5.0 Recommended Alternative

For the majority of the project length, only one Feasible Alternative was recommended for advancement at the end of Step 5. Interchange concepts were evaluated operationally and refined until a feasible solution could be found for each location. Therefore, there is only one feasible alternative for the mainline and for the majority of the interchange locations. However, two feasible options were carried forward for the I-74/I-75 interchange area – with and without local access ramps. Therefore, the Recommended Alternative for the project, with the exception of the I-74/I-75 interchange, is discussed throughout this document and shown on the Recommended Alternative Exhibits.

Following is a discussion of the identification of a Recommended Alternative for the I-74/I-75 interchange, the sole location for this project where more than one Feasible Alternative has been identified. The environmental impacts of the two options are virtually identical. The primary differences are in engineering feasibility and cost, discussed in Chapter 2 and summarized below.

I-75 / I-74 Interchange

Two build alternatives were recommended for further development at PDP Step 5; 1) I74-A Fully Directional Interchange with Local Access and 2) I74-B Fully Directional Interchange with No Local Access. During PDP Step 6, the two alternatives were investigated further to evaluate operation, impacts and cost in the context of the overall project goals of improving safety and reducing congestion. It should be noted that the alternatives for interchanges under PDP Step 5 were conceptual. During Step 6, they were refined to achieve operational and geometric requirements. (Exhibits for I74-B are included in the Recommended Alternative Sheets 57/103 to 75/103. Exhibits for I74-A are included under Other Alternatives Considered.)

The existing service ramps within the I-74/I-75 interchange provide the following movements:

1. William P. Dooley entrance loop to I-75 southbound,
2. I-74 westbound exit to Elmore Street,
3. I-74 eastbound to Central Parkway southbound,
4. Central Parkway to I-75 northbound.

These partial movements do not provide reciprocating travel routes in that drivers are not able to take the same route on the return trip. A semi-reciprocating route exists using the William P. Dooley Bypass and Elmore Street ramps for access to and from I-75.

At the start of this PDP Step, I74-A involved providing higher speed directional ramps from I-74 eastbound to I-75 northbound and I-75 southbound to I-74 westbound; replacing existing ramps that are highly deficient and low speed. Additionally, three local access ramps were proposed to retain local connectivity. The impacts of these additional ramps may be considered individually and are discussed below.

Central Parkway to I-75 Northbound. Alternative I74-A proposed reconstructing the existing ramps at Central Parkway with additional improvement of creating a single full movement intersection of ramps at Central Parkway. The ramp terminal from Central Parkway to I-75 northbound would physically conflict with the east abutment of the Ludlow Viaduct bridge over I-75. This structure recently rebuilt in the 1990's would require major reconstruction of multiple bridge spans to provide the necessary width under the east end span for the ramp terminal to be constructed. This ramp is expected to have a high cost with very low utilization of the ramp (estimated design year 2030 peak hour volume of 240 vehicles).

I-75 Northbound to Colerain/Dooley Bypass. To replace some of the lost access due to the closure of the Elmore Street ramp, I74-A alternative included a ramp that would utilize available space under the existing CSX bridge over the I-75 northbound to I-74 westbound ramp with the relocation of the I-75 southbound to I-74 westbound ramp to add a deceleration lane that transitions over the Mill Creek to form the fourth leg of the Colerain Avenue / William P. Dooley Bypass intersection. The resulting ramp requires the relocation of the existing Duke Energy Cumminsville #64 substation and nearby transmission towers. This ramp would have low utilization (estimated design year 2030 peak hour volume of 400 vehicles) and a high relocation cost of the substation (approximately $4 million). In addition, it would have potentially undesirable operating conditions (questionable stopping sight distance to intersection with stopped vehicles), and lack of reciprocating travel route.

I-74 Eastbound to Central Parkway. The I-74 eastbound to Central Parkway exit ramp is predicted to be a moderately utilized ramp (estimated design year 2030 peak hour volume of 635 vehicles). This ramp provides no reciprocating movement, but provides improved incoming access to Cincinnati State and the hospitals.

In summary, the I74-A Fully Directional Interchange with Local Access alternative has identical features as the I74-B No Local Access alternative, with these additional impacts:

- Construction cost associated with ramps on structures over the freeway
- Costly impacts to the recently rebuilt Ludlow Viaduct bridge
- Maintenance of traffic concerns for the Northside Community based upon concerns experienced during the last closure of the Ludlow Viaduct bridge for construction
- Relocation of the Duke Energy Cumminsville #64 substation and nearby transmission towers
- Potential stopping sight distance concerns at intersection of the I-75 northbound ramp to Colerain/Dooley Bypass.

