OKI 2050
METROPOLITAN
TRANSPORTATION PLAN

# Financial Plan

**March 2020**

OKI
Ohio · Kentucky · Indiana
*Regional Council of Governments*

# Federal Funds Play Big Role in Region's Financial Plan

This plan's financial analysis was developed in response to the requirements for a "fiscally constrained plan," which was first introduced in the Intermodal Surface Transportation Efficiency Act (ISTEA) and continued in subsequent federal transportation legislation, including the FAST Act.

This plan considers capital, operation and maintenance costs associated with the preservation and continued operation of the existing transportation system, as well as the costs associated with the recommended improvements presented in this plan. It also projects revenues (funds) from all sources to be available to pay for the improvements. The process includes revenue estimation, cost analysis and a revenue/cost comparison to arrive at a fiscally constrained plan. Revenues and costs are tracked separately for Ohio, Kentucky and Indiana.

## Federal Funding Sources

A significant part of OKI's funding flows into the region from federal sources. Federal funding amounts are based on estimates of the region's share of funds from programs authorized and appropriated by Congress. The region's share of these federally funded programs is based on the assumption that current funding levels will rise about two percent per year through 2050. The current FAST Act programs that provide funding for the region's transportation system are described below.

### Interstate Maintenance

The Interstate Maintenance (IM) program finances projects to rehabilitate, restore and resurface the interstate system. Administered by the states, the match rate for this program is 90 percent federal and 10 percent state or local.

### National Highway System

The National Highway System (NHS) is 160,000 miles of the country's major roads. It includes all interstate routes, a large percentage of urban and rural principal arterials, the defense strategic highway network and strategic highway connectors. The match rate is 80 percent federal and 20 percent state or local. A link to the OKI region's NHS system can be found here: http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/ohio/cincinnati_oh.pdf

### Surface Transportation Block Grant Program (STBG)

The Surface Transportation Block Grant Program (formerly STP) is the most versatile type of transportation funds. Roadways that have a federal functional classification of collector or higher in are eligible for STP funds. These funds may also be used for capital projects for transit agencies, regional planning, and bicycle and pedestrian facilities. The STBG set-aside (aka Transportation Alternatives) program also receives 10 percent of the STBG funding levels.

Other modal projects eligible for STBG funds include freight; capital transit projects; commuter rail; bus terminals and facilities; carpool projects; traffic monitoring; and bicycle and pedestrian facilities that are above and beyond the TA allocation.

In addition to OKI's STP allocation by formula (population of the urban area), the three state DOTs invest a significant portion of their state STBG funding in the region on a variety of the above identified project types.

## Transportation Alternatives Program

As noted above the TA program is a set-aside of the STBG program. The FAST Act continues the program with no major changes from previous transportation bills and is used for a variety of transportation projects such as pedestrian and bicycle facilities, safe routes to school, historic preservation of transportation facilities, vegetation management and environmental mitigation related to storm water and habitat connectivity.

## Congestion Mitigation Air Quality

The Congestion Mitigation Air Quality Improvement Program (CMAQ) provides funds for transportation projects in maintenance areas for ozone and carbon monoxide. These projects contribute to meeting the attainment of national ambient area air quality standards. The OKI region is eligible for these funds because of its designation as an ozone maintenance area. Transportation projects and programs are eligible for CMAQ program funds if they are associated with documented emissions reductions and do not add to the existing roadway capacity. OKI administers CMAQ in Dearborn County. In Ohio, OKI operates through a cooperative statewide committee. KYTC administers CMAQ for the Northern Kentucky area of the region.

## 5310 Program

OKI is a direct recipient of FTA Section 5310 transit funds for private, non-profit entities. These funds are provided on a competitive basis to private, non-profit agencies for the delivery of transit services to the elderly and disabled for capital and operating activities. OKI allocates about $1.3 million each year.

## Bridge Replacement and Rehabilitation Program

This program enables the states to replace significant bridges that are unsafe because of structural deficiencies, physical deterioration or functional obsolescence. The match rate is 80 percent federal and 20 percent state or local.

## Nationally Significant Freight and Highway Projects (NSFHP)

The FAST Act establishes the Nationally Significant Freight and Highway Projects (NSFHP) program to provide financial assistance — competitive grants, known as INFRA grants, or credit assistance — to nationally and regionally significant freight and highway projects that align with the program goals to:

- Improve the safety, efficiency, and reliability of the movement of freight and people;

- Generate national or regional economic benefits and an increase in global economic competitiveness of the U.S.;
- Reduce highway congestion and bottlenecks;
- Improve connectivity between modes of freight transportation;
- Enhance the resiliency of critical highway infrastructure and help protect the environment;
- Improve roadways vital to national energy security; and
- Address the impact of population growth on the movement of people and freight.

An INFRA grant (formerly known as FASTLANE) may not exceed 60 percent of the total eligible project costs. An additional 20 percent of project costs may be funded with other federal assistance, bringing total federal participation in the project to a maximum of 80 percent. There is an exception for projects carried out by federal land management agencies, which can use federal funds other than those made available by Titles 23 and 49, United States Code, to pay the non-federal share of the project cost, bringing total federal participation up to 100%. [23 U.S.C. 117(j)]

## BUILD Grants

The Better Utilizing Investments to Leverage Development, or BUILD Transportation Discretionary Grant program, provides a unique opportunity for the USDOT to invest in road, rail, transit and port projects that promise to achieve national objectives. Previously known as Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grants, Congress has dedicated nearly $7.1 billion for ten rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact.

In each competition, USDOT receives hundreds of applications to build and repair critical pieces of our freight and passenger transportation networks. The BUILD program enables DOT to examine these projects on their merits to help ensure that taxpayers are getting the highest value for every dollar invested.

The eligibility requirements of BUILD allow project sponsors at the state and local levels to obtain funding for multi-modal, multi-jurisdictional projects that are more difficult to support through traditional USDOT programs. BUILD can fund port and freight rail projects, for example, which play a critical role in our ability to move freight, but have limited sources of federal funds. BUILD can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional federal programs, which provide funding to very specific groups of applicants (mostly state DOTs and transit agencies). This flexibility allows BUILD and traditional partners at the state and local levels to work directly with a host of entities that own, operate and maintain much of our transportation infrastructure, but otherwise cannot turn to the federal government for support.

