

**DATE:** September 4, 2012  
**STAFF:** Rick Richter, Dean Klingner  
Tim Kemp

**AGENDA ITEM SUMMARY**  
FORT COLLINS CITY COUNCIL

**7**

**SUBJECT**

Second Reading of Ordinance No. 076, 2012, Appropriating Unanticipated Revenue in the Capital Projects Fund for the Vine Drive and Shields Street Intersection Improvements Project.

**EXECUTIVE SUMMARY**

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The City has received a federally funded grant through the North Front Range Metropolitan Planning Organization, category STP-Metro, for operational and safety improvements at the Vine Drive and Shields Street intersection. Ordinance No. 076, 2012, unanimously adopted on First Reading on August 21, 2012, appropriates federal grant funds and Regional Road Impact Fee funds into the Capital Project Fund for use on the Vine Drive and Shields Street Intersection Improvements Project.

**STAFF RECOMMENDATION**

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Staff recommends adoption of the Ordinance on Second Reading.

**ATTACHMENTS**

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1. Copy of First Reading Agenda Item Summary - August 21, 2012  
(w/o attachments)

**DATE:** August 21, 2012  
**STAFF:** Rick Richter, Dean Klingner  
 Tim Kemp

**AGENDA ITEM SUMMARY**  
 FORT COLLINS CITY COUNCIL

**16**

**SUBJECT**

Items Relating to the Vine Drive and Shields Street Intersection Improvements Project.

- A. Resolution 2012-065 Authorizing the Mayor to Sign an Intergovernmental Agreement with the Colorado Department of Transportation to Receive Funding for the Vine Drive and Shields Street Intersection Improvements Project.
- B. Resolution 2012-066 Authorizing the Mayor to Execute an Intergovernmental Agreement with Larimer County to Receive Funding for the Vine Drive and Shields Street Intersection Improvements Project.
- C. Resolution 2012-067 Determining that a Single-Lane, Modern Roundabout is the Preferred Alternative for the Vine Drive and Shields Street Intersection Improvements.
- D. First Reading of Ordinance No. 076, 2012, Appropriating Unanticipated Revenue in the Capital Projects Fund for the Vine Drive and Shields Street Intersection Improvements Project.

**EXECUTIVE SUMMARY**

The City has received a federally funded grant through the North Front Range Metropolitan Planning Organization, category STP-Metro, for operational and safety improvements at the Vine Drive and Shields Street intersection. In accordance with Council adopted Resolution 2001-120, an Alternatives Analysis was completed as part of the Arterial Intersection Priority Study. The conclusions of the Alternatives Analysis show that a single-lane, modern roundabout is the preferred alternative for this intersection.

Resolution 2012-065 will authorize the Mayor to sign an Intergovernmental Agreement with the Colorado Department of Transportation (CDOT) to receive federal grant funds. Resolution 2012-066 will authorize the Mayor to sign an Intergovernmental Agreement with Larimer County to receive Regional Road Fee funds. Resolution 2012-067 will authorize the construction of a single-lane, modern roundabout at this intersection. Ordinance No. 076, 2012, will appropriate federal grant funds and Regional Road Impact Fee funds into the Capital Project Fund for use on the Vine Drive and Shields Street Intersection Improvements Project.

**BACKGROUND / DISCUSSION**

In 2011, the Engineering Department completed an Arterial Intersection Priority Study which ranked the Vine Drive and Shields Street intersection in the top ten for needed safety and operational improvements. Multiple existing problems brought this intersection to the top of the list, including poor horizontal geometry, deficient and/or non-existent bicycle and pedestrian facilities, higher than average vehicle accident rates and significant congestion. The improvements will include multi-modal facility improvements to create a safer and more efficient intersection for all users.

Project Goals:

- Improve safety for vehicles, bicycles and pedestrians
- Correct the sub-standard horizontal geometry of the intersection
- Improve air quality through reduced vehicle wait time.

Under direction of the City, Muller Engineering completed an evaluation of a signalized intersection with turn lanes compared to a single-lane modern roundabout. This Alternatives Analysis report compares the two intersection improvement options in terms of safety, right-of-way requirements, cost, constructability, multi-modal enhancements and operations (Attachment 3).

The signalized intersection would add an eastbound right turn lane, a northbound left turn lane and southbound left and right turn lanes. Long, sweeping horizontal curves would be added on both approaches for Vine Drive to align the travel lanes through the intersection.

The single-lane roundabout would be built around an oval central island, rotated to the northwest and southeast directions to correct the Vine Drive alignment deficiency. The entrances and exits to and from the roundabout would be single lanes in all directions.

Conceptual Level exhibits for both improvement options are shown in Attachment 3.

