secured

with private payments including, for example, payments arising from the private business purchase or rental of governmental property.

LRAs could not, for example, issue tax-exempt bonds to build roads and sewers on private land and repay the bonds with land sale proceeds or rents.

Bonds issued to finance public roads and sewers that are repaid with an LRA's real estate income would, however, fail the first private business test and, therefore, would be tax-exempt.

Tax counsel are ordinarily part of the financial team an LRA would engage to issue infrastructure bonds. They provide opinion letters to assure issuers that their bonds do not run afoul of these complex *IRC* requirements.

Municipal bond investors are U.S. taxpayers only. Yields on municipal bonds are too low to attract global investors, or tax-exempt pension funds.

- Mutual and money market funds held one-third of the $1.306 trillion in municipal bonds outstanding in 1996.
- Another third of bonds outstanding is held directly by households.
- The last third is held by institutional investors, principally property and casualty insurance companies (13%) and commercial banks (7%). (*The Bond Buyer 1997 Yearbook,* p. 70.)

Defense adjustment infrastructure municipal bonds may be issued by LRAs; utility, airport, and port authorities; state, county, and local governments; and state infrastructure banks. They may issue general obligation (GO) or revenue bonds.

General obligation bonds are repaid with the general revenues of the issuing government.

- GO bonds are issued by state, county, and local governments and secured with their full faith and credit, i.e., the issuer pledges that it will use all of its funds, revenues, and complete taxing powers, and raise taxes if necessary, to repay bondholders on time.
- GO bonds are highly regulated, ordinarily subject to constitutional as well as statutory restraint. Their issuance often requires voter approval in a referendum.

Revenue bonds are repaid with user fees, or limited, dedicated tax revenues.

- Revenue bonds are commonly used by county and municipal governments, utility service districts, and state and local authorities to finance facilities needed to provide service.
- They can be used by public entities not legally authorized to levy taxes.
- When repaid through project revenues, they efficiently and equitably place the burden of bond repayment on the individuals who benefit from facility use.
- Less secure than GO bonds, revenue bonds ordinarily carry lower credit ratings and pay higher interest rates.

The MIT survey indicates that 36% of 42 respondents plan to use GO bonds as an economic development tool of major importance; 45% plan to use revenue bonds. 62% of respondents indicated prior experience with GO bonds; 69% with revenue bonds. (*MIT,* p. 6.)

B. Credit Risks and Ratings

When a defense adjustment community has decided to issue general obligation or revenue bonds to fund infrastructure construction, it must then structure a bond offering. The credit risk bondholders will assume will be a primary determinant of the bond structure to be used, the credit rating the bonds will receive from the rating agencies, and, most importantly, the interest rate the community will pay for the capital it borrows.

Credit risk describes the likelihood that a bond issuer will make its debt service (principal and interest) payments on time, i.e., without delinquency, until the bond has been fully repaid, i.e., without default.

- Delinquency in payment may cause liquidity risk, i.e., the risk that there will be insufficient cash available to pay bondholders on time as required payments become due.
- Default can cause both liquidity problems and long-term investor losses if debt service revenues are insufficient to retire outstanding debt.

In any municipal bond offering, credit risk will be:

- legally defined and prioritized by statute and contract;
- economically identified and estimated by the credit rating agencies; and then
- financially priced by the capital markets.

1. Legal Considerations

Credit risks are legally defined and prioritized by statute and contract among borrowers, bondholders, and credit enhancers. State statutes and county or municipal ordinances authorize bond issuers to borrow, and ordinarily impose some restraint on that authority.

For example, statutes (or state constitutions) may limit the amount of debt a jurisdiction may incur, or the revenues it may pledge in bond repayment. They also regulate the manner in which bonds may be offered and sold.

The basic contract among bondholders and bond issuers is called a bond indenture. Under state law, a bond indenture is authorized by vote of the bond issuer (by resolution or by referendum) and contains covenants that legally establish the terms and conditions of the bond offering. Bond covenants describe the relationship among the parties, establish bond administration and duration, and distribute the risks of repayment in time and in priority of liability. Bond sales must comply with Federal tax and securities laws.

Legal considerations for the five types of bonds defense adjustment communities may issue are outlined in this report. They may serve as a guide to the legal issues attendant upon a municipal bond offering for defense adjustment infrastructure. However, the laws governing bond issuance vary significantly among states and localities.

Local bond counsel provide bond issuers with the detailed understanding of legal issues they must address. Tax counsel and underwriter's counsel may also be called upon to address bond offering legal issues.

2. Rating Agency Criteria

The municipal bond rating agencies—Standard & Poor's (S&P), Moody's Investor Services and Fitch IBCA—are in the business of identifying and estimating credit risk. They evaluate the creditworthiness of bond offerings and then give the bonds letter and number rankings. S&P's ranking system, for example, ranges from "AAA" ("Capacity to pay interest and repay principal is extremely strong.") down to "D" ("...in payment default").

Debt rated "AAA" to "BBB" is considered investment grade. Bonds with a "BB" rating or lower are considered below investment grade and ordinarily may not be included (or included only in small amounts) in the investment portfolios of mutual funds, insurance companies, banks, and other institutional investors.

- Bonds with investment grade credit ratings may be sold through a public offering and ordinarily pay lower interest rates.
- Debt rated below investment grade ordinarily may only be sold in the more limited private placement market and ordinarily pays higher interest rates to compensate bondholders for the increased credit risk they assume.

The rating agencies, and investors doing their own credit analysis, rely upon similar methods and criteria for evaluating the creditworthiness of municipal bond offerings. The methods and criteria described in this report for defense adjustment infrastructure bonds are those delineated by S&P in its most recent *Municipal Finance Criteria,* published in 1996. (hereinafter: *Criteria*)

In general, when rating any infrastructure bonds, the rating agencies analyze the bond issuer's capacity to make timely and uninterrupted debt service payments to bondholders. Credit analysis begins with the issuer's revenue potential:

- Issuer capacity to repay bonds is measured through understanding its state's economic condition and the local or regional market into which a project will be introduced.
- Revenue history lends credibility to revenue projections.
- Evidence of commercial, industrial, or residential real estate demand and, therefore, revenue potential, is scrutinized. Firm commitments to develop can be key to investment-grade credit ratings.
- Are fees and taxes competitive and affordable? Autonomy to raise fees and tax rates and the issuer's general financial liquidity support creditworthiness.
- Excess capacity in land or facilities and one-time revenues (e.g., asset sales and impact fees) can adversely impact creditworthiness.

Project management is carefully evaluated. Is it proactive? Does the project manager have the requisite experience and support? Does performance match projections? How will construction risk be managed? Could operational or budgetary considerations impact revenue consistency? Is insurance coverage adequate both for physical loss and business interruption?

Statutes and bond indenture covenants are examined to determine the issuer's authority to sell bonds, to identify the specific security pledged as bond debt service, and to determine how risk is prioritized among the issuer and bondholders.

Debt Coverage Ratio: One of the most important rating agency criteria used to evaluate creditworthiness is a bond's debt coverage ratio. Debt coverage ratios give bondholders a revenue cushion, assuring them that the borrower will have sufficient revenues available to make timely debt service payments.

Debt coverage ratios specify the minimum relationship between annual revenues pledged as debt service and annual debt service requirements acceptable to bondholders. Coverage ratios reflect the number of times actual and/or estimated annual revenues exceed debt service requirements for that year.

- Ordinarily, debt coverage ratio is expressed in a bond indenture as a multiple of annual revenues (gross revenues or net revenues, i.e., gross revenues minus operating and maintenance expenses, but not depreciation) over annual debt service payments.
- For example, if net revenues are required to be 1.25x debt service and annual debt service is $1,000,000, then annual net revenues must equal or exceed $1,250,000.
- Debt coverage ratios vary for each financing and different types of financing. They may range from 1.00x maximum annual debt service to 3.0x or more.

In general, the higher the debt coverage ratio within the appropriate range for that type of financing, the higher the rating of the bond, and the lower its interest costs.

A rate covenant is frequently included in a revenue bond indenture to require the issuer to maintain the required debt coverage ratio. Rate covenants ordinarily require the borrower to produce sufficient revenues to cover 100% of annual operating and maintenance expenses plus the minimum annual debt service coverage ratio. If the borrower fails to comply with the rate covenant in any year, it must revise its user fees or revenue rates or methods of operations, frequently by following the recommendations of an independent consultant.

Debt coverage ratios are also included in bond indentures as a means of restricting the borrower from issuing additional parity bonds that dilute the revenues available to pay the bonds. Additional parity bonds are new debt issues secured on an equal basis with the same revenues used to secure the bonds being rated. If revenues available to secure debt service on both the bonds being rated and the additional parity bonds falls below the mandated debt coverage ratio, the additional parity bonds may not be issued.

Debt Service Reserve Funds: A second significant rating agency criterion is a bond's debt service reserves, i.e., cash reserves immediately available to pay timely principal and interest.

General obligation bonds are not ordinarily permitted reserve funds by the *IRC.* Instead, cash reserves for GO bonds are measured by the rating agencies and investors against budget totals for revenues and expenditures and the impact of annual debt service payments on the issuing government's unobligated general fund balance at the end of any fiscal year.

For revenue bonds, debt service reserve funds are moneys deposited at closing with bondholders' trustee. They are used to make timely principal and interest payments if borrower is delinquent. They provide the liquidity needed to offset interruptions in debt service and can be particularly important for real estate income or user fee bonds.

Ordinarily, a debt service reserve is funded with a portion of bond proceeds at the time of sale. These moneys may not be used to cover development costs. The issuer does, however, pay

interest on these funds and may collect most of the interest on their investment. Debt service reserves also may be capitalized with EDA, state, county, or local government grants.

The size of a debt service reserve capitalized with bond proceeds and interest income derived from its investment are limited by Section 148 of the *IRC.* Interest income from the investment of debt service reserves is ordinarily pledged to pay debt service.

Generally, a debt service reserve is considered fully funded when it contains the lesser of 125% of average annual debt service, maximum annual debt service, or 10% of bond proceeds.

The amount of capital committed to a debt service reserve fund may be reduced over time as bonds mature and the amount of principal outstanding is reduced.

If a reserve fund is used to pay a debt service shortfall, the borrower may be required to replenish the reserve from its first available revenues. Or, replenishment may come from a supplemental reserve fund, i.e., from an additional reserve used to makeup draws against a debt service reserve when the borrower has been delinquent.

Supplemental reserves may contain a multiple of one, two or more times the capital committed to a debt service reserve.

- Supplemental reserves may be funded with the proceeds of land sales or excess rents.
- They also may be capitalized with EDA, state, county, or local government grants.
- Supplemental reserves may provide credit support for individual defense adjustment infrastructure bond offerings.
- Or, they may be established as a common reserve for all defense adjustment infrastructure bonds issued in a state. As old bonds are retired, new bonds could be credit enhanced by the common state reserve.
- Defense adjustment borrowers could be charged a fee to help replenish common reserve funds consumed, and to cover administrative costs.
- The investment of supplemental reserves is also controlled by *IRC* Section 148.

Senior-subordinate bond structures may be used instead of or with a debt service reserve as support against issuer delinquency. Senior bonds have a higher debt service coverage ratio than junior bonds. Subordinate bondholders bear a disproportionate share of credit risk, but receive higher interest payments.

3. Market Pricing

Pricing involves setting the interest rate scale for each maturity of bonds being offered. The credit markets price bonds.

- Bonds with longer maturities ordinarily carry higher interest rates than short-term bonds.
- Bonds with interest rates below market at the time of sale may sell at a discount; bonds with above market rates may sell at a premium.
- Interest rates are a function of the global supply and demand for money, particularly American dollars, the risks associated with different types of investments, e.g., municipal

bonds issued by local governments and, finally, the risks associated with lending to a particular bond issuer.

Pricing occurs through negotiation between financial advisors and investment bankers hired by the bond issuer to sell its bonds and prospective bondholders. Borrowers have some control over the risks associated with lending to them. Their economic and legal decisions have interest rate consequences.

Efficient pricing is achieved when the borrower structures a bond offering that, judged by the capital markets, receives the highest possible credit rating and pays the lowest possible interest and credit enhancement costs.

C. Defense Adjustment Infrastructure Bonds

There are only a few types of municipal bonds defense adjustment communities can issue:

- Special purpose district revenue bonds issued by LRAs and secured with their real estate sales, lease and impact fee income, tax increment, or special assessment revenues;
- User fee revenue bonds issued by utility service district, airport, or port authorities;
- General obligation or revenue bonds issued by state, county, or local governments; and
- Structured portfolio bonds issued by state infrastructure banks (SIBs) and secured with repayments from infrastructure loans it has made to several LRAs.

Special purpose district bonds issued by LRAs, and structured portfolio bonds issued by SIBs but secured with LRA revenues, would ordinarily be burdened with significant credit risk of delinquency and default, i.e., would be rated below investment grade by the rating agencies:

- Real estate rents and sales proceeds are fragile sources of debt service payments.
- Tax increment and special assessment levies, if available, give LRAs only marginal access to property tax revenues.
- LRA infrastructure investment is often speculative, i.e., bond principal and interest payments depend on residential, commercial, or industrial development that may occur, if at all, only after bonds have been sold and infrastructure constructed.
- Even when commitments for future development have been made, there may be a long ramp-up period before LRA revenues become available to pay bond debt service.

LRA risk mitigation strategies may reduce and redistribute, but not eliminate, credit risk. LRAs may pursue investment-grade ratings on their bonds by:

- developing a strong reuse plan and giving it active public and private support;
- hiring management with real estate development experience;
- seeking authorization to draw upon full *ad valorem* property tax revenues;
- using existing income and commitments to build by site developers;
- collateralizing bond repayment with developable land;
- phasing debt financing for infrastructure development with growth in financial capacity;
- utilizing bond repayment and credit structures to prioritize risk among bondholders; and/or
- securing public and/or private credit enhancement.

Utility service districts, e.g., sewer and water authorities, may pay for LRA facilities by issuing revenue bonds secured with their user fees:

- Utility authorities ordinarily receive connection and ongoing user fees for services, and frequently finance infrastructure they need with tax-exempt revenue bonds.
- Regulated utilities, e.g., gas, electric, and telecommunications, also use bonds to pay for the infrastructure they need to gain access to prospective customers.

Airport or port authorities, including those operated by LRAs, may also issue revenue bonds secured with user fees, e.g., landing fees and docking fees:

- These LRA revenues, more consistent and predictable than real estate income or tax increment revenues, may nevertheless merit only lower investment-grade ratings.
- They may also be speculative and delayed during ramp-up as facilities are constructed and put into productive use.

State, county, and local governments may issue general obligation or revenue bonds, and then grant bond proceeds to LRAs to pay for defense adjustment infrastructure.

- States, counties, and localities have greater ability to pay than LRAs: stronger sources of revenue—income, sales, gas, and property taxes—and greater capacity to distribute credit risk among a larger, already developed tax base.
- GO and revenue bonds are a traditional source of infrastructure investment capital.

The credit ratings for GO and revenue bonds issued by defense adjustment communities are ordinarily established and have apparently been largely unaffected by base closure:

> Standard & Poor's has been monitoring base closures and the resulting effect on the credit characteristics of municipalities in the affected areas. To date, there have been no widespread credit problems caused by base closures, although a few local cities have experienced problems....The local economy of municipalities closely linked to bases that were examined by Standard & Poor's were negatively impacted by closures, with some more severely affected than others. Each has had varying degrees of success replacing jobs lost or converting real property to public use. A factor that decides the magnitude of recovery is the diversity of the economy. Where a military base was the major employer and the commercial sector primarily served military operations, the recovery has been more difficult. (*Standard & Poor's CreditWeek Municipal,* "Military Base Reuse After Realignment and Closure," November 9, 1998, pp. 20-21.)

GO or revenue bonds may be issued, or appropriations enacted, to capitalize state infrastructure banks. SIBs would then lend, rather than grant, these funds to LRAs or other defense adjustment community borrowers. Examples of existing infrastructure banks include:

- State revolving funds (SRFs) capitalized with Federal environmental funds that make loans for clean and safe drinking water facilities;
- Transportation banks established to use Federal highway funds to finance roads; and
- State bond banks enabled to pool small, local government and authority debt into sizable portfolio bonds suitable for sale in the broader municipal bond capital market.

Infrastructure bank loans may bear market interest rates, or subsidized, below-market rates. They may be secured with pledged real estate income, user fees and/or tax revenues.

Structured portfolio bonds recapitalize infrastructure banks. They could recycle illiquid, long-term loans into current cash for new generations of defense adjustment investment.

Structured portfolio bonds enable infrastructure banks to securitize and sell their LRA loans:

- An SIB securitization would aggregate the debt service payments from a portfolio of LRA loans and then sell multiclass bonds secured by those payments.
- Infrastructure banks hold all credit risk on the LRA loans they originate and may retain some measure of risk when these loans are securitized and sold.
- LRA loans, particularly those with below-market interest rates, would sell at a discount, i.e., less than the outstanding balance remaining on the loan.

Term sheets and spreadsheets for five model defense adjustment infrastructure bonds are provided in the Appendix:

- LRA Real Estate Income Bonds
- LRA Tax Increment Bonds
- Airport Authority User Fee Bonds
- County General Obligation Bonds
- State Infrastructure Bank Structured Portfolio Bonds

D. Credit Enhancements

State, county, and local governments assume direct liability for bond repayment when they issue bonds for infrastructure investment in their own names. But, they need not only function as bond issuers to invest in defense adjustment infrastructure. They may also provide credit enhancements.

Credit enhancements are assurances of timely debt service payment provided to bondholders by a third party or through a cash reserve. They backup the bond issuer's obligation to pay.

Credit enhancement is an efficient, cost-effective means of using limited public funds to raise private defense adjustment infrastructure investment capital in the municipal bond market.

There are various forms of public and private credit enhancements that furnish additional security to bondholders against defense adjustment borrower delinquency and default.

1. Private Credit Enhancements

Bond insurance companies and letter of credit banks provide "AAA" or "AA" rated credit enhancement, but only when the bonds to be enhanced meet their standards of commercial eligibility: a natural, i.e., unenhanced, rating of "A" or higher.

Bonds with insurance or a letter of credit ordinarily receive the same rating as that of the bond insurance company or letter of credit bank.
Bond insurance and letters of credit can be economically attractive when the issuer's interest savings on the bonds is greater than the cost of enhancement.

Bond insurance and letters of credit would ordinarily not be available for below-investment-grade defense adjustment infrastructure bonds.

2. State, County, and Local Government Credit Enhancements

States, counties, and municipalities may provide credit enhancement for revenue bonds issued by LRAs; utility, airport, and port authorities; infrastructure banks; or lower levels of government.

Grants provided to defense adjustment bond issuers may be used to purchase bond insurance or a letter of credit, if available. With public credit enhancement, even lower rated defense adjustment bonds may be candidates for private credit enhancement.

Grants also may be used to capitalize debt service and/or supplemental reserve funds, or the purchase or retention of subordinate bonds.

A full faith and credit guarantee is the strongest form of credit enhancement a state, county, or local government may provide defense adjustment bondholders:

- The guarantor pledges its general revenues and taxing power to make timely debt service payments on borrower's bonds. The guarantee is legally enforceable by bondholders.
- Subject to state constitutional provisions, statutes and bond covenants, a full faith and credit guarantee shifts legal liability to meet debt service requirements from the borrower to the guarantor. It effectively substitutes the general obligation bond credit rating of the guarantor for the rating of the bond issuer, even for below-investment-grade bonds.

State, county, and local governments may commit specific revenues as a double-barreled pledge against bond issuer default. The credit enhancing government legally obligates itself to appropriate funds if necessary to cure borrower's delinquency or default, but only from the revenues specified:

- A state may, for example, pledge the revenues generated by one cent of its sales tax to credit enhance defense adjustment bonds.
- When a borrower becomes delinquent, the bondholders' trustee draws upon the debt service reserve. A state appropriation is then made to replenish the reserve.
- This appropriation may not exceed the revenues generated by one cent of the sales tax.

States, counties, and municipalities also may provide credit enhancement for revenue bonds through a moral obligation pledge.

- The borrower promises to request an appropriation from the legislature authorizing the moral obligation pledge to replenish debt service reserves. The legislature is obligated to consider the appropriation, but not legally bound to make it.
- Bondholders may not legally enforce a moral obligation pledge.
- Nevertheless, the backing of the morally obligated government is expected by the capital markets. State governments have invariably honored their moral obligation pledges.

Generally, the rating agencies award revenue bonds with double-barreled or moral obligation pledges a credit rating one investment grade below the GO bond rating of their public credit enhancement provider.

The choice of grant, pledge, or guarantee ordinarily reflects the inherent credit risk of the borrowing; the importance of base revitalization to the state, county, or local government credit enhancer; its available budgetary or contingent liability resources; and its willingness to absorb the credit risk that the defense adjustment borrower will become delinquent or go into default.