## Federal Transit Administration Funding

There are five transit agencies in the OKI region: Butler County RTA, Clermont Transportation

Connection, SORTA, TANK and Warren County Transit System. These agencies rely on federal, state and local funds for operations, maintenance and capital expenses. The Federal Transit Ad ministration (FTA) has several funding sources for operating, maintenance and capital expenses.

Section 5307 funds can cover up to 50 percent of annual operating costs and 80 percent of annual capital and planning costs, after excluding projected annual fare revenue. The Section 5307 formula transit grant program makes funds available on the basis of a statutory formula to all urbanized areas in the country. For capital projects, the match rate is 80 percent federal and 20 percent state or local. Capital funds are used for transit maintenance, such as replacing buses, as well as other projects. For operating assistance, the match rate is 50 percent federal and 50 percent state or local. Operating assistance is capped at a percentage of the total Section 5307 apportionment for each urban area.

The Section 5309 discretionary capital program is a potential funding source for the rail transit systems. Funds are split 40 percent for new starts, 40 percent for rail modernization and 20 percent for bus and other. The match rate is 80 percent federal and 20 percent state or local.

Section 5337, The State of Good Repair Grants Program (49 U.S.C. 5337), provides capital assistance for maintenance, replacement and rehabilitation projects of high-intensity fixed guideway and bus systems to help transit agencies keep assets in good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management plans.

Section 5339 funds can cover up to 80 percent of capital costs to replace, rehabilitate and purchase buses and related equipment, and to construct bus-related facilities.

OKI also administers the FTA Section 5310 Program known as the Specialized Transportation Program. This program provides funds for projects where existing transportation services are unavailable, insufficient or inappropriate. The program provides an 80 percent federal share for capital projects (including capitalized maintenance). As the Designated Recipient, OKI is responsible for soliciting and awarding projects that are selected on a competitive basis and are based on the Coordinated Public Transit-Human Services Transportation Plan for the OKI region. The Cincinnati urbanized area receive about $1.3 million in 5310 funds each fiscal year.

## Federal Emergency Relief Program

This program provides emergency funds to the state and counties for the repair or reconstruction of federal-aid highways and roads on lands that have suffered serious damage by natural disasters or catastrophic failures from an external cause. Congress provides $100 million nationwide annually to this program, which requires a Governor’s Disaster Declaration to be accessed.

## Ohio State and Local Funding Sources

Some of the Ohio Department of Transportation (ODOT) highway programs are listed below. A portion of the statewide allocation will be used for projects located in Butler, Clermont, Hamilton or Warren counties.

### TRAC

This is funding for ODOT's new facilities and major expansion projects. These projects add lanes to freeways, build bypasses, expand existing interchanges, build new interchanges, and fund major transit expansion and intermodal/multimodal terminals. ODOT funds the TRAC from a variety of sources depending upon the nature of the project, the funding sources for which it is eligible, and the funding available in a specific program. This program is for projects that cost more than $12 million.

### ODOT

ODOT invests state and federal funds in the Ohio portion of the region on a variety of projects with both state and federal funding, including their own allocated STBG, STBG set-aside, CMAQ, Bridge, etc. These sources are described above. Following are programs administered by ODOT to help county and local entities implement a variety of safety, maintenance and capital improvements.

## County Local Bridge Program

The County Local Bridge Program (about $34 million annually in Ohio) provides funds for bridge replacement and rehabilitation; and it is administered by the County Engineers Association of Ohio (CEAO). The standard federal participation rate is 80 percent. Funding is typically only provided for construction unless the program manager determines that PE and right-of-way are warranted.

## County Surface Transportation Block Grant Program

The County Surface Transportation Block Grant Program (CSTBG) has two components. First, there is a regular construction funding program for eligible roadway improvements, and that is administered by the Ohio Department of Public Safety (ODPS) for safety studies. The CEAO serves as the program manager and is responsible for project selection, funding criteria and program priorities. Second, ODOT provides federal CSTBG funds to counties each year through the CEAO. The program is funded at about $14 million annually. Eligible activities include new construction; major reconstruction; resurfacing, restoration and rehabilitation (3-R projects); bridges not eligible for county bridge funding; guardrail construction and reconstruction; centerline and edge line striping; and raised pavement marker projects. The standard federal participation rate is 80 percent on roadway projects.

## County Highway Safety Program

This program provides funds to counties for highway safety treatments or corrective activity designed to alleviate a safety problem or potentially hazardous situation. The County Engineers Association of Ohio (CEAO) serves as the program manager and is responsible for project

selection, funding criteria and program priorities. More information can be found in the CEAO Federal Funding Policies Manual at http://www.ceao.org/aws/CEAO/pt/sp/cstpprograms. This program is funded at about $14 million annually, a portion of which is set aside for safety studies, sign upgrades and curve sign upgrades. The standard federal participation rate is 80 percent on roadway projects and sign upgrades; 90 percent on safety studies; and 100 percent on guardrail, pavement marking, raised pavement marker, and curve sign upgrade projects. There is a $5 million per project maximum on the federal share of roadway projects. Other project funding limits are: $300,000 per county for each guardrail project; $150,000 per county for each pavement marking project; and $75,000 per county for each raised pavement marker project. Funding is only provided for construction unless the program manager determines that preliminary engineering and right-of-way costs are warranted.

## District Pavement & Bridge Preservation

The pavement and bridge preservation program was created to provide funding for the preservation and rehabilitation of the Priority, Urban and General System pavements and the state-maintained bridge structures. The goal of the program's funding process is to maintain pavements and bridges at "steady state" conditions. This constitutes a relatively low and stable level of deficiencies, where a predictable rate of preventive maintenance and regular repairs can efficiently sustain the system conditions. Preliminary engineering, right of way and construction phases of the following types of projects are eligible:

- .. Priority and General System Pavements – Surface treatments and minor rehabilitation as defined by the Office of Pavement Engineering.
- .. ODOT Maintained Bridges – Preventive maintenance, rehabilitation, replacement and removal as defined by the Office of Structural Engineering.
- .. Project Related Costs – Maintenance of traffic, drainage roadway excavation, etc.

