



Oasis Rail Transit

Funding Analysis and Strategy

HAM/CLE – Oasis Rail Corridor
PID No. 86436

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February 8, 2016

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1. Introduction

The purpose of this technical memorandum is to provide a preliminary funding analysis to support the Ohio Department of Transportation (ODOT) and its project partners in evaluating rail transit alternatives being considered as part of The Eastern Corridor Program. The objective of The Eastern Corridor Program is to enhance east-west mobility between Downtown Cincinnati and the communities in eastern Hamilton County and western Clermont County through a series of multi-modal improvements. These enhancements may reflect roadway network improvements, new rail transit options, and expanded bus service, bikeways and walking paths. The rail transit component of The Eastern Corridor Program is known as the Oasis Rail Transit Project.

This technical memorandum represents the first step in the financial planning process for major transit capital improvement projects proceeding through the Federal Transit Administration (FTA) implementation process. Reflecting this initial step, the purpose of this memorandum is to provide:

- An overview of how similar passenger rail projects have recently been funded throughout the United States;
- A brief description of potential funding sources;
- An overview of conceptual financial strategies; and
- A summary of the next steps in the financial planning process.

As the Oasis Rail Transit Project moves through the FTA implementation process, the financial strategy to build and operate the Project will evolve as the project definition and costs (capital and operating) are refined and funding sources and levels change. As a result, the key objectives at this stage of the FTA implementation process are to develop conceptual but realistic funding strategies and to start or continue discussions with potential federal, State and local funding partners. Additionally, and from a financial perspective, by the end of this phase of the Oasis Rail Transit Project, a key decision to be made is:

- Are one or more of the conceptual financial strategies realistic and should one or more of them be further refined as the project planning and engineering moves forward? Or
- Do the results of the conceptual funding strategies represent a fatal flaw for the project?

Following this introduction, the remainder of the technical memorandum covers the following:

- Section 2 provides a summary description and cost estimates for the rail transit alternative currently under consideration;
- Section 3 provides an overview of financial strategies used to fund similar rail transit projects across the country;

- Section 4 provides a description of potential capital and operating funding sources and conceptual financial strategies to construct and operate the Oasis Rail Transit Project; and
- Section 5 provides a description of the next steps in the financial planning process.

2. Oasis Rail Transit Project

Several alternative configurations of the project were developed, as documented in the OASIS Rail Conceptual Alternative Solution Report, originally completed in November, 2013 and most recently updated in December, 2015. This analysis identified four segments of the OASIS line covering the 17.2 mile distance from the Riverfront Transit Center (RTC) to Milford including a conceptual operating plan. The analysis considered both shared use of existing Norfolk Southern (NS) tracks, and construction of parallel tracks within the NS right-of-way. While the FRA alternatively-compliant vehicle, represented by the Stadler GTW 2/8, is the current vehicle preference identified by the Partners, the analysis also examined the cost and ridership impacts associated with the use of an FRA Compliant DMU. Two alternative scenarios were evaluated in this option, as summarized below:

- **Alternative A1:** Single tracking from RTC to Milford, including stations at both Newtown and Ancor, and use of the Stadler alternatively compliant vehicle. Shared track with Norfolk Southern (NS) from vicinity of Fairfax/Red Bank to Milford Station.
- **Alternative A2:** Single tracking from RTC to Milford, including a single station at Newcor (combining the Newtown and Ancor stations), and use of the Federal Railroad Administration (FRA) Compliant Vehicle. Shared track with Norfolk Southern (NS) from vicinity of Fairfax/Red Bank to Milford Station.

Additional details on the definition of each alternatives and differences in vehicle technologies can be found in the *OASIS Rail Conceptual Alternative Solution Report*.

2.1. Order of Magnitude Capital Cost Estimate

Table 2 summarizes the order of magnitude capital costs estimates for the two Alternatives in both current year dollars (2015 dollars) and year of expenditure (YOE) dollars. The YOE dollar estimate reflects the annual cost growth due to the impact of time (implementation schedule) and inflation on capital costs. Table 2 summarizes the annual level of capital costs that would be completed over the 2016 to 2020 implementation period and ODOT's current annual inflation factors for this period. Additionally, costs in Table 2 reflect FTA's Standard Cost Categories which is the format required for projects pursuing federal discretionary grants.

As shown in Table 2, the capital cost for Alternative A2, \$278.5 million (2015 \$) / \$327 million (YOE \$) is slightly less than Alternative 1, \$289.8 million (2015 \$) / \$340 million (YOE \$). The primary differences between the two alternatives is that although Alternative A2 has higher station related costs (approximately \$5.0 million (2015 \$)), the cost for FRA Compliant Vehicles is \$16 million (2015 \$) less than the Stadler vehicle proposed for Alternative A1.

Table 1: Conversion to YOE Dollars Assumptions

Year	Level of Capital Costs Completed	Annual Inflation Factors
2016	2%	5.0%
2017	3%	3.6%
2018	15%	4.0%
2019	50%	3.5%
2020	30%	3.5%

Table 2: Oasis Rail Transit Project: Order of Magnitude Capital Cost Estimates (2015 \$ and YOE \$ (for total only))

FTA Cost Category	Alternative A1	Alternative A2
Guideway and Track Elements	\$49.8	\$49.8
Stations	\$23.9	\$28.9
Maintenance Facility	\$20.2	\$20.2
Sitework and Special Conditions	\$8.9	\$8.9
Systems	\$20.3	\$20.3
Right of Way / RR Agreements	\$34.8	\$34.8
Vehicles	\$77.0	\$61.7
Professional Services	\$36.2	\$36.2
Unallocated Contingency	\$17.2	\$16.2
Finance Charges	\$1.5	\$1.5
Total (2015 \$)	\$289.8	\$278.5
Total (YOE \$)	\$340.0	\$327.0

Source: OASIS Rail Conceptual Alternative Solution Report, December 2015

2.2. Order of Magnitude Operating and Maintenance Cost Estimate

Table 3 summarizes the Oasis Rail Transit Project's conceptual operating plan which is targeted to commuters working in downtown Cincinnati. During the morning peak periods, six westbound trips would be provided from Milford to downtown Cincinnati between 6:00 am and 8:00 am. During the afternoon peak period, six eastbound trips would be provided from downtown Cincinnati to Milford between 4:30 pm and 6:30 pm. Additionally, two reverse commute trips would be provided during the morning and afternoon peak period. Midday service would be provided by three round trips to serve off-peak passengers.

An annual operating and maintenance cost estimate was developed based on annual revenue hours that would be provided based on the operating plan and a conceptual operating cost per hour. The conceptual cost per is based on evaluation of annual operating costs and annual revenue service hours provided by similar passenger rail systems across the country and reported to the National Transit Database. Conceptual annual operating costs for Alternative A1 are estimated at \$8.9 million (2015\$) / \$10.3 million (2021\$), while annual operating costs for Alternative A2 are estimated to be \$9.7 million (2015\$) / \$11.2 million (2021\$). For each alternative, the conversion to 2021 dollars (the first year of operations) reflects a 2.5 percent annual inflation rate which is based on a September 2015 Federal Reserve long term consumer price index (CPI) forecast of 2.0 percent per year, plus an additional 0.5 percent per year.

Additional details on the conceptual operating plan and development of annual operating and maintenance costs can be found in the *OASIS Rail Conceptual Alternative Solution Report*.