The type of credit enhancement best suited for individual defense adjustment bonds will depend upon a state's particular constitutional and statutory law. Any decision on how best to structure appropriate credit enhancements must be determined on a state-by-state basis, after first conducting an appropriate legal review.

Legally, credit enhancement authority is derived from state enabling legislation subject to the state's constitution. State statutes enable pledges and guarantees just as they enable credit enhancement grants. Counties and local governments must have state authorization to provide full faith and credit guarantees, double-barreled, or moral obligation pledges. In some states, county and local government credit enhancement powers are limited by constitution.

3. EDA Credit Enhancement Grants

The Federal government could also provide credit enhancement on defense adjustment infrastructure bonds. Federal loan guarantees provided, for example, through the 108 Program administered by the Department of Housing and Urban Development (HUD) could be sought to protect bondholders against default and assure defense adjustment communities of investment-grade ratings on their infrastructure bonds.

However, Section 149(b) of the *IRC* denies tax-exempt status to most municipal bonds on which payment of principal or interest is guaranteed, in whole or in part, directly or indirectly, by the Federal government. A HUD 108 or other Federal guarantee of tax-exempt defense adjustment bonds would therefore not be cost effective: the increase in the borrower's interest costs from loss of Federal tax exemption would be significantly larger than the decrease in interest costs the borrower receives from a Federal loan guarantee.

Federal agencies could, however, make grants to communities to fund credit enhancement on infrastructure bonds without loss of the municipal bond tax exemption. The Environmental Protection Agency (EPA), for example, makes grants to state revolving funds that are used to capitalize debt service reserves on bonds financing wastewater and drinking water facilities.

EDA could make Defense Adjustment Program grants to capitalize debt service or supplemental reserve funds, subordinate revenue or structured portfolio bonds, or subsidized interest accounts. Eligible grantees could include LRAs; state, county, or municipal governments and authorities; and SIBs.

EDA credit enhancement grants, in support of additional public or private credit enhancements against default, can help make investment-grade capital available for defense adjustment infrastructure investment:

- Reserves and subordinate bonds could be funded to protect bondholders and credit enhancers against two or more years of delinquency.
- Only a borrower's continuing inability to pay debt service even after multiyear reserves have been exhausted would trigger public or private credit enhancement against default.

EDA credit enhancement grants would absorb first loss risk on defense adjustment infrastructure bonds. They would provide the essential cash cushion against borrower delinquency that states, counties, localities, bond insurers, or letter of credit banks need to provide bondholders with complete third-party protection against borrower default.

As the "but for" investor in today's pay-as-you-go funding system for defense adjustment infrastructure, EDA is already accepting first loss risk. Its grant is ordinarily the first investment committed to a project. Changing the use of EDA's grant from construction into credit enhancement does not change its critical role. "But for" EDA's credit enhancement grant, project financing, and, hence, the project, would not be undertaken.

Defense adjustment borrowers could expect infrastructure bond proceeds to leverage EDA credit enhancement grants up to twenty times. They would provide communities with extra cash when credit risk is highest. With an EDA credit enhancement grant, borrowers should pay the lowest interest and credit enhancement costs on their infrastructure bonds.

EDA's evaluation of credit enhancement grants will continue to review prospective grantee and area eligibility and the expected economic impact of the projects funded with the proceeds of the enhanced bonds. EDA will review applicants' proposed financing and the availability of other credit enhancements.

EDA's grant agreement would direct grantees to deposit grant funds with bondholders' trustee to be used as debt service.

Federal regulations and construction requirements will extend to all bond-funded projects. The nonfederal matching share can be met with cash or credit enhancements.

EDA's credit enhancement grant could continue to be the first financial commitment to defense adjustment infrastructure, sparking interest among other public and now private sources of credit enhancement and investment capital.

E. Harmonizing Financial Options with Financial Needs

An LRA's need for financial support is inversely related to the likelihood of its successful redevelopment and conversion. The higher the demand for LRA land and facilities, the less speculative are its bond repayment revenues and the lower its need for financial support.

The type and amount of financial support for LRA infrastructure investment provided by EDA, state, county, or local governments may be ranked to respond to the degree of support needed:

- When demand for LRA land and facilities is very high, the LRA may be able to issue bonds on its own credit. Predictable repayment revenues result in investment-grade credit ratings. Credit enhancement may be unnecessary.

- With high demand, an EDA credit enhancement grant equal to one year's debt service may be sufficient, or may be combined with a state, county, or municipal moral obligation pledge, private bond insurance or letter of credit.
- Moderate demand may require an EDA grant covering several years of debt service and a state, county or municipal double-barreled pledge or guarantee. The risk of LRA default would be carried as a contingent liability on the books of the credit enhancer.
- When demand is low, states, counties, or municipalities may issue their own bonds rather than credit enhance LRA bonds. It may be less expensive to directly finance infrastructure than to assume a large contingent liability likely to be triggered. Bond proceeds may be loaned to LRAs to pay for infrastructure construction. Bondholders bear only the risk they would ordinarily bear when the state, county, or municipality issues GO or revenue bonds. The bond issuer bears the full risk of LRA loan repayment.
- Construction grants funded with appropriations from current revenues may directly pay for defense adjustment infrastructure when demand for LRA land and facilities is very low.
- If base redevelopment and conversion does not seem feasible, i.e., if market demand does not exist or redevelopment requires grants too large to justify as prudent investment policy, states, counties, and municipalities may entirely forego investment.

The use of GO or revenue bonds to finance defense adjustment infrastructure may require a willingness to pay on the part of taxpayers or ratepayers who may not directly benefit from investment in base conversion. Interest costs may seem prohibitive. Base reuse may be seen as too expensive. There may be higher priority uses for bond proceeds. Bond issuance may be legally or financially restrained.

The choice of credit enhancement grant, pledge, or guarantee ordinarily reflects the inherent credit risk of the borrowing; the importance of base revitalization to the public credit enhancer; its available budgetary or contingent liability resources; and its willingness to absorb the credit risk that the borrower will become delinquent or go into default.

The type of bond to issue or credit enhancement best suited for a defense adjustment bond also depends upon a state's constitution and statutes, and only should be determined following legal review.

II. Defense Adjustment Infrastructure Bonds: by Issuer and Bond Type

A. Local Redevelopment Authority Revenue Bonds

Base Realignment and Closure policy calls for the Department of Defense to work closely with Local Redevelopment Authorities--representatives from local governments, businesses, workers, and other groups affected by base closure--to develop a community strategy for converting their base to non-military use, and a land use action plan to implement it.

The overall base reuse and property conveyance process is governed by diverse Federal real property and environmental laws. The *Base Reuse Implementation Manual,* December 1997 (hereinafter: *BRIM*), issued by the office of the Deputy Under Secretary of Defense (Industrial Affairs and Installations), provides guidance to LRAs and the Military Departments on the legal requirements for base reuse planning, property disposal decision making, and implementation.

The Office of Economic Adjustment (OEA) in DoD is the Federal agency primarily charged with helping communities plan their base's conversion to the civilian economy. OEA has delivered technical assistance and planning resources to more than 500 communities. (See, Office of Economic Adjustment, *Community Guide to Base Reuse, May 1995*) (hereinafter: *Guide*)

Once planning has been completed, base property can be transferred to an LRA. The property transfer system is comprehensive, complex, and time-consuming. Assessing and remediating environmental contamination of base property, the statutorily-mandated liability of the Military Departments, also takes time and is subject to annual DoD budgetary constraints.

Once legally constituted--and there is significant variation among LRAs in their mandated responsibilities and powers--LRAs function as public or quasi-public master real estate developers, constructing or upgrading needed infrastructure and improving, selling or leasing base land, buildings, and equipment. Some LRAs both develop and operate their former base, e.g., airport and port authorities.

Under BRAC, the LRA that develops the base reuse plan need not be the organization that serves as master developer. Some planning LRAs have not become owners of the closed base but, rather, have encouraged the Military Department to sell the base to a private developer.

1. Property Transfer and Environmental Remediation

As required by the *BRIM,* LRA base reuse planning begins once the approval date for base closure or realignment has been determined. Each LRA conducts a community-based reuse planning process through which local reuse needs are identified and plan created.

This reuse plan is considered by the Military Department, serving as the Federal property disposal agent, as it decides on how it will convey base real estate and facilities to the LRA or

other end users. It takes time to close a military facility, remediate environmental problems, and plan for and convert it to productive civilian economic use.

LRAs engaged in reuse planning are encouraged by the *BRIM* to conduct market research and marketing activities to attract users to purchase or lease military property conveyed to the LRA.

- Initial LRA reuse plans have not ordinarily included an infrastructure financing component.
- Many of the more recent plans have, however, included capital improvement plans in which infrastructure development or modernization costs have been detailed.
- Moreover, LRAs have developed business plans for economic development conveyances with capital improvement plans and pro forma cost and revenue projections.

As LRA planning proceeds, the Military Department continues to protect and maintain base property until it is leased or disposed of, or a contractually specified maintenance period has expired. Speeding the environmental assessment, remediation and conveyance process ultimately reduces maintenance expenses borne by the Military Department.

Concurrently, the Military Department undertakes property disposal planning; natural and cultural resource determinations and consultations; and environmental impact analysis, the identification of uncontaminated property, and other environmental compliance activities.

The *BRIM* requires that environmental remediation and land-use planning and redevelopment be coordinated. Parcelization of base property can give LRAs site control sooner and enable coordination and phasing of development.

After completing its environmental assessments, the Military Department announces its final property disposal decision, ordinarily in a public document that takes the form of a:

- Finding of No Significant Impact (FONSI): a determination that the disposal of property will not significantly affect the environment; or a
- Record of Decision (ROD): a determination of the disposal actions to be taken, their environmental impacts and the remediation activities to be completed prior to the transfer of title to the property to the LRA, other developer, or end user.

The *Comprehensive Environmental Response, Compensation, and Liability Act* (*CERCLA*) "requires the Military Departments to complete environmental cleanup before transferring the property by deed to non-Federal entities." (*BRIM,* p. 2-13; See also *Guide,* p. 16.)

- Remediation plans and implementation success must be approved by EPA and its state counterpart before the Military Department may convey title to base property.
- Title may be conveyed parcel-by-parcel as remediation is completed and approved.
- Liability for environmental remediation should not be of concern to site owners, lenders, or LRA bondholders; the locus of remediation liability is clearly the Military Department.

There is significant environmental contamination at some parcels of the bases being closed. Federal resources may not be sufficient to timely fund remediation.

Given delays that may arise as environmental issues are catalogued and remediated, LRAs often take possession of base property for which there is private sector demand through early

leasing. Base property may not be leased, however, until the Military Department has determined that it is environmentally suitable for its intended use. An early lease can:

- spur rapid economic recovery and job creation, and
- reduce the Military Department's caretaker costs; as well as
- generate rents from civilian tenants to cover LRA operating expenses, and
- pay debt service on defense adjustment infrastructure bonds.

There are two types of leases available from the Military Departments:

- an interim lease is a short-term lease ordinarily used before final disposal decisions (FONSI or ROD) have been made. It enables the lessee to take possession of the property, but makes no commitment for future use or conveyance of title. Interim leases may have terms in excess of 5 years and may charge below market rents. Lessees may make capital improvements to interim leaseholds at their own financial risk.
- a lease in furtherance of conveyance is ordinarily entered into once the Military Department has issued its final disposal decision but has not yet completed environmental remediation and, thus, legally may not convey title to the property.
- Under certain circumstances, a newly authorized "early transfer" may be used to convey title to base property while remediation continues.

An LRA with an interim lease or lease in furtherance receives rental income from the private sector tenant who subleases the property. This rental income may secure an infrastructure financing only if it is creditworthy. Recent changes in interim leases have improved the ability of LRAs to use their rental income as debt service. Leases in furtherance ordinarily provide a financable interest in the property, but may suffer from uncertainties in the timing of Federal funding needed to complete environmental remediation.

Conveyance of base property by a Military Department is the final step in DoD's property disposal process. It can take one of several forms:

- in public benefit conveyances for public purposes such as airports, education, health, historic monuments, ports, parks and recreation, and wildlife conservation, a relevant Federal agency will ordinarily serve as sponsor or grant its approval; the property may be conveyed at substantial discounts of up to 100% of fair market value (FMV).
- in negotiated sales to public bodies for other than the enumerated public purposes the conveyance will be at the property's FMV with negotiated payment terms.
- in advertised public sales the private party acquires the property that submits the highest bid, provided that it is not less than the property's FMV.
- in economic development conveyances (EDCs) for job creation purposes, LRAs pay the property's FMV or a discounted sales price, with negotiated payment terms.

"An EDC may be with or without initial payment at time of transfer and may be at or below the estimated fair market value of the property. Terms and conditions of the payment to the Department of Defense are fully negotiable. These negotiations should be fair and reasonable to both parties and strike a balance between compensation to the Federal taxpayer and the need for the EDC to spur redevelopment and job creation." (*BRIM,* p. 7-2.)

To determine the property's fair market value for an EDC, LRAs must add a business/ operational component to their base reuse plan, including a pro forma spreadsheet of their revenues and expenses as base redeveloper. (*BRIM,* p. 7-6.) The income approach is preferred to comparable sales as the method for determining economic value, which is then adjusted for real estate market trends and discounted to present value at a market capitalization rate adjusted for risk.

The estimate of the property's fair market value in an EDC can be reduced to reflect infrastructure improvement costs: "The estimated fair market value then [of EDC property] is the economic value minus the cost to cure the physical and infrastructure obsolescence of the base to make the space and land usable in present-day market conditions." (*BRIM,* p. 7-9.)

EDC applicants must provide a cost estimate for the infrastructure and other investments needed to develop its property and describe the income that may be generated from infrastructure investment. LRAs also must describe their own commitment to invest and their financing strategies; "...probably the most important part of the application because it provides the basis for the Military Department's determination as to the project's feasibility." (*BRIM,* p. 7-7.) The more a community is willing to invest, the more it is contributing to redevelopment. "The increased risk by the community should be viewed favorably." (*BRIM,* p. 7-10.)

Military Departments may finance an EDC purchase at negotiated interest rates and maturities:

- "The terms of the [financing] are negotiated between the parties based primarily on the economics of the transaction and the capacity of the buyer to pay the seller from project cash flow." (*BRIM,* p. 7-13.)
- Interest costs may be as low as 0%. The Military Department will maintain a security interest, e.g., a mortgage, on the property being financed.
- In an EDC financing, principal repayment and the accrual of interest may be deferred for the first years following conveyance; the repayment structure may include a balloon payment at maturity.
- When negotiated by an LRA, EDC financings may be subordinated to subsequent financings used to fund base infrastructure and business development.
- Military Departments will consider other financial relationships with LRAs, including participations in LRA cash flow or net profits, and limited partnerships. (*BRIM,* p. 7-14.)

The *BRIM* cautions the Military Departments to "Look at the financial resources of the EDC applicant. Be wary of undercapitalized entities, because without proper capital, the development may not be able to support the necessary investments to create and maintain job creation." (*BRIM,* p. 7-2.) Under these circumstances, the Military Department may reduce the community's land acquisition costs to zero, accept debt to pay whatever acquisition costs are charged, and subordinate that debt to the community's infrastructure bonds.

2. Legal Considerations: Enabling Legislation; Revenue Authority

Enabling Legislation: LRAs need certain authorized powers to issue bonds for infrastructure investment. At a legal minimum, they should be able to:

- take title to base land and facilities in a conveyance from a Military Department;

- undertake redevelopment activities pursuant to their adopted base reuse plan;
- sell, lease, or mortgage base assets;
- contract with site developers;
- clear and improve land with roads, sidewalks, public utilities and other infrastructure; and
- issue tax-exempt bonds as a political subdivision of a state, or, subject to *IRC* limitations, issue tax-exempt bonds "on behalf of" a state or local governmental unit.

LRAs are often legally constituted as independent special purpose districts, or as redevelopment agencies, authorities, or districts. Nonprofit corporations also may serve as LRAs. Of 40 LRA respondents to the MIT survey, 48% were public authorities, 13% were joint powers authorities, 40% were local governments, 13% were state governments, and 10% were nonprofits. (*MIT,* p. 10. Some respondents fit more than one category.)

LRAs do not often have the sovereign taxing, police, or eminent domain powers of a political subdivision of a state, i.e., a county or municipality. They may not, therefore, directly issue tax-exempt municipal bonds. The power to act as a conduit for industrial development bonds is <u>not</u> authority to issue municipal bonds.

LRAs are, however, ordinarily authorized by a state, county, or municipal government to carry out a public purpose, i.e., the redevelopment and economic conversion of the former military facility. LRAs should, therefore, be able to issue tax-exempt municipal bonds “on behalf of” their state or local government. Certain specific *IRC* criteria must be met that should not prove problematic to most LRA bond issuers. The opinion of tax counsel will be essential.

Special purpose districts are ordinarily created by enabling legislation to provide economic development or related services to a specified area. They may be located within a single municipality or county, or may cross jurisdictional boundaries. They are ordinarily governed by a board of directors independently elected or appointed by another governmental entity or entities. Management may be inexperienced and administration may be minimally staffed. Operations and financial track records are frequently short.

Redevelopment agencies, authorities, or districts ordinarily may operate only in specified project areas. These areas may be established to include the entire former military facility, and such additional areas of deteriorated properties, inadequate infrastructure, or blighted conditions determined to be necessary for the effective redevelopment of the base. They may range in size from a few acres to many thousands of acres.

The authority to issue bonds to finance defense adjustment infrastructure may be centralized in a state agency or dispersed among LRAs:

- In Massachusetts, a state economic development agency, the Government Land Bank, has been designated by executive order of the governor as the lead agency responsible for implementing base redevelopment plans for Fort Devens. It has issued $80 million in state general obligation bonds to support Devens’ redevelopment.
- In California, separate state enabling legislation has been enacted for individual bases closing or downsizing. Base redevelopment authority has been delegated variously to county or municipal agencies, new special purpose districts, and joint powers authorities.

Special purpose district bonds are often issued in anticipation of, rather than in response to, economic growth. Debt ratios per capita and to the market value of the district's property, as well as the ratio of debt service to district budget, are ordinarily higher than average for municipal financings. Solid capital and financial plans and feasibility studies are common characteristics of successful special purpose district debt financings.

Revenue Authority: The creditworthiness of an LRA's bonds rests fundamentally on its authorized powers to generate income and revenues to pay bond debt service. These powers, authorized in an LRA's enabling legislation, vary widely among LRAs. Generally,

- LRAs are enabled to raise revenues from Federal, state, and local government grants, by selling and leasing base land and facilities, and by charging impact fees.
- LRAs may also provide services and utilities for which they receive user fees, e.g., water and sewer connection and service fees, and landing and docking fees.
- Many LRAs have authority to issue tax increment, special tax, or special assessment bonds supported with tax revenues of marginal financial strength; few, if any, can levy the full *ad valorem* tax, or have any other taxing powers.

Grants from Federal, state, county, or municipal agencies may be used to pay LRA operating expenses, to pay infrastructure construction costs, or to fund debt service or supplemental reserves, but ordinarily may not be used to pay debt service.

At a minimum, LRAs ordinarily own the land to be developed and serviced and, therefore, should have real estate income with which to secure bond debt service.

An asset sale provides an LRA with immediate cash. A building or ground lease to a site developer or end user provides an LRA with rental income over the term of the lease. Leases may charge market rent, an escalating rent, or a base rent plus a percentage of lessee's sales or some other objective measure of lessee's business operations.

- The proceeds of an asset sale or lump sum impact fee may be used pay-as-you-go to buy infrastructure or to capitalize debt service reserves for LRA bonds.
- An LRA may use lease payments and impact fee installments to pay debt service on infrastructure bonds or to capitalize supplemental reserves when, for example, tax increment revenues are pledged to pay bond debt service.

To mitigate delinquency risk, an LRA's bond indenture usually provides that lessees directly deposit rental payments with bondholders' trustee. Any residual, i.e., excess in rental payments over debt service payment, could then be deposited in bond reserves or forwarded by the trustee to the LRA as lessor.

LRAs may be authorized to assess impact fees against site developers and end users. Developers may be required to pay impact fees to help LRAs defray the cost of providing the infrastructure that makes their land developable. Impact fees may be collected as a lump sum at sale or over time in installments with interest.

- Impact fees are justified on the theory that new development creates the need for new infrastructure and that, therefore, developers and their purchasers or tenants who benefit from facilities' use should help pay for them.

- They are ordinarily imposed through local ordinance as a condition for obtaining zoning, building, or occupancy permits. Negotiated investments, exactions, and private initiatives are similar to impact fees.

Impact fees have been used in many parts of the country, especially in areas experiencing rapid growth. In some cases, they are supported by developers as an equitable means of financing improvements; in others, developers have challenged impact fees in court. Legal issues may arise regarding the extent to which a municipality attaches conditions to zoning or building permit approvals.

Two notes of caution are necessary when LRAs attempt to use impact fees to place infrastructure investment costs on site developers and end users:

- First, increasing the price of LRA property with an impact fee is only viable when demand exists for the property. LRAs can price themselves out of the market.
- Second, developers and end users may be poor credit risks; they may default on impact fees paid in installments. And, the capital they borrow is expensive; they ordinarily borrow at taxable corporate bond interest rates, not the lower tax-exempt municipal bond rates available to LRAs.