## Local Major Bridge Program

This program provides federal funding to counties and municipalities for bridge replacement or major bridge rehabilitation projects. Funds are for construction only for local major bridges that carry vehicular traffic. These are defined as moveable bridges or bridges having a deck area greater than 35,000 square feet. About $20 million annually is available in Ohio and ODOT will provide up to 80 percent of the eligible costs for the project.

## Metro Parks

This program provides state funds for park drives or park roads within the boundaries of township or county parks, together with roads leading from state highway to any into any such park. The Ohio Parks & Recreation Association (OPRA) serves as the program manager.

Funds can be used for materials and labor necessary for construction or reconstruction of park drives, park roads, new or replacement bridges, park access roads and parking lots. The funds also may be used to purchase and haul materials to improve, repair and maintain park drives, park roads, park access roads and parking lots, and to rent labor and equipment. Force account

labor costs are ineligible. Ineligible projects include bikeways, and items such as shelter houses, wells, pumps, restroom facilities, park buildings, etc. All projects must be associated with public vehicular access to be eligible for funding.

## Multi-Lane Major Rehab Program

This program provides funding for major rehabilitation projects along the multilane divided priority system (interstate or interstate look alike), which restore the structural integrity of the pavement and/or the bridges. The program is allocated $200 million each year to repair or replace poor performing pavements and/or bridges along the multi-lane priority system throughout the state. Any multi-lane divided roadway along the state's priority system is eligible for the program. The Multi-Lane Major Rehab Program may participate on all phases of a project.

## Ohio's Bridge Partnership Program

This program is a bridge replacement initiative designed to reduce the number of deficient county and municipal bridges. ODOT will work cooperatively with county and city engineers to address those bridges needed to be replaced. The program provides $5 million annually to counties and municipalities for roadway bridge replacement projects, utilizing either the typical design-bid-build or design-build methods. A funding limit of $1 million per project has been established. ODOT will provide 100 percent of eligible costs for construction only (including construction engineering, i.e. testing and inspection), up to the specified funding limit. The local entity will be responsible for all costs associated with preliminary engineering, environmental studies and documents, final design and right of way.

## Municipal Bridge Program

The Municipal Bridge Program (about $10 million annually in Ohio) provides funds to replace and rehabilitate bridges that carry vehicular traffic on a public roadway within municipalities. Bridges funded under this program must be at least 20 feet long; listed in the ODOT Bridge Management System with a sufficiency rating value of 80 or less for rehabilitation, or less than 50 for replacement; and classified as structurally deficient or functionally obsolete. ODOT will provide up to 80 percent of eligible costs for construction only. The municipality is responsible for the balance of the construction costs, as well as all costs associated with preliminary engineering, environmental studies and documents, final design and right of way. The local match for construction is required to be cash.

## Noise Walls Program

The Noise Wall Program provides funds for retrofitting existing highways with noise barriers. The annual statewide budget has been $5 million.

## Safety Program

The Safety Program provides funds to ODOT and local governments for highway safety treatments or corrective activity designed to alleviate a safety problem or a potentially hazardous situation. The current program is funded at about $159 million annually in Ohio,

making it the third largest in the nation. ODOT will provide up to 90 percent of eligible costs for preliminary engineering, detailed design, and right-of-way or construction. Projects may be on a city, county or township streets and roads. Prioritization is based on these criteria: crash frequency/density, crash rate, relative severity index, equivalent property damage only rate, percent truck traffic and rate of return. Typical projects include signalization, turn lanes, pavement markings, traffic signs, traffic lights, guardrails impact attenuators, concrete barrier end treatments and break away utility poles.

## Safe Routes to School

The SRTS program provides funding to help develop and implement projects and activities that enable and encourage children to walk or bike to school. This program is funded at $4 million annually for projects in five categories: Engineering, Encouragement, Education, Enforcement and Evaluation. Funds are available for infrastructure projects within two miles of schools serving K-8 students. ODOT will reimburse up to 100 percent of eligible costs for all phases, including preliminary engineering, detailed design, right-of-way, construction and construction engineering. Project limit: $400,000. Non-infrastructure activities such as education, encouragement, enforcement or evaluation. Non-infrastructure funding may be requested for help with developing plans. ODOT will reimburse up to 100 percent of eligible costs for items such as training and materials, program supplies, small safety and education incentives, and public awareness campaigns. Project limit: $60,000.

## Urban Paving Program

This program provides funds for eligible surface treatment and resurfacing projects on state and U.S. routes within municipal corporations. The program is funded on an 80/20 basis with local governments providing the 20 percent match for construction costs.

## State Capital Improvements Program

The State Capital Improvements Program (SCIP) provides low-interest loans and grants for infrastructure facilities. Eligible projects include improvements to roads, bridges, culverts, water supply systems, wastewater systems, storm water collection systems and solid waste disposal facilities. Funding is provided from the issuance of up to $120 million in bond sales annually.

## Local Transportation Improvements Program

The Local Transportation Improvements Program (LTIP) was created by the legislature in 1989. It provides an additional $60 million in gasoline tax receipts statewide each year. The program provides grants for local roads and bridge projects, which must have useful lives of at least seven years.

Both SCIP and LTIP funds are distributed for local government capital projects throughout Ohio on a competitive and population basis among 19 districts established by the Ohio Public Works Commission. Hamilton County is a district by itself (District 2). Butler, Clermont and Warren counties are in a district that includes Clinton County (District 10). Funding estimates from these two programs are based on the assumption that they will be renewed when they expire.

Through the two programs, the Ohio Public Works Commission provides grants, loans and financing for local debt support and credit enhancement. Eligible projects include improvements to roads, bridges, culverts, water supply systems, wastewater systems, storm water collection systems and solid waste disposal facilities.

## Clermont County TID

Established in June 2006, the CCTID's primary function is to take the lead in working between local jurisdictional partners and other county, state and federal agencies to identify, develop and secure funding for transportation improvement projects that support local and regional economic development strategies. As of Feb. 18, 2020, the TID had completed 45 projects, with 11 in the design stage and three under construction.

