Final Report

Village of Midlothian

Village Center Enhancement Plan

Phase II
Transportation Improvement Modifications

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Disclaimer

This document, the *Midlothian Village Center Enhancement Plan-Phase II,* was prepared under contract with the Village of Midlothian and was financed through a grant from the Regional Transportation Authority (RTA).

I. Introduction

I.1. Overview

This report reviews, assesses, and recommends further enhancements to the *Transportation and Circulation* component of the *Village of Midlothian's Village Center Enhancement Plan* (VCEP), dated December 21, 2005. The improvements proposed in this report enhance access to Midlothian's transit facilities and the proposed redevelopment of downtown Midlothian. The report includes:

- Supplementary data in support of the Village's effort to implement the VCEP concept design illustrations of the selected improvements
- Prioritization of the recommended improvements for implementation, and
- Preliminary cost estimates for making such improvements

All provisions of the VCEP remain as originally published, unless otherwise noted in this report. The following relevant excerpts of the VCEP are included in Appendix A of this report:

- Transportation and Circulation Plan (*Pages 4-8 to 4-11 of the VCEP*),
- The Concept Plan (*Figure 4-4 of the VCEP*), and
- The Traffic Study Memorandum (*Appendix C of the VCEP*).

I.2. Summary of Conclusions

Based on further assessment of the traffic circulation and commuter parking improvements discussed in the VCEP, a refined list of major road, local road, and parking facility improvements were created and are shown in Table 1. In summary, it was concluded that:

- Additional improvements to 147th Street (IL83) and local side streets beyond those identified in the Concept Plan are recommended to improve traffic circulation by better controlling access to and from 147th Street (IL83) and commuter parking facilities.
- The traffic and circulation improvements recommended can be accomplished within available right-of-ways, with the exception of the proposed Springfield Avenue extension and the addition of proposed 146th Place.
- Streetscaping should be added for 147th Street (IL83) from Karlov Avenue to Millard Avenue and on Pulaski Road from 145th Street to 148th Street to create an improved environment for pedestrians.
- Due to a reconfiguration of the proposed replacement/expanded commuter parking facility north of 147th Street (IL83), shown in the Concept Plan of the VCEP, parking capacity will

exceed the 486 minimum number of commuter parking spaces needed to match the planned consolidation of the six (of the existing seven) parking lots. The 137-space (*the 7th*) commuter lot just southeast of the Midlothian Metra Station and north of 147th Street would remain. The increased number of spaces due to the reconfiguration may alleviate some of, but not all, of the projected need for additional spaces, which are to be accommodated in a shared parking structure south of 147th Street (IL83). Metra has a projected a need for 200 more commuter parking spaces by 2030 based on future development for the area and the Chicago Metropolitan Agency for Planning's 2030 household projections.

- An additional pedestrian bridge over Midlothian Creek should be constructed north of 147th Street (IL83) to link the proposed replacement/expanded commuter parking facility north of 147th Street with the Metra Rock Island District north (outbound) platform. The existing pedestrian bridge and the existing boarding platforms are proposed to remain in their current locations.

I.3. Applications of the Reports

The VCEP combined with this supplemental report may be used by the Village of Midlothian to encourage other agencies to work with the Village to bring the proposed improvements to fruition. The long term success of the VCEP is dependent to a large degree on the Village's ability to partner with agencies that have jurisdiction over the facilities slated for improvement, and with those agencies and organizations that either can share in the cost of the improvement or can support requests for funding. As an example, a majority of the recommended roadway improvements pertain to 147th Street (IL83), which is under the jurisdiction of the Illinois Department of Transportation (IDOT). Making improvements on that roadway requires IDOT's cooperation, and perhaps the support of the South Suburban Mayors and Managers Association, so that those proposed improvements are included in IDOT's multi-year Highway Improvement Program. In addition, this report may be used as a source of information to develop applications for funding from the Congestion Mitigation & Air Quality (CMAQ) Program or other funding opportunities that may become available.