LRAs that directly provide utility services or operate airports and ports, i.e., LRAs that charge user fees, may finance needed infrastructure by pledging their fee revenues to pay debt service. These revenue bonds may be investment grade. They will be rated by S&P using the criteria and methods described below in section II.B.2.

LRAs constituted as agencies of county or local government may be able to access their parent jurisdiction's *ad valorem* property tax revenues. *Ad valorem* taxes are levied against the assessed value of the property at a millage rate determined by the taxing jurisdiction. A county's or municipality's use of *ad valorem* property tax revenues to finance defense adjustment infrastructure would ordinarily entail the procedures, legislative and voter approvals necessary to issue a GO bond. GO bonds are described below in section II.C.

LRAs constituted as independent special purpose districts rarely, if ever, have full *ad valorem* property tax powers. They may, however, be authorized to issue bonds secured with tax increment or special assessment revenues.

Tax increment financing (TIF) captures the growth above a base year in assessed property tax valuation in the designated TIF district, and uses these incremental revenues to pay debt service on its bonds.

- The property tax revenues from the assessment base flow to local governments.
- TIF districts do not ordinarily have the authority to increase tax rates. Rather, they passively receive revenues derived from the assessment increment at tax rates determined by the local jurisdictions that receive assessment base revenues.
- TIF works best when real estate values are rising. Declining or stagnant values may reduce or eliminate the increases in assessed value that generate TIF revenues.
- Tax increment financing is also known as tax allocation financing.

The MIT survey indicates that 50% of 42 LRA respondents plan to use TIF as a strategic economic development tool of major importance. 48% of respondents have prior experience with TIF. (*MIT,* p. 6.)

An LRA may also raise revenues to repay infrastructure debt through special assessments, e.g., an assessment based on a formula such as street front footage. Special assessments are legally justified by the special benefits the assessed parcels receive from the new infrastructure facilities; special benefit means that the assessed property's fair market value has increased by reason of the installation of infrastructure facilities.

3. Rating Special Purpose District and Tax Increment Bonds

Special Purpose District Bonds: From a rating agency perspective, LRAs are ordinarily considered to be special purpose districts. They are political subdivisions of a state, county, or local government created to provide economic development or related services to a geographically limited area, the former military facility.

Standard & Poor's--whose credit criteria are used in this report as an example of rating agency criteria--generally begins to evaluate the credit quality of special purpose district bonds by examining the underlying strength and diversity of the district's economy to determine the ability of its residents to pay for district services and improvements.

- Regional economic characteristics, e.g., proximity of the district to employment and commercial areas and transportation links, can strengthen credit quality.
- Districts within municipalities ordinarily receive more favorable ratings than new districts in unincorporated areas.
- "With good statistics to support the argument, a strong case can be made that a district is really part of, and not really separated from, the prospects of the surrounding area." (*Criteria,* p. 59.)

When evaluating district financial data, S&P prefers to review three years of past performance along with the current year's operating budget. The coverage ratio of district revenues to debt service is calculated on a rent or fee only basis to determine project self-sufficiency. A separate coverage ratio analysis includes any available tax revenues as well as fees.

To enable an evaluation of development potential, district plans and revenue projections are analyzed. "Indices for residential, commercial, and industrial development in the district and area are essential." (*Criteria,* p. 59.) Property price, volume, and absorption rate trends are evaluated. Profiles of prospective purchasers are reviewed. A strong base reuse plan with community support can ameliorate rating agency concern with LRA revenue projections.

- District revenues should be sufficient to satisfy both operating and capital needs.
- Current and total rent, user fee, and tax collections and trends are examined to evaluate how fluctuations in the flow of revenues may effect timely repayment to bondholders.
- Concentration of revenues from one or only a few tenants, taxpayers, or ratepayers heightens credit risk and is a negative rating factor.

- Dependency on one or only a few site developers or end users is a substantial delinquency and default vulnerability and may be of special concern when there are questions concerning developer creditworthiness.

Debt ratios per capita and to the market value of the district's property, as well as the district's unobligated general fund balance and the ratio of debt service to district budget, are examined and compared to national norms.

- The national average of municipal bond debt to true property value ranges from 2 to 8%.
- A 5% general fund balance is considered healthy; debt service in excess of 20% of a district's budget is considered high.

The district's capacity and willingness to adjust rents, fees, and taxes is a positive component of credit risk analysis. Special purpose districts are frequently limited by their enabling legislation to specified tax rates and/or rate increases. Overall user fee and tax burdens, including district fees and taxes, are analyzed.

A debt service reserve fund will support a higher credit rating. A more developed and diversified tax base reduces the need for a high debt service reserve. "Debt service funds expressed as a percentage of subsequent year's debt service is viewed as an important ratio for the less developed districts....The more developed and diversified the tax base, the less the need for a district to have a high debt service cushion." (*Criteria,* p. 62.)

Tax Increment Bonds: TIF bonds based on projected property tax revenues to be derived from future development will ordinarily carry below investment grade credit ratings:

> Although the track record for successful retirement of tax increment debt has been good over the past several years, this type of debt is subject to many vulnerabilities. A typical investment-grade tax allocation district already generates sufficient revenues to cover future maximum annual debt service before the bonds are even sold....Standard & Poor's has not rated a tax allocation bond with an open lien higher than the 'A' category, although many ratings fall into the 'A' and 'BBB' categories, both of which are investment grade. (*Criteria,* p. 68.)

Creditworthiness for undeveloped special purpose districts depends on prospects for strong real estate values, reasonable debt levels, and taxpayer diversity.

- "Legal covenants providing meaningful bondholder protection must lock in the economic benefits of a strong tax base against future issuer actions, such as additional debt dilution or poor tax collection procedures, but the tax base must exist first." (*Criteria,* p. 63.)
- "Strong structural legal protections regarding taxpayer foreclosure, debt coverage, or debt service reserves cannot, in and of themselves, raise a rating into the investment-grade category unless favorable real estate conditions exist. (*Criteria,* p. 63.)

S&P's analysis of tax increment bonds focuses on:

- project area characteristics, including the general economic conditions for growth in the area, its size, historical and projected growth trends, and tax base concentration;
- the district's financial operations, including the stability of the underlying tax rates and the bond's debt coverage ratio;

- district management's ability to successfully administer the project in accordance with the area's redevelopment plan, including any need for additional financing; and
- the bond's legal structure, including the indenture's debt coverage ratio.

To rate a special purpose district bond "A," S&P expects it to be 80% or more developed. A district would need to be 70% developed to receive a "BBB" rating. S&P describes the characteristics of a below-investment-grade "BB" district:

> Vacant district upon which construction has just begun (land is graded or very partially developed); Appraised market value to lien ratio, using conservative assumptions, ranges from 7:1 to 3:1 or better; Highway access to nearby employment center; Good residential density in surrounding neighborhoods; Strong track record for the developers; Some legal covenant protection on additional debt issuance or coverage margins; a few developers may own the majority of the district during construction. *or* A major diverse ownership shopping center is planned with pre-leasing in place; Good surrounding residential density; Good legal covenant protection; No major competition nearby; Appraised value to lien of 3:1 or better. (*Criteria,* p. 64.)

LRAs may be able to accomplish investment-grade ratings on TIF bonds when the taxing district includes significant amounts of developed properties in or surrounding the former military base.

The particular criteria used when special assessments serve as bond security include: project importance to assessment payers; technology risk; a stable and diverse economic base; an objective and equitable method of assessment, e.g., street front footage; an assessment collection system tied to *ad valorem* property tax collection with incentives for early payment and disincentives for late payment; high property value-to-debt ratios; a lien position on a parity with or ahead of *ad valorem* taxes; protection of the assessment lien from other creditors; a debt service schedule that is declining or level and repays bonds during the useful life of the project; cash flow sensitivity tests; and active monitoring of the assessment collection process and project completion.

Senior-Subordinate Bonds: LRAs may issue real estate income, tax increment, or special assessment bonds using a senior-subordinate bond structure to help achieve investment-grade credit ratings on senior bonds:

- Senior bonds are secured with a first lien; subordinate bonds have a second lien.
- Senior bonds' priority in repayment gives them a higher debt service coverage ratio than would be true if the senior-subordinate structure had not been relied upon
- If the district is delinquent, subordinate bonds provide senior bonds with a debt service cushion similar to the cushion against delinquency provided by a debt service reserve.

With higher debt service coverage ratios, senior bonds may receive investment-grade ratings; subordinate bonds are ordinarily unrated.

Even with a senior-subordinate structure, an investment-grade rating for special purpose district bonds will still require "strong value-to-lien ratios, a reasonably diverse economy, and other positive credit fundamentals." (*Criteria,* p. 67.)

A more detailed description of senior-subordinate bonds and how they are evaluated by the rating agencies is described below in sections II.D.3. and 4.

4. LRA Bonds are Below Investment Grade

LRAs have very limited revenue-raising capabilities. They generate real estate income by selling or leasing base land and facilities, and by charging impact fees. They receive grants from the Federal, state, and local governments. Some LRAs directly provide services and utilities for which they receive user fees, e.g., water and sewer connection and service fees and landing and docking fees. Many LRAs may collect property taxes, rarely *ad valorem,* most often as tax increment or special assessment taxes.

LRA revenues are fragile and difficult to accurately predict. Land sale proceeds are inconsistent, fluctuating with market conditions. Rents may be more consistent than sales, but are still variable (vacancy rates, for example, may be cyclical and hard to forecast). Real estate income varies with prevailing mortgage interest rates, local supply and demand. Tax revenues, if authorized, are marginal and ordinarily controlled by other jurisdictions.

Credit risk can be particularly significant when the infrastructure an LRA would finance is needed to stimulate development. The sale proceeds, rents, user fee, and/or tax revenues needed to pay principal and interest on LRA infrastructure bonds then depend upon residential, commercial or industrial development that will occur, if at all, only after the bonds have been sold and the infrastructure has been developed. If you build it, will they come?

Moreover, it may take some time, a ramp-up period, following the completion of infrastructure construction for development to occur—and for debt repayment revenues to flow in earnest. For example, if user fee bonds were issued to finance water and sewer lines, it could be some months or years before the businesses or residences to be connected to those lines are developed and the user fees needed to pay debt service on the revenue bonds begin to flow.

Financial analysis, current revenues, and revenue projections have not, it seems, ordinarily been included in base redevelopment plans. Some more recent plans have included detailed capital improvement programs. Some LRAs have business plans with pro forma infrastructure development budgets and revenue projections.

Many LRAs are not yet operational as real estate developers. There seems to be very little data about either current LRA revenues or projected revenues at a rating agency level of confidence. There is little historical data on LRA revenues.

The MIT survey did, however, ask LRAs to describe the funding sources for their "current operating budget allocated to base redevelopment activities." (*MIT,* p. 13.) Funding sources for infrastructure improvements and construction costs were not included in the survey.

- Of 39 respondents, 18 (46%) indicated that they derived none of their funding from real estate revenues; another 10 respondents (26%) derived less than one-quarter of their operating funding from real estate operations.
- Operating expenses were being covered in large part with Federal, state, and local government grants. (*MIT,* p. 13.)

These ratios should change as more LRAs begin to implement their reuse plans.

In its project profiles, *Rutgers* occasionally reports significant projected increases in the property tax base of LRA's that have received EDA defense adjustment construction grants.

In addition to the risks that the redevelopment of the base will not live up to projected expectations, investors may face other credit risks:

- LRAs may be newly created. Management may have considerable experience with real estate development as individuals, but the LRA as an institution may have little track record in planning, financing, and building infrastructure or in managing the private sector development that should ensue.
- Environmental contingencies, while clearly the legal liability of the Military Department, can affect the timing of conveyance and an LRA's legal control of base property. Sale proceeds, rents, and impact fees pledged as security on LRA bonds may be delayed. The ability of developers and users to secure site financing may be adversely affected.

Projected revenues based upon future development are ordinarily considered speculative by the rating agencies:

- S&P accords an "A" rating to the bonds of a special purpose district only when it has been 80% or more developed at the time the bonds are issued.
- With development 70% completed, a "BBB" rating (the lowest investment-grade rating) can be expected. (*Criteria,* p. 64.)

For most LRAs, 70% development may be only a distant goal. Any bonds they issue, therefore, would be rated below investment grade and carry the commensurate high interest charges.

Some defense adjustment communities may be able to sell below-investment-grade debt through private placements. This approach has worked successfully, for example, for California's Mello-Roos Community Facilities Districts and for a few LRAs. The few examples of LRAs selling defense adjustment infrastructure bonds are described in the next section.

5. Examples of LRA Revenue Bonds: Lowry and Norton

Lowry Economic Redevelopment Authority: The Lowry Economic Redevelopment Authority (LERA), created by an intergovernmental agreement between the City and County of Denver and the City of Aurora, Colorado, has issued three series of infrastructure revenue bonds.

In 1996, LERA privately placed $33,000,000 in unrated real estate revenue bonds:

- Bond proceeds were used to finance basic trunk infrastructure rehabilitation, construction, and improvement in accordance with the base reuse plan.
- The bonds were secured with LERA's income from the sale or rental of Authority property and impact fees (estimated at $24,000 per acre, to be paid in a lump sum or installments with interest at 8.25% over ten years), net of LERA's operating and maintenance expenses. LERA has no taxing power.
- The bonds were not credit enhanced by a third party. (Official St

At the time of bond issuance, LERA was completing an economic development conveyance from the Air Force, but had not yet received title to the property. LERA's purchase of the EDC property was financed with a note to the Air Force in the amount of $32,500,000. The Air Force agreed to subordinate payments on this note to payments on the bonds if, on any debt service payment date, LERA would otherwise be delinquent or in default on the bonds. LERA's prior commitments to pay certain public entities and nonprofit organizations for the provision of housing for the homeless were senior to bond payments.

The 1996 bonds were sold in a private placement to institutional investors.

- They had a 15-year maturity, paid 7.5% interest, and sold with a discount of 3.42%.
- The bond indenture required LERA to maintain a debt service reserve equal to 9.7% of bond proceeds, a supplemental reserve equal to 2 years of bond interest and a surplus fund into which 75% of remaining revenues were to be deposited (25% of remaining revenues were released to LERA for its own use).
- LERA was required to deposit 15.75% of bond proceeds in a subsidized interest account.
- The debt coverage ratio on the bonds, based on revenue projections by LERA's consultant, ranged from 2.58x to 9.78x. LERA may issue additional parity bonds if the debt coverage ratio on both outstanding bonds and parity bonds equals 1.5x. (*LERA 1996 OS*)

Risk factors LERA disclosed to prospective bondholders included:

- LERA's status as a new authority with a limited record of operations, a risk mitigated by the real estate development experience of members of its management team;
- the dependence of revenue projections on regulatory approvals (e.g., zoning and environmental) and market conditions (e.g., the availability of other large, developable parcels in the Denver metropolitan area);
- the ability of the Air Force to remediate prior to the transfer of title;
- construction risk; and
- the substantial need for additional funding (approximately $91,000,000) to complete infrastructure improvements necessary to fully realize the reuse plan. (*LERA 1996 OS*)

In March 1998, LERA issued $6,000,000 in additional parity real estate bonds in a private placement to the three institutional investors who hold its outstanding Series 1996 Bonds. These bonds were approved by a vote of these investors amending the bond indenture. The bonds were not credit enhanced and carried an interest rate of 7%. Bond proceeds matched a construction grant from EDA and were used to finish infrastructure development of LERA's Employment Campus.

In July 1998, LERA issued $14,500,000 in variable rate demand tax increment bonds, LERA's Series 1998B Bonds. The proceeds of these bonds will be used to finance demolition and infrastructure construction in LERA's EDC parcel, and to fund debt service reserves.

The tax increment revenues LERA has pledged to repay the Series 1998B Bonds will be collected by the Denver Urban Renewal Authority (DURA) from the portion of Lowry lying within Denver. DURA's obligation to make TIF payments to LERA is not mandatory and is subject to annual appropriation by its Board of Commissioners. No property taxes were

collected in the TIF area in the base year; all future taxes collected are considered tax increment revenues.

The Series 1998B Bonds are secured with an irrevocable, direct pay letter of credit from Canadian Imperial Bank of Commerce (CIBC). It provides both credit enhancement and liquidity support on the bonds until August 11, 2001. LERA has unconditionally and irrevocably agreed to reimburse CIBC for all amounts paid under the letter of credit plus interest. CIBC's right to reimbursement is on a parity with the rights of bondholders.

A debt service reserve fund was also created specifically for this series of TIF bonds. Draws against this reserve fund are to be replenished with first pledged TIF revenues available in excess of those needed to pay debt service when due. Additional TIF bonds may be issued provided that a 1.10x debt coverage ratio is maintained.

Recent changes to the Colorado Constitution and their interpretation in pending litigation could affect the availability of tax increment revenues to repay LERA's Series 1998B Bonds. These legal concerns have caused the City of Denver to provide a moral obligation pledge credit enhancing LERA's TIF bonds:

- In the event that LERA's tax increment revenues for the preceding 12 months are less than 120% of debt service payments for the following year, Denver may make up the shortfall in principal and interest payments with a general fund appropriation.
- *"Denver's payments...are expressly subject to annual appropriation in the sole discretion of Denver."* (Official Statement, *Lowry Economic Redevelopment Authority Adjustable Rate Revenue Bonds, Series 1998B,* July 30, 1998)
- Denver may be repaid, but only from LERA's surplus TIF funds.
- The Series 1998B Bonds explicitly are not obligations of Denver or Aurora.

See Section III.C.3 below for a description of moral obligation pledges.

Inland Valley Development Agency: Tax increment financing was used by the Inland Valley Development Agency (IVDA), the LRA responsible for the redevelopment of the Norton Air Force base and surrounding area. IVDA is a Joint Powers Authority created by three cities and one county under California law. It has the authority to issue bonds, but does not have power to levy and collect taxes. It may, however, finance its redevelopment activities by pledging allocated tax increment revenues.

In 1993, as it was completing its base reuse plan, implementation strategy and financial plan, IVDA issued $25,000,000 in tax increment notes with a 6-year final maturity at 7% interest.

- These notes were sold as unrated securities through a private placement.
- A debt service reserve fund equal to 3.5% of note proceeds was funded at closing with proceeds and other IVDA funds.
- A capitalized interest account equal to 6.3% of proceeds and used to supplement interest payments over the term of the notes was also created.
- Coverage ratios on the notes' interest payments ranged from 1.03x to 1.49x.
- IVDA was permitted by the indenture to issue additional parity bonds if its tax increment revenues exceed 1.20x debt service on the notes plus any additional parity bonds. (Official

Statement, *Inland Valley Development Agency Tax Allocation Bonds, Series 1997,* March 18, 1997) (hereinafter: *IVDA 1997 OS*)

Debt service payments on the notes were limited to interest only, with principal to be repaid in a single balloon payment at final maturity. In its indenture with bondholders, IVDA "covenanted to use its best efforts to issue refunding obligations if other funds are not available to pay the principal of and interest on the notes at maturity....It is anticipated that sufficient moneys will not be available...to pay the principal of the notes at their maturity; however, based on projections of future Tax Revenues...sufficient Tax Revenues should be available to allow the IVDA to issue refunding bonds or refunding obligations in a sufficient amount to pay all of the principal of the notes at their maturity....[N]o assurances can be given that such projections will be realized." (*IVDA 1993 OS,* p. 4.)

In 1997, IVDA was able to issue $44,485,000 in 30-year, variable interest rate tax allocation refunding bonds. The initial interest rate on the bonds was 4.2%.

A debt service reserve equal to 6.4% of bond proceeds was funded with proceeds. Capitalized interest equal to 1.7% of proceeds was also funded. The debt coverage ratio for the first year of bond repayment was 1.04x.

The bonds were credit enhanced with an 8-year letter of credit from the Sumitomo Trust and Banking Company, Ltd. Based on the letter of credit, the bonds were rated "A-." IVDA was responsible for reimbursing Sumitomo for payments it makes to bondholders. If IVDA revenues prove insufficient, the City and County of San Bernadino have guaranteed IVDA's bonds to Sumitomo. See Section III.C.1 below for a description of full faith and credit guarantees.

As is standard practice with variable rate bonds, bondholders have the option of requiring bond repurchase by IVDA if interest rates decline or if the letter of credit is terminated and not replaced with a letter of credit that maintains the bonds' credit rating; repurchased bonds would be remarketed to new bondholders if possible. IVDA may covert the bonds to a fixed interest rate if they can be remarketed as such. These fixed rate bonds will not be enhanced with Sumitomo's letter of credit. (*IVDA 1997 OS*)

6. Credit Risk Mitigation Strategies

There are several strategies an LRA may use to mitigate risk and lower its interest and credit enhancement costs when issuing infrastructure bonds secured with its own revenues.