Table 3: Oasis Rail Project: Conceptual Operating Plan

Trainset	Westbound - Toward Cincinnati		Trainset	Eastbound - Toward Cincinnati	
	Depart from Milford	Arrive at RTC		Depart from RTC	Arrive at Milford
Morning Service			Morning Service		
1	6:00 AM	6:35 AM	1	6:45 AM	7:10 AM
2	6:30 AM	7:05 AM	2	7:15 AM	7:50 AM
3	7:00 AM	7:35 AM			
4	7:15 AM	7:55 AM			
1	7:30 AM	8:05 AM			
2	8:00 AM	8:35 AM			
Midday Service			Midday Service		
1	10:00 AM	10:35 AM	1	9:00 PM	9:35 PM
1	12:00 PM	12:35 PM	1	11:00 PM	11:35 PM
1	2:00 PM	2:35 PM	1	1:00 PM	1:35 PM
Afternoon / Evening Service			Afternoon / Evening Service		
1	5:15 PM	5:50 PM	1	4:30 PM	5:05 PM

2	5:45 PM	6:20 PM	2	5:00 PM	5:35 PM
			3	5:15 PM	5:50 PM
			4	5:30 PM	6:05 PM
			1	6:00 PM	6:35 PM
			2	6:30 PM	7:05 PM

3. Examples of Commuter Rail Financial Strategies

As background for the identification of potential capital funding sources for the Oasis Rail Transit Project, Table 4 provides a summary of the funding strategies used for nine recent commuter rail lines implemented across the country. As shown in the table, the majority of the new commuter rail lines utilized a variety of federal, state and local funding sources. The combination of sources includes the following, which are described in more detail in Section 4:

- Federal funding:** Five of the commuter rail lines were successful in obtaining Federal Transit Administration (FTA) New Starts funds under the Section 5309 Capital Investment Grant Program. The Capital Investment Grant program is the primary federal discretionary program for supporting locally planned, implemented, and operated transit "guideway" capital investments, including commuter rail projects. Projects applying for New Starts funds must undergo evaluation by the FTA throughout the project development process. Projects are evaluated according to a variety of criteria including mobility improvements, environmental benefits, cost-effectiveness, operating efficiencies, transit supportive land use, and local financial capacity.

As shown in the table, the share of New Starts funding for the five projects ranged from 25 percent to 80 percent. However, it should be noted that in today's current federal funding climate, the Front Runner North Project (Utah Transit Authority (UTA)) would likely no longer receive 80 percent funding from the New Starts program. Based on recent feedback from the FTA, project sponsors are encouraged to limit New Starts funding requests to a maximum 50 percent share of total capital costs.

In addition to the FTA New Starts program, two projects took advantage of Federal Highway Administration (FHWA) programs that are eligible to fund transit projects. As described in more detail in Section 4, the two programs, Congestion Mitigation and Air Quality Improvement (CMAQ) program and Surface Transportation Program (STP), could potentially provide funding to support specific elements of the Oasis Rail Transit Project.

- State funding:** Reflecting the regional importance of commuter rail service, four projects received funding support from their respective state governments. The State of New Mexico provided the largest share of total funding (93 percent), while Florida and Minnesota were primary funding partners as part of New Starts Grants applications providing 25 percent and 31 percent of total funding respectively.

- **Local funding:** The largest local funding sources were dedicated sales taxes and direct contributions from the general funds of local jurisdictions (counties and cities) served by a commuter rail line. Two lines were able to obtain a small amount of regional funding from their respective Metropolitan Planning Organizations (MPO). Two other lines were able to take advantage of unique circumstances. For the Front Runner North Line (UTA), the agency was able to leverage the value of previously purchased railroad right-of-way as local match for the FTA New Starts grant. UTA was able to use the right-of-way value as local match because the agency did not use federal funds to purchase the property. In Denton County (TX), funding for the A-Train included local dedicated sales tax revenue and an allocation of \$190 million to the transit agency from the payment the MPO received upon entering into a concessionaire's agreement for a long-term lease of a regional toll road facility to the private sector.

Table 4: Funding Strategies – Recently Implemented Commuter Rail Systems
(\$, in millions)

	Sun Rail (FL)	North Star (MN)	Front Runner North (UT)	Front Runner South (UT)	Music City Star (TN)	A- Train (TX)	MetroRail (TX)	Rail Runner (NM)	Sounder (WA)
Federal									
New Starts	\$179	\$157	\$489		\$24				\$100
FHWA Funds		\$5			\$8				
State	\$89	\$99			\$4			\$125	
Local									
Local Jurisdictions	\$89	\$51			\$3			\$10	
Dedicated Sales Tax			\$82	\$368		\$48	\$105		\$301
MPO Programmed Funds		\$6			\$2				
Right-of-Way Value			\$40						
Toll Road Concessionaire Payment						\$190			
Total	\$357	\$317	\$612	\$368	\$41	\$238	\$105	\$135	\$401

4. Conceptual Funding Sources and Strategies

This section provides an overview of potential funding sources for the Oasis Rail Transit Project and includes potential federal programs and State and local participation.

The description of federal programs reflects an initial review of the recently passed Fixing America's Surface Transportation (FAST) Act legislation. Signed into law on December 4, 2015, the FAST Act provides five-years of funding for surface transportation programs. As a result, the descriptions below may be further refined as more detailed analysis of the FAST Act is completed.

4.1. Potential Capital Funding Sources

4.1.1. FTA Capital Investment Grant Program

This program awards grants on a competitive basis for major capital investments in new and expanded rail, bus rapid transit (BRT), and ferry projects that are locally planned, implemented, and operated. The Capital Investment Grant program includes two categories for new fixed guideway projects: New Starts and Small Starts. Based on planning and cost estimates completed to date for the Oasis Rail Transit Project, if the decision is made to pursue an FTA Capital Investment Grant, it would most likely request funding through the New Starts category.

- **New Starts Category**

Projects with capital costs in excess of \$300 million and project sponsors requesting more than \$75 million in Capital Investment Grant funds. New Starts projects are evaluated and rated based on a set of defined justification criteria (mobility improvements, environmental benefits, cost effectiveness, economic development effects, and public transportation supportive land use policies) as well as local financial commitment criteria. The current FTA New Starts evaluation criteria tend to favor streetcar and Light Rail (LRT) projects that generate a large number of passenger trips. Commuter rail projects generally have a smaller number of daily trips that are considerably longer in length than Streetcar and LRT. Trip length has been a consideration in FTA criteria in the past, and it is important to note that FTA changes these criteria periodically.

- **Small Starts Category**

Projects with capital costs less than \$300 million and project sponsors requesting less than \$100 million in Capital Investment Grant funds. These projects are evaluated and rated on fewer project justification criteria and local financial commitment measures.

4.1.2. Potential Other Federal Programs

- **FTA Formula Funds**

Transit providers receive annual formula funds through the FTA Section 5307 Urbanized Area Formula Program and Section 5339 Bus and Bus Facilities Formula Grants. An eligible use under each formula program is vehicle acquisition/replacement as part of an agency's state of good repair program. One potential approach for using FTA formula funds to support implementation of the Oasis Rail Project would be for acquiring new vehicles. This could be accomplished without impacting the transit provider's existing vehicle replacement plan / state of good repair program. Typically implementation of fixed guideway service results in the reduction or elimination of existing local bus service within the corridor. As an illustrative example, assume implementation of the Oasis Rail Transit Project will result in the reduction of 10 buses from regional transit service. The FTA formula funds that would have been used to purchase 10 replacement buses for this local service could be transferred to acquire a portion of the costs for the Oasis Rail Transit Project vehicles.

- **FHWA Funds**

This includes FHWA funding sources that are eligible to be "flexed" (transferred) to the FTA to support implementation of transit projects. These funds are programmed by the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and would require adoption in the Long Range Transportation Plan (LRTP) and Transportation

Improvement Plan (TIP) to be used to fund a portion of the Oasis Rail Transit Project's capital costs. Flexible FHWA funding sources include:

- Congestion Mitigation and Air Quality (CMAQ) Improvement Program: These funds are available for transportation projects likely to contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution and congestion. Potential Oasis Rail Transit Project elements that could be eligible for CMAQ funding include: improved signalization intersection improvements, and implementing turning lanes; ITS improvements including real-time traffic, transit, and multimodal traveler information; and facilities serving electric or natural gas-fueled vehicles.

Historically ODOT has distributed CMAQ funds proportionally by population to the eight largest metropolitan planning organizations (MPOs)—including OKI--- to prioritize for and administer local/regional projects. A competitive process will now be used to distribute the approximately \$57 million annually available for all CMAQ-eligible transportation projects throughout the State. Also it is important to note that prior commitments for CMAQ funds programmed beyond 2017 will not necessarily be honored.