Table 1 - Revised Summary of Roadway and Parking Modifications Related to Midlothian's VCEP

(Refer to Appendix B for graphic representations)

Reference	*Location*	*Description and Limits*
	Major Routes	
M1 M1A M1B M1C M1D	147th St (IL83)	Milling and resurfacing of 147th St from Karlov Avenue to Millard Avenue with proposed channelization as follows: • Mountable median from Karlov Avenue to Pulaski Road • Mountable median from Pulaski Road to Springfield Ave, with left turn channelization for NB Springfield Avenue and SB Pulaski Road • Mountable median from Springfield Avenue to Waverly Avenue, with left turn channelization for SB extended Springfield Avenue into NB Waverly • Barrier median from Waverly Avenue to Abbotsford Road, gapping the Rock Island District Line tracks • There is no raised median proposed from Abbotsford Road to Millard Avenue
M2	147th St (IL83)	Install traffic signal at intersection of 147th and Springfield Avenue in conjunction with the Waverly Avenue closure and the Springfield Avenue extension
M3	147th St (IL83)	Streetscaping of 147th Street (IL83) from Karlov Avenue to Millard Avenue
M4	Pulaski Road (Cook Co Hwy W43)	Streetscaping from the Metra Rock Island tracks to the south to Clair Boulevard to the north.
M5	Pulaski Road (Cook Co Hwy W43)	Investigate replacing emergency warning beacon on sign with a standard traffic signal at 148th and Pulaski Road
	Local Roads	
L1	146th Place	Add a new connection from Waverly Avenue to Springfield Ave between 147th Street (IL83) and 146th Street.
L2	147th Place	Demolition and vacation of 147th Place from approximately 100' east of Pulaski Road to Waverly Avenue
L3	148th Street	Reconstruct from Pulaski Road to Waverly Avenue
L4	Waverly Ave	Removal of Waverly Avenue from 147th St (IL83) to 147th Place
L5	Springfield Ave	Extension of Springfield Ave south to 147th Pl to create a 4-leg intersection with 147th St (IL83) and Springfield Avenue
L6	Hamlin Ave	Demolition and vacation of Hamlin Avenue from 147th Street (IL83) to 147th Place
	Parking Lots and Structures	
P1	North Parking Lot	Revised proposed replacement/expanded north commuter parking lot north of 147th Street to improve access, internal circulation, and increase number of spaces. The preferred design of the proposed reconfigured/expanded north lot would result in 56 additional commuter spaces.
P1A	Optional Parking Structure	An optional shared-use parking structure has been suggested for the north parking lot location and is discussed in text only.
P2	Pedestrian Bridges	An additional pedestrian bridge is proposed north of 147th (IL83), adjacent to the Midlothian Metra Station, to serve commuters that will park in the proposed consolidated parking lot. It is recommended that the existing pedestrian bridge, south of 147th Street (IL83) remain in place.
P3	South Parking Structure	A 400-space shared use parking structure is to be part of the redevelopment proposed in the southeast quadrant of 147th Street (IL83) and Pulaski Road. 196 additional commuter spaces and 204 spaces for other uses are proposed.

II. Existing Conditions and Findings

II.1. Summary of Existing Conditions

The following is a summary of existing conditions and findings based on data originally collected for the VCEP and supplemented with recent field observations.

Location – The intersection of 147th Street (IL83) and Pulaski Road (Cook County Highway W43) is located in the Village of Midlothian in the County of Cook, approximately 2 miles west of I-294; T36N, R13E, Bremen Township, Section 11. The discussions made in this report pertain mainly to 147th Street (IL83), from Pulaski Road east to Millard Avenue and the surrounding local streets. The Metra Rock Island District Line railroad at-grade highway crossing is located within the boundaries of the study on 147th Street (IL83), approximately ¼ mile east of Pulaski Road.