Fragile revenues and debt repayment dependent upon future development may be mitigated by a strong reuse plan actively supported by a communities' public and private sectors.

Experienced LRA management may also provide comfort to rating agencies and prospective investors, particularly when the LRA has not been in operation as a real estate master developer for any significant period of time.

Some LRAs have authorization to fully access the property tax revenues redevelopment can generate. These tax revenues, while subject to speculative development and ramp-up risk, are nevertheless more consistent than real estate income and marginal tax revenues. The

creditworthiness of tax increment or special assessment bonds may be strengthened by giving these marginal revenue streams a lien on a parity with or senior to *ad valorem* revenues.

Existing revenues are always more creditworthy than projected revenues:

- Existing revenues from properties leased or sold to commercial, industrial, or residential users may be pledged as bond debt service or to fund credit enhancement.
- Earnings from the investment of this income may also help secure infrastructure debt.
- Interim leases currently being negotiated by the Military Departments have new terms that increase their reliability as security for debt financings.
- Prior commitments from site developers or end users to purchase or lease property once infrastructure construction has been completed also mitigate uncertainty of debt repayment revenues derived from future development.
- High debt coverage ratios, particularly if based on existing rather than assumed revenues, may mitigate credit risks created, for example, by a high concentration of rent, ratepayers, or taxpayers.

Bondholders' trustee may be provided the right to foreclose against specified base properties as additional collateral for debt repayment. These mortgaged properties would be developable land rather than common areas used for roads, water and sewer lines, and other utility access. The value of this land as collateral may, however, also be dependent upon redevelopment and, therefore, be considered speculative by the rating agencies and prospective bondholders.

LRAs may match new revenue-generating development with needed infrastructure investment. Revenues from properties developed during the first phase of redevelopment would secure infrastructure financings that open new parts of the facility to new development.

Bond repayment and credit structures may also be relied upon to mitigate credit risk:

- Prudent financial practice requires that the maturity of a debt financing equal the useful life of the facilities financed.
- Repayment structures may, however, be varied within this overall time frame to accommodate projected revenue inadequacy.
- LRA bonds may be structured in time (repayment structures) and/or in priority of repayment (credit structures) to distribute credit risk among bondholders with different time and risk preferences.

A bond indenture may require each periodic payment of debt service to be in the same amount. Level payment bonds are ordinarily self-amortizing, i.e., the level payments are calculated to fully repay the loan with interest by maturity. In a level payment, self-amortizing repayment structure, early payments are primarily interest with very little repayment of principal. This relationship reverses over time so that the final payment is primarily principal.

Or, bond repayment may be structured to minimize debt service payments during ramp-up, i.e., payments can be deferred or made disproportionately lower in the early years following bond issuance, increasing in later years or culminating in a single large payment at maturity.

For example, the borrower may pay interest only in the early years following bond issuance; principal payments would be deferred, either increasing in the later years or culminating in a

single balloon payment of principal at maturity. The borrower may raise the dollars needed for its balloon payment by issuing new bonds. See, e.g., the Inland Valley Development Agency's 1993 tax allocation notes described above.

Note, however, that the longer the principal amount borrowed is outstanding, the greater the total interest costs paid by the borrower. State constitutional and statutory provisions may also limit the ability of a borrower to use repayment structures that significantly defer early principal or interest payments. Bond issuers must also be careful not to run afoul of the "artifice and device" arbitrage rules of Federal tax law when structuring bond repayment schedules.

A subsidized interest account may be used to reduce borrower's revenue requirements in the first years following bond issuance. A larger amount of money than required for project purposes would be borrowed and these excess bond proceeds deposited with the bondholders' trustee explicitly to make the first few years of interest payments on the bonds. By increasing the amount borrowed, of course, the bond issuer would also increase its total interest costs. Subsidized interest accounts could also be funded with grants.

LRA bonds may use senior-subordinate or multiclass credit structures to redistribute delinquency and default risk among bondholders, bringing the rating of senior bonds up to investment grade. With these structured bonds, senior class bondholders are paid in full before subordinate bondholders are paid at all. Senior class bonds therefore have higher debt coverage ratios that justify investment-grade ratings.

Subordinate (mezzanine and junior) bondholders carry increasingly disproportionate shares of delinquency and default risk. Junior class bonds are ordinarily unrated (and, if rated, would ordinarily be below investment grade). The interest payments received by mezzanine and junior bondholders are higher than those received by senior bondholders, reflecting their higher risk. Investors in subordinate bonds ordinarily have a stronger appetite for yield and less aversion to risk than investors in senior bonds.

Senior-subordinate and multiclass bond structures, and how they are evaluated by the credit rating agencies, are described in detail below in sections II.D.3 and 4.

State, county, or local credit enhancement and an EDA credit enhancement grant could be used by an LRA to mitigate, if not eliminate, their bonds' inherent credit risks. Credit enhancement will be needed for most LRA bonds to receive investment-grade ratings and thus achieve lower interest rates.

B. Utility Service District, Airport, and Port Authority Revenue Bonds

Utility service districts that provide services, e.g., water and sewer, gas, electric, and telecommunications, to LRA properties may sell user fee revenue bonds in their own names to finance needed defense adjustment facilities.

Or, LRAs that directly provide services, e.g., as airport or port authorities, may issue revenue bonds secured with their user fees to finance needed infrastructure.

User fees are commonly used by county and municipal service districts and authorities to repay revenue bonds sold to finance the lines and facilities needed to provide service.

Typical user fees include: water, sewer, gas, electric, telephone, and cable TV connection and service delivery fees, and landing or docking fees.

1. Legal Considerations: Statutes and Indentures

User fee revenue bonds have certain legal and financial advantages:

- Unlike general obligation bonds, user fee bonds do not ordinarily require voter approval and are not subject to constitutional or statutory limitations on debt.
- Bond indenture covenants are more susceptible to negotiation among the parties to the transaction than GO bond terms and conditions, which are largely governed by statute.
- Revenue bonds may be used by public entities not legally authorized to levy taxes.
- User fee revenue bonds place the burden of infrastructure bond payment on the businesses and individuals who benefit by using the facility.

They also have certain legal and financial disadvantages:

- Less secure than GO bonds, revenue bond indentures ordinarily have covenants that strictly circumscribe issuer behavior.
- Revenue bonds ordinarily carry higher interest and credit enhancement costs and lower credit ratings than GOs.

In a typical revenue bond financing, bonds are secured by a pledge of all revenues derived by the issuing district or authority from the operation of its facilities.

- An independent financial feasibility study is often included in disclosure documents provided to potential bondholders. It describes historic and projected revenues and their adequacy to pay operating and maintenance expenses and maintain coverage ratios.
- Revenue bond indentures often require issuer revenues to be paid directly upon receipt to the bondholders' trustee. Indentures may allow the issuer to pay net revenues to the trustee, i.e., after deducting current authority operating and maintenance expenses.

The bondholders' trustee deposits the issuer's gross revenues into a revenue account and, typically, periodically allocates these funds as follows:

- First, to pay operating and maintenance expenses;
- Second, to pay debt service on the revenue bonds;
- Third, to fund any deficiencies in the debt service reserve fund;
- Fourth, to fund a reserve for renewal and replacement expenses for authority facilities as contemplated over the life of the bond issue;
- Fifth, to pay debt service on subordinated debt, if any; and
- Sixth, any remaining surplus to be paid to the issuer for any legal purpose, free and clear of the lien on such revenues under the indenture.

Revenue bonds are typically secured by a debt service reserve fund initially capitalized with proceeds of the bond issue.

- Debt service reserve funds provide for timely payment even during periods of temporary reduction or loss of authority operating revenue.
- They may also be fully funded with cash from the issuer or a third party.
- Deficiencies in the debt service reserve account may be replenished from future operating revenues, or from a supplemental reserve fund.
- Amounts in other bond funds and accounts created under the indenture may also be pledged to secure revenue bond debt service.

To protect the adequacy of the revenue stream to pay debt service, a rate covenant is often included in a revenue bond indenture. Rate covenants usually require the bond issuer to charge rates sufficient to cover 100% of its annual operating and maintenance expenses and to maintain a specified debt coverage ratio. Coverage ratios reflect the number of times annual revenues must exceed annual debt service requirements.

If the issuer fails to comply with the rate covenant in any year, it must make revisions to its rates or methods of operations. The bond indenture may require the issuer to follow the recommendations of an independent expert in reestablishing rate covenant compliance.

Bondholders are also ordinarily protected by covenants in revenue bond indentures that restrict the ability of the authority to issue additional parity debt, i.e., new bonds secured on an equal basis with the same revenues securing the outstanding bonds. Issuers may not sell new debt if the indenture's minimum debt coverage ratio is not maintained.

Revenue bonds are generally sold through a public offering made by investment bankers. A private placement may also be legally permissible.

2. Rating Revenue Bonds

The security for user fee revenue bonds is narrower than the security for a bond backed with tax revenues, i.e., bondholder security is a fee paid to a utility or other service provider rather than the taxing power of a state, county, or municipality. Geographically, service areas may be quite small or may extend over the boundaries of many governments. User fee revenues may also be subject to competition. It is, however, often easier to increase user fees than taxes.

S&P's analysis of infrastructure revenue bonds concentrates on industry risks, Federal or state regulations, construction risk, historical and projected operating performance, and demand for the facility. Fee levels are important to creditworthiness, as is analysis of the service area economy, legal provisions, and financial performance.

S&P maintains similar criteria and methods for the various types of user fee revenue bonds. The following description covers water and sewer bonds.

The service area's economy is the initial focus of S&P's credit risk analysis: the stability of the customer base, the need for the infrastructure, and the affordability of user fees. Income trends, employment opportunities, and other measures of wealth and economic vitality are compared with local, state and national norms. The employment base is analyzed for diversity and stability. Demographic trends are examined to assess future revenue potential.

Authority management is assessed. Is it proactive in setting and meeting its goals and objectives? How good are its planning techniques and ability to incorporate plans into budgets and operations?

Does issuer management have autonomy when implementing rate increases and capital improvement programs? If not, does it work well with its governmental overseer, e.g., the state public service commission? What are management's rate setting policies? Have they been employed consistently and promptly when necessary?

Operational factors such as customer mix, service area demand, and user concentration affect creditworthiness. A balance among commercial, industrial, and residential users provides the most stable and efficient operating profile. Growing demand for service may be advantageous when excess capacity exists, or it can place a significant burden on an authority to upgrade when the system is operating at capacity. If any single customer accounts for more than 5% of revenues, their commitment to the area will be independently evaluated.

The competitiveness and affordability of user fee rates is examined. "Timely and prudent rate changes strengthen overall credit quality, especially as capital costs grow; large increases are politically more visible and sensitive." (*Criteria,* p. 111.)

S&P's evaluates 3 to 5 years of financial performance to determine issuer stability and consistency through the business cycle. Actual results are compared with planning and budgeting forecasts. Reliance on one-time revenues, e.g., asset sales or connection fees, to support ongoing liabilities can adversely affect a credit rating. Issuer liquidity, i.e., access to cash through grants, accounts receivable, and working capital, is also considered in determining credit quality. Well-rated authorities do not rely heavily on short-term or variable rate debt.

A utility serving a developed community and in environmental compliance requires less of a debt service cushion that a system in a growth area with a substantial capital program.

S&P evaluates the legal covenants describing issuer responsibilities and bondholder recourse when covenants are breached:

- What specific security is pledged by the issuer as the source of repayment?
- Aside from ordinary operations and maintenance costs, do bondholders have a lien on the pledged security senior to other obligations of the issuer, e.g., renewal and replacement accounts? Are these subordinated accounts available to pay debt service? Can surplus funds be transferred out of the authority?
- Has the authority agreed to a rate covenant establishing a minimum debt coverage ratio:

Suggested debt coverage ratios vary for each financing and type of financing and may range from 1.1x to 3x maximum annual debt service. In general, the higher the debt coverage ratio, the higher its bond rating and the lower its interest costs.

Sewer and water rate covenants typically require the issuer to maintain security that is 1.10x to 1.25x annual debt service. They also outline corrective measures the issuer must take if the ratio falls below the minimum.

"Generally, a mature system with stable operational and financial performance will not need as strong a covenant as a system that can be subject to volatile financial margins or anticipates a large capital program." (*Criteria,* p. 109.)

- Can the issuer offer additional bonds at a later time with the same security, i.e., parity bonds? "A strong additional bonds test for parity debt reads: prior to issuance of additional debt, net revenues for the prior 12 months or preceding fiscal year must equal at least 125% of the maximum annual debt service requirement, taking into account the issuance of proposed bonds." (*Criteria,* p. 109.)
- Does the bond offering have a debt service reserve?

Minimum reserve funding may be measured as the lesser of 10% of bond proceeds, 125% of average annual debt service or 100% of maximum annual debt service.

Reserve funding may be built up over time, usually not more than 5 years, from pledged revenues or from payments from a creditworthy third party.

Depleted reserve funds should be replenished within a maximum of 2 years.

The absence of a debt service reserve or equivalent credit enhancement may be seen by the rating agencies as a general weakness in bondholders' legal protection.

"From a credit perspective, debt service reserves are more important for weaker utility systems that exhibit asset or customer base concentration, a shallow service area economy, or cash flow constraints. Absence of a fully funded reserve for systems with these characteristics may result in a lower rating." (*Criteria,* p. 110.)

C. State, County, and Local Government General Obligation Bonds

General obligation bonds are repaid with the general revenues of the issuing government. They are debt instruments issued by states, counties, and municipalities that pledge their full faith and credit as security for repayment, i.e., the issuing government pledges that it will use all of its funds, revenues, and taxing powers, even to the extent of raising taxes, to repay bondholders on time:

- The strong security of repayment contained in a full faith and credit pledge ordinarily makes GO bonds easier to sell than revenue bonds.
- Strong security ordinarily permits bondholders to accept lower interest rates.
- GO bond indentures tend to have terms and conditions more favorable to borrowers than those for revenue bonds. Bondholders tend to be less concerned about restricting issuer activities when they know that its taxing power stands behind repayment.

GO bonds to fund defense adjustment infrastructure may be issued by state, county, and local governments. They all suffer economically when the base is closed and profit when it has converted to civilian use. They have stronger sources of revenue—personal and corporate income, sales, gas, and property taxes—than LRAs and greater ability to distribute credit risk among a larger, already developed tax base. Their revenues may be evaluated historically and can be more reliably projected. The credit rating of state, county, and local GO bonds is ordinarily known and should not overly depend on future LRA development.

A state economic development agency, the Massachusetts Government Land Bank has issued $80 million in state GO bonds to support the redevelopment of Fort Devens.

Pennsylvania has sold GO bonds to help a large European shipbuilder redevelop portions of the Philadelphia Naval Shipyard.

In October 1998, the Village of Glenview, Illinois issued $34,400,000 in GO bonds to finance demolition and infrastructure improvements at its former Naval Air Station. The Village is a "AAA" rated bond issuer. The bonds were additionally secured with tax increment revenues and 80% of base land sale proceeds.

GO bond proceeds may be granted or loaned to LRAs to pay for infrastructure facilities. GO bonds may be issued to capitalize infrastructure banks which then lend this capital to LRAs for infrastructure investment. As described below in section II.D.3 and 4, infrastructure banks may manage their assets by securitizing LRA loan payments into structured portfolio bonds to efficiently recycle long-term loan payments from LRAs into current cash for new generations of projects.

1. Legal Considerations: State Constitutions and Statutes

Because they expose the issuer to required tax increases if necessary to repay the debt, the use of GO bonds is generally limited by state constitutions and statutes as well as by local government charters and enabling legislation. State laws ordinarily impose procedural requirements on general obligation bond issuance, limitations on the permissible use of bond proceeds, structural requirements including caps on the amount of GO bonds that a jurisdiction may have outstanding, and restrictions on the methods of bond sale.

Voter approval through a referendum is a common procedural requirement imposed on the issuance of GO bonds. In California, for example, the enactment of Article XIIIA of the State Constitution requiring two-thirds voter approval for GO bonds has effectively curtailed their use. In some states, GO bonds may be authorized by the legislative adoption of a bond resolution, statute or ordinance after a series of public notices and public hearings held with respect to the debt issuance.

The use of GO bond proceeds frequently will be limited by state law to capital projects with specific, authorized purposes, e.g., roads and bridges, and water and sewer systems. GO bonds must be issued for a governmental purpose, e.g., public infrastructure development in an LRA located within the issuing jurisdiction. They may not ordinarily be issued for the benefit of other units of government absent specific statutory authority.

Among the structural requirements that state law may impose on GO debt is the observance of a debt limit, commonly set as an absolute dollar cap or as a fixed percentage of equalized or assessed valuations of taxable property within a county or local government. Jurisdictions are proscribed from offering new bonds if their new aggregate GO debt would exceed the legal debt limit at the time of issuance. State law may also require that a project may not be financed with bonds unless the issuing jurisdiction pays a certain percentage of the overall project costs from its general funds in advance as a down payment.

State law may impose structural constraints on the maturity of a GO bond issue. It commonly limits the maturity of GO bonds to the useful life of the projects financed. It may also require a repayment structure in which principal payments are fixed, e.g., no annual payment may exceed by more than 100% the amount of the smallest prior payment, and/or that payments must commence by a certain time, e.g., no later than one year following issuance.

State law may require that GO bonds be sold through a public bidding process, rather than through a private negotiation with investment bankers who subsequently market the bonds to prospective bondholders. Often, however, GO bonds may be sold on a private basis, without public bidding, where the purchaser is a unit of state or local government, e.g., an SIB.

2. Rating General Obligation Bonds

Full faith and credit provides bondholders with their broadest and deepest form of security. S&P evaluates four general factors to determine the issuer's ability to generate pledged revenues: its economy, financial performance and flexibility, debt burden, and administration.

A community's economic base is the most critical element in determining its GO bond rating. General economic factors evaluated include: the issuer's location, natural assets and liabilities; a profile of its population (age, education, wealth, and income levels); the size, structure, and diversity of its tax base; and the composition and growth of its economy and employment base. These data are then compared with regional, state, and national norms.

S&P's analysis of financial indicators includes: the issuer's accounting and financial reporting methods; its revenue and expenditure structure and patterns; historical data on its annual operations and budgetary performance; budget and financial planning practices; and such other factors as its pension fund position and long-term liabilities. Particular attention is paid to the issuing government's unobligated general fund balance, i.e., its bottom-line reserve.

S&P analyzes four specific aspects of a GO bond offering:

- type and strength of the pledged security;
- bond maturities;
- the issuing jurisdiction's current debt burden and future financing needs; and
- the degree to which the issuer relies on short-term debt or has issued bonds subject to a demand for repayment by the bondholders before scheduled maturity.

The type and strength of pledged security may vary even when a full faith and credit pledge has been made. The strongest security is provided by a pledge with no limit on the type, rate, or levy of taxes or other revenues used to assure repayment. A pledge limited to specific taxes provides less security to bondholders, unless there is a sufficient margin between current revenues and limits imposed by legislation or bond covenants to justify a higher rating.

The maturity of the bonds should at most match the useful life of the facilities being financed. A longer maturity may leave bondholders with inadequate security. A shorter maturity may place an undue burden on the issuing government's operating budget.

Short-term debt is used by many governments to even out the flow of revenues and disbursements. It can be a valuable cash flow management tool. It can, however, also expose the government to rising interest rates and place a heavy burden on annual operating budgets.

Too high a debt burden can adversely affect the rating of a GO bond offering. Debt burden is viewed as high when debt service payments are 15% to 20% of combined operating and debt service expenditures.

Current debt burden and future financing needs are often subject to constitutional or statutory limitation. These legal limits may affect the issuer's ability to meet its ongoing financing needs. An issuer approaching its debt limits with a new bond offering has less flexibility in financing its future capital needs, and may be unable to access the capital markets in the event of an emergency. Regular financing needs-assessments and capital budget planning for future financing requirements can beneficially affect the rating of GO bonds.

When assessing the creditworthiness of state GO bonds, S&P will also evaluate other tax-supported debt issued by that state—the additional bonds test. Such debt may affect the state's ability to make good on its full faith and credit pledge. Additional bonds include the debts of state authorities that are subject to appropriation, moral obligation debt and other types of debt secured by dedication of specific taxes such as the sales or income tax.

When evaluating administrative factors, S&P will utilize data describing the organization of the issuing government, the range and level of services provided, and the ability of officials to make timely and sound financial decisions to meet both economic and fiscal demands.

D. Infrastructure Bank Structured Portfolio Bonds

1. State Infrastructure Banks

Defense adjustment communities may borrow needed investment capital from state infrastructure banks. There are two types of SIBs: revolving loan funds and bond banks.

SIBs provide capital market access to local governments and authorities unable to borrow, or to borrow at affordable rates, because of the small amount of their debt offering, poor credit rating, inexperience, market unfamiliarity, and/or high bond issuance costs.