- Surface Transportation Program (STP): This program provides funding for projects that preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects. Potential Project elements that could be eligible for STP funds include: construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, or operational improvements for highways; capital costs for transit projects; corridor parking facilities; improvements at intersections with high accident rates or levels of congestion; and infrastructure-based ITS capital improvements. Unlike CMAQ fund, the STP program will continue to be allocated throughout the state through a formula process with local MPO prioritizing and administering funds.
- Transportation Alternatives Program (TAP): This competitive grant program could provide funding for non-motorized elements of the Oasis Rail Transit Project. Potential eligible expenses could include: planning, design, and construction of facilities for pedestrians and bicyclists.

- **USDOT TIGER Grants**

The Transportation Investment Generating Economic Recovery (TIGER) program was initially established as part of the American Recovery and Reinvestment Act of 2009 and has continued annually as a competitive grant program to support implementation of “shovel ready” infrastructure projects, including highways, bridges,

public transit, passenger and freight rail, port infrastructure, and intermodal facilities. Grants are made available for transportation projects that contribute to the long-term economic competitiveness of the nation, improve the condition of existing transportation facilities and systems, increase energy efficiency and reduce greenhouse gas emissions, improve the safety of U.S. transportation facilities, and/or enhance the quality of living and working environments of communities through increased transportation choices and connections. Since 2009, the USDOT has issued seven application cycles and in each case the level of funding requested by applicants far exceeded the available funding.

The majority of TIGER grants have been for transit or multimodal projects, with the typical maximum individual grant award each application cycle being approximately \$20 million. The limited number of successful street/highway projects incorporated innovative bicycle and pedestrian-friendly design elements in addition to capacity enhancements.

If the Project Partners were to pursue a future TIGER grant to support implementation of the Oasis Rail Transit Project and assuming continuation of the TIGER Program, the application would need to demonstrate specific elements that would meet requirements for independent utility.

4.1.3. Potential State Sources

On behalf of the State of Ohio, the ODOT administers over 35 transportation-related grant programs, some of which could have applicability to elements of the OASIS Rail Transit Project. Complete information on these programs for the 2014 year¹ is available in ODOT's "Program Resource Guide" available at its website:

<http://www.dot.state.oh.us/Divisions/Planning/LocalPrograms/Documents/ODOT%20Program%20Resource%20Guide.pdf>

Based on a review of the State grant programs, only a few are directly applicable to the OASIS Project and would likely provide limited funding. Most ODOT programs are related to highway and road-oriented improvements. There could be instances in which a roadway project was interrelated to OASIS, such as a bridge crossing, common roadbed embankment, or corridor planning activities, which would provide opportunities for State funding that would be supportive both of Oasis and a roadway project.

The following are the programs that are the most likely candidates to contribute funding during various phases of the OASIS Rail Transit Project. (The complete ODOT program list is included and commented on in Appendix A).

¹ No more recent updates have been located.

- **Transportation Review Advisory Council (TRAC)**

This is the major source of discretionary State funds for capital transportation projects with costs over \$12 million. OASIS would compete for TRAC funding against a wide array of state-wide projects (road, rail and transit). Presently, OASIS is listed under the TRAC Program as a “Tier 3” project “under development” with a potential commitment of \$5.5 million in future years but with NO commitments currently shown for the 2016 to 2019 planning period budget cycle currently under review. Future TRAC commitments could potentially be of some significance but are highly speculative at the present time. The program is also very competitive, with only \$33 million available statewide under the current round, with over \$600 million requested for projects².

- **Grants to Transportation Improvement Districts (TID)**

ODOT provides \$3.5 million per year in grants for projects submitted by the State’s TIDs on a competitive basis. There is an annual cap per TID of \$250,000/year or 10 percent of project costs, whichever is greater. Eligible expenses include: planning, design, Right-of-Way (ROW) acquisition and/or construction phases. OASIS might qualify for a series of grants over a number of years while the project is under development through submissions by both the Hamilton County and Clermont County TIDs.

- **Other ODOT Administered Programs**

ODOT administers a variety of specific transportation funding programs dealing with such items as bridge replacement, road safety issues/repairs, pedestrian/bicycle infrastructure, and rail oriented programs. The rail oriented programs are administered through the Ohio Rail Development Commission (ORDC), and include eligible expenses related to ROW acquisition, signaling, crossings, bridges, rehabilitation, etc.

Typically the programs’ grant award processes are conducted on a statewide, competitive basis with annual allocations for all projects ranging from \$1 million to \$100 million per program. In some cases, such as the large Highway Safety program, hundreds of projects may be competing for a share of these funds. It is reasonable to assume that funds for certain very specific elements of the OASIS project (e.g. a particular bridge or crossing improvement, signalization, station pedestrian/bike access features, etc.) might be successfully sought over the Project’s anticipated four to five year development period. But these other State programs should be viewed more as source of supplemental local funds used to help “top up” and “round off” an Oasis funding package, rather than serving as one of the core pillars of it. In other words, once some fundamental core funding sources have been identified for perhaps 80 percent or more of the local Oasis funding

² In the previous round \$78 million was available and \$550 million in applications received.

needs, then these types of programs can be examined and utilized to help fill in the remaining gap(s).

4.1.4. Potential Local/Regional Area Sources

Local area funding sources are defined as those that might be derived through station area development, private sector sources and local area governments (such as the cities, counties, TIDs, and OKI).

- **Value Capture at Station Areas**

Rail transit systems can result in higher property values around station areas through generation of location premiums and increased property taxes collected as a result of that, as well as added development. In some cases, owners find it in their long-term interest to agree in advance to contribute some of the increases to the sponsoring agency (via special assessment districts) to help assure the introduction of the infrastructure investment that brings about the added values. Typically this is captured through some form of special assessment district or joint development agreement. When the sponsoring agency owns developable property in the station area(s), the transit project may obtain a double benefit both through being allocated a portion of any value gains (through direct ownership), and as a result of ongoing tax increments following development.

The value and development increases typically occur within ¼ mile of station locations (with some benefits extending out to perhaps ½ mile radius) and are most pronounced in locales with strong real estate development markets (and demand). Other important determinants of value generation include extensive, well developed, high quality rail transit systems with frequent service and high and convenient interconnections with other lines and proximity to dense concentrations of population and economic activity.

In 2013, an analysis of the ultimate development potential around each of the station areas identified for the 17 mile OASIS line was completed.³ In Spring 2014, RCLCO completed a market analysis study of development trends in the Eastern Corridor and estimates of future absorption around the potential OASIS station locations. The analysis identified market driven absorption potential over the next twenty years by land use type (residential, commercial, retail) near the proposed stations, for cases both without and with OASIS service. This approach is useful in identifying both the strength of the underlying market in specific subareas, and the increment that could be generated by establishing rail service.⁴

In the particular case of OASIS, the RCLCO results indicate that the station area development potential of the line's stations is unlikely to generate enough added value in the early years to significantly help in the line's funding. Three factors lead to this conclusion:

³ "Final Station Area Analysis" (November, 2013) by HDR.

⁴ "Development Strategy for Oasis Rail Transit Corridor, Cincinnati, Ohio", RCLCO, March, 2014

1. *Relatively small scale of total market demand for new development in the overall corridor.* Only a very small amount of land within the station areas is likely to be developed within the first 10 years.

RCLCO's real estate market analysis of the entire OASIS transit corridor from the RTC to Milford quantified 20 year demand for new development in the corridor to 2036 with and without OASIS rail. Over the 20 years, the presence of the rail line is projected to add approximately 1000 additional (over trend) units of housing and about 80,000 square feet of additional retail and commercial development collectively into all the station areas together out through Milford. This represents about a doubling of demand over a presently low level of development of approximately 100,000 square feet of structures per year. Even so, if the rate doubled to 200,000 square feet per year (80 to 100 housing units and 5 to 10,000 square feet of commercial) it would consume no more than about 100 acres of land over next 10 years (assuming development at 10 units/acre, which is comparable to a mix of small lot single family homes, moderate level of townhouse densities and garden apartments). These 100 acres would represent about 25 percent of all the vacant and "susceptible to change" sites within ¼ mile of the stations and under 9% of all the land so characterized as being within ½ mile of the stations⁵ (and under 4% of ALL the sites within ½ mile of the stations). Higher levels of density such as 3 to 5 story apartments or condos above retail, would require significantly less land.