Roadway Features – 147th Street (IL83) accommodates two lanes of traffic in each direction with channelized left and right turn lanes at the Pulaski Road intersection. The existing flush medians on 147th Street (IL83), on either side of Pulaski Road, are painted with double yellow lines. The posted speed limit is 30 mph on 147th Street (IL83) and Pulaski Road.

Pavement – 147th Street (IL83) was recently repaved with asphalt surface, minor curb repairs, and new lane markings; there are no other improvements to 147th Street (IL83) listed in IDOT's multi-year program. Improvements to Pulaski Road for this area are not listed in the current Cook County Highway Transportation Plan 2006 through 2010.

Traffic – According to the IDOT website, the Average Daily Traffic (ADT) of 147th Street (IL83) was approximately 20,000 vpd in 2005 with approximately 4-6% trucks. The ADT on Pulaski was approximately 21,000 vpd in 2006.

Parking – There is on street parking on 147th Street at certain locations between Pulaski Road and the Metra Rock Island District Line railroad tracks.

Auto Crashes – Crash data was obtained for 147th Street (IL83) for the study area for years 2001 to 2005, and it was found that there were no high accident locations.

Pedestrian Access – The concrete sidewalks along 147th Street (IL83) are wide with no grass parkways and no landscaping features. There are a few storefronts abutting the sidewalks.

Emergency Route – The Midlothian Fire Department is located at 148th Street and Pulaski Road, in the southeast quadrant of 147th Street (IL83) and Pulaski Road. Waverly Avenue is a direct link from the Midlothian Fire Station to 147th Street between Pulaski Road and the Metra Rock Island District Line railroad tracks. Improving the access and traffic flow on that section of 147th Street would improve emergency access.

Bus Route – There is an east-west Pace bus route (#354) on 147th Street (IL83) with a bus stop at the Midlothian Metra Station, located just east of the Metra Rock Island District Line railroad at-grade highway crossing.

One Way Streets – The north leg of Keystone Avenue (west of Pulaski Road) is one way north with a right-in/right-out, which would prohibit a closed barrier median at that location.

Roadway Bridge – There is a bridge for 147th Street (IL83) over the Midlothian Creek directly west of the Metra Rock Island District Line railroad at-grade highway crossing. The existing bridge is sufficiently wide enough for 4 lanes of traffic and a wide sidewalk on each side.

Known Studies to the Area – IDOT has initiated a process to study the feasibility of a future interchange at the crossing of I-294 and I-57. That study would include the existing nearby interchange of 147th Street (IL83) and I-57 (approximately 2 miles east of Pulaski Road). And given that there are 3 crossings, 300 feet apart each, the study would likely include studying movements from I-294 and 147th Street (IL83) as part of a possible Collector/Distributor (CD) road network. When such improvements are made to this area, it would increase the access to the local system and increase traffic on 147th Street (IL83), one of the major routes through Midlothian.

II.2 Roadway and Access Improvements as Proposed in the VCEP

The following table (Table 2) reflects the roadway and access related recommendations shown in the original VCEP (dated 12/21/05). Refer to the VCEP for additional details. An additional column has been added to reflect how the original items correlate to the list as shown in Table 1 of this report.

Table 2 –Summary of improvements suggested in the VCEP

Location as described in the VCEP (*pp 4-8 to 4-9 and Figure 4-7*)	*See corresponding item in Table 1*
Realigned and Removed Streets	
1. Demolition and vacation of Hamlin Avenue from 147th Street (IL83) to 147th Place	*L6*
2. Removal of Waverly Avenue from 147th Street (IL83) to 147th Place, and extension of Springfield Avenue south to 147th Pl to create a 4-leg intersection with 147th Street (IL83) and Springfield Avenue. It is also anticipated that a traffic signal will be warranted at this proposed intersection.	*L3, L4, L5 M2*
3. Removal of Waverly Avenue between 144th and I-294	*(*)*
4. Demolition and vacation of 147th Place from Pulaski Road to Waverly Avenue	*L2*
New Streetscapes	
1. Reconstruction and streetscaping of 147th Street (IL83) from west of Karlov Avenue to east of the railroad crossing, which includes a mountable or barrier median and channelization on 147th Street (IL83).	*M1, M3*
2. Streetscaping of Pulaski Road north and south of 147th Street (IL83).	*M4*