- SIBs may be established as agencies of state government, or as independent state authorities managed by an appointed board and administered by a professional staff.
- They may make short-term construction loans, provide long-term financing, or provide credit enhancement to local borrowers.
- Their loans may bear market interest rates or subsidized, below-market rates.
- SIB loans may be secured with pledged real estate income, user fees or tax revenues.
- They may be credit enhanced with supplemental reserves, county or local government full faith and credit guarantees, or double-barreled or moral obligation pledges.

SIBs, often capitalized with Federal grants, may only invest in specific types of infrastructure. Program financing is often limited, competitive and may require borrowers to demonstrate ability to repay. Defense adjustment communities may be competing with other localities or authorities that can better secure their debt with creditworthy revenues.

Examples of existing infrastructure financing programs include:

- state revolving funds (SRFs) created and capitalized under the *Clean Water Act of 1987*;
- transportation banks created in conjunction with the U.S. Department of Transportation (DOT); and
- bond banks that issue bonds secured with pooled local revenue bond debt service.

- California's Infrastructure and Economic Development Bank has a uniquely broad mandate and is specifically enabled to finance defense adjustment infrastructure.

SRFs are state agencies or authorities that make direct loans to localities for wastewater and safe drinking water projects. They are capitalized with Federal grants from EPA, state appropriations, and/or the proceeds of state bond offerings. They use their loan repayments, received over the maturity of the loans, to capitalize new generations of projects.

The *Clean Water Act* authorized states to use their capitalization grants (80%) and matching funds (20%) to buy or refinance eligible debt obligations, to guarantee or purchase insurance for local obligations, and to serve as security for state bonds sold to capitalize the loan fund. SRF loans carry at or below market interest rates for maturities of up to 20 years. Borrowers are required to dedicate revenue to repay their loans.

Over $24 billion in revolving fund loans have been made to almost 5,700 wastewater treatment projects by SRFs. (Council of Infrastructure Financing Authorities, Environmental Financial Advisory Board, *A Decade of Successful SRF Performance 1987-1997,* January 1998) (hereinafter: *CIFA*) About one-half of the states leverage their EPA funds with municipal bonds.

SRFs may provide below-market and interest free loans to communities whose investment needs outstrip their ability to pay. SRF loans carry interest rates 2.5 to 3.5 percentage points lower than the interest rates the average tax-exempt revenue bond rate index, having saved SRF borrowers an estimated $6.25 billion in capital costs over 10 years. *(CIFA*) SRFs that have dedicated their capitalization grants to debt service reserves use the arbitrage-limited interest income derived from their investment to subsidize borrower interest costs.

SRF bonds are heavily overcollateralized. Reserve funding ranges from one-third (i.e., 3-to-1 leverage) to one-half (2-to-1) of the principal amount of bonds outstanding—credit enhancement far in excess of investor or rating agency requirements.

With local borrower pledges of dedicated revenues to loan repayment, local general and moral obligation pledges, excess debt service reserves, and other state credit enhancements, the credit quality of SRF bonds has been good. Most outstanding SRF debt is rated by S&P in the "AA" range. The ratings agencies, as a rule-of-thumb, rate SRF bonds at least one full credit rating below that of the state of issuance. Some SRF bonds backed by "AAA" loans and additional state credit enhancements have, however, been rated "AAA." S&P has recently liberalized its credit criteria for SRF bonds.

Defense adjustment communities may be able to apply for financial support from transportation SIBs created in response to a DOT pilot program. (DOT, *State Infrastructure Bank Pilot Program Update,* June 1997, p. 1) (hereinafter: *DOT SIB*)

- As of March, 1997, the 10 original transportation banks had been capitalized with $64 million in Federal highway grants and $42 million in state funds. (*DOT SIB,* p. 2.)
- An additional 29 states have been selected by DOT and are currently starting their SIB operations. These new banks may offer borrowers both loans and credit enhancement.

- In the *Transportation Equity Act for the 21st Century (TEA 21),* the new Department of Transportation reauthorization, only 4 states--California, Mississippi, Rhode Island, and Florida--were authorized to transfer new Federal funds into their transportation banks.

Bond banks are not capitalized to make loans. Rather, they purchase and pool local bonds.

- Local governments or authorities issue infrastructure bonds that the bond bank buys, aggregates, and offers as one large bond issue.
- Local borrowers dedicate revenues to loan repayment and may provide full faith and credit guarantees, moral obligation, or double-barreled revenue pledges to further secure repayment of their bonds.
- State-aid intercepts and other bond bank or state credit supports may also be used to enhance pooled local bonds.
- Interest rates on bond bank bonds and, therefore, on the local bonds they acquire and pool, are tax-exempt and competitive, but ordinarily not below-market.

The California Infrastructure and Economic Development Bank is a state infrastructure bank with a broader mandate than SRFs or transportation SIBs. Among its other powers, it has the specific authority under State law to make loans to LRAs, county or local governments for investment in various types of defense adjustment infrastructure. It is enabled to provide credit enhancement and to issue structured portfolio bonds. It was initially capitalized with a $50 million appropriation in the new California state budget. It could also be capitalized with bonds secured with Federal formula grants and/or the proceeds of a state general obligation bond offering.

2. Legal Considerations: Statutes and Indentures

The state legislation authorizing an SIB should provide it with maximum flexibility in structuring its defense adjustment financing program, including the power to provide credit enhancement and make direct loans to LRAs, county and local governments and authorities, and to tax increment and special assessment districts.

An SIB should be authorized to function as a bond bank as well as a revolving loan fund. It should have the power to finance all manner of infrastructure, including, for example, on- and off-site roads and interchanges, water and sewer lines and treatment facilities, and site demolition and clearance. An SIB should be authorized accept real estate income, user fees or tax revenues as security for the loans and credit enhancement it extends and bonds it purchases.

An SIB should be authorized to provide financing to defense adjustment borrowers with below-investment-grade credit ratings. While there should be a range in credit quality among borrowers, SIB regulations and policy guidelines should embody explicit, commercially acceptable and consistent underwriting criteria and methods for making financing decisions.

SIB loan repayments should be retained and dedicated to capitalizing new generations of defense adjustment infrastructure. An SIB should be authorized to issue structured portfolio bonds as a means of more rapidly recapitalizing itself through the securitization and sale of the loans it has originated.

3. Structured Portfolio Bonds

Capital investment needs for defense adjustment infrastructure may be significantly greater than a state's fiscal capacity to capitalize a state infrastructure bank with appropriations or GO bond proceeds. SIBs may wait for enough of their loans to repay to accumulate capital for new loans for new infrastructure projects. Or, they may more rapidly recover and reinvest their capital by securitizing borrowers' debt service payments, i.e., by issuing structured portfolio bonds.

Structured portfolio bonds could be issued by an SRF, bond bank, or SIB, and secured with the aggregated debt service payments from the defense adjustment infrastructure loans it has originated or purchased.

Structured SIB portfolio bonds may have lower interest and credit enhancement costs than traditional state revolving loan fund or bond bank bonds. They should provide defense adjustment borrowers with access to the broad capital markets and enable SIBs to better manage their assets and to share credit, interest rate, and funding risks with bondholders.

Structured portfolio bonds would be multiclass, senior-subordinate securities. Traditional municipal bonds have a single class of bondholders. Structured portfolio bonds have the financial flexibility to specify and distribute bond credit risks and returns among multiple classes of bondholders more efficiently and cost effectively than single-class municipal bonds.

Structured portfolio bonds could use stand-alone bond indentures to legally isolate pooled loan debt service payments from the other assets and liabilities of the infrastructure bank. Stand-alone indentures are written for individual bond offerings. That is, the assets pledged as security for bonds issued under a stand-alone indenture secure only those bonds; they may not be used to pay other parity or additional bonds previously or subsequently issued.

Or, an infrastructure bank could legally isolate its loans selling them to a special purpose entity. The special purpose entity would finance the purchase of the pooled loans by selling its structured portfolio bonds to investors. Borrowers' debt service payments on the pooled loans would be passed through the special purpose entity to its bondholders. Special purpose entities may be trusts, partnerships, or corporations created under state law. They would be sponsored by the infrastructure bank. Special purpose entities must be "bankruptcy-remote."

Legally isolating structured portfolio bond debt service from the bank's other assets and liabilities permits the bonds to be independently rated. The creditworthiness of a structured portfolio bond is based on the cash flow of the segregated, aggregated, pledged assets—and how these debt service payments are structured into multiple classes of bonds—rather than on the general creditworthiness of the state or infrastructure bank.

Multiclass structured portfolio bonds disproportionately distribute bond debt service payments among three or more classes of bondholders. Each class, or tranche, of bonds would have different investment terms and conditions. Tranching the pledged revenues could reduce a bond issuer's risks as well as its interest and credit enhancement costs. It could, for example, reduce or eliminate the need for a debt service reserve or third-party credit enhancement. Multiclass bonds could tranche debt service cash flows in terms of maturity, flow of funds priorities, tax status, call protection, and other criteria.

In a structured bond, credit support begins with the prioritization of payment among the different, senior and subordinate, classes of bonds. In sequential pay structured portfolio bonds, for example, credit risk is distributed so that subordinate classes of bonds overcollateralize senior classes. On any debt service payment date, all holders of outstanding bonds receive interest in priority of class. Then, principal due is paid on the senior outstanding class of bonds until fully repaid. Principal still outstanding is then paid when due to the next senior class of bondholders until repaid, and so on, until final maturity when the last principal payment is made on the most junior class of bonds.

A sequential pay credit structures provides senior bondholders with a high investment-grade debt coverage ratio. Junior bondholders absorb a disproportionate amount of delinquency and default risk, and receive higher interest rates on their bonds commensurate with their risk. The blended interest rate on the multiclass structure should nevertheless be the lowest available for SIB structured portfolio bonds.

Junior bondholders may be private investors. Or, the state, county or local government, or SIB that sponsored the bond offering may retain the junior bonds at the time of the offering, holding them to maturity or, subject to Federal arbitrage restrictions relating to tax exemption, selling them to private investors as the bonds season and the pledged debt service payments increase in certainty.

Overcollateralization may be used by SIBs issuing structured portfolio bonds to improve the bond's debt coverage ratio. Overcollateralization pledges more money than necessary to cover bond repayment: the debt service cash flow from the pooled loans exceeds the debt service needed to pay bondholders.

Subordinating mezzanine or junior bonds provides senior bondholders with a form of overcollateralization. Loan substitution is another form of overcollateralization. After recapitalization, the SIB will make new infrastructure loans to LRAs. If a loan in the portfolio sold goes into default, a new loan in good standing may be substituted.

State infrastructure banks would use structured portfolio bonds to increase capital availability to defense adjustment infrastructure borrowers and reduce their interest costs. They would use structured portfolio bonds to pool and sell their loans, recapitalize their loan fund, more rapidly finance new generations of projects, and better manage their investment risks.

4. Rating Structured Portfolio Bonds

Standard & Poor's uses a three-step analytical approach when evaluating the creditworthiness of structured financings. It evaluates the credit quality of loan debt service and collateral pledged as assets for the financing, analyzes the transaction's legal documentation, and scrutinizes its payment structure.

Credit Quality: The credit rating of structured portfolio bonds, like any securitized financing, will be based primarily on the security value of the loans pledged to repay the financing.

S&P first determines the borrowers' ability to repay their debt, i.e., the potential for impairment of debt service payments to bondholders resulting from borrower delinquency or default. S&P identifies the assets (loans or bonds) dedicated to bond repayment and determines the

probability that the stream of debt service payments from these assets is of sufficient strength to justify the desired rating. The maturities of the structured portfolio bonds should equal the maturities of the pooled loans or bonds.

When the assets pledged are a pool of defense adjustment infrastructure loans, S&P's would evaluate the creditworthiness of each loan in the pool. This evaluation would follow the criteria described above for special purpose district bonds. The higher the individual ratings of their pooled loans, the greater the possibility that structured portfolio bonds will achieve an investment-grade rating without significant credit enhancement.

The credit quality of a pool of loans is also a function of the geographic dispersion of the borrowers whose loans are pooled.

- A pool consisting of loans made to borrowers across the nation should carry less risk of default and delinquency due to a downturn in the economy than a pool of otherwise comparable loans from a multistate region.
- A multistate regional pool should carry less risk than a pool derived from a single state.
- A statewide pool should carry less risk of economic dislocation than a comparable pool from a particular region of the state or a single county or municipality.

A high degree of economic diversity within a state or substate region and/or diversity in the sources of real estate income, user fees or tax revenues pledged to repay SIB loans can help to offset a lack of geographic dispersion.

S&P's credit quality analysis also includes an evaluation of loan origination and servicing, and the bond trustee who will carry out various administrative and financial management responsibilities for bondholders.

S&P evaluates the loan underwriting standards used in originating the loans pledged as assets in a structured financing. The focus of this analysis will be to determine the impact of the loan originator's underwriting policies on the expected performance of the loans.

For example, if the pledged loans come from the portfolio of a state infrastructure bank, S&P will review the SIB's primary sources of funds, organizational strengths and weaknesses, the quality of its management and staffing, overall risk profile (historic and expected financial performance), historic and current lending practices and the consistency of credit analysis standards, problem loan reporting, collection procedures, audit procedures, and accounting systems.

Strong underwriting standards do not increase the rating of an offering; weak, unclear and inconsistent underwriting standards increase risk and can result in increased credit enhancement requirements or a lower credit rating. S&P may decline to rate an offering if underwriting standards are imprudent. A smaller dollar volume and number of loans in an SIB's portfolio will not necessarily be a negative influence in S&P's review.

The SIB's legal obligation, ability, and willingness to service the loans or local bonds pledged to repay its bonds will be evaluated. Loan servicing involves managing and maintaining control of the loans and repayment stream from borrowers.

- An evaluation of the SIB's portfolio delinquencies and losses, financial statements, and operations are indicators of servicing quality.
- Data processing capabilities, loan accounting, collection procedures, actions taken to resolve delinquencies, and investor reporting procedures are evaluated to determine that the steps necessary to collect and forward the borrowers' debt service payments are within the servicer's capabilities.
- The SIB should not be allowed to resign as servicer until a suitable successor servicer has been named. Servicing fees should be sufficient to ensure the willingness of a successor to step in if necessary.

Loan servicing may also involve a backup liquidity obligation by the SIB to fund delinquencies in loan repayments so that timely payment can be made to bondholders. This obligation could take the form of a pledge of SIB assets (e.g., appropriations) in addition to the pledged loans, or a supplemental reserve fund. The SIB would be reimbursed when the late payments are made by the delinquent borrowers. This type of liquidity support, known as a cash advance mechanism, may be relied upon in lieu of or in addition to a debt service reserve fund, but requires that the SIB be rated no lower than one credit rating category below the financing.

S&P will also review the SIB's process for selecting the loans included in the pool of pledged assets. Portfolio characteristics to be reviewed include industrial, program and geographic diversity, historic portfolio origination and repayment statistics, and portfolio delinquency and default statistics. The pledged loans should represent a random selection of the SIB's loan portfolio, or its best loans.

The trustee in a structured financing is responsible for preserving the rights of bondholders in accordance with the bond indenture governing the transaction. The trustee's primary responsibilities include receiving debt service payments from loan servicers and third-party guarantors, if any, and distributing these receipts to bondholders under the terms and conditions of the bond indenture.

The investment of debt service payments prior to their distribution to bondholders, or of reserve funds by the trustee, should comply with S&P's list of permitted investments. Investments should have a credit rating at least as high as the rating on the bonds.

The trustee is also responsible for receiving and reviewing periodic reports from the servicer regarding payments received and projected payments. These reports are also independently audited. The trustee must also be willing and able to assume servicing responsibilities should the servicer be removed or resign and a suitable successor cannot be promptly obtained.

S&P requires that the legal documentation of the transaction assures that the trustee cannot resign without the appointment of a qualified successor. S&P also requires that the dedicated assets be held in separate, designated funds and accounts in trust for the benefit of the bondholders, thereby insulating the bondholders from the insolvency of the trustee.

The final step in S&P's credit quality analysis is an assessment of any credit enhancements provided in the financing.

- Credit enhancement is valued in terms of either a fixed percentage of the bonds outstanding or a fixed dollar amount.

- The amount of credit enhancement required for a particular level of credit rating is determined by the analysis of the credit quality of the loan debt service payments pledged as assets in the structured financing.

It is often possible to allow the amount of credit enhancement to decline over the maturity of the SIB's bonds to a minimum coverage level as bond principal is repaid, i.e., as the loans season. The minimum coverage level also reflects the credit policies of the loan originator or servicer that may affect loan repayment, e.g., loan extensions or forgiveness.

Investor coverage decreases as the bond's debt service reserve is drawn down by borrower defaults and delinquencies. These draws against reserves or other enhancements should be reimbursed from late debt service payments from delinquent borrowers. Payments from reserves may also be replenished with excess debt service payments from the pledged assets. Supplemental reserves funded with grants from the Federal and/or state government may also be used to makeup draws against the debt service reserve fund.

When evaluating third-party credit enhancement, S&P analyzes not only the amount of the credit protection for investors, but also its source. Credit protection is only as good as the credit strength of its provider. S&P uses a "weak link" approach. i.e., the rating on an offering reflects the lowest rating among its credit enhancement providers. "AAA" bonds cannot be supported by a "AA" credit enhancement provider.

Legal Analysis: Senior bonds issued in a structured portfolio bond offering must be legally insulated from default on the junior classes of bonds. Acceleration of repayment upon default should not be permitted.

The legal analysis of structured portfolio bonds involves a determination of the binding nature of the investors' ownership or security interest in the pledged assets. This determination includes an analysis of the strength of the bondholders' interests in the event of bankruptcy of one of the parties to the transaction.

State governments are bankruptcy-remote, i.e., cannot be deemed a debtor under the Bankruptcy Code. By legally isolating pooled loan debt service payments from the other assets and liabilities of an infrastructure bank, stand-alone indentures obviate bankruptcy concerns. Special purpose entities issuing structured municipal bonds, as instrumentalities of state government, may also be considered bankruptcy-remote. Special purpose entities may nevertheless be evaluated by the rating agencies to determine that debt service payments to bondholders will be made in a timely manner notwithstanding their potential insolvency.

Legal analysis also includes an evaluation of bond redemption (or call) provisions that allow (or require) the issuer to prepay the bonds prior to their maturity. Prepayment may expose bondholders to reinvestment risk, i.e., the risk that principal returned to bondholders prior to expected maturity may only be reinvested at an interest rate lower than the interest rate on the prepaid bonds. The provisions in the bond indenture permitting early redemption should clearly state the conditions under which prepayment may occur and any prepayment penalties for which the issuer may be liable.

Ordinarily municipal bonds are call-protected for a specified period. For example, a bond with a twenty-year maturity may not be redeemed (prepaid) during the ten years following issuance. It may be redeemed in year ten, but only upon issuer payment of a 3% penalty. This penalty

may fall to 2% in year eleven and 1% in year twelve. For years thirteen through twenty, the bond may be redeemed without penalty. Structured portfolio bonds may carry these same call protections.

Payment Structure: S&P's analysis of payment structure evaluates the promise to pay debt service from the pledged assets as it applies to each different class of bondholders.

- The payment features of the pledged loans, their capacity to make sufficient and timely debt service payments, and any applicable credit enhancement are also evaluated.
- Each point of passage of the debt service payments from the borrower to the originating lender or servicer, to the bondholders' trustee and, finally, to the bondholders must be properly secured at the level of the desired rating.

Because infrastructure projects cannot ordinarily be sold in the event of default, the payment structure of an infrastructure financing should contain sufficient debt service payments from the pledged loans to assure investors of timely payment.

- Sufficiency may be demonstrated by means of cash flow simulations.
- Simulation models will be stress-tested to determine the adequacy of loan payments to pay bondholders under worst case, Depression-era scenarios.
- If loan payment deferrals, forgiveness, or prepayments are allowed, the maximum amount of such deferrals, forgiveness, or prepayments must be reflected in cash flow simulations.
- If interest rate subsidies are provided to borrowers, cash flow analysis must clearly reflect the source of the subsidy and how it will be used.

Structured portfolio bonds will use multiclass payment structures to provide senior bondholders with credit support. Multiclass payment structures are used to give senior bondholders certainty that interruptions in loan debt service payments to the bondholders' trustee caused by borrower delinquency or default will not impair their timely receipt of principal and interest.

To provide credit support for senior bonds, the principal balance of mezzanine and junior bonds should be sufficient to provide adequate protection against losses to senior investors. Similarly, mezzanine bonds should have sufficient protection to justify their desired credit. The most junior class of bonds in a multiclass bond structure is ordinarily not rated by S&P. These junior may be sold in a private placement or retained by the issuing SIB or special purpose entity issuing the bonds.

The level of protection provided by subordinate bonds may gradually decline as the loans in a pool season, the amount of outstanding principal on the loans declines and borrower payment histories add certainty to debt service cash flows.

Debt service reserves, bond insurance, letters of credit, and cash advance commitments from loan servicers may also be used in a multiclass structure to provide bondholders with liquidity support against cash flow shortages resulting from loan delinquencies.

Overcollateralization, loan substitution, reserve makeup requirements, bond insurance, letters of credit, bond repurchase agreements, and accrual bonds may also be used in a multiclass structure to provide bondholders with support against borrower default.