2. *Station areas are likely to require expensive infrastructure and amenities.* With the exception of Columbia-Tusculum and Newtown, the areas immediately around the other stations will require quite significant amounts of infrastructure to make them into the pedestrian friendly, accessible and amenitized environments that will drive the higher levels of development assumed in the RCLCO study. Additional costs will be involved with issues of flood control, vehicular access patterns, removal of hazardous materials and with provision of water, sewer and other infrastructure. All of these factors will significantly raise per acre development costs, with the effect that many sites may remain uneconomic to develop even though they may be near transit stations.
3. *Some of the station areas may have limited market appeal due to the surrounding uses.* Locations such as the Fairfax and Ancor sites may have limited market appeal unless there is very large scale redevelopment that substantially changes the character of the area. This may be impractical in the first 5 to 10 years given the limited scale of the overall corridor market and the heavy up-front costs that would be involved.

⁵ Based on Table 3-1 (Page 17) of the "Final Station Area Analysis" (November, 2013) by HDR., vacant and "susceptible to change" sites within ¼ mile of the stations sums to 390 acres (excluding Newtown (B)), with an additional 765 acres within the ¼ to ½ mile rings.

These factors all suggest that there is unlikely to be large scale capturable land value increments in the foreseeable future that could be relied upon as a source of significant funding for the project.

A more detailed parcel analysis⁶ of the Columbia-Tusculum and Red Bank/Fairfax station areas suggested they were unlikely to generate more than a total of \$10 million of land value increment (on vacant sites within ¼ mile) within the first 5 to 10 years (assuming a doubling in land values). Moreover, only a portion of this could be recaptured through sales for actual development or via special assessment. Since almost all of this land is currently privately owned, the typical ways this value could be accessed for the OASIS project would be via pre-development purchase by the OASIS project (and then future sale or ground lease) or by means of an extremely high special assessment or other form of value capture tax⁷. While limited application⁸ of one or more of these mechanisms in combination might be able to generate \$1 or \$2 million in up front funding towards the cost of OASIS, this seems to be a high cost and complex, low return proposition that will only marginally benefit the overall project funding plan. This amount might expand up towards \$4 million if all similar sites out through Milford are included in the analysis and the same types of value capture mechanism are assumed.

“Joint development” where adjacent property owners may combine physical efforts with the transit sponsor to build a station area complex (for example, possibly using shared parking, access and plazas) could be another source of some additional private funding towards some station area improvements. The amounts are unlikely to be significant unless the property owner receives added development rights of value – much of which have already been accounted for in the previous paragraph. The property owner will only contribute improvements or funds to the extent that the added value received in return (i.e. their gross added profit) exceeds these amounts.

Subsequent to the RCLCO analysis, two additional station location options have been identified that could offer significant development opportunities. The Fairfax/Red Bank station location could potentially shift to the NS Clare rail yard immediately to the east. This would offer a large development opportunity, but would depend upon a wide range

⁶ This was conducted last year during efforts to analyze the funding of OASIS out to Fairfax when the status of the Route 32 relocation project was still unclear.

⁷ A high level of special assessment or transfer tax on value increases of privately owned property is unlikely to be politically popular and may not be legally plausible; a low rate is unlikely to produce significant revenue given the market, economic and development issues mentioned in the text.

⁸ Full application of any of these tools is improbable: (1) an OASIS project transit authority would not have a plausible reason for buying up the many separate small scattered parcels throughout the ¼ mile zones that make up the vacant land in the station areas from Newtown west (but it might be able to buy a limited number of sites as part of each station project, for access and parking development, and perhaps a few contiguous “excess” parcels that could then be jointly developed) (2) there could be substantial risks in land banking larger sites in the station areas further east, and it could be difficult to obtain the public funds needed for this particular purpose (over and above those needed for the transit improvements alone and (3) a high rate of special assessment or transfer tax on value increases of privately owned property is unlikely to be politically popular and may not be legally plausible .

of factors such as relocation of the rail yard and construction of a new access road. The potential combination of the Newtown and Ancor stations midway between could be coordinated with the re-alignment of State Route 32, offering excellent access and visibility to the combined site. Because these station locations were not analyzed earlier in the project study process, they have not been considered in this analysis. While they may offer some financial support to an Oasis Rail project, it would not make a significant impact on the financial feasibility of the project.

- *Special Assessment Districts*

Throughout the country, jurisdictions along rail corridors have established special assessment districts covering some or all of the properties proximate to a transit line's stations. Sometimes, establishing these assessment districts requires a vote of the property owners within the boundaries of the area to be specially assessed and, because of this, residential properties are often deliberately excluded. In other cases, jurisdictions are able to impose assessments without requiring a vote of the affected property owners, but even in these cases a vote is frequently taken or at least an extensive series of public hearings held to determine local political support for the proposed action. Often, the assessment is used for a combination of purposes, with transportation being but one – others might include, for example, street and landscape improvements, way-finding, pedestrian/cycling amenities, pocket parks, infrastructure improvements, area cleaning and safety programs. In most cases where a general assessment for public transit is levied, the upper limit for this purpose alone is in the order of 5 cents per \$100 of true market value. This equates to \$100/year on a home with \$200,000 in value. If higher assessments are levied, it may be on a limited number of commercial properties immediately adjacent to the transit station (with the value generated already accounted for in the previous section) or, if more widely applied, the revenues generated would be allocated amongst a much wider variety of project uses (e.g. sidewalk, bikeway, landscaping, wayfaring and other streetscape improvements, as well as transit). The end result is that the amount available to a transit project is effectively capped, for practical purposes, at 5 cents per \$100 of property value in the overall assessment zone.

The combined market value of property within ½ mile of the Columbia-Tusculum and Redbank/Fairfax stations totals less than \$300 million. Including all of the property within ½ mile of the remaining stations (excluding Riverfront transit Center) would add between another \$100 and \$200 million.⁹ If ALL of this property were put in a special assessment district with a levy of 5 cents per \$100 of value applied with 100% allocation to OASIS, it would amount to a revenue yield of \$200 - 250,000/year. This amount could be applied towards annual operations or perhaps to underwrite the financing of roughly \$3 to 4 million in

⁹ Columbia –Tusculum and Redbank/Fairfax account for 1024 out of 1322 housing units (or 77.5%) and 130,000 out of 540,000 square feet (24%) of the commercial space within ½ mile of the various stations, per the RCLCO study.

capital improvements. In actuality, many of the properties would need to be "carved" out (i.e. excluded from the assessment district), by virtue of their particular use or ownership, or location and difficult access to the transit facility (e.g. remote hilltop residential areas with very indirect access to the transit stations). In all likelihood, the actual yield from this source would be significantly less.

Expanding the assessment area would broaden the resource base for the project, however, as the assessment area becomes larger, it becomes more difficult to demonstrate a connection between direct benefits and a property owner's increased costs due to an assessment. For example, in the literature on the subject, there is no discernable value increase on properties more than ½ mile from transit stations: therefore, very few property owners two miles from the station are going to be willing to pay (in the earlier example of the \$200,000 house) \$100/year solely for the availability of a transit line located two miles away. This factor of distance from the transit stations should be taken into consideration when a larger assessment district's boundaries are being considered. On the other hand, if the assessment for the larger area also included other transportation projects of benefit to the property owner (for example, specific road intersection improvements, bike/pedestrian trail improvements, additional bus lines, etc.) then such an assessment might be supported. A combined Eastern Corridor Program could serve as an appropriate "package of projects" benefitting many different users and travel trips, and allow for an assessment over a much larger area. This approach is discussed in the following section, and is certainly an avenue open to the two TIDs partnering on OASIS.