*(*This item pertains to Floodway mitigation and is not addressed further in this report)*

Given the limitations of the initial analysis, the recommendations from the VCEP were subjected to further analysis with the aim of affirming the validity of the improvements as recommended, identifying refinements to the modifications as proposed, or recommending additional improvements that would serve to improve the flow and environment for vehicular and pedestrian traffic.

As a first step in the analysis, the geometric and parking facility modifications included in the VCEP Concept Plan (Shown in Appendix A) were tested against existing field conditions. The proposed roadway and parking lot geometrics were drafted in CAD against a scaled aerial photo background with existing right-of-way taken from plats added for reference. Existing roadway geometrics and right-of-way were also checked against IDOT roadway plans of existing roads. The results of this exercise are shown in Appendix B. In addition, existing and proposed typical sections are included in Appendix C.

II.3. Recommended Revisions to Roadway and Access Improvements

Following the validity check of the improvements proposed in the VCEP, the roadway geometrics of the Concept Plan were refined relative to assumed circulation, traffic flow patterns and capacity. These refinements were done utilizing sound traffic engineering judgment and in collaboration with Village Officials. It should be noted that an exhaustive, complete traffic impact study, signal warrant analysis, or rigorous crash analysis were not conducted given the limited scope of this report. It is suggested that those elements be initiated as part of a Phase I study, as the recommended improvements advance toward the implementation stage.

As seen in Table 1, the refined list of proposed improvements under consideration is now classified into the following three categories:

- Major Routes (M#): Includes improvements recommended for 147th Street (IL83) and for Pulaski Road (Cook County Highway W43).
- Local Roads (L#): Includes improvements to the local street network that feed into the major roads and to the Metra commuter facilities. Items include changes to geometrics at key intersections, the vacating of segments of roadways, and the addition of segments of roads.
- Commuter Parking and Associated Facilities (P#): Includes recommendations for improved vehicular and pedestrian access (including pedestrian bridges) to the proposed commuter parking facility north of 147th Street.

The following 3 sub-sections provide additional discussion of each improvement listed in Table 1 considered by category. Refer to Appendix B for graphic representations.

II.3.a. Major Routes

M1. The suggested milling and resurfacing of 147th Street (IL83) from Karlov Avenue to Millard Avenue is to include a mountable or barrier median and channelization from Karlov Avenue to Abbotsford Road. The suggested median segments are divided into 4 sections (A, B, C, D) as follows:

M1-A Install a mountable median on 147th Street (IL83) from Karlov Avenue to Pulaski Road. Since Keystone Avenue is currently one-way north, a closed median would be prohibitive in that it would only allow eastbound right turns to enter. Under the suggested situation, the median may warrant a gap to better accommodate westbound left turns into northbound Keystone Avenue.

M1-B Install a mountable median on 147th Street (IL83) from Pulaski Road to Springfield Avenue, with left turn channelization for northbound Springfield Avenue and southbound Pulaski Road. Along with the median on 147th Street (IL83), it is suggested to convert the north leg of Harding Avenue to be right-in/right-out.

M1-C Install a mountable median on 147th Street (IL83) from Springfield Avenue to Waverly Ave, with left turn channelization for southbound Springfield Avenue and northbound Waverly Avenue, and with a closed median at Avers Avenue.

The VCEP Concept Plan depicts the Avers Avenue approach being modified to a right-in/right-out by adding a closed barrier median. The alternate suggested here is to eliminate the access of Avers Avenue to 147th Street (IL83), if possible through a modified redevelopment plan. Alternate routes are readily available.