III. Credit Enhancements: by Type

Credit enhancements provide bondholders additional protection against delinquency and default. They may be provided by third party--a bond insurance company or letter of credit bank, and/or the Federal, state, county, and/or local government--as an assurance to bondholders of timely payment of bond debt service. Credit enhancement also may take the form of a cash-funded debt service or supplemental reserve or a subsidized interest account.

Credit enhancements can raise below-investment-grade defense adjustment infrastructure bonds to the investment-grade rating of its weakest credit enhancement provider. Improving the credit rating of a bond ordinarily reduces its interest cost.

Bond insurance and letters of credit (LOCs) are forms of private sector third-party credit enhancement. Bond insurance companies and letter of credit banks will not ordinarily enhance bonds with natural, i.e., unenhanced, credit ratings below “A." Below-investment-grade infrastructure bonds would not be good candidates for bond insurance or a letter of credit.

Rather than directly issue bonds, state, county, and local governments may invest in defense adjustment infrastructure by providing third-party credit enhancement.

- States may credit enhance county, local government, LRA, or authority revenue bonds, or SIB structured portfolio bonds.
- Counties and municipalities may credit enhance LRA or authority revenue bonds.

Credit enhancement is an efficient, cost-effective means of using limited public funds to raise private infrastructure investment capital in the municipal bond market.

State, county, or local governments may provide grants to capitalize a debt service reserve fund or a supplemental reserve fund for individual defense adjustment bonds. Or a grant may capitalize a supplemental reserve fund for all bonds issued in a jurisdiction. Grants may capitalize subordinate or junior class bonds in a multiclass bond offering, or be used to buy bond insurance or letters of credit if commercially available.

Cash reserves directly protect bondholders and credit enhancers against borrower's delinquency, and support them against default. EDA grants also could be used to fund cash credit enhancements, i.e., reserves or subordinate bonds or subsidized interest accounts.

States, counties, and municipalities may protect bondholders against both delinquency and default through full faith and credit guarantees, double-barreled revenue pledges, or moral obligation pledges. Guarantees and pledges are contingent liabilities for public credit enhancement providers.

Under the *IRC,* the Federal government may not directly or indirectly guarantee municipal bonds without loss of their Federal tax exemption.

More than one public credit enhancement may be relied upon to achieve an investment-grade credit rating. Credit enhancement protections can be cumulative, i.e., different forms of

enhancement may be combined to give bondholders complete protection against default. For example:

- Bondholders may first rely upon a debt service reserve fund for the timely payment of principal and interest when borrower is delinquent.
- Draws against a debt service reserve fund may trigger replenishment payments from a supplemental reserve.
- If borrower's revenues continue to be inadequate and the supplemental reserve is depleted, bondholders may then look to a full faith and credit guarantor for timely debt service payments until fully paid.

With public enhancements, LRA and SIB bonds could be an efficient, cost-effective means of raising the infrastructure investment capital.

Upon default by a borrower, a credit enhancement provider may assume responsibility to pay debt service when due until final maturity, or it may accelerate the repayment of bond principal. Acceleration is the full payment of outstanding principal plus accrued but unpaid interest on the bonds at the time of default. Acceleration of principal is, for example, used by mortgagors when a homeowner defaults on his or her mortgage and the property is sold at foreclosure.

Many bondholders prefer credit enhancement that does not accelerate the repayment of principal. With acceleration, they may suffer reinvestment risk, i.e., may receive a large sum of money to reinvest when market interest rates are lower than the rates on the defaulted bonds.

Credit enhancement providers frequently require subrogation to the rights of bondholders when they make debt service payments on delinquent or defaulted bonds. Subrogation enables the provider to sue the borrower for reimbursement of any payments made on borrower's behalf.

To maximize the efficient use of limited public sector funds, credit enhancements for defense adjustment infrastructure should be provided without acceleration and, where possible, only for the duration of ramp-up. The third-party provider should be subrogated to bondholders when they seek reimbursement from borrower for enhancements provided.

User fee revenue bonds issued by rated utility districts and general obligation or revenue bonds issued by state, county, or local governments should not ordinarily require third-party credit enhancement to be marketable as investment-grade securities.

- They may, however, seek to lower their interest costs by obtaining credit enhancement from bond insurance companies or LOC banks.
- Or, credit enhancement may be provided by senior levels of government, e.g., a state may credit enhance defense adjustment bonds issued by a utility district.

LRA real estate income and tax increment bonds, and structured portfolio bonds issued by SIBs and backed with LRA loan repayments, will ordinarily require third-party credit enhancement to achieve investment-grade credit ratings and be marketable to institutional investors at competitive, affordable interest rates. Bond insurance and letters of credit will rarely be commercially available. LRA and SIB credit enhancement may be provided by:

- Grants that capitalize debt service or supplemental reserves or subordinate bonds;

- State, county, and/or municipal governments in the form of full faith and credit guarantees, double-barreled dedicated revenue or moral obligation pledges.

The different types and uses of credit enhancement EDA and state, county, and local governments may provide are described in this section. Legal and financial considerations unique to defense adjustment infrastructure bonds are delineated.

A. Private Enhancements

Bond insurance and letters of credit are commercially available third-party credit enhancements.

- Bond insurance companies and letter of credit banks will not ordinarily enhance bonds with natural credit ratings below “A."
- Below-investment-grade LRA and SIB bonds would not, without a senior-subordinate structure or some public sector credit enhancement, be good candidates for bond insurance or a letter of credit.
- Bond insurance and LOCs are economically attractive when the bond issuer’s interest savings on the enhanced bonds is greater than their cost of enhancement.

1. Bond Insurance

Municipal bonds are usually insured by monoline insurance companies—e.g., AMBAC Indemnity Corporation, Municipal Bond Investors Assurance Corporation (MBIA), Financial Guarantee Insurance Company (FGIC), and Financial Security Assurance (FSA)—rated "AAA". As a result, the insured bonds also receive the rating agencies’ highest ratings.

For a one-time premium payment at bond closing, bond insurance guarantees bondholders’ timely debt service payments. The noncancelable insurance is usually purchased at closing for the life of the bonds.

Bond insurance pays bondholders when reserves are depleted. Most bond insurance follows similar procedures when a bond issuer defaults: the insurer steps in and makes timely payments to bondholders over the remaining maturity of the bonds. Bond insurance does not permit acceleration. Insurers seek to recover these payments from the defaulting bond issuer and are ordinarily subrogated to the payment rights of bondholders.

Bond insurance is economically attractive when the interest savings on the insured bonds is greater than the premium paid for the insurance. Average gross interest savings over the term of the bonds should be two or more times premium costs. However, because premiums are paid at the time of issuance, an early bond redemption can reduce, eliminate, or even reverse anticipated interest rate savings.

2. Letters of Credit

With a letter of credit, a bond issuer ordinarily pays a highly rated commercial bank an annual commitment fee and drawing fee for its unconditional obligation to pay investors.

- Letters of credit are typically issued for three to seven years, and at most ten years, a time period considerably less than the maturity of many infrastructure bonds.
- When its initial LOC terminates, the borrower is usually required to obtain a new letter of credit from the initial bank or a bank of comparable credit quality.
- If suitable substitute letters of credit are not obtained, the bonds must be redeemed.
- If an LOC bank has its credit rating reduced, many bond indentures require the issuer to obtain a new letter of credit from a bank of comparable quality to the original bank, or the rating on the bonds also will be reduced.

There are several kinds of letters of credit. With a direct-pay LOC, the bank pays principal and interest to bondholders on each payment date. The borrower then reimburses the bank for its outlay of funds. If the borrower defaults, the bank can accelerate the debt and payoff outstanding principal in full. Or, it can wave the delinquency and maintain the letter, but not reinstate the LOC at its termination.

Under a standby LOC, the borrower maintains its responsibility to pay bond debt service to the trustee for distribution to bondholders. If the borrower is delinquent or defaults, the trustee demands payment from the bank in amounts necessary to cover all payments due on the bonds. After the standby LOC has been drawn upon and all principal due and accrued interest is paid, all future principal payments are accelerated.

LOC banks generally have credit ratings of “AA” or "AAA." As with bond insurance, the rating agencies require that the LOC provider be rated at least as high as the rating on the bonds. The rating agencies primary rating concern is that draws on the credit support can be made in time to meet scheduled debt service payments. Events of default and remedies should be clearly spelled out in the bond indenture. The flow of funds from the credit enhancer to the bondholders’ trustee must be assured—the LOC bank cannot have discretion with regard to meeting its obligations to bondholders.

An LOC can be cost effective if the fees paid are less than the interest savings resulting from the improved credit rating. For longer term securities, the issuer faces the risk that a renewal or substitute LOC may not be available or may be prohibitively expensive.

B. Grants

EDA grants, and grants from state, county, and local governments, may be used as cash credit enhancement for defense adjustment infrastructure bonds. Grants would be deposited with bondholders’ trustee at bond closing to serve as a cash reserve. They could capitalize:

- a debt service reserve fund for an individual bond issue;
- a supplemental reserve fund for an individual bond issue or a common reserve for all defense adjustment bonds issued in the jurisdiction; or
- subordinate or junior bond purchase or retention.

1. Debt Service and Supplemental Reserve Funds

Debt service reserves are moneys deposited at bond closing with bondholders’ trustee subject to instructions that they be used only to make timely principal and interest payments if

borrower's pledged revenues are insufficient. They provide the liquidity needed to offset potential interruptions in debt service.

Ordinarily, a debt service reserve is funded with a portion of bond proceeds at the time of sale. The size of a debt service reserve fund capitalized with bond proceeds and the interest income derived from its investment are limited by *IRC* Section 148. Interest income from the investment of debt service reserves is ordinarily pledged to pay debt service. The amount of capital committed to a debt service reserve fund may be reduced over time as bonds mature and the amount of principal outstanding is reduced.

If a debt service reserve fund is used to pay a debt service shortfall, the borrower may be required to replenish the reserve from their first available revenues. Or, replenishment moneys may come from a supplemental reserve fund.

Supplemental reserves may be one, two, or more times annual debt service on bonds they secure. They may provide credit support for individual defense adjustment infrastructure bond offerings, or as a common supplemental reserve for all defense adjustment infrastructure debt issued in the jurisdiction. As old bonds retire, new bonds could be credit enhanced by a common reserve. Defense adjustment borrowers could be charged a fee to help replenish individual or common supplemental reserves, and to cover administrative costs.

In addition to bond proceeds and grants, debt service and supplemental reserves may also be funded with the proceeds of land sales and with excess rent or loan debt service payments.

Debt service or supplemental reserve funds capitalized through state, county, or local appropriations would be subject to fewer constitutional restrictions than a full faith and credit guarantee or double-barreled revenue pledge. Cash reserve funds should not constitute debt within the meaning of state constitutions and neither referenda nor debt limits should apply.

A state statute adopted by the state legislature would, however, be required to authorize the funding of debt service or supplemental reserve funds and provide for their governance and operations. To make cash reserves effective as credit enhancement, the state would also have to appropriate moneys to deposit in the fund(s) and provide for their custody, investment, and application, as well as assure a common reserve fund of its credit enhancement powers.

Should debt service or supplemental reserve funds become fully depleted, any remaining losses would be borne by bondholders or additional credit enhancers. The legislature would not be legally required to appropriate additional moneys to cover these additional losses. Its loss would be limited to the size of its grant.

2. Subordinate Bonds

LRAs and SIBs may use senior-subordinate or multiclass bond structures to help achieve investment-grade credit ratings on senior bonds:

- Senior bonds would be secured with a first lien on debt service revenues; subordinate bonds would have a second lien.

- In a multiclass bond structure, their would be at least two classes of subordinate bonds: mezzanine bonds would have a second lien; junior bonds would have a third lien or residual interest in debt service revenues.
- Senior bonds' priority in repayment would give them a higher debt service coverage ratio than would be true if a senior-subordinate or multiclass structure were not relied upon.
- If the borrower is delinquent, subordinate bonds would provide senior bonds with a debt service cushion similar to the cushion against delinquency provided by a debt service reserve. Junior bonds would cushion both senior and mezzanine bonds.
- Debt service or supplemental reserves can support senior-subordinate or multiclass bond structures, but may not be required or may be required only in limited amounts to ensure liquidity.

Senior-subordinate and multiclass bond structures disproportionately distribute delinquency and default risk among different classes of bondholders. They allow the financial flexibility to specify and prioritize bond credit risks and returns among multiple classes of bondholders more efficiently and cost effectively than single-class municipal bonds.

With higher debt service coverage ratios, senior bonds would receive high investment-grade ratings; mezzanine bonds would receive low investment-grade ratings; subordinate or junior bonds are ordinarily unrated and, if rated, would ordinarily be noninvestment grade.

The interest payments received by mezzanine and junior bondholders are higher than those received by senior bondholders, reflecting the greater credit risk they are assuming.

Subordinate or junior bondholders may be private investors. Or, the state, county, local government or SIB that issued the bonds may purchase or retain subordinate or junior bonds at the time of the offering and hold them to maturity.

Credit enhancement grants could be used to purchase subordinate or junior class bonds. When the bonds or portfolio have seasoned, i.e., when their risks and returns can be more easily judged by the markets, e.g., following ramp-up, subordinate or junior class bonds could be sold as unrated debt in a private placement, raising additional capital to complete the project or begin a new one.

C. State, County, and Municipal Enhancements

Cash grants are only one form of state, county, or municipal credit enhancement. They protect bondholders against borrower delinquency, but provide only partial protection against default.

States, counties, and municipalities may fully credit enhance defense adjustment infrastructure bonds against bond issuer default with:

- full faith and credit guarantees;
- double-barreled revenue pledges; or
- moral obligation pledges.

Financially, the choice of grant, pledge, or guarantee ordinarily reflects the inherent credit risk of the borrowing; the importance of base revitalization to the government credit enhancer; its

available budgetary or contingent liability resources; and its willingness to absorb the credit risk that the defense adjustment borrower will become delinquent or go into default.

Legally, the type of credit enhancement best suited for individual defense adjustment bonds will depend upon a state's constitution and enabling legislation. County and municipal guarantees and pledges may be limited by constitution and must have state authorization.

1. Full Faith and Credit Guarantees

State, county, and local government credit enhancement may take the form of a full faith and credit guarantee of timely debt service payment. If, for example, LRA real estate revenues are insufficient to meet debt service requirements, a state guarantee, funded with the state's pledge of its taxing powers and revenues, may be called upon by bondholders to make payments when due.

Full faith and credit guarantees improve the credit rating of a bond offering to the extent that their legal provisions require the guarantor promptly to cure delinquency or default and evidence a high probability that it is both willing and has available financial resources to make full and timely payment of debt service.

Guarantees are legally enforceable obligations that, upon delinquency or default, shift liability to meet debt service requirements from borrower to guarantor.

- Under appropriate state constitutional provisions, legislation and bond covenants, a full faith and credit guarantee effectively substitutes the general obligation bond credit rating of the guarantor for that of the bond issuer.
- Ratings upgrades are limited, however, by the credit quality of the guarantor, i.e., the highest rating available for bonds guaranteed by an "A" rated state is "A."

Constitutional law in most states imposes certain requirements in connection with granting a state, county, or local government guarantee:

- A full faith and credit guarantee of the debt service on defense adjustment infrastructure bonds requires state legislative authorization.
- It may also have to be specifically approved by the guarantor's voters in a referendum.
- It may be subject to a constitutional debt limit.
- It may not be directly or indirectly provided to any private person or entity, unless in fulfillment of an public purpose where private benefit is secondary. Financing defense adjustment infrastructure would ordinarily be a permissible public purpose.

State constitutional law generally will view a full faith and credit guarantee as debt and will, therefore, require authorization of the guarantee to comply with constitutional requirements applicable to the issuance of general obligation bonds.

2. Double-Barreled Revenue Pledges

A double-barreled pledge of state, county, or local government revenues may be used instead of a full faith and credit guarantee to help bring the credit rating of below-investment-grade defense adjustment bonds up to investment grade.

- Double-barreled pledges are not as strong a form of credit enhancement as full faith and credit guarantees, but may be easier to implement legally.
- They may be provided legislatively or administratively by agencies enabled to make them. They do not ordinarily require voter referendum or compliance with the procedural safeguards for GO bonds and full faith and credit guarantees.
- While constitutional and statutory requirements vary, states making double-barreled pledges ordinarily need follow only the lesser procedures used to issue revenue bonds.

With a double-barreled pledge only specified revenues—not the full taxing power—of the credit enhancer would be available to cure borrower's delinquency or default. For example:

- A state might pledge the revenues generated by one cent of its sales tax to credit enhance defense adjustment infrastructure bonds secured with real estate income or tax increment revenues.
- In the event that a borrower's revenues are insufficient to timely pay debt service, bondholders' trustee would draw the needed funds from the bond's debt service reserve.
- In its next budget, the state would implement its double-barreled pledge by appropriating funds to replenish the draw from the debt service reserve fund.
- This replenishment appropriation could not exceed the revenues generated by one cent of the state's sales tax. The state's double-barreled pledge is limited in its liability.

When evaluating double-barreled bonds, the rating agencies first examine an LRA on its merits to determine if it is self-supporting, i.e., can it independently pay operating and maintenance expenses and debt service from its revenues through bond maturity.

- If an LRA is self-supporting, double-barreled bonds will be rated on the basis of the credit enhancer's revenue pledge.
- If LRA revenues are considered speculative, i.e., below investment grade, the added risk that the pledged revenues may be used to cover the LRA's default may adversely impact the bond rating of the credit enhancer; the LRA may become a drain on its tax revenues.

Double-barreled pledges do not ordinarily result in the full substitution of the credit enhancer's GO bond credit rating for that of the bond issuer:

- The credit enhancer is legally committed; bondholders may enforce the pledge—but there is not as much financial capacity behind it. The credit enhancer's liability is limited to specified revenues, not its full taxing power.
- The double-barreled pledge increases the debt coverage ratio on enhanced bonds. A substantial increase in the bonds' coverage ratio should enable them to receive a rating just below the general obligation rating of the jurisdiction providing the pledge.
- Double-barreled pledges make capital available to defense adjustment borrowers that may not otherwise be able to access the capital markets, but they do not ordinarily reduce interest costs as much as full faith and credit guarantees.

3. Moral Obligation Pledges

Timely payment of defense adjustment infrastructure bonds may also be supported by the moral obligation pledge of a state, county, or local government.

- With a moral obligation pledge, the bond issuer makes a promise to request an appropriation from the legislature to make up deficiencies in debt service payments or in the debt service reserve fund if it is drawn upon.
- The state, county, or local legislature is obligated by law only to consider the appropriation requested in its next budget. Unlike a full faith and credit guarantee or double-barreled pledge, the legislature is not legally bound to make the appropriation.
- Bondholders may not enforce a moral obligation pledge against a legislature that considers an appropriation to cure delinquency or default, but declines to make it.
- A moral obligation pledge is only a legislative statement of its present intention; it is not a legal commitment to appropriate funds.

While the legislative decision to honor its moral obligation pledge is discretionary, the backing of the morally obligated government is implied and expected by the capital markets. Not only have state governments honored their moral obligation pledges when called upon, they have frequently done so well in advance of actual shortfalls and, at times, when no moral obligation pledge had previously been authorized.

Most states do not require bonds containing moral obligation pledges to obtain voter approval or make them subject to constitutional or statutory debt limits.

S&P rates moral obligation bonds one rating category below the state's general obligation bonds, in the belief that a state's failure to honor a moral obligation pledge would reflect adversely on its general obligation bond rating. Moody's ignores moral obligation pledges and rates the bonds strictly on their pledged revenues.

Revenue bonds with a moral obligation pledge generally pay lower interest rates than unsupported revenue bonds and higher interest rates than general obligation bonds.

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IV. Economic Development Administration

A. Defense Adjustment Credit Enhancement Grants

Eligible EDA defense adjustment credit enhancement grantees could include LRAs; state, county, or municipal governments and authorities; and state infrastructure banks.

EDA credit enhancement grants could capitalize cash reserves of different types, e.g., debt service or supplemental reserve funds, or subordinate revenue or structured portfolio bonds.

EDA credit enhancement grants could also fund subsidized interest accounts that help reduce borrower's interest costs on defense adjustment infrastructure bonds during ramp-up or write-down interest costs over the full maturity of the bonds.

1. Debt Service and Supplemental Reserve Funds; Subordinate Bonds

EDA grants could fund debt service or supplemental reserve funds, or subordinate LRA revenue or SIB portfolio bonds.

Cash reserve funds would be deposited in trust for the benefit of bondholders and could be used only to pay debt service on the enhanced defense adjustment infrastructure bonds:

- Bondholders' trustee could use cash reserves to pay bondholders only upon the events of delinquency and default specified in the indenture and trust documents. Neither the grantee nor the trustee would have discretion in their use.
- As the bonds mature and reserve requirements get smaller; reserve fund principal and accumulated interest would be committed to final, scheduled debt service payments.
- In either event, with or without delinquency or default by borrower, EDA's grant would be committed in the grant agreement only to pay debt service on bonds issued to finance EDA-supported defense adjustment infrastructure projects.