## Butler County TID

The TID, established in 1993 by the Butler County Board of County Commissioners, initially included the townships of Liberty, West Chester and Fairfield, as well as the cities of Hamilton and Fairfield. The TID Board and governing partners saw the need to reach other areas of the county and have added members from elsewhere in the County and undertaken projects beyond the initial territory.

Since its inception, the TID has worked on 16 major construction projects in 30 separate phases, resulting in more than $338 million of infrastructure-related improvements. The economic value of projects like State Route 129 Extension from Hamilton to Interstate 75, Union Centre Interchange & Boulevard, Liberty Interchange and State Route 747 is well into the billions of dollars returned to the area.

## Hamilton County TID

The Hamilton County Transportation Improvement District (HCTID) is a governmental entity appointed by the Hamilton County Board of County Commissioners. HCTID seeks to identify, evaluate and advance transportation projects throughout the county.

## Warren County TID

The Warren County Transportation District (WCTID) is a governmental entity appointed by the Warren County Board of County Commissioners. WCTID possesses general powers to operate and fund highway-related projects, whose purpose is to improve the transportation system in Warren County.

## ODNR Clean Ohio Trails Fund

Ohio local governments, park and joint recreation districts, conservancy districts, soil and water conservation districts, and non-profit organizations are eligible. The Clean Ohio Trails Fund

works to improve outdoor recreational opportunities for Ohioans by funding trails for outdoor pursuits of all kinds. Up to 75 percent matching State of Ohio funds are reimbursed under Clean Ohio Trails Fund. All projects must be completed within 15 months from the date that they are signed into contract. Eligible projects include: Land acquisition for a trail, trail development, trailhead facilities, engineering and design.

## Kentucky State and Local Funding Sources

In Kentucky, funds for both the State Projects and Rural Secondary Programs are derived from gasoline tax receipts, and are expended under the direction of the Department of Highways. These funds may be used for the construction, reconstruction, and maintenance of state and county roads and bridges.

Another source of state funds is from Unspecified Programs, which encompass all the state revenue that Kentucky allocates to the OKI counties that do not fall into any of the established state programs. These allocations usually finance 100 percent of these projects.

## Indiana State and Local Funding Sources

### State of Indiana Public Mass Transportation Fund

This is a fund authorized by the legislature to receive revenue from the State's General Fund. These funds are allocated on a calendar year basis using a performance-based formula to eligible municipal corporations. In 2020, INDOT will allocate $44.1 million in PMTF to 64 of the state's transit systems.

### Electric Rail Service Fund

The Electric Rail Service Fund (ERSF) is a special state fund generated from property tax on a railroad company's distributable property, and that provides service with a commuter transportation district. Currently, all funds go to the Northern Indiana Commuter Transportation District (NICTD), the only entity eligible for these funds at this time. Currently INDOT allocates all ERSF funds to NICTD.

### Commuter Rail Service Fund- Sales Tax

The Commuter Rail Service Fund (CRSF) is distributed to commuter transportation districts to be used for maintenance, improvement and operations of commuter rail service. Currently INDOT allocates all CRSF funds to NICTD.

### Commuter Rail Service Fund – Situs Tax

Collections from the indefinite-situs tax on distributable property of railroad car companies also contribute to the Commuter Rail Service Fund. These funds must be used for debt financing for long-term capital needs. Currently, INDOT allocates all CRSF- Situs funds to NICTD, the only entity eligible for these funds at this time.

## Innovative Finance

Innovative finance refers to a series of administrative and legislative initiatives that in recent years have removed barriers and added flexibility to federal participation in transportation finance. Policy makers recognized they could accelerate surface transportation project development and expand the base of available resources by removing barriers to private investment. This brings the time value of money into federal program decision making. Encouraging the use of new revenue streams, particularly to retire debt obligations and reducing financing and related costs, frees up savings for transportation system investment. These financing initiatives and techniques, which are commonly used in the private sector, are relatively new to federal aid transportation funding and are thus frequently referred to collectively as innovative finance.

Innovative finance is broadly defined as a combination of special funding initiatives. In the transportation industry, the term innovative finance has become synonymous with techniques that are specifically designed to supplement the traditional methods used to finance highways. The United States Department of Transportation's (USDOT) innovative finance initiatives are intended to augment -- rather than replace -- traditional financing techniques. The current status of these programs is described in more detail below.

## Credit Assistance

Two of the most significant federal credit assistance programs introduced in recent years are the Transportation Infrastructure and Finance Innovation Act (TIFIA) and the State Infrastructure Bank (SIB) programs.

- **Transportation Infrastructure and Finance Innovation Act**
  TIFIA was passed as part of TEA-21 and authorized the USDOT to establish a new credit program by offering eligible applicants the opportunity to compete for direct loans, loan guarantees, and lines of credit for up to one-third of the cost of large infrastructure construction projects of national significance. The project must have a dedicated revenue source pledged to secure both the TIFIA and senior debt financing. Major requirements include a capital cost of at least: $10 million for Transit-Oriented Development, Local, and Rural Projects, $15 million for Intelligent Transportation System Projects, $50 million for all other eligible Surface Transportation Projects TIFIA projects include highways and bridges, ITS projects, intermodal connectors, transit vehicles and facilities, intercity buses and facilities, freight transfer facilities, bike/ped infrastructure networks, transit-oriented development, rural infrastructure, passenger rail vehicles and facilities, surface transportation elements of port projects.
- **State Infrastructure Banks**
  State Infrastructure Banks (SIB) are revolving infrastructure investment funds for surface transportation that are established and administered by states. A SIB, much like a private bank, can offer a range of loans and credit assistance enhancement products to public and private sponsors of Title 23 highway construction projects or Title 49 transit

capital projects. The requirements of Titles 23 and 49 apply to SIB repayments from federal and non-federal sources. All repayments are considered to be federal funds.

SIBs give states the capacity to make more efficient use of transportation funds and significantly leverage federal resources by attracting non-federal public and private investment. Alternatively, SIB capital can be used as collateral to borrow in the bond market or to establish a guaranteed reserve fund. Loan demand, timing of needs and debt financing considerations are factors to be weighed by states in evaluating a leveraged SIB approach.