Based upon the low to moderate traffic volumes expected to utilize the local access ramps compared to these additional impacts, ODOT identified the I74-B Fully Directional Interchange with No Local Access Alternative as the Recommended Alternative at a Public Meeting on 9/28/06.

Based upon substantial comments from the Northside Community regarding the reduction in access to the area, ODOT met with state and local representatives, the Northside Community Council and the Northside Business Association for input. (See Chapter 4.)

As a result of public input, ODOT decided to include proposed improvements at the Colerain/Beekman interchange as a part of the I-75 project effort in advance of the closure of the local access ramps to Northside. These issues are discussed under the I-74 / Colerain Avenue (Beekman Street) Interchange in Chapter 2.

Table 5-1: Local Access Ramp Travel Time Study Results

	Average Travel Time								
	AM			PM			Distance		
Elmore Ramp	Existing	Build	Change	Existing	Build	Change	Existing	Build	Change
Harrison Ave to Hamilton/Blue Rock	5:01	5:48	0:47	5:27	10:19	4:52	2.7	3.5	0.8
I-74/75 RR bridge to Dreman/Dirr	3:47	3:39	-0:08	4:23	4:19	0:04	0.8	2.0	1.2
Central Parkway to I-75 NB Ramp									
Hamilton/Blue Rock to SR 562 ramp	5:21	8:13	2:52	6:08	7:30	1:22	4.0	3.2	-0.8
College Street to SR 562 ramp	3:26	6:11	2:45	10:31	12:59	2:28	3.4	4.8	1.4
Dooley Loop Ramp									
Hamilton/Blue Rock to Harrison Ave	4:46	7:07	2:21	4:36	7:11	2:35	2.7	3.6	0.9
Dreman/Dirr to I-74/75 RR Bridge	0:55	2:58	2:03	1:09	2:34	1:25	0.5	1.4	0.9
I-74 EB to Central Parkway									
Montana to College Street	3:50	7:01	3:11	2:16	6:18	4:02	1.9	3.8	1.9

Travel Time Study. Based upon concerns from the public, the project team also completed a travel time study of the alternative routes compared with existing conditions. Points of interest along the existing and proposed routes were identified to use as trip ends for calculation of the potential change in travel times resulting from the closure of existing local access ramps. Travel times were measured during AM and PM peak hours based upon multiple runs that were averaged to arrive at the value for a given trip. The travel time study results are shown in Table 5-1 and summarized below. Exhibits of the routes are included in Appendix A – Traffic.

The removal of the Elmore ramp would increase travel times to Northside by less than one minute, except in the PM peak when intersection operations on neighborhood streets add to the trip time. An evaluation of impacts rerouted traffic will have on local streets due to service ramp closures is ongoing. Recommendations for improvements to the alternative routes to alleviate this concern will be made during Step 7.

The removal of the Central Parkway to I-75 Northbound ramp and the Dooley loop ramp would increase travel times by approximately 2 minutes.

The remaining ramp, the I-74 Eastbound to Central Parkway ramp, was found to have the greatest impact on travel time not readily attributable to local intersections, with an increase over 4 minutes. With the presence of Cincinnati State Technical College and area hospitals at this location, ODOT has committed to investigating alternatives to mitigate the loss of this connection. The current proposal, the Central Parkway Connector, is included on the Recommended Alternative Exhibits (Sheets 73/103 to 75/103.) It is currently proposed as a two-way local street connection, which replaces the removed ramp without impacting the freeway and provides the additional benefit of a reciprocating movement. Traffic volumes for this new connection will be developed during Step 7 to verify that the concept is feasible. Any changes to proposed concept will be disclosed in the environmental document in Step 7.

Identification of the Recommended Alternative

Based upon the above evaluation, public input and a consideration of impacts, the Recommended Alternative will include improvements to the I-75 mainline and the Hopple, I-74, Mitchell, SR 562 and Paddock Interchanges as shown on Exhibits 3/103 to 100/103. Improvements to the Colerain/Beekman interchange on I-74 will be included within the project to mitigate lost local access to Northside. No local access ramps will be provided within the I-74 interchange; except, ODOT will provide a proposed Central Parkway Connector to replace the removed I-74 Eastbound to Central Parkway ramp. The Towne Street interchange will be closed. The impacts of rerouted traffic on local streets as a result of access changes will be evaluated in Step 7 and additional recommendations made as necessary to address resulting deficiencies, if any.