EDA-funded cash reserves and subordinate bonds would absorb first loss liability:

- If a defense adjustment infrastructure borrower is delinquent, debt service reserves would be drawn upon first to pay bond principal and interest on time.
- Supplemental reserves would be drawn upon to replenish draws against debt service reserves resulting from borrower delinquency. They may be capitalized at one or more years of bond debt service, significantly reducing bond delinquency and default risk.
- Multiyear reserves would provide a debt service cushion, giving public and private credit enhancers comfort to furnish additional enhancements against default.
- Only a borrower's continuing inability to pay, even after multiyear reserves had been exhausted, would trigger additional public or private credit enhancements.

EDA's first loss liability would be limited to the size of its grant. No further responsibility for bond repayment would, or could, transfer to EDA or the Federal government.

Credit enhancement grants should realize the highest financial leverage and lowest interest and credit enhancement costs for borrowers.

- Borrowers could expect bond proceeds to leverage EDA's grant up to twenty times.
- An early credit enhancement grant would provide defense adjustment infrastructure bonds with extra cash during ramp-up when credit risk is highest.
- Unlike Federal loan guarantees, a grant used to capitalize a cash reserve would not jeopardize the municipal bond tax exemption.
- Grants from other government agencies could augment EDA credit enhancement grants.

As the "but for" investor in today's pay-as-you-go funding system, EDA already accepts first loss risk. Its grant is ordinarily the first cash committed by an investor to a project:

- Changing the use of EDA's grant from construction to credit enhancement does not change its critical role.: "but for" EDA, the project financing, and therefore the project, would not be undertaken.
- EDA's grant would continue to be the first financial commitment to base infrastructure, sparking interest in the project among other public and private sources of capital.

By assuming first loss responsibility, and enabling other credit enhancers to then share defense adjustment credit risk, EDA credit enhancement grants could help LRA and SIB bonds achieve investment-grade ratings.

2. Subsidized Interest Accounts

Grantees could deposit their EDA credit enhancement grant at bond closing into a subsidized interest account held by bondholder's trustee.

Unlike a debt service reserve through which bond principal and interest may be paid only upon delinquency, a subsidized interest account would be used to pay only scheduled bond interest.

Because a subsidized interest account assures bondholders of interest payments, reduces borrower's repayment requirements, and improves bond coverage ratios, it may also be considered a form of credit enhancement.

When funded with an EDA grant, a subsidized interest account could be used to reduce interest costs on defense adjustment infrastructure bonds during ramp-up, or for the full maturity of the bonds. Limiting interest subsidy to ramp-up concentrates the financial and budgetary benefits of subsidized interest in the period during which LRA revenues likely will be weakest, thereby accentuating its credit enhancement effect.

B. Suggested Credit Enhancement Grant-Making Process
TABLE 1: Suggested Grant-Making Data

EDA Regional Offices currently follow a standardized review process when evaluating a prospective defense adjustment construction project:

- This process ordinarily begins informally with discussions between Regional staff and the potential grantee. An abbreviated proposal is submitted for informal review.

- If the preliminary proposal meets EDA's criteria for defense adjustment eligibility and the economic development potential of the projects to be funded, the prospective grantee is requested to complete EDA's *Application for Federal Assistance, Attachment B: Construction, Title IX of PWEDA* (hereinafter: *Application*)

Defense adjustment construction grant applications are reviewed to determine the legality of project ownership; the project's environmental remediation needs; and its engineering and market feasibility. EDA performance, i.e., its social return on investment, is measured in terms of its public purposes: jobs created and retained, additional public and private dollars "directly related to, but not part of, the EDA project," percentage increase in local tax base, and diversification of local economy. (*Rutgers,* p.16.)

Changing grants from construction to credit enhancement would add new responsibilities to EDA defense adjustment grant making.

EDA would continue to review applicant data currently requested, i.e., information regarding the base reuse plan, the project description, and economic development potential of the project.

In addition, EDA would seek new data regarding the applicant's proposed financing, i.e., its basic terms and conditions, the revenues the borrower would pledge to pay debt service, and some fundamental indicators of credit risk. These data would be submitted in the applicant's abbreviated proposal and informally reviewed.

EDA could submit the applicant's proposed financing to one or more of the credit rating agencies for a preliminary rating. This "shadow" rating would indicate the proposed financing's unenhanced credit rating and the amount of cash credit enhancement needed to raise that natural rating to the desired level. The rating agencies would receive a fee for these services.

If the abbreviated proposal meets EDA's criteria for financial feasibility, the applicant would be requested to complete an *Application.* Evidence of public and/or private commitments of credit enhancement in addition to the credit enhancement grant requested of EDA would be included in the *Application* for EDA's review.

1. Proposed Project

EDA currently collects and evaluates the following information from prospective grantees:

- Base Reuse Plan:

Powers: Include information regarding the bond issuer's formal organization; the number, term, and method of election or appointment of its governing board, if any; and its legally authorized powers, with emphasis on its ability to raise revenues; own, sell, and lease assets; and issue debt directly or "on behalf of" a government.

Management: For all key employees and board members, if any, of the LRA or other bond issuer, include a summary of their roles in the organization and their resumes, emphasizing real estate development and debt issuance experience.

Goals: Summarize reuse plan goals including phases of infrastructure development.

Ownership: State the owner, the legal form of ownership (i.e., an interim lease, a lease in furtherance of conveyance, or full fee simple) of the property to be developed. If a lease is in place, summarize the terms of the lease, indicate if a thirty-day termination clause is in effect, and state the anticipated date of fee simple ownership.

Remediation: Summarize all outstanding environmental issues, any remediation that has been completed to date, and the role of the Military Department in completed and ongoing remediation. Has the Military Department issued a Finding of No Significant Impact or a Record of Decision?

Engineering: No new information would be required.

Market Feasibility: Include the base reuse plan market evaluation or feasibility study for the property detailing supply and demand for the proposed facilities.

Financial Plan: Include the financial component of the base reuse plan and the business plan component of any economic development conveyance application, including revenue and expenditure pro formas.

- Project Description:

Reuse Phase: Describe status including existing facilities or structures, any current tenants, any subdivisions of the property, and the zoning status.

Percent to be Developed: What proportion of the property will be developed?

Infrastructure Type: describe the type of infrastructure to be financed.

Total Cost: List the various costs involved in completing the proposed project, e.g., planning, design, engineering, demolition, and construction. Explain assumptions.

Completion Date: Indicate when the construction or upgrading of the proposed infrastructure is planned to be completed.

Useful Life: Define the expected useful life (the time frame over which the facilities will be operational and technologically current) of the proposed infrastructure stating all underlying assumptions.

- Area Economic Indicators:

Unemployment Rate: State unemployment rate in region prior to base closure, and after base closure. Compare to relevant state and national unemployment rates.

Job Loss: Discuss number and types of jobs lost in region as a result of the base closure. Compare to experience at other comparable base closures.

Per Capita Income: State per capita income in region prior to base closure and after base closure. Compare to relevant state and national per capita income.

Percent below Poverty: State percentage of people living below the poverty level in the region prior to base closure and after base closure. Compare to relevant state and national poverty levels.

- Potential Economic Impact:

Jobs Created: Detail number of jobs expected to be created at completion of the proposed project and two to four years after completion.

Jobs Retained: Detail number of jobs expected to be retained at completion of the proposed project and two to four years after completion.

Economic Diversity: Quantify anticipated increase in the mix of industries in the local economy that result from the proposed project.

Tax Base: Project anticipated increase in state, county, and municipal tax bases and revenues that are expected to result from the proposed project.

2. Proposed Financing

The following information would enable EDA to evaluate the basic terms and conditions, the pledged debt service revenues and risk of delinquency and default of the financing proposed by the grant applicant.

- Terms and Conditions: Include the following information for the bonds to be issued:

Issuer: State full name and legal status of debt issuer.

Bond Type: State type of bond to be issued, e.g., property tax general obligation bond; real estate income, tax increment or special assessment revenue bond; airport revenue bond; state infrastructure bank structured portfolio bond; etc.

Issuance Amount: State the anticipated face amount of bonds to be issued.

Maturity: When will the bonds be fully repaid?

Tax Status: Are the bonds to be issued tax exempt or taxable?

- Debt Service Revenues: Describe historical and projected debt service revenues annually by source. Detail projection assumptions.

Rents: Rental income from ground leases, building, facilities, and equipment leases available to pay debt service on proposed financing. Are lease terms longer than bond maturities? Describe any lease renewal conditions.

Land Sales: Revenues from land sales available for debt service. Is purchase price paid at closing, or over time through a financing lease or installment land contract?

Impact Fees: Impact fees available to pay debt service. Are impact fees payable as a lump sum when the property is purchased, or with interest over time? Are they imposed as a regulatory condition of receiving zoning, building, or occupancy permits, or as negotiated investments, exactions and private initiatives?

User Fees: Revenues from user fees including water and sewer hook-up and service fees; gas, electric, and telecommunications charges; landing and docking fees; solid waste disposal fees; parking fees; fare box receipts; and tuition and health care fees.

Tax Increment Revenues: Any increment in property tax revenues available to pay debt service. Any special assessments.

Tax Revenues: Any tax revenues available to pay debt service.

- Credit Risk: the following information will be used to assess bond creditworthiness.

Percent Developed: How much of the base is currently developed and producing revenues available for debt service? How much of the base will be developed and producing debt service revenues when construction of the proposed infrastructure project has been completed?

Prior Commitments: Describe any land sale or rental agreements to which site developers and industrial, commercial, or residential end users are legally committed.

Prior Debt: Describe any debt of the bond issuer outstanding at the time of the proposed financing. Will it draw upon the same revenues pledged to debt service of the proposed bond offering? On a parity basis? As senior debt? As subordinated debt?

Debt Per Capita: Discuss the current and anticipated burden of rental payments, user charges and property taxes for industrial, commercial, and residential end users. Divide total debt outstanding by the number of tax payers. Are there any regulatory or structural limitations on debt per capita?

Debt Service to Budget: Discuss the current and anticipated debt burden relative to the issuer's budget for operations, maintenance and debt service. Divide issuer's total budget by total debt service on all its outstanding debt.

Debt Service Reserve Fund: Include all capital amounts scheduled to be deposited into debt service reserve funds to pay bondholders in the event of a shortfall in scheduled repayment revenues.

3. Non-EDA Credit Enhancement

Provide the amounts and sources (other than the EDA) of the following credit enhancements available to support the proposed financing. Describe the legal obligation of its source to assume payment liability and provide loss coverage.

Potential sources of matching credit enhancements include local, county, or state governments; private entities; or a Federal agency other than EDA. Include its credit rating if available.

Describe the events upon which funds will be drawn upon from each credit enhancement source. Who bears first loss responsibility? Describe the order of liability if borrower fails to pay debt service on time.

Describe the duration the funds will be available.

- Public:

Full Faith and Credit Guarantees: Include any full faith and credit state, county, municipal government or authority guarantees available to bondholders to ensure timely payment of debt service.

Double Barreled Revenue Pledges: Include any back-up pledges by state, county, municipal governments or authorities of property, sales, income, gas tax, or user fee revenues available to bondholders to ensure timely payment.

Moral Obligation: Include any moral obligation pledges by states, counties or municipalities available to ensure timely payment of bondholders.

Grant: What is the amount of the grant to be provided?

Interest Rate Write-Down: Include all grants funding subsidized interest accounts.

- Private:

Bond Insurance: Include any bond insurance policy available to ensure timely payment. What will it cost?

Letter of Credit: Include any letter of credit available to ensure timely payment. What will it cost?

C. Grant Agreement

An applicant awarded a credit enhancement grant would enter into a grant agreement with EDA specifying the terms and conditions of grantee's use of EDA's funds.

Bond proceeds, net of transaction costs, could be used only to finance EDA-supported defense adjustment infrastructure projects.

Federal regulatory requirements, e.g., Davis-Bacon wage standards and environmental requirements, would extend to all projects financed with net bond proceeds.

EDA grant match requirements could be met with grantee cash or bond proceeds and state, county, or municipal credit enhancement contingent liabilities. Guarantees and pledges could be valued as match by determining the total liability assumed and discounting it for risk and to present value. This is the method used in budget scoring Federal guarantees--a contingent liability of the Federal government.

Grantees would irrevocably deposit their credit enhancement grant at bond closing into a cash reserve fund or subsidized interest account administered by bondholders' trustee under instructions specified in the bond indenture and trust documents. EDA funds for common supplemental reserves would be placed in trust through the grantee agency or authority.

Funds from other public and private sources could be commingled with EDA's grant in a cash reserve fund or subsidized interest account.

The funding of cash reserve funds and subsidized interest account with bondholders' trustee at closing is a standard bond practice. Bondholders' trustee would ordinarily be the trust department at a commercial bank.

Bondholders' trustee could invest cash reserve funds and subsidized interest accounts only in permitted investments, subject to the arbitrage rules of the *IRC.* The interest earned on these investments would be retained in the reserve fund or interest account until expended along with the cash from EDA's grant as debt service on the bonds.

D. Technical Assistance

EDA could supplement the technical assistance (TA) it currently provides defense adjustment communities to help them to understand, plan for, and use defense adjustment infrastructure bonds and credit enhancements. EDA TA could support:

- Defense adjustment financial planning and policies that enable LRAs; SIBs; state, county, and local governments to arrange feasible and efficient infrastructure project financings;
- Determination of alternative defense adjustment infrastructure bond and credit enhancement options and restraints;
- "Shadow" ratings from the credit rating agencies; and

- The development of grant applications that best respond to EDA grant making data requirements, methods, and criteria.

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Conclusion

The defense adjustment community--EDA, states, counties, municipalities, and their authorities, LRAs, and SIBs--has the opportunity, particularly working together, to leverage their limited cash funds with investment-grade municipal bond financings to efficiently and fairly provide capital for investment in its infrastructure priorities.

EDA--willing to assume first loss liability through credit enhancement grants--has a special opportunity. The “but for” investor in defense adjustment infrastructure, EDA may provide the critical cash that gives sufficient comfort to bondholders and public and private credit enhancers needed to garner their support.

The proposed debt financing tools--state, county and local government bonds and LRA or SIB bonds with credit enhancements--are complex; may require new state, county, or local policies or legislation; require a willingness to take financial risk; and are unfamiliar and untried to many in the defense adjustment community

Redeveloping closed and downsized bases requires infrastructure investment. This report was written to help the defense adjustment community realize and seize its financial opportunities.

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APPENDIX:

MODEL DEFENSE ADJUSTMENT INFRASTRUCTURE BONDS

TABLE 2: MODEL BOND OVERVIEW

TERM SHEETS and SPREADSHEETS

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A. LRA Real Estate Revenue Bonds

Term Sheet:

Bond Issuer	A Local Redevelopment Authority (the "Authority") established under the laws of the state issuing the Bonds directly or "on behalf of" the state or a political subdivision
Bond Description	Special Purpose District Bonds (the "Bonds")
Purpose of the Issue	Proceeds of the Bonds will be used to finance capital expenditures in the Authority's roads and interchanges, water and sewer lines, and utility conduits as described in the Base Reuse Plan, Phase I, and as approved by EDA, and pay certain costs and expenses relating to the issuance of the Bonds.
Issuance Amount	$30.0 million as determined in the Base Reuse Plan for Phase I Infrastructure Investment.
Credit Rating	Natural = Below Investment Grade
	Credit Enhanced = "A"
Maturities	Bonds amortization will occur over 25 years. Only interest will be paid for the first five years. The Bonds will be self-amortizing with level payments for remaining 20 years.
Interest Payments	The Bonds will bear interest at a fixed rate, payable annually. Interest rates range from 4.05% to 5.15%. See interest rate scale in financial analysis.

LRA Real Estate Revenue Bonds Term Sheet, continued:

Security	The Bonds will be repaid by specified Authority revenues net of operating and maintenance expenses.
	"Pledged Revenues" securing the Bonds will be limited to impact fees, land sale proceeds, rents from land, facilities and equipment, and other operating and non-operating income required to be recorded as revenue under Generally Accepted Accounting Principles.
	"Net Revenues" shall mean Pledged Revenues after deduction for Operating Expenses, all expenditures required and incurred in the operation of the Authority and maintenance of its facilities, exclusive of deprecation, amortization and other non-cash charges, and interest on long-term debt.
Debt Service Coverage Ratio	"Rate Covenant" The Authority shall conduct and maintain its operations in such manner as necessary to provide "Net Revenues" at least equal to 125% of the maximum annual debt service in each fiscal year.
	"Additional Bonds" So long as any Bonds remain outstanding, the Authority shall not incur additional debt unless it certifies that, for the immediately preceding Fiscal Year, it was in compliance with the Rate Covenant; and that, for the first Fiscal Year following the issuance of such additional debt, projected Net Revenues will not be less than 125% of maximum annual debt service on both outstanding and additional bonds.
Credit Enhancement	Payment of debt service when due will be secured by a full faith and credit guarantee of the state.
Use of Grants	EDA grant of $4,834,205 to capitalize a debt service reserve fund equal to two-times maximum annual debt service for the maturity of the bonds. Final principal and interest payments will be made from this debt service reserve fund.

B. LRA Tax Increment Financing Bonds

Term Sheet:

Bond Issuer	A Local Redevelopment Authority (the “Authority”) established under the laws of the state issuing the Bonds directly or "on behalf of" the state or a political subdivision.
Bond Description	Special Purpose District Bonds (the “Bonds”)
Purpose of the Issue	Proceeds of the Bonds will be used to finance capital expenditures in the Local Redevelopment Authority’s roads and interchanges, water and sewer lines, and utility conduits as described in the Base Reuse Plan, Phase I, and as approved by EDA, and pay certain costs and expenses relating to the issuance of the Bonds
Issuance Amount	$34.775 million as determined in the Base Reuse Plan for Phase I Infrastructure Investment.
Credit Rating	Natural = Below Investment Grade
	Credit Enhanced Senior Bonds = “AA”
	Subordinate Bonds = “BB”
Maturities	Bonds amortization will occur over 25 years. Only interest will be paid for the first five years. The Bonds will be self-amortizing with level payments for remaining 20 years.
Interest Payments	The Senior Bonds will bear interest at a fixed rate, payable annually. Interest rates range from 3.9% to 5.05%. The Subordinate Bonds carry an interest rate of 6.5%. See interest rate scale in financial analysis.

LRA Tax Increment Financing Bonds Term Sheet, continued

Security	The Bonds will be repaid by specified Authority tax increment revenues net of operating and maintenance expenses.
	"Pledged Revenues" securing the Bonds will be limited to revenues derived by the Authority from the increment in assessed value of the property located within the LRA following a specified base year.
	"Net Revenues" shall mean Pledged Revenues after deduction for Operating Expenses, all expenditures required and incurred in the operation of the Authority and maintenance of its facilities, exclusive of deprecation, amortization and other non-cash charges, and interest on long-term debt.
Debt Service Coverage Ratio	"Rate Covenant" The Authority shall conduct and maintain its operations in such manner as necessary to provide "Net Revenues" at least equal to 125% of the maximum annual debt service in each fiscal year.
	"Additional Bonds" So long as any Bonds remain outstanding, the Authority shall not incur additional debt unless it certifies that, for the immediately preceding Fiscal Year, it was in compliance with the Rate Covenant; and that, for the first Fiscal Year following the issuance of such additional debt, projected Net Revenues will not be less than 125% of maximum annual debt service on both outstanding and additional bonds.
Credit Enhancement	Payment of debt service when due will be secured by a pledge of the county of its property tax revenues.
	The bonds are limited obligations of the authority, payable solely from Pledged Revenues. Neither the credit nor the taxing power of the state or any political subdivision thereof other than the county is pledged for the payment of the bonds, nor shall the bonds be deemed to be obligations of the state or any political subdivision thereof. The authority has no taxing power.
Use of Grants	EDA grant of $4,775,000 to capitalize subordinate bonds retained by the Authority.

C. Airport Authority Revenue Bonds

Term Sheet:

Bond Issuer	An Airport Authority (the “Authority”) established under the laws of the state
Bond Description	User Fee Revenue Bonds (the “Bonds”)
Purpose of the Issue	Proceeds of the Bonds will be used to finance capital expenditures in the Authority’s terminal, runways, hangers, and warehouses as described in the Base Reuse Plan, Phase I, and as approved by EDA, and pay certain costs and expenses relating to the issuance of the Bonds.
Issuance Amount	$5.0 million as determined in the Base Reuse Plan for Phase I Infrastructure Investment.
Credit Rating	Natural = “A”
	Credit Enhanced = "AAA" insured
Maturities	Bonds amortization will occur over 25 years. Only interest will be paid for the first five years. The Bonds will be self-amortizing with level payments for remaining 20 years.
Interest Payments	The Bonds will bear interest at a fixed rate, payable annually. Interest rates range from 3.95% to 5.05%. See interest rate scale in financial analysis.