- Tax Increment Districts:

Tax increment financing (TIF) is another tool sometimes used, on a limited basis, by transit projects to help fund capital and/or operating costs. Unlike the special assessments described above, tax increment financing involves taking some share of the increase in property taxes at current rates¹⁰ generated by increases in the value of property in the affected zone over time, and applying this increment towards funding the desired project. There are several key difficulties in seeing this as a major source of funding for the OASIS line:

¹⁰ For example, if an area had a current assessment of \$100 million and a tax rate of \$2 per \$100 in value, then its taxes per year are \$2 million/year. If as a result of new development and value increases this assessed value base increased to \$150 million in 10 years, then the taxes being generated in Year 10 would be \$3 million/year or \$1 million/year MORE than in year 1. This \$1 million/year is considered to be the "tax increment" available for allocation towards the defined projects.

1. The amount of property value increase likely over the next ten years in the relevant station areas is likely to be small and uncertain relative to what would be needed for this source to have a major impact on closing a funding gap. The property value increase in the next ten years in the station areas attributable to existing development trends and likely-to-be induced development is unlikely to exceed \$200 million, is difficult to project on an annual basis and is likely to be back-loaded towards the end years.
2. A portion of the areas most likely to develop and see increased values are already covered by existing Tax Increment Financing Districts in the Columbia-Tusculum area, thus carving out a major portion of the potential.
3. In expanding existing tax increment districts or creating new ones to benefit the Oasis service, a significant portion of the tax increment funds would also need to be used to support other redevelopment activities, if the area is to legally qualify as a tax increment financing district. Another element will be a need for all the various agencies entitled to levy property taxes (e.g. local school districts, cities/townships, county, etc.) to agree to the formation of any district and its expenditure plan.
4. All of the above factors suggest that tax increment financing, if used at all, is likely to be able to only support a small amount of overall project costs and is probably best used for access and amenity projects such as the build-out and equipping of station facilities.

- **Foundations/Local Business and Community Support**

Regional civic betterment foundations and charitable programs run by businesses can be called upon for financial support for the Oasis Rail Transit Project, because of its beneficial impacts not only to providing new transportation resources, but to the quality of life and environmental enhancements it can offer to the neighborhoods and communities through which it passes. Cincinnati has a rich tradition of community support for civic betterment projects. It may be that there are certain local foundations, businesses or businesspeople with a particular interest in supporting transit alternatives to the automobile. This has been demonstrated locally in terms of the recent leadership shown by the Haile Foundation and its partners in supporting the Cincinnati Streetcar.

While the direct amounts likely to be contributed may be limited, the visible support and contributions by such entities may help provided needed leverage for generating positive funding decisions from the other sources discussed in this Memorandum.

- **Related Projects (Public-Public Partnerships)**

There could be related or adjacent projects, such as those being identified by other infrastructure agencies (CWW, MSD, Duke Energy, etc.), where funding might allow for Oasis-related project work.

- **Cities, Counties, TIDs: Reallocation of Existing Resources**

These entities could all periodically review elements of their existing budgets and reserves and consider reallocation of some of these sources when completion of the OASIS project becomes a priority and nears reality. These amounts are not likely to be substantial, but are still extremely important since they may be among the final building blocks that enable the funding plan to be completed and the project to proceed, and would be important local matches both from the financial and community support perspectives.

This may occur as elements of the project's basic funding fall into place (e.g. contingent award of major Federal grants, identification of significant reliable and sustained local funding sources), and as residual funding gaps need to be closed for the project to be able to proceed. The amounts available or likely to be committed at any given time are difficult to project, particularly early in the project development cycle when core funding sources have not yet been solidified. But almost every significant transit project in the country eventually calls upon its supporters to "top off" the needed funding by drawing from these various sources. The reasons the amounts are typically small is because they represent a real diversion from other programs and services. The exceptions are where the funds are "found" money tapped, for example, from unallocated reserves, "rainy day" funds, surplus land or facility sales or other "one off" sources of funds.

- **New Contributions from Local Jurisdictions**

An alternative of the Reallocation of Existing Resources is the development of an equitable capital cost allocation methodology that distributes costs among the jurisdictions served by the rail line. Based on the results of the potential cost allocation methodology, each jurisdiction would be responsible to funding their share of capital costs from their respective general funds or other locally controlled funding sources. As a starting point, potential cost allocation approaches could reflect the following options or a combination of these options. If the decision is made by the Project Partners to pursue this approach, regional negotiations would be required to analyze the potential technical/fiscal impacts as well as political implications of a capital cost allocation methodology.

- Option 1: Allocate all capital costs equally among the jurisdictions: Based on the experiences of regions that have implemented multi-jurisdictional rail programs, while this approach provides a simple, easy to understand methodology, it may be perceived as not being equitable to all jurisdictions. Examples would be jurisdictions with more capital assets (stations, track, signals, maintenance-of-way equipment, etc.) within their

geographic boundary would pay the same as those with fewer assets. However, this approach has been successful in allocating capital costs that benefit the entire system such as the costs of the maintenance/storage facility and rolling stock.

- Option 2: Develop a capital cost allocation methodology that distributes costs equitably among the jurisdictions based on specified variables. The methodology would reflect a percentage of costs for specific items based on the level of capital infrastructure within a specific jurisdiction. These variables could include but not be limited to the following: track miles, stations, ticket vending machines, at-grade crossing / grade crossings; and/or other localized improvements.

4.2. Potential Operating Funding Sources

Implementation of the Oasis Rail Transit Project would result in an increase the transit operating costs for the region. As described previously, based on planning completed to date, the conceptual annual operating costs, in 2021 dollars, are \$10.3 million (Alternative A1) and \$11.2 million (Alternative A2). In addition to the operating costs associated with the commuter rail corridors, it is likely bus operating costs will increase in each county as feeder bus service between stations and major employment/residential centers will be implemented to provide convenient “last mile” service for passengers. The financial impact of feeder bus service will be evaluated as Oasis Rail Transit Project moves through the project development process.

Similar to capital costs, long term operating funding will likely reflect a combination of multiple sources. At this stage of project development, operating funding sources are typically less defined compared to capital revenue sources. However, it is critical to initiate the discussions among regional partners to identify which potential sources have the most political support to carry forward for further evaluation. To initiate this process, the following list of potential operating revenue sources has been identified.

- **Fares**

Riders of the transit system are obviously important direct beneficiaries who typically pay for their benefits through the payment of fares in proportion to their actual use. Fares typically recover 20 to 30 percent of total annual operating and maintenance costs on most US rail transit systems. Based on travel demand ridership estimates and planning completed to date, preliminary fare revenues estimates (expressed in 2021\$)¹¹ are shown in the Table 5. As shown below, based on these estimates, operating subsidies of \$7.1 million and \$8.3 million would be required for the two alternatives.

¹¹ Late 2020 is the earliest assumed opening date for the project out to Milford. Fares and operating costs are inflated from 2015 to 2021 at 2.5%/year compounded.

- **Federal Formula Funds**

Two previously described federal formula programs also provide funding for eligible operating costs. CMAQ funding is also eligible to support the first five years of operation of a new transit service. The jurisdictions along the commuter rail corridors would have to work with the regional partners and OKI to identify realistic annual levels of funding that could assist with the first five years of rail service.

FTA annual formula funds allocated to the Cincinnati region for transit would automatically increase based on the number of vehicle hours of service provided by increased transit investment and other related parameters measuring the overall availability of transit service. As formula capital funds can be applied for some forms of preventive maintenance, they are often counted as a contribution to operating funds by transit projects.

Any early determination of the FTA formula funding amounts that might be made available for the OASIS project is highly conjectural, due both to the actual technicalities for calculating how much the regional stream might increase over time, and how its allocation might be apportioned amongst the different existing transit operators and their services operating within the region (such as bus, streetcar, paratransit services, OASIS).

In any event, the amounts likely to be available to OASIS upon commencement of routine revenue service operation are limited. For the purposes of beginning a discussion among regional partners, a placeholder amount of \$1.5 to \$1.6 million/year in 2021 (the first year after the likely beginning of full Oasis operations) has been included to approximate an order of magnitude estimate of funding from this source.