## Tax Incremental Financing

Tax Incremental Financing (TIF) is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project such as a road, school or hazardous waste cleanup is carried out, there is an increase in the value of surrounding real estate and often new investment, such as construction of new or rehabilitated buildings. This increased site value and investment creates more taxable property, which increases tax revenues. The increased tax revenues are the tax increment. TIF dedicates that increased revenue to finance debt issued to pay for the project. TIF is designed to channel funding toward improvements in distressed or underdeveloped areas where development would not otherwise occur. TIF creates funding for public projects that may otherwise be unaffordable to localities.

## Residential Improvement District

A Residential Improvement District (RID) is another name for an incentive district TIF. They work the same way as a standard TIF. Property within the incentive district is exempt from regular property taxes. The exempt property does not pay property taxes rather they make Payments In Lieu of Taxes (PILOT). These PILOTs are the same amount as property taxes but they do not get distributed the same way as property taxes. The Ohio authorizing legislation is ORC 5709.73(C).

## Debt Financing and Cash Flow Management Tools

Because of their complexity, cost and lengthy design and construction periods, transportation projects are often financed by issuing bonds. Repayment of the bonds over several years has traditionally been covered by sources such as state and local taxes or revenue generated from highway user fees referred to as Grant Anticipation Notes (GAN), backed by anticipated grant moneys. Grant Anticipation Revenue Vehicles (GARVEE) is a particular form of GAN being used for transportation projects.

## Garvee Bonds

In the broadest sense, a GARVEE is a type of anticipation vehicle, which are securities (debt instruments) issued when moneys are anticipated from a specific source to advance the upfront funding of a particular need. In the case of transportation finance the anticipation vehicles' revenue source is expected federal-aid grants.

Specific to highways, a GARVEE is used as a term for a debt instrument that has a pledge of future Title 23 federal-aid funding. The issuer may be a state, political subdivision or a public authority.

GARVEE enable a state to accelerate construction timelines and spread the cost of a transportation facility over its useful life rather than just the construction period. The use of GARVEEs expands access to capital markets as an alternative or in addition to potential general obligation or revenue bonding capabilities. The upfront monetization benefit of these techniques needs to be weighed against consuming a portion of future years' receivables to pay debt service. This approach is appropriate for large, long-lived, non-revenue generating assets.

## Advance Construction

The use of advance construction and partial conversion of advance construction, facilitates state issuances of GARVEEs. GARVEEs are used in conjunction with advance construction to enable using federal-aid funds for future debt service payments.

## Public Private Partnerships

A public-private partnership (P3) is a broad term that collectively refers to contractual agreements formed between public and private sector partners, where the private sector partner steps outside of its traditional role and becomes more active in making decisions as to how a project will be completed. P3s would allow for working with the private sector in new and innovative ways to develop, finance, maintain or operate a transportation facility. One of the strengths of a P3 is the number of ways to fund a project as compared to traditional methods through state gas tax and federal dollars. FHWA supports project funding using P3s. P3s include availability payments, tolling, and Private Activity Bonds.

- **Availability Payment**
  Availability Payments (APs) may be the best method for funding a large-scale, long-term transportation project worth hundreds of millions or over $1 billion in cost. A private firm pays the upfront cost of the entire project in exchange for annual payments from the state department of transportation (DOT) over a specified period of time. The private entity does not use tolling or any other user-based fee with AP. The AP financing allows for the delivery of a large-scale project much sooner than the traditional financing mechanism.
- **Private Activity Bonds**
  Private Activity Bonds (PAB) bring the benefit of tax-exempt bond financing to the transportation industry. PAB's provide private developers and operators with access to tax-exempt interest rates which lowers the cost of capital. The result of increasing the involvement of private investors in highway projects generates new sources of money, ideas and efficiency.

## Regional Infrastructure Improvement Zones

Regional Infrastructure Improvement Zones (RIIZs), introduced in federal legislation in the 112th Congress (H.R. 3780), are an innovative infrastructure financing solution. RIIZs change

the federal tax code to allow private corporations or individuals to contribute tax-deductible dollars to lower local costs associated with construction and maintenance of public infrastructure, even if the project benefits the private entity. The local government project administrator reimburses the Federal General Revenue Fund 20 percent of the contributed funds, to help offset the deduction. Jurisdictions benefit because more good projects are built faster and cheaper. The private sector benefits because economically powerful projects, helpful to their operations, are built. The impact on the federal budget is small, if not positive. RIIZs attract private-sector driven infrastructure investment that unleashes federal and state funds for projects that the market place deems most economically powerful.

## Revenue (Funding) and Cost Expectations

The primary source of public funding will be from federal sources. Fixing America's Surface Transportation Act (FAST) reauthorizes federal highway, transit, safety and rail programs for federal fiscal years 2016 through 2020. It provides modest increases over previous bills.

Estimated funding for transportation improvements for the OKI region is based on data from federal, state and local sources. Future funding levels expected for the planning period covering 2020 through 2050 are estimated based on past trends and through consultation with the Ohio Department of Transportation (ODOT), the Kentucky Transportation Cabinet (KYTC), the Indiana Department of Transportation (INDOT) and FHWA. First, the base annual revenue is derived (averaged) from actual expenditure data.

All three transportation agencies provided data for OKI's use in deriving estimates for revenue. ODOT provided data for all projects for the Ohio portion of region covering the period of FY 2008 through 2019. KYTC provided historical information on federal and state expenditures for highway projects statewide for the years 1993 through 2017. INDOT provided data from Dearborn County over the period 2009 through 2019. Each state provided sufficient detail to identify the primary project type. OKI collapsed the data into major categories of new roadway capacity, roadway maintenance, transportation system management and operations (TSMO), non-highway, transit capital, and transit operating and derived an estimate of the annual base year state and federal funding stream. To complete the base year funding picture, OKI estimated local highway and transit funding using OKI Transportation Improvement Program (TIP) information because it was not fully included in the DOT data sets.