Airport Authority Revenue Bonds Term Sheet, continued:

Security	The Bonds will be repaid by specified Authority revenues net of operating and maintenance expenses.
	“Pledged Revenues” securing the Bonds will be limited to commercial landing fees, fuel fees, impact fees, land sale proceeds, rents from land, facilities and equipment, and other operating and non-operating income required to be recorded as revenue under Generally Accepted Accounting Principles.
	“Net Revenues” shall mean Pledged Revenues after deduction for Operating Expenses, all expenditures required and incurred in the operation of the Authority and maintenance of its facilities, exclusive of deprecation, amortization and other non-cash charges, and interest on long-term debt.
Debt Service Coverage Ratio	“Rate Covenant” The Authority shall conduct and maintain its operations in such manner as necessary to provide “Net Revenues” at least equal to 125% of the maximum annual debt service in each fiscal year.
	“Additional Bonds” So long as any Bonds remain outstanding, the Authority shall not incur additional debt unless it certifies that, for the immediately preceding Fiscal Year, it was in compliance with the Rate Covenant; and that, for the first Fiscal Year following the issuance of such additional debt, projected Net Revenues will not be less than 125% of maximum annual debt service on both outstanding and additional bonds.
Credit Enhancement	Payment of debt service when due will be secured by a third-party guaranty from a “AAA” municipal bond insurance provider.
	The bonds are limited obligations of the authority, payable solely from Pledged Revenues. Neither the credit nor the taxing power of the state or any political subdivision thereof is pledged for the payment of the bonds, nor shall the bonds be deemed to be obligations of the state or any political subdivision thereof. The authority has no taxing power.
Use of Grants	EDA grant of $418,668 to subsidize approximately 33% of interest costs during ramp-up. Ramp-up is estimated at five years, i.e., when projected revenues should meet minimum debt service coverage ratio of 1.25x.
	The authority will obtain a state or local economic development authority grant to purchase bond insurance.

D. County General Obligation Bonds

Term Sheet:

Bond Issuer	A County authorized to issue bonds under the laws of the state.
Bond Description	General Obligation Bonds (the “Bonds”)
Purpose of the Issue	Proceeds of the Bonds will be used to finance capital expenditures in the Local Redevelopment Authority’s roads and interchanges, water and sewer lines, and utility conduits as described in the Base Reuse Plan, Phase I, and as approved by EDA, and pay certain costs and expenses relating to the issuance of the Bonds
Issuance Amount	$20.0 million as determined in the Base Reuse Plan for Phase I Infrastructure Investment.
Credit Rating	Natural = “AA”
Maturities	Bonds amortization will occur over 25 years. The Bonds will be self-amortizing with level payments.
Interest Payments	The Bonds will bear interest at a fixed rate, payable annually. Interest rates range from 3.0% to 5.05%. See interest rate scale in financial analysis.
Security	The County pledges its full faith and credit to payment of Bond principal and interest
Use of Grants	EDA grant of $2,035,718 to a subsidized interest account to write-down approximately 1 percentage point of interest costs for the maturity of the Bonds.

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E. State Infrastructure Bank Structured Portfolio Bonds

Term Sheet:

Bond Issuer	A State Infrastructure Bank ("SIB") established under the laws of the state
Bond Description	Structured Portfolio Bonds ("Bonds")
Purpose of the Issue	Proceeds of the Bonds will be used for site preparation, roads and interchanges, water and sewer lines and treatment facilities, utility conduits, terminals, runways, hangers, and warehouses, all as qualified by EDA, and pay certain costs and expenses relating to the issuance of the Bonds.
Issuance Amount	$30.0 million
Credit Rating	Credit Enhanced Senior Bonds = "AA"
	Mezzanine Bonds = "A"
	Junior Bonds = "BB"
Maturities	Bonds amortization will occur over 25 years. Only interest will be paid for the first five years. The Bonds will be self-amortizing with level payments for remaining 20 years.
Interest Payments	The Senior Bonds will bear interest at a fixed rate, payable annually at interest rates ranging from 3.0% to 5.03%. The Mezzanine Bonds bear interest at 3.15% to 5.13%. The Junior Bonds carry an interest rate of 6.5%. See interest rate scale in financial analysis.

State Infrastructure Bank Structured Portfolio Bonds Term Sheet, continued

Security	The Bonds will be repaid by specified, aggregated SIB revenues from LRA borrowers net of operating and maintenance expenses.
	"Pledged Revenues" securing the Bonds will be limited to aggregate LRA commercial landing fees, fuel fees, impact fees, land sale proceeds, rents from land, facilities and equipment, and other operating and non-operating income required to be recorded as revenue under Generally Accepted Accounting Principles
Debt Service Coverage Ratio	The SIB shall pledge LRA debt service revenues in such manner as necessary to at least equal to 125% of the maximum annual debt service in each fiscal year.
Credit Enhancement	Payment of debt service when due will be secured by the mezzanine and junior class bonds
	The bonds are limited obligations of the SIB, payable solely from Pledged Revenues. Neither the credit nor the taxing power of the state or any political subdivision thereof is pledged for the payment of the bonds, nor shall the bonds be deemed to be obligations of the state or any political subdivision thereof. The SIB has no taxing power.
Use of Grants	EDA grant of $3,312,214 to subsidize original issue discount of $912,214 and capitalize $2,400,000 of additional junior class bonds.

GLOSSARY

***Ad Valorem* Property Taxes:** *Ad valorem* taxes are levied against the assessed value of property at a millage rate determined by the taxing jurisdiction. A county's or municipality's use of *ad valorem* property tax revenues to finance infrastructure would ordinarily entail the procedures, legislative and voter approvals necessary to issue a general obligation bond.

Below Investment Grade: Bonds with a "BB" rating or lower are considered below investment grade and may be referred to as "junk bonds." Below-investment-grade bonds may not ordinarily be included (or included only in small amounts) in the investment portfolios of institutional investors. Debt rated below investment grade ordinarily may only be sold in private placements and pays higher interest rates to compensate bondholders for the increased credit risk they assume.

Bondholders: Municipal bond investors are U.S. taxpayers only. Mutual and money market funds held one-third of the $1.306 trillion in municipal bonds outstanding in 1996. Another third of bonds outstanding is held directly by households. The last third is held by institutional investors, principally property and casualty insurance companies (13%) and commercial banks (7%). Commercial banks once held more than 50% of municipal bonds outstanding. They have steadily reduced their portfolios of tax-exempt municipal bonds since the *Tax Reform Act of 1986.*

Bondholders' Trustee: The trust department of a bank designated by a bond issuer to act as the custodian of funds, e.g., debt service reserve funds, and as the official representative of bondholders. Trustees are appointed to insure compliance with the bond indenture and to represent bondholders in the enforcement of its covenants with the issuer.

Bond Insurance: For a one-time premium payment at bond closing, bond insurance guarantees bondholders' timely debt service payments. The noncancelable insurance is usually purchased at closing for the life of the bonds. Municipal bonds are usually insured by monoline insurance companies rated "AAA". As a result, the insured bonds also receive the rating agencies' highest ratings. Bond insurance is economically attractive when the interest savings on the insured bonds is greater than the premium paid for the insurance.

Credit Enhancements: Credit enhancements are assurances of timely debt service payment provided to bondholders by a third party or through a cash reserve. They backup the bond issuer's obligation to pay, providing bondholders with additional protection against borrower delinquency and default. The various forms of public credit enhancements for defense adjustment infrastructure bonds include cash-funded debt service reserve funds, supplemental reserve funds, subsidized interest accounts, and subordinate bonds; and the assumption of contingent liability through full faith and credit guarantees, double-barreled revenue pledges, and moral obligation pledges. Available private credit enhancements include bond insurance and letters of credit.

Credit Rating Agencies: The municipal bond credit rating agencies identify and estimate credit risk. They evaluate the creditworthiness of bond offerings and then give the bonds letter and number rankings. Standard & Poor's ranking system, for example, ranges from "AAA"

("Capacity to pay interest and repay principal is extremely strong.") down to "D" ("...in payment default").

Credit Risk: Credit risk describes the likelihood that a borrower, i.e., a bond issuer, will make its debt service payments on time, i.e., without delinquency, until the bond has been fully repaid, i.e., without default.

Debt Coverage Ratio: Debt coverage ratios specify the minimum relationship between annual revenues pledged as debt service and annual debt service requirements. Coverage ratios reflect the number of times actual and/or estimated annual revenues exceed debt service requirements for that year. For example, if net revenues are required to be 1.25x debt service and annual debt service is $1,000,000, then annual net revenues must equal or exceed $1,250,000. In general, the higher the debt coverage ratio, the higher the rating of the bond, and the lower its interest costs. A rate covenant is frequently included in a revenue bond indenture to require the issuer to maintain the required debt coverage ratio. Additional parity bonds are new debt issues secured on an equal basis with the same revenues used to secure the bonds being rated. If revenues available to secure debt service on both the bonds being rated and the additional parity bonds falls below the mandated debt coverage ratio, the additional parity bonds may not be issued.

Debt Service: Principal and interest payments on bonds are its debt service.

Debt Service Reserve Funds: Debt service reserves are cash funds deposited with bondholders' trustee that are immediately available to pay timely principal and interest. if the borrower is delinquent. They are ordinarily funded with a portion of bond proceeds at the time of sale. The size of a debt service reserve capitalized with bond proceeds and interest income derived from its investment are limited by *IRC* Section 148. Generally, a debt service reserve is considered fully funded when it contains the lesser of 125% of average annual debt service, maximum annual debt service, or 10% of bond proceeds.

Default: Default is a permanent failure to pay debt service by a borrower.

Delinquency: Delinquency is a failure by a borrower to pay debt service on time as required payments become due.

Double-Barreled Pledge: State, county, and local governments may commit specific revenues as a double-barreled pledge against borrower default. The credit enhancing government legally obligates itself to appropriate funds if necessary, but only from the revenues specified. A state may, for example, pledge the revenues generated by one cent of its sales tax to credit enhance defense adjustment bonds. When a borrower becomes delinquent, the bondholders' trustee draws upon the debt service reserve. A state appropriation is then made to replenish the reserve. This appropriation may not exceed the revenues generated by one cent of the sales tax. Generally, the rating agencies award revenue bonds with a double- barreled pledge a credit rating one investment grade below the GO bond rating of the public credit enhancement provider.

First Loss Liability: If a borrower is delinquent or in default, the borrower, reserves or credit enhancer with first loss liability will be the first person called upon to pay bond principal and interest on time.

Full Faith and Credit Guarantee: A full faith and credit guarantee is the strongest form of credit enhancement a state, county, or local government may provide bondholders. The guarantor pledges its general revenues and taxing power to make timely debt service payments on borrower's bonds. The guarantee is legally enforceable by bondholders. Subject to state constitutional provisions, statutes and bond covenants, a full faith and credit guarantee shifts legal liability to meet debt service requirements from the borrower to the guarantor. It effectively substitutes the general obligation bond credit rating of the guarantor for the rating of the bond issuer, even for below-investment-grade bonds.

General Obligation Bonds (GOs): General obligation bonds are issued by state, county, and local governments and secured with their full faith and credit, i.e., the issuer pledges that it will use all of its funds, revenues, and complete taxing powers, and raise taxes if necessary, to repay bondholders on time. GO bonds are highly regulated, ordinarily subject to constitutional as well as statutory restraint. Their issuance often requires voter approval in a referendum.

Impact Fees: Developers may be required to pay impact fees to help defray the cost of the infrastructure that makes their land developable. Impact fees may be collected as a lump sum at sale or over time in installments with interest. They are ordinarily imposed through local ordinance as a condition for obtaining zoning, building, or occupancy permits. Negotiated investments, exactions, and private initiatives are similar to impact fees.

Indenture: The basic contract among bondholders and bond issuers is called a bond indenture. Under state law, a bond indenture is authorized by vote of the bond issuer (by resolution or by referendum) and contains covenants that legally establish the terms and conditions of the bond offering. Bond covenants describe the relationship among the parties, establish bond administration and duration, and distribute the risks of repayment in time and in priority of liability. Stand-alone indentures are written for individual bond offerings, i.e., the assets pledged as security may not be used to pay other parity or additional bonds previously or subsequently issued.

Interest: Interest payments are the cost of borrowed money. An interest rate scale is determined by the bond issuer and its financial advisors and investment bankers for each bond offering. Bonds with longer maturities ordinarily carry higher interest rates than short-term bonds. Interest rates are a function of the global supply and demand for money, particularly American dollars, the risks associated with different types of investments, e.g., municipal bonds issued by local governments and, finally, the risks associated with lending to a particular bond issuer.

Investment Grade: Debt rated “AAA,” “AA,” “A” or “BBB” is considered investment grade. Bonds with investment-grade credit ratings may be sold through a public offering to individual investors, and to mutual funds, insurance companies, banks, and other institutional investors. Ordinarily, the higher the credit rating, the lower the interest rates paid on bonds.

Letter of Credit (LOC): With a letter of credit, a bond issuer ordinarily pays a highly rated commercial bank an annual commitment fee and drawing fee for its unconditional obligation to pay investors in the event of issuer delinquency or default. Letters of credit are typically issued for three to seven years, and at most ten years, a time period considerably less than the maturity of many infrastructure bonds. If a suitable substitute letter of credit is not obtained, the bonds must be redeemed. LOC banks generally have credit ratings of “AA” or "AAA." An

LOC can be cost effective if the fees paid are less than the interest savings resulting from the improved credit rating.

Moral Obligation Pledge: States, counties, and municipalities may provide credit enhancement for revenue bonds through a moral obligation pledge. The borrower promises to request an appropriation from the legislature authorizing the moral obligation pledge to replenish debt service reserves. The legislature is obligated to consider the appropriation, but not legally bound to make it. Bondholders may not legally enforce a moral obligation pledge. Nevertheless, the backing of the morally obligated government is expected by the capital markets. State governments have invariably honored their moral obligation pledges. Generally, the rating agencies award revenue bonds with a moral obligation pledges a credit rating one investment grade below the GO bond rating of the public credit enhancement provider.

Multiclass Bonds: In a multiclass bond structure, their would be one class of senior bonds with a first lien on debt service revenues and at least two classes of subordinate bonds: mezzanine bonds would have a second lien; junior bonds would have a third lien or residual interest in debt service revenues. Senior bonds' priority in repayment gives them a higher debt service coverage ratio than would be true if a multiclass structure were not relied upon. If the borrower is delinquent, mezzanine and junior bonds provide senior bonds with a debt service cushion similar to the cushion against delinquency provided by a debt service reserve. Junior bonds cushion both senior and mezzanine bonds. Mezzanine bonds carry higher interest rates than senior bonds to reflect their higher risk; junior bonds carry still higher interest rates.

Municipal Bonds: The debt obligations of state, county or local governments or their political subdivisions. The interest payments on municipal bonds received by bondholders may be exempt from taxation, or taxable, as determined by the *IRC.*

Pay-As-You-Go: Buying a capital asset with a multiyear useful life, such as infrastructure, with current cash.

Pay-As-You-Use: Buying a capital asset with a multiyear useful life with borrowed capital repaid over its useful life by those who benefit from its use.

Principal: The amount of money borrowed through a debt instrument such as a municipal bond or other form of loan, principal is ordinarily repaid with interest.

Ramp-Up Period: The time it takes following the completion of infrastructure construction for commercial, industrial, or residential development to occur—and for debt repayment revenues to flow in earnest.

Revenue Bonds: Revenue bonds are repaid with user fees, or limited, dedicated tax revenues. They are commonly used by county and municipal governments, utility service districts, and state and local authorities that have not been legally authorized to levy taxes to finance facilities needed to provide service. Less secure than GO bonds, revenue bonds ordinarily carry lower credit ratings and pay higher interest rates.

Senior-Subordinate Bonds: Senior-subordinate bond structures may be used instead of or with a debt service reserve as support against issuer delinquency. A senior bond is analogous

to a first mortgage on a home; a subordinate bond is like a second mortgage. Senior bonds have a higher debt service coverage ratio than junior bonds. If the borrower is delinquent, subordinate bonds provide senior bonds with a debt service cushion similar to the cushion against delinquency provided by a debt service reserve. With higher debt service coverage ratios, senior bonds may receive investment-grade ratings; subordinate bonds are ordinarily unrated. Since subordinate bondholders bear a disproportionate share of credit risk, they receive higher interest payments than senior bondholders.

Special Assessments: A special assessment, e.g., a levy based on a formula such as street front footage, may be used to raise revenues to repay infrastructure debt. Special assessments are legally justified by the special benefits the assessed parcels receive from the new infrastructure facilities; special benefit means that the assessed property's fair market value has increased by reason of the installation of infrastructure facilities.

Special Purpose District: Special purpose districts are ordinarily created by enabling legislation to provide economic development or related services to a specified area. They may be located within a single municipality or county, or may cross jurisdictional boundaries. They are ordinarily governed by a board of directors independently elected or appointed by another governmental entity or entities. Special purpose district bonds are often issued in anticipation of, rather than in response to, economic growth. Solid capital and financial plans and feasibility studies are common characteristics of successful special purpose district debt financings.

State Infrastructure Banks (SIBs): SIBs provide capital market access to local governments and authorities unable to borrow, or to borrow at affordable rates. SIBs lend, rather than grant, their capital in short-term construction loans, long-term financing, or credit enhancements. State revolving funds are an example of an infrastructure bank capitalized with Federal environmental funds. They make loans for clean and safe drinking water facilities. State bond banks, a different type of SIB, pool small, local government and authority debt into sizable portfolio bonds suitable for sale in the municipal bond market. Infrastructure bank loans may bear market interest rates, or subsidized, below-market rates. SIB financing is often limited, competitive and may require borrowers to demonstrate ability to repay.

Structured Portfolio Bonds: Structured portfolio bonds recapitalize infrastructure banks. They could recycle illiquid, long-term loans into current cash for new generations of defense adjustment investment. Structured portfolio bonds enable infrastructure banks to securitize and sell their LRA loans. An SIB securitization would aggregate the debt service payments from a portfolio of LRA loans and then sell multiclass bonds secured by those payments.

Subsidized Interest Account: A subsidized interest account may be used to reduce borrower's revenue requirements in the first years following bond issuance. A larger amount of money than required for project purposes would be borrowed and these excess bond proceeds deposited with the bondholders' trustee explicitly to make the first few years of interest payments on the bonds. By increasing the amount borrowed, of course, the bond issuer would also increase its total interest costs. Subsidized interest accounts could also be funded with grants.

Supplemental Reserve: A supplemental reserve fund is an additional cash reserve used to makeup draws against a debt service reserve fund when it has been drawn down because the

borrower has been delinquent. Supplemental reserves may contain a multiple of one, two or more times the capital committed to a debt service reserve. Supplemental reserves may provide credit support for individual defense adjustment infrastructure bond offerings or they may be established as a common reserve for all defense adjustment infrastructure bonds issued in a state. The investment of supplemental reserves is controlled by *IRC* Section 148.

Tax Exemption: The Federal government exempts the interest paid on municipal bonds from the income tax. Historically, this Federal tax exemption has reduced the interest cost on municipal bonds by one-fifth when equated with comparably rated, taxable corporate bonds. States and municipalities also ordinarily exempt interest payments on their own bonds from bondholders' taxable income.

Tax Increment Financing (TIF): Tax increment financing captures the growth above a base year in assessed property tax valuation in the designated TIF district, and uses these incremental revenues to pay debt service on district bonds. The property tax revenues from the assessment base flow to local governments. TIF districts do not ordinarily have the authority to increase tax rates. Rather, they passively receive revenues derived from the assessment increment at tax rates determined by the local jurisdictions that receive assessment base revenues. Tax increment financing is also known as tax allocation financing.

MEMORANDUM

TO: Dave Witschi, John MacNamee and John Fieser
Economic Development Administration

Joe Cartwright, Toby Halliday and Pat O'Brien
Department of Defense

FROM: Scott Reznick
Commonwealth Development Associates

DATE: November 5, 1998

RE: ***Defense Adjustment Infrastructure Bonds***

The enclosed is the final draft of CDA's stand-alone executive summary and report on *Defense Adjustment Infrastructure Bonds.* I look forward to receiving your comments.

The model bond spreadsheets will be updated just prior to printing the final report so that they reflect the most current interest rates.

Earlier today, in anticipation of an article in next week's edition of *Credit Week Municipal,* Standard & Poor's held a teleconference on the effect of military base reuse on the credit ratings of defense adjustment communities. Nothing new was revealed. Nevertheless, I should have a copy of the article by Wednesday and may want to update the executive summary and report to reflect its contents.

Following our last meeting with the Expert Panel, it seemed clear to me that I had not yet successfully addressed credit enhancement grant making standards and procedures. Section IV of the enclosed report is therefore a rewrite of the earlier draft that I hope simplifies the standards and process, alleviating time and expertise requirements on both EDA and prospective grantees. I will, of course, be happy to discuss it as needed by phone or in a meeting in D.C.

Thank you all again for your interest and support.