Table 5: Ridership and Fare Estimates

Oasis Rail Corridor - Ridership and Full Year of Fares in 2021***					
Option	Ridership in Opening Year		Fares after Discounts**	O & M Costs	Fares as % of O & M Costs****
	Daily	Annual*			
Alternate A1	5300	1,378,000	\$3,200,000	\$10,300,000	31%
Alternate A2 with FRA Vehicle	4900	1,274,000	\$2,900,000	\$11,200,000	26%

* Daily ridership times 260

** SORTA Zone 1,2 and Clermont zoned fares with 15% discount to cover daily passes, seniors, etc.

*** Inflation from 2016 to 2021 at 2.5%/yr.

**** Compares with 32.8% for SORTA system in 2014

- **Station Area / Private Sector**

Some revenue may be generated if advertising/billboard space is offered at station stops or on trains. Naming or sponsorship rights might be available for sale for specific system

components e.g. station stops, certain special train service (e.g. to ball games). The amount of revenue that might be generated would be a function of the ridership and visibility of the system to the general population, and the nature of the specific advertising or sponsorship rights offered. The amounts are expected to be of limited scale, especially in early years when the sponsoring agency will most likely want to focus on branding and marketing the line and increasing ridership and support through its own advertising and sponsorship and not create a confused message by promoting third parties. In the case of OASIS, most, if not all revenue, from this source is likely to come in later years and be sporadic and is best considered as applied against O & M costs.

4.3. Conceptual Financial Strategies

4.3.1. Conceptual Capital Financial Strategy

Based on currently available information, Table 6 provides initial funding level assumptions for capital costs for the previously reviewed sources. It is unlikely that the Oasis Rail Transit Project would receive both a TIGER grant and a New Starts grant, so the larger New Starts grant is shown in Table 6. Local government agency funding is currently shown at \$0 because there has been no consensus by the Partners on level of participation.

Table 6: Maximum Likely Sources of Funding OASIS Capital Costs
(in millions of dollars)

Capital Funding	Maximum Likely
Federal:	
Planning/AA/Env'tl Grants	\$ 2
New Starts and TIGER combined	\$ 170
Other	\$ 20
State:	
TRAC	\$ 15
TID Grants	\$ 2
All Other State/ODOT	\$ 20
Station Area/Private Sector:	\$ 5
Local:	\$ -

A “ranging” analysis was completed to identify the size of possible funding gaps that might emerge with regards to constructing the Oasis Rail Transit Project. Alternative assumptions were made regarding the use of Federal discretionary capital grants: (i) TIGER only but no New Starts, or (ii) Maximum likely amount of New Starts. In both cases the same amounts of State and local funding were assumed (see Table 7). This begins to allow identification of the possible magnitudes of the local funding shortfall.

Table 7: Conceptual Capital Funding Gaps
(YOE \$, in millions)

	Alternative A1		Alternative A2 & FRA Vehicle	
	TIGER but no New Starts	With New Starts	TIGER but no New Starts	With New Starts
CAPITAL COST (A)	\$340	\$340	\$327	\$327
Federal:	\$42	\$192	\$42	\$185
Planning/AA/Env'tl Grants	\$2	\$2	\$2	\$2
TIGER	\$20	\$0	\$20	\$0
New Starts	\$0	\$170	\$0	\$163
Other	\$20	\$20	\$20	\$20
State:	\$37	\$37	\$37	\$37
TRAC	\$15	\$15	\$15	\$15
TID Grants	\$2	\$2	\$2	\$2
All Other State/ODOT	\$20	\$20	\$20	\$20
Station Area/Private Sector:	\$5	\$5	\$5	\$5
Local:	\$0	\$0	\$0	\$0
TOTAL Identified Sources (B)	\$84	\$234	\$84	\$227
FUNDING GAP (A-B)	\$256	\$106	\$243	\$100

As shown in the Table, the resulting funding gap ranges from \$106 million to \$256 million under Alternative A1, and a slightly lower \$100 million to \$243 million under Alternative A2.

For discussion purposes only, a calculation was made to determine what level of annual payment commitment would be needed if traditional long term financing was incorporated into the financial strategy to address these deficits. The assumption used for this conceptual analysis included: 20 year term, 5 percent interest rate and a 1.15 debt coverage ratio.¹² Based on these assumptions, the annual debt service levels (additional annual funding required in 2021\$) would be:

- Alternative A1:
 - TIGER but No New Starts: Debt issued: \$256 million; annual debt service payment \$23.6 million
 - With New Starts: Debt issued: \$106 million; annual debt service payment \$9.8 million
- Alternative A2:
 - TIGER but No New Starts: Debt issued: \$243 million; annual debt service payment \$22.4 million
 - With New Starts: Debt issued: \$100 million; annual debt service payment \$9.2 million

¹² The annual debt service repayment factor used was \$92.30 per \$1000 of capital cost. The “coverage ratio” at 115% (or 1.15 times) the debt service payment determines the amount of annual cash flow that the bond holders want to see the project generate to assure them that there will be an adequate “buffer” in the calculations to reasonably assure them that payments will be made on time.

If the Project Partners consider pursuing financing in the future, in addition to traditional government debt consideration should be given to financing through the Transportation Infrastructure Financing Act (TIFIA) Program. This financing program can be used either in-lieu of, or in conjunction with other Federal funding programs as long as total federal participation is less than 80 percent of total costs. Like federal discretionary grant programs, TIFIA has an extensive, expensive and stringent application process, and is also highly competitive. Compared to traditional government issued bonds, an advantage of TIFIA is that it provides much more flexible repayment terms, including repayment periods extending up to 35 years after substantial completion of the project. TIFIA rules also permit projects to require no repayments for up to five years after their substantial completion and offers lower interest rates than might be available through other sources. However, TIFIA loans can amount to no more 1/3 of total project eligible costs. TIFIA loans may have some particular utility to the project sponsor if they are being repaid by revenue sources that are anticipated to be slow in maturing, such as revenues from property tax based assessment districts, or ground rents from TOD real estate projects.

The use of TIFIA might have some advantages in possibly reducing average interest costs, and hence in increasing the amount of debt that could be serviced. But the use of TIFIA is very unlikely to be a make-or-break factor in determining whether the OASIS project would progress.

Both USDOT and FTA have encouraged transit projects to pursue TIFIA loans, and under MAP-21 there have been increased transit loans made available. Like other funding sources, TIFIA loans are also extremely competitive and involve a lot of administrative details. In practical experience, a number of rail transit projects began pursuing TIFIA loans, but decided not to apply due to the program's onerous application and reporting requirements.

Finally, under the recently approved FAST Act, the annual appropriations to the TIFIA program have been reduced from a previous level of \$1 billion to \$275 million, and the minimum project size has been lowered from \$50 million to \$10 million. This makes the program that much more competitive.

4.3.2. Conceptual Operations and Maintenance Financial Strategy

Based on currently available information, Table 8 provides initial funding level assumptions for operating and maintenance costs for the previously reviewed sources. Based on the assumptions in the table and discussed previously, the annual operating funding shortfall is approximately \$4.8 million (2021\$) for Alternative A1 and \$6.1 million (2021\$) for Alternative A2.

For discussion purposes only, the operating funding gap could be addressed through the equivalent of a 10 to 12 percent increase in the City of Cincinnati's current 0.3% earnings tax for transit (to a range of 0.33 to 0.336%) with the increment passed through to the OASIS rail operator.

Table 8: Conceptual Operating Funding Gaps
(in \$2021 dollars)

	Alternative A1	Alternative A2 with FRA Vehicle
O & M Funding		
Federal:		
Formula grants (up to \$1/trip times CPI to 2021)	\$ 1,600,000	\$ 1,480,000
SORTA:	\$ -	\$ -
Station Area Assessment Districts:	\$ 500,000	\$ 500,000
Advertising/ Other private:	\$ 250,000	\$ 250,000
Fares:	\$ 3,190,000	\$ 2,860,000
TOTAL O & M COST OFFSETS	\$ 5,500,000	\$ 5,100,000
TOTAL O & M COSTS	\$ (10,300,000)	\$ (11,200,000)
NET OPERATING DEFICIT AFTER OFFSETS	\$ (4,800,000)	\$ (6,100,000)
CPI inflation at 2.5%/yr (16% from 2016-2021)		
* Maximum likely amounts shown for all categories except SORTA where no commitments are shown.		