To estimate the total revenue amount available from all sources over the planning period, it is assumed that revenue grows at 2 percent per year. This figure is based on information received from state DOT's. Finally, an adjustment is made to account for other federal programs such as BUILD and INFRA. The region has history of receiving discretionary INFRA funds ($120.7 million in NKY). Conservative amounts of $200 million to Ohio, $100 million to Kentucky, $20 million to Indiana are added to total plan revenue. Revenues from tolls is not included but this could change as conditions warrant.

The relative proportion for expenditures, such as the proportion of operations and maintenance (O&M) funds versus capital, are assumed to remain stable through the planning period. The total revenue for the planning period (2020 to 2050) is equivalent to the future value of a series of annual payments at the growth rate stated.

An estimated $18.89 billion ($11.90 billion in Ohio, $6.59 billion in Kentucky, and $400 million in Indiana) is expected to be available over the 30 year planning period of 2020 to 2050. These revenues are a mix of formula and non-formula funds. Formula based funds are those that OKI or other local governments receive on an ongoing, annual basis and are therefore, repetitive and predictable. It is assumed that the non-formula based expenditures will continue at about the same levels plus some growth for inflation.

Once the revenues were identified for each state, the dollars available for new projects were determined by subtracting the funds equal to four years of base annual revenues to approximate the level required for currently programmed TIP projects and O&M and subtracting the funds attributable to transit formula funds. Figures 1 and 2 present the funds that can reasonably be expected to be available. Figure 1 is the regional outlook and Figure 2 is broken down by state.

| **Figure 1 - Regional Summary of Available Resources ($B)** | |
|---|---|
| All Revenue | $18.89 |
| TIP | $1.27 |
| Transit O&M | $2.34 |
| Highway O&M | $5.87 |
| Available for Multimodal Discretionary Projects | $9.40 |

| **Figure 2 - OKI 2050 Metropolitan Transportation Plan Estimated Revenues** | | |
|---|---|---|
| **Ohio** | Annual Amount | Available for Plan |
| Roadway Capacity | $99,703,720 | $3,826,894,041 |
| Roadway Maintenance | $122,630,248 | $4,641,050,430 |
| TSMO | $3,919,611 | $45,048,651 |
| Non- roadway | $7,453,600 | $252,669,519 |
| Transit Capital | $23,023,519 | $800,221,949 |
| Transit Operating | $45,149,085 | $1,569,253,990 |
| Total | $301,879,783 | $11,135,138,579 |
| Discretionary Available | | $4,924,834,160 |

| Kentucky | Annual Amount | Available for Plan |
|---|---|---|
| Roadway Capacity | $62,677,662 | $2,446,712,967 |
| Roadway Maintenance | $30,312,470 | $1,024,723,209 |
| TSMO | $41,785,108 | $1,554,843,675 |
| Non- roadway | $3,454,670 | $123,527,660 |
| Transit Capital | $6,964,200 | $242,052,733 |
| Transit Operating | $22,240,443 | $773,684,797 |
| Total | $167,434,553 | $6,165,545,040 |
| Discretionary Available | | $4,367,137,034 |

| Indiana | Annual Amount | Available for Plan |
|---|---|---|
| Roadway Capacity | $1,182,524 | $65,830,745 |
| Roadway Maintenance | $7,686,405 | $206,986,532 |
| TSMO | $788,349 | $34,260,787 |
| Non- roadway | $197,087 | $12,398,458 |
| Transit Capital | $0 | $0 |
| Transit Operating | $0 | $0 |
| Total | $9,854,366 | $319,476,521 |
| Discretionary Available | | $112,489,990 |

| | |
|---|---|
| Total Regional Discretionary | $9,404,461,184 |
| Total Plan (after funding TIP) | $17,620,160,140 |

## Assumptions on Revenue Forecasts

Revenues expected to be reasonably available for projects in the region are primarily based on federal and state sources. To estimate annual rate of growth, OKI relies on approaches from the collective states in which OKI operates, as well as analyzing trends from federal transportation bills. The annualized estimated revenue growth is assumed to be 2 percent per year for all three states.

Federal funding has remained steady during the multiple extensions of MAP-21. FY12 and FY13 funding increased about 1% year over year and fiscal years 2014, 2015 and 2016 remained flat. The four year cycle for metropolitan plan updates will require these assumptions to be revisited on a consistent and regular basis. The FAST Act has an average annual growth rate of 2.9%.