The roundabout outperformed the signalized intersection in the categories of: safety, right-of-way impacts to local businesses, cost and operations. The categories of constructability and multi-modal enhancements were neutral, meaning both intersection types are buildable and both options would improve the multi-modal aspects as compared to the existing intersection. The overall footprint (spatial impact) of the roundabout is approximately 20% less than the overall signalized intersection footprint.

The City’s engineering staff is recommending a single-lane roundabout as the preferred option.

**FINANCIAL / ECONOMIC IMPACTS**

These Ordinances will authorize the appropriation of Federal Grant and Regional Road Fee funds into the City of Fort Collins Capital Project Fund for design, right-of-way acquisition and construction of the Vine Drive and Shields Street Intersection Improvements Project. The following table lists the funding sources, amounts and percentages of the total project cost.

The Regional Road Impact Fee was adopted by City Council in February 2000 (Resolution 2000-024). The methodology for the fee is based upon a “demand driven” model which charges new traffic generating developments the cost of replacing the capacity that it consumes on the regional road system. The Resolution states that the City and the County will collect fees on building permits within their own jurisdiction for the purpose of improving five specific regional roads within the City’s Growth Management Area (GMA); one of which is Shields Street (Larimer County Road 17). The Regional Road Impact Fee funds will be spent prior to using any of the Building on Basics Intersection funds.

<b>Funding Summary (2012 – 2015)</b>		
<i>Funding Source</i>	<i>Funding Amount</i>	<i>% of Total Project Cost</i>
STP-Metro Federal Grant (CDOT)	\$1,054,000	± 62%
Regional Road Impact Fee (Larimer County)	\$325,000	± 19%
Building on Basics Intersection Fund (City)	\$322,101	± 19%
<b>Total Anticipated Funding</b>	<b>\$1,701,101</b>	<b>100%</b>

The Regional Road Fee will be used as the local agency match in the amount of \$219,101 and as overmatch in the amount of \$105,899. The Building on Basics quarter-cent tax will be used as overmatch in the amount of \$322,101.

The Vine Drive and Shields Street Intersection Improvements Project was awarded a total of \$1,054,000 from the North Front Range Metropolitan Planning Organization. The disbursement of the construction funds will not be available until the CDOT 2015 Fiscal Year. The following table lists the funding amount by CDOT Fiscal Year (FY).

	FY 2012	FY 2013	FY 2014	FY 2015	<b>TOTAL</b>
<b>Federal Funds</b>	\$304,000	\$132,000	-	\$618,000	<b>\$1,054,000</b>

Short and long term economic benefits of the roundabout will be realized by the following:

1. Easing of traffic congestion resulting in reduced fuel consumption
2. Multi-modal safety improvements resulting in fewer and less severe accidents
3. A concrete intersection without traffic signals resulting in lower long term asset maintenance allocations
4. A smaller project footprint resulting in a lower construction cost.

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## ENVIRONMENTAL IMPACTS

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The project will have a positive impact on short and long term air quality. The peak hour analysis of the roundabout intersection, as compared to the existing conditions, shows the following percent reductions for the short term benefits:

- Vehicle Delay 75%
- Total Stops 70%
- Fuel Consumption 37%
- Vehicle Emissions 39%

Additionally, the roundabout will outperform a signalized intersection in the off-peak hours when traffic volumes are lower and the user will not have to wait for a traffic signal to cycle through its programmed green times.

Other environmental benefits stemming from the project:

- An improved storm sewer system with water quality features
- Landscape enhancements and urban design elements
- Accessible crosswalks and the addition of bicycle and pedestrian facilities.

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## STAFF RECOMMENDATION

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Staff recommends adoption of the Resolutions and the Ordinance on First Reading.

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## BOARD / COMMISSION RECOMMENDATION

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At its February 15, 2012 meeting, the Transportation Board voted unanimously to recommend the modern roundabout design option for the Shields and Vine Intersection. The Transportation Board also encouraged staff to coordinate with Lincoln and Putnam employees, students and parents.

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## PUBLIC OUTREACH

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City staff teamed with Larimer County for two open house events. The first event was in the fall 2011 to announce the kick-off for both agencies projects. The City explained the need for improvements at the intersection and discussed the Alternatives Analysis process. The open house participants agreed with the "need" statement and were generally neutral to the type of intersection improvement.

The second open house was held in May 2012 to present the findings of the City's intersection alternatives analysis. Invitations were sent to all residents and business owners within a 1/4 mile radius of the intersection. Additionally, Lincoln Middle School and Putnam Elementary staff and parents were included on the invitee list.