4.3.3. Potential Supplemental Funding Sources

As shown in the prior tables, a significant funding gap exists in the OASIS Rail Transit Project on both the capital and operating sides, even after taking all presently identified available sources of funding into effect. This is because no significant and sustainable long-term local funding source has yet been identified to support the project. Commuter rail projects implemented across the country are typically underpinned by a major long term source of local or regional transit oriented funding that underwrites the major portion of annual operating deficits (after allowing for fares and Federal operating subsidies) and helps provide a significant share of local match towards Federal capital funds.

Numerous options, either singularly or in combination, can be considered to provide the source of this local sustained funding commitment that will inevitably have to be made before the Oasis Project can proceed. By far, the most commonly used source of local funding around the country is a dedicated sales tax specifically to be allocated to funding and maintaining transportation and transit projects. While a general commitment has been made by the Partners that a broad based tax is not being considered at this time to fund The Eastern Corridor Program improvements, including the Oasis Rail Transit Project, the following is provided to ensure a common understanding of the issues associated with these sources.

Dedicated taxes are typically voted upon by the citizens of the affected jurisdiction(s), usually after a fully detailed public information program has been developed and implemented, explaining the projects to be undertaken, and the benefits to be obtained from completing the entire program of projects. Some regions combine transit, road, bicycle,

pedestrian (and even open space) projects in a packaged referendum to provide a broad range of benefits to all citizens. Sales taxes are used because the benefits are so widely distributed – for example, almost all citizens benefit from congestion relief, reduced air pollution and improved accessibility, regardless of which particular transportation mode they use.

Sales taxes are typically used because they offer a relatively predictable and long term sustainable source of revenue (which is beneficial for supporting up front capital costs through bond financing as well as ongoing operations costs). As well, they shift some of the cost recovery to out-of-town visitors who also benefit from the transportation improvements.

Some other alternatives or supplements to use of a transportation sales tax exist uniquely in the Ohio and Cincinnati area context. The two Transportation Improvement Districts (HCTID and CCTID) which cover the OASIS and Eastern Corridor project improvements have the power to levy broad property based assessments to finance transportation improvements without requiring a local vote. The City of Cincinnati uses the personal income tax (as have other jurisdictions in Ohio), as a method of funding SORTA (Metro) transit operations. A relatively small increase from the current rate (.3 percent) could mathematically make a major contribution to an OASIS funding package. For example, in the calculations described as part of the conceptual financial strategies in Section 4.3, a 10 to 12 percent increase in this rate (from .3 percent to .33 percent or .336 percent) could completely fill the expected gap in O & M cost funding in 2021. Similarly, other possible sources of funding might be a local area tax on motor vehicle registrations or tolls on local area bridges.

Use of any of these tools alone, or in conjunction with sales tax, to generate new revenue could provide major sources of local funding for OASIS, either as a stand-alone project or as part of a larger program of multi-modal transportation improvements. The critical issue becomes one of defining a process, and its timing, to identify which of these tools might have the highest degree of support and viability in the region in the context of the area population's current attitudes towards the need for and support of transportation and other forms of public infrastructure.

5. Next Steps

Major high capacity transit projects similar in nature to OASIS Rail Transit Project take many years, even decades to plan, fund and ultimately implement. They are long in developing, but enduring and regionally formative in their impacts once created. A significant portion of US metropolitan society, particularly the younger and oldest generations, are seeking transportation alternatives to the single occupancy car, and are looking to live in walkable, amenity rich neighborhoods with good transit access to other activity centers and communities.

The OASIS Rail Transit Project could be a logical first step element of a more extensive regional system. Oasis could potentially develop as part of a limited rail transit system only (to the east and northeast), or as part of a larger package of regional multi-modal improvements to be funded and built over many decades, similar in manner to the completion of the Interstate highways in and around Cincinnati over the past 50 years.

A complete funding package for a transit project often seems extremely challenging to put together in its early development stages, because of the inevitable existence of perceived funding gaps. But as planning work on the project continues, clarity becomes increasingly clear as each of many possible funding elements is put in place, often opportunistically.

It is important to be ready to seize new opportunities as they arise. Transit projects in other communities that had been slowly progressing their planning along over the 2000-2005 period were presented a sudden and unexpected opportunity to obtain opportune discretionary Federal grant funds through the TIGER program and other components of the ARRA act passed in early 2009. This enabled some of these projects to complete their funding packages (long under development) and go into construction.

Public support in regions can also change rapidly with regard to transportation funding. In two past cycles of crisis with regard to gasoline availability or its price (1973-1974 and 2007-2008) transit ridership soared and regional populations moved to support new transit initiatives. These conditions may return either gradually (as a result of oil prices trending progressively higher over time, changing lifestyles and attitudes, and/or increased traffic congestion) or perhaps more suddenly as a result of supply shocks to the auto-oriented elements of the transportation system.

It would be an act of great local civic foresight to have important “shovel ready” transit projects on the boards to seize these opportunities when they arise. The investment in up-front planning and project development activities can be fairly limited until the funding picture becomes improved through a change in public support.

If the decision is made to continue to advance the project the Partners should consider the following practical actions to move it to its next level of development:

- Advance critical planning and engineering aspects of the project (including the all important environmental clearances) to get a better understanding of the project's likely

physical and operating characteristics, costs, and possible revenues, and position it to be able to legally proceed.

- Identify a project sponsor.
- Reach a conclusion as to whether the project will seek Federal New Starts funding and, if so, plan the appropriate next step actions. Engage FTA based on these decisions.
- Launch a process to identify a sustainable annual local funding commitment of at least \$15 million/year¹³ (assuming a decision is made to position the project for a New Starts application).
- Determine whether this funding effort will be launched for OASIS as a standalone project or as part of a larger package of regional transportation investments.

¹³ This commitment would need to be in the order of \$28 million/year were the project's sponsors to move ahead without intending to apply for New Starts funding.

Appendix A: Funding Matrix

FUNDING/REVENUE SOURCE (January 2016)	Can Use for:		New (N) or Repurposed (R)	Comments	Likely Maximum Scale of Funding	Precedent Actions to Draw Funds	Due Dates for Submittal	Notes
	Capital	O & M						
FEDERAL:								
FTA: S5309 Discretionary ("New Starts")	X		N	For projects of \$250 million or more. New Starts projects face a rigorous application process and great competition for limited funds. Project's score on a New Starts application is expected to be in the mid range of the criteria and may not be competitive given the large number of projects competing for funds. maximum likely funding is 50% of project cost.	Up to 50% of project cost, even though theoretical maximum is 60%	LPA, NEPA, P.E., Funding Plan, local match		
FTA: TIGER	X		N	About \$500 to \$700 million in funds has been released approximately in annual "rounds" since 2009. 6th round recently completed \$10 billion of projects were submitted for \$500 million in awards. 39 out of 627 were approved. Largest grant given was \$25 million, with 12 at or over \$15 million and only 2 over \$21 million. Three were related to passenger rail. Smaller grant might be obtainable for planning work.	Up to \$20 million (in theory can be more but extremely unlikely).	LPA, NEPA, P.E., Funding Plan, local match	Future rounds and application dates have not yet been announced.	
FTA: Livable Communities/ Other Capital	X		N	Very limited funding availability, highly competitive, small amounts, future funds availability uncertain.	Maybe \$2- \$5 million per grant	Unknown		
FTA: S 5307 Formula O & M (currently via SORTA)		X	R	Formula driven based on vehicle hours, passenger trips, area population. Can be expected to rise as service increases. Some State of Good Repair allocations could possibly be diverted towards some capital cost elements of the commuter rail, but would be small in amount and require re-allocation away from existing regional transit priorities.	Maybe in range of 65 cents- \$1 per ride, so could be in range of \$950,000 to \$1.6 million/yr (\$2015) depending on ridership and amount per ride.			
FTA: S 5310	X		R	Refer to ODOT Program Resource Guide. Formula Federal funds for transportation services for elderly and disabled. Likely to be very small amount, if any. 5310 funds are not eligible for this project. Funds are for private non-profit agencies	\$0	Annual application process		ODOT/OKI Administered
FHWA: STP Flex Funds (State and MPO)	X		R	Formula driven regional surface transportation funds can be "flexed" into some capital cost elements of the commuter rail, but would be small in amount and require a re-allocation away from existing State and regional transportation (mostly highway)	OKI Max award is \$6 million. New changes in recently passed FAST legislation increase ability of local MPOs to "flex" funds towards highway as opposed transit			
FHWA: CMAQ via OKI/ODOT	X		R	Formula driven regional monies. Would need to be re-allocated away from existing priorities. Limited \$ likely, especially after considering existing streetcar allocations.	No official maximum but likely \$5 million in practice.			
Metropolitan Planning (Through FTA to OKI)			R	Planning Funding. Refer to ODOT Program Resource Guide	\$0. Planning Funds used for metropolitan planning by OKI. Not available for Eastern Corridor projects.			OKI Administered