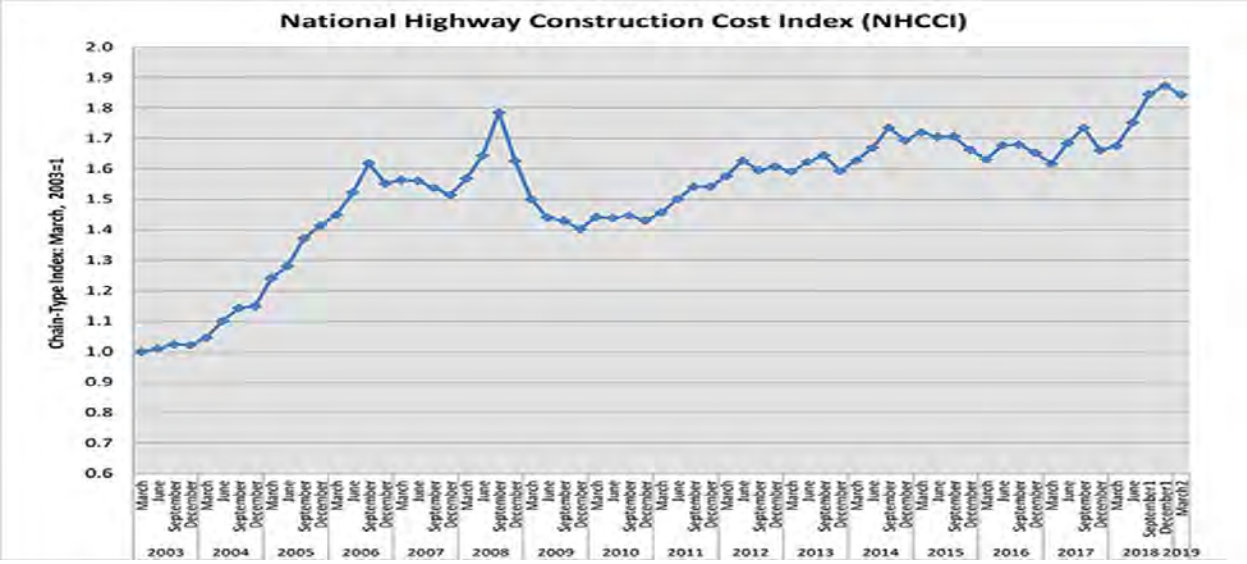
## Assumptions on Cost Estimation

- **Year of Expenditure Cost**
  The FAST Act requires that this plan's fiscal constraint demonstration include estimates of project costs in terms of dollars for the year of expenditure (YOE). In other words, a project that is built in a future year would include inflation in the cost estimate. For example, 2035 projects would have the cost in terms of 2035 dollars, 2050 projects would have the cost in terms of 2050 dollars. The YOE is assumed to be the mid-point of the construction period. Year of expenditure cost estimation requires a current or base year cost estimate, the implementation date (year) of the project and an inflation factor for the project to reflect the cost in terms of the implementation year.
- **Base Year Cost**
  Base year project cost (BY) is developed in the documented planning process that generated the concept of the project. Some projects not originating in a documented study are estimated by staff as described below. Refer to Estimation of Individual Project Costs section.
- **Year of Expenditure**
  The year in which the project is constructed is estimated by staff. Staff considered information from various corridor studies, perceived complexity of the construction process, environmental challenges, availability of right of way and revenue flow to assign projects into implementation time frames. The time frames are consistent with air quality conformity analysis years for the region of 2020, 2030, 2040 and 2050.
- **Inflation Factor**
  The OKI Plan is required to account for the time value of money (inflation). Therefore, project costs are inflated using generalized figures derived from industry cost information (material, labor, etc.) and guidance from the states' transportation agencies. This practice is known as developing estimated project costs in terms of their YOE. The YOE is estimated by OKI staff as the midpoint of the project's year of construction. The year of expenditure cost is the product of the base year cost and an inflation factor. The factor is dependent on the inflation rate and the number of years between the BY and the YOE. OKI has estimated a yearly inflation rate based on information from several sources. For this plan update the inflation rate is 2.5 percent per year.

  This rate is based on the recent trends in project construction cost moderation. Figure 3 demonstrates that highway construction costs are trending up. A review of cost growth trend (inflation) assumptions used in metropolitan areas across Ohio and Kentucky for metropolitan plans, indicates that 2.5 percent is in the range of what other plans are using. For example, KIPDA 5 percent, the Lexington MPO 1 percent, MVRPC 2.5 percent, MORPC 3 percent through 2030, 2.0 percent from 2030 to 2050, NOACA 3 percent through 2030, 2.0 percent from 2030 to 2050. TMACOG 1.0 percent.

  The formula for converting base year cost estimates to year of expenditure cost estimates is:

  YOE Cost = BY Cost Estimate x Inflation Factor
  YOE Cost = BY Cost Estimate x $[1+ (i / 100)]^{(YOE - BY)}$
  (BY = base year)



1/ Source: Federal Highway Administration, Office of Highway Policy Information, "National Highway Construction Cost Index (NHCCI)"

## Estimation of Individual Project Costs

OKI will use the cost estimate from published planning studies or those provided by the agency that submitted the project. In the absence of a cost estimate from a primary source, an estimate is made using either a Kentucky Project Information Form (PIF) (if available for a Kentucky project) or the default value described below using secondary literature research. See Figure 4 below.

- **Roadway**

  Roadway project cost estimates include construction and right of way for projects which introduce a new facility on a new alignment and/or add additional through lanes. Default data is estimated from FHWA Highway Economic Requirements System (HERS) 2010 data and more current data from other state DOT's and the American Road and Transportation Builders Association (ARTBA). An inflation rate of 2.5 percent per year is applied to reflect costs in 2020 dollars.

Figure 4 road

| New Roads | Per Mile Cost | |
|---|---|---|
| Road Type | Urban | Rural |
| 6 lane freeway | $ 12,693,700 | N/A |
| 4 lane freeway | $ 9,713,400 | $ 7,450,700 |
| 5 lane | $ 7,285,100 | $ 5,519,000 |
| 4 lane divided | $ 7,174,700 | $ 5,767,400 |
| 4 lane | $ 4,967,100 | $ 3,228,600 |
| 2 lane | $ 2,483,600 | $ 2,207,600 |
| | | |
| | | |
| Bridges | Cost Per Sq ft. | |
| New bridge | 143 | |
| widen existing | 127 | old deck replaced |
| widen existing | 63 | old deck retained |
| | | |
| Widen Existing Roadway | Per Mile Cost | |
| Road Type | Urban | Rural |
| 2 lanes to 3 lanes | $ 3,311,400 | $ 2,483,600 |
| 2 lanes to 4 lanes | $ 4,911,900 | $ 3,725,300 |
| 2 lanes to 5 lanes | $ 5,215,500 | $ 3,863,300 |
| 3 lanes to 5 lanes | $ 5,160,300 | $ 3,311,400 |
| 4 lanes to 5 lanes | $ 3,477,000 | N/A |
| 3R widening (2 lanes) | $ 1,766,100 | $ 1,241,800 |
| | | |
| 2016 cost inflated to 2020 using 2.5% per year (1.1038) | | |

- **Interchange on Interstate System**
  Interchange cost estimates are based on recently completed interchanges in or near the OKI region and recent cost estimates from local area studies. OKI will use $75 million for urban interchanges, $50 million for suburban and $30 million for rural as the default interchange cost on interstate facilities.
- **Transit**
  Cost estimates in Figure 5 were used estimating transit project costs based on input provided by the Transit Authority of Northern Kentucky (TANK) and the Southwest Ohio Regional Transit Authority (SORTA).

| **Figure 5 - Transit** | |
|---|---|
| **2050 Plan Transit Facilities (in 2020 dollars)** | |
| Basic P&R | $ 850,000 |
| P&R with amenities | $ 2,200,000 |
| Mini hub | $ 3,500,000 |
| Hub | $ 6,500,000 |