Major questions / comments from the public and City staff responses:

1. Will you add crosswalks and ramps?

*Response – Yes, ADA compliant ramps and crosswalks will be installed regardless of the type of intersection improvement*

2. How big will the roundabout be?

*Response – The Vine and Shields roundabout option will be similar in scale to the Taft and Vine intersection (single-lane, 130-foot inscribed diameter)*

3. Will the City and County projects be built at the same time?

*Response – No, the County's North Shields project will be built in 2014 and the City's intersection improvements will be built in 2015. This is based upon construction fund timelines as laid out by the North Front Range MPO.*

4. What will the business accesses look like on the two northern corners?

*Response – The City has had conversations with both property owners and can accommodate two points of access for each business*

5. Will the intersection be closed during construction and how long will it take?

*Response – No, we feel it can be built under traffic by using a combination of lane shifts and temporary signals. We are anticipating 100 – 120 days for construction.*

Over the past few months, staff met with property owners in the vicinity of the intersection. The two business owners on the northwest and northeast corners are in favor of the roundabout option.

Public outreach will be intensified after the selection of a design consultant. A detailed communication plan will be created and implemented prior to construction.

The conceptual level project website is located at: <http://www.fcgov.com/engineering/vsi.php>.

#### **ATTACHMENTS**

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1. Project Location Map
2. Resolution 2001-120
3. Alternatives Analysis Summary Report
4. Transportation Board Letter

ORDINANCE NO. 076, 2012  
OF THE COUNCIL OF THE CITY OF FORT COLLINS  
APPROPRIATING UNANTICIPATED REVENUE IN THE CAPITAL  
PROJECTS FUND FOR THE VINE DRIVE AND SHIELDS  
STREET INTERSECTION IMPROVEMENTS PROJECT

WHEREAS, in 2011, the City Engineer completed an arterial intersection priority study which ranked Vine Drive and Shields Street as an intersection in need of safety and operational improvements; and

WHEREAS, the intersection demonstrated poor horizontal geometry, deficient or nonexistent bicycle and pedestrian facilities and higher than average vehicle accident rates as well as significant congestion; and

WHEREAS, an "alternatives analysis" report was prepared by Muller Engineering which suggests that a single-lane roundabout intersection at that location will outperform a signalized intersection with respect to safety, right-of-way impacts to local businesses, costs and operations; and

WHEREAS, the single-lane roundabout intersection would also have a positive impact on short and long term air quality, would improve storm drainage facilities, would enhance landscape elements and would provide accessible crosswalks for bicycle and pedestrian users; and

WHEREAS, pursuant to Resolution 2012-067 City Council has determined that a single-lane, modern roundabout is the preferred alternative for the Vine Drive and Shields Street intersection improvement; and

WHEREAS, the City has been awarded a federally funded Colorado Department of Transportation (CDOT) grant through the North Front Range Metropolitan Planning Organization in the amount of \$1,054,000 for improvements at the Vine Drive and Shields Street intersection; and

WHEREAS, the City will also receive \$325,000 from the Regional Road Impact Fee administered by Larimer County to be used as matching funds for the grant; and

WHEREAS, existing appropriations in the amount of \$322,101 from the Building on Basics Intersection Improvements Project will be used as an overmatch for this grant; and

WHEREAS, the total of the aforementioned funds in the amount of \$1,701,101 will be used for the design, right-of-way acquisition, and construction of the Vine Drive and Shields Street Intersection Improvements Project (the "Project"); and

WHEREAS, this Ordinance appropriates the CDOT grant and the Regional Road Impact Fee to be used for the Project; and

WHEREAS, Article V, Section 9, of the City Charter permits the City Council to make supplemental appropriations by ordinance at any time during the fiscal year, provided that the total amount of such supplemental appropriations, in combination with all previous appropriations for that fiscal year, does not exceed the current estimate of actual and anticipated revenues to be received during the fiscal year; and

WHEREAS, City staff has determined that the appropriation of the revenue as described herein will not cause the total amount appropriated in the Capital Projects Fund to exceed the current estimate of actual and anticipated revenues during fiscal year 2012.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS that there is hereby appropriated from unanticipated revenue in the Capital Projects Fund the sum of ONE MILLION THREE HUNDRED SEVENTY-NINE THOUSAND DOLLARS (\$1,379,000) for expenditure in the Capital Projects Fund for the Vine Drive and Shields Street Intersection Improvements Project.

Introduced, considered favorably on first reading, and ordered published this 21st day of August, A.D. 2012, and to be presented for final passage on the 4th day of September, A.D. 2012.

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Mayor Pro Tem

ATTEST:

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City Clerk

Passed and adopted on final reading on the 4th day of September, A.D. 2012.

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Mayor

ATTEST:

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City Clerk