FUNDING/REVENUE SOURCE (January 2016)	Can Use for:		New (N) or Repurposed (R)	Comments	Likely Maximum Scale of Funding	Precedent Actions to Draw Funds	Due Dates for Submittal	Notes
	Capital	O & M						
STATE:								
TRAC Funding	X		N	Mostly for highways; rolled back for Cincinnati streetcar. Very competitive. Focused on capacity adding projects. \$33 million was awarded in the latest 2015-2016 application cycle out of \$600 million in submitted projects. Cash match is important scoring criteria.	OASIS is listed as a Tier 3 (in planning) project in the TRAC statewide list of projects with a potential allocation of \$5.5 million in TRAC funding over the long term, but with NO allocations shown for the 2016-2019 budgeting cycle.	ODOT/Federal Funding	Open April 1st. Applications due May 30th.	
TID Districts	X		N	Refer to ODOT Program Resource Guide.	Up to 10% of project costs - \$3.5 million/year to be allocated among all statewide TID applicants for grants.		September 1 submission.	
Jobs OHIO	X		N	Not clear whether this is separate from the TID grants in previous heading or in addition. A limited number of road and dock extensions appear to have been funded (under \$1 million each) to				
OPWC (LTIP and SCIP)	X		N	Capped at \$2M per project. Can be used infrastructure improvements, including roads, bridges, grade crossings, utilities, etc. Must be an existing facility.			Fall applications	
CEAO (Federal Funding) - County Highway Safety	X		N	Refer to ODOT Program Resource Guide. Federal funding requiring 80/20 split. CEOA administered.	\$14 M available annually. \$5M maximum for a specific project.		Applications accepted in July.	Not a likely source of funding for this project
CEAO (Federal Funding) - County Surface Transportation	X		N	Refer to ODOT Program Resource Guide. Federal funding requiring 80/20 split. CEOA administered.	\$2M per project		Applications accepted in August.	
CEAO (Federal Funding) - County Local Bridge	X		N	Bridge replacement funding. Federal funding requiring 80/20 split. CEOA administered.	\$5M per project maximum.			
ODOT Geological Site Management Program	X		N	Refer to ODOT Program Resource Guide	\$22M annually available statewide - No project maximum limit		Applications due mid-June.	
ODOT Pavement and Bridge Preservation Program	X		N	Allocated to Districts for pavement and bridge preservation. Minor rehab. Preliminary engineering, ROW and construction phases are eligible.	District allocations vary based on formula needs.			
ODOT Municipal Bridge	X		N	Refer to ODOT Program Resource Guide. Construction only funding. 80/20 program (match must be cash).	\$8M annually statewide		Begins January 1st	

FUNDING/REVENUE SOURCE (January 2016)	Can Use for:		New (N) or Repurposed (R)	Comments	Likely Maximum Scale of Funding	Precedent Actions to Draw Funds	Due Dates for Submittal	Notes
	Capital	O & M						
STATE:								
ODOT Urban Public Transportation Grant Program	X	X	R	Refer to ODOT Program Resource Guide. Mostly redirects of Federal funds discussed above under Federal			December 15th	Administered by ODOT
ODOT Noise Walls	X		N	Refer to ODOT Program Resource Guide.	Applications completed by communities.			
ODOT Metro Park	X		N	Refer to ODOT Program Resource Guide. 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. Must be Park District administered.				
ODOT Safety	X		N	Refer to ODOT Program Resource Guide. Federal funding. 90/10 split.	\$100M annually statewide.		2 application cycles per year. Due April 30th	
ODOT Safe Routes to School	X		N	Refer to ODOT Program Resource Guide. 100% eligibility.	Funded at \$4M annually. \$500K limit for infrastructure projects, \$50K for all others.			
ODOT Bicycle and Pedestrian	X		N	Refer to ODOT Program Resource Guide. A standalone bike/pedestrian project can be funded with Transportation Alternative (TA), Clean Ohio Trails, and Recreation Trails Program.				
ODOT Transportation Alternatives Program (TA)	X		N	Refer to ODOT Program Resource Guide. Projects must be outside large MPO boundaries. 80/20 split program.			Application process begins January 1 each	
Urban Public Transportation Grant Program	X	X	N/R	Refer to ODOT Program Resource Guide. Provides state operating, capital and planning assistance to public transportation providers in urbanized areas.			Application process begins December 15	
Community Development Block Grants	X		N	Refer to ODOT Program Resource Guide.	\$400,000 Max.			
Ohio Rail Development Commission - Rail Tourism	X		N	Refer to ODOT Program Resource Guide				
Ohio Rail Development Commission - RR Rehabilitation	X		N	Refer to ODOT Program Resource Guide				
Ohio Rail Development Commission - Rail Line Abandonment	X		N	Refer to ODOT Program Resource Guide				
Ohio Rail Development Commission - Freight Development	X		N	Refer to ODOT Program Resource Guide.				
Ohio Rail Development Commission - Rail Safety, Etc.	X		N	Refer to ODOT Program Resource Guide	\$15M annually available statewide.		April 30/September 30	

FUNDING/REVENUE SOURCE (January 2016)	Can Use for:		New (N) or Repurposed (R)	Comments	Likely Maximum Scale of Funding	Precedent Actions to Draw Funds	Due Dates for Submittal	Notes
	Capital	O & M						
LOCAL: Station Area Property Owners								
Special Assessments	X	X	N	Various forms of special assessment districts that levy one time or annual payments on property over and above property taxes	Analysis of TOD potential may yield some initial ranges of maximums possible			
Formal TIF District	X		N	Traditional TIF district with TIF revenues allocated to a designated project or set of projects. High probability that TIF revenues would				
"Shadow" TIF	X	X	N	Agreement by City and/or County(ies) to annually allocate a specific amount of funds to the project based on a set of paper calculations				
Disposition of excess project land	X		N	Capital gains or annual revenues from development on station land excess to project transit needs	Analysis of TOD potential may yield some initial revenue ranges.			
Development Agreements	X		N	Negotiated contributions by adjacent landowners/businesses (in kind or dollars) towards infrastructure costs as part of joint				
Parking	X	X	N	Unlikely to be a significant source, if at all, due to limited passenger volumes and need to encourage use of transit.				
LOCAL: Private Parties								
Businesses	X	X	N	May have some limited advertising and sponsorship rights (not common on commuter rail)				
Foundations/Charities			N	No real precedents for commuter rail				
LOCAL: Regional Sources								
Tolls	X	X	N					
Cities, Counties, TIDs: Reallocation of Existing Resources	X	X	R	Reprioritization of spending for existing resources e.g. casino revenues, sale of existing assets.				
Cities, Counties, TIDs: New Resources	X	X	N	New resources would be listed here.				
SORTA	X	X	N or R	Would require a funding source increase - could act as a conduit for increased City of Cincinnati funding for transit; and for incremental increase in Federal Sec. 5307 operating funds.	City of Cincinnati subsidized SORTA bus routes at approximately \$2.58 per trip in 2014 through the City's .3% income tax for transit. If an equivalent subsidy of \$2.58 per ride were applied to OASIS the annual subsidy would be in the range of \$3.3 to \$3.5 million in 2015 based on projected ridership. However, to generate this level of money would either require a re-allocation away from existing bus routes and/or an increase in the City of Cincinnati income tax rate.			