- **Bike and Pedestrian**
  Cost estimates in Figure 6 are for bicycle facility and sidewalk construction only and do not include design, engineering, property acquisition, utility relocation or operation and maintenance. Many pedestrian projects will be incorporated and included as elements of roadway improvement projects but as necessary, the costs for sidewalks will be estimated at $340,000 per mile for a 5 foot walk.

| **Figure 6 - 2020 OKI Bicycle/Pedestrian Facility Construction Cost Estimates** | | |
|---|---|---|
| **Facility** | **Component cost / mile** | **Estimated cost / mile** |
| **On-Road** [viii] | | |
| Bike lanes (striping) | Center Line - $5,300<br>Bike lane symbols - $15,600<br>Shared lane markings - $2,400 | $23,300 |
| Wide curb lanes (14+ ft.) | Added pavement | $220,000 |
| **Off-Road** | | |
| Off road shared use path [ix] | 10 ft. paved | $530,000 |
| Sidewalk – 5 ft. concrete [x] | Both sides (10 ft.) | $680,000 |

- **Transportation System Management & Operations (TSMO)**
  Although, each TSMO project is very unique, OKI has been able to take advantage of recent work by ODOT in Columbus, Ohio. Default costs for freeway active traffic demand management (ATDM) is estimated to be $1.53 million per mile. This cost includes electronic monitoring, overhead information signs for hard shoulder running and variable speed limits. Non freeway TSMO improvements rely heavily on traffic signal improvement and adaptability to optimize traffic flow. Project costs are heavily dependent on the number and type of signals, controller type, detection type, etc. Contact OKI staff for more information on default cost estimates including adaptive traffic signal systems, dedicated short range communications (DSRC), 5G, and fiber optic, etc.

## Recommended Plan Cost Distribution

The individual recommended projects have been identified elsewhere. A summary and the associated costs is provided below in Figure 7. These figures do not include the approximate two billion dollars programmed in the current OKI TIP.

| Figure 7 Plan Expenditures | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Ohio** | **# of projects** | **Cost $M** | | **Kentucky** | **# of projects** | **Cost $M** | | **Indiana** | **# of projects** | **Cost $M** |
| Freight | 2 | 35.93 | | Bike/ped | 8 | 25.4 | | Bike/ped | 5 | 12.835 |
| Bike/ped | 15 | 158.02 | | TSMO | 4 | 49.1 | | TSMO | 2 | 1.105 |
| TSMO | 5 | 190.44 | | Highway | 56 | 3957.4 | | Highway | 10 | 83.441 |
| Highway | 84 | 3171.77 | | Transit | 3 | 93.4 | | Transit | 1 | 0.262 |
| Transit | 10 | 724.67 | | | | 4125.3 | | | | 97.643 |
| | | 4280.84 | | | | | | | | |

## Major Projects

The region has one project that is expected to be a major project and that is the replacement and rehabilitation of the Brent Spence Bridge (BSB). A major project is defined by the Federal Highway Administration as one expected to cost more than $500 million. The BSB is considered the most important project for the region and will be constructed.

Project development continues. A preferred alternative has been identified and will continue through the public evaluation process. A cost estimate review was completed in March 2012. A Finding of No Significant Impact (FONSI) was signed by the Ohio Division of FHWA on Aug. 9, 2012. A financial plan needs to be completed before advancing forward.

The most recent cost estimate for BSB is $2.63 billion and these costs are distributed between Kentucky and Ohio per the current bi-state agreement. To date, about $89 million has been invested from sources at the state and federal level. The total remaining cost is estimated at $2.289 billion with the KYTC share at $1.019 billion and Ohio share at $1.165 billion. ODOT is carrying that amount in their ELLIS financial software distributed over FY21 through FY23. These funds are listed in the OKI TIP. The BSB is included in this fiscally constrained plan update. The outcome of the financial plan for the bridge project may warrant future adjustments to the fiscal constraint analysis.

According to 23 CFR 450.322(f)(10): "The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified." Though construction funding has not been secured for this project, the regional effort to secure earmark funding has been unwavering. The significance of the Brent Spence Bridge project corridor is such that the likelihood of a successful procurement of the needed funding is strongly anticipated, due to the project's impact on regional, national and international goods and passenger movement.

## Fiscal Constraint

Federal legislation requires the OKI 2050 Regional Transportation Plan to demonstrate that its recommendations are fiscally constrained, that is, financial resources can be reasonably expected to be available to cover the costs of the plan. As outlined above in the Funding Revenue and Cost Expectations section, about $18.89 billion is estimated to be available for all transportation expenditures in the OKI region over the life of the plan. The estimated cost of

the recommendations of this plan is an estimated $17.94 billion. Because the total value or cost of recommended projects in this plan (Figure 8) is less than the discretionary resources reasonably expected to be available, this plan demonstrates financial constraint.

**Figure 8 Fiscal Constraint**

| | | |
|---|---|---|
| Ohio | Total Plan Budget | $11,899,869,507 |
| | TIP | $764,730,928 |
| | Highway O&M | $4,641,050,430 |
| | Transit Operating | $1,569,253,990 |
| | Discretionary Projects | $4,280,860,000 |
| | Balance | $643,974,160 |
| Kentucky | Total Plan Budget | $6,589,213,705 |
| | TIP | $423,668,665 |
| | Highway O&M | $1,024,723,209 |
| | Transit Operating | $773,684,797 |
| | Discretionary Projects | $4,125,230,000 |
| | Balance | $241,907,034 |
| Indiana | Total Plan Budget | $401,922,876 |
| | TIP | $82,446,355 |
| | Highway O&M | $206,986,532 |
| | Transit Operating | $0 |
| | Discretionary Projects | $97,642,000 |
| | Balance | $14,847,990 |
| Region | Total Plan Budget | $18,891,006,088 |
| | TIP | $1,270,845,948 |
| | Highway O&M | $5,872,760,170 |
| | Transit Operating | $2,342,938,787 |
| | Discretionary Projects | $8,503,732,000 |
| | Balance | $900,729,184 |
| | Total Plan | $17,990,276,905 |