It is also suggested to modify the 147th Street/Waverly Avenue intersection to provide a channelized left turn lane from eastbound 147th Street to northbound Waverly Avenue, and eliminate the southbound left turn lane on Waverly Avenue to eastbound 147th Street (IL83); which modifies the approach to be a right-in, left-in, and right-out, but not a left-out. The purpose is to force those commuters to exit the north parking lot with destinations east of the Midlothian Metra Station, to use the proposed traffic signal at Springfield, and not attempt to exit across 147th near the crossing and potentially block traffic on the tracks.

M1-D Install 6 to 9 inch barrier median on 147th Street (IL83) from Waverly Avenue to Abbotsford Rd, gapping the Rock Island District Line tracks, and taper down the median to the existing roadway conditions east of the tracks.

The VCEP Concept Plan shows the 147th Street (IL83) mainline widening returning to existing conditions west of the bridge over the Midlothian Creek. It is suggested that the 6 to 9 inch barrier median extend to the east side of the Rock Island District Line at-grade crossing to better prohibit vehicles from attempting to go around lowered railroad the Metra Rock Island District Line railroad tracks gates.

In addition to the existing 4 lanes of pavement on the roadway bridge over Midlothian Creek, there are approximately 8’ bituminous paved parkways and 5’ sidewalks on each side of the roadway adjacent to the Rock Island District Line at-grade crossing.

There appears to be room to widen for a median by reducing the parkways, without the need to widen the bridge. This would have to be verified by a structural engineer.

By reducing the paved parkway width, the useable area for pedestrians will also be reduced. If the resulting pedestrian width is less than desirable, the bridge over Midlothian Creek will need to be widened to accommodate the barrier median and wider sidewalks. If the bridge is widened, the Metra Rock Island District Line railroad crossing gates and signals would have to be relocated in association with the pavement widening. Coordination with Metra and IDOT will be necessary for this item. It should be noted that the Village would need to seek their own funding for this project and any related moving of the signals and gates; Metra does not have funding available for these items.

M2. It is suggested to investigate warrants for traffic control signals at the intersection at 147th Street (IL83) and the proposed Springfield Avenue intersection. As noted previously, a traffic signal may eventually be needed if the proposed removal of the south leg of Waverly Avenue and the north leg of Springfield Avenue being extended south to 147th Place, is implemented. This report has not assessed possible traffic signal warrants but notes the following points:

- There is already a painted school crossing at that location, currently a midblock crossing.
- The inclusion of a traffic signal near the existing traffic signal at Pulaski Road would require a traffic signal interconnect system.
- The inclusion of a traffic signal closer to the railroad would require coordination with Metra, ICC, and IDOT.

Once the changes to the side streets are made and the traffic is brought under the new median and lane configurations proposed for 147th Street, the signal may become more necessary for the safety of vehicles and pedestrians close to Metra, the school, and local commercial areas.

M3. Provide streetscaping on 147th Street (IL83) from Karlov Avenue on the west to Millard Avenue on the east, with appropriate accommodations made for current or future Pace Bus stops.

M4. Provide for streetscaping of Pulaski Road from the Metra Rock Island tracks to the south to Clair Boulevard to the north (just north of 144th Street) with appropriate accommodations made for potential Pace bus stops in the future.

M5. It is suggested to investigate traffic signal warrants to replace the emergency warning beacons (mounted on the fire station entrance signs) located at the intersection of Pulaski Road at 148th Street. The left turn channelization and tapers are already in place, which likely eliminates the need to widen the road. A traffic signal interconnect would be required to connect to the traffic signal at 147th Street (650 ft north), and coordination would be required with the at-grade crossing to the south (650 ft south). The inclusion of a traffic signal closer to the railroad would require coordination with Metra ICC, and the Cook County Department of Highways.

II.3.b. Local Roads

L1. A new roadway connection, being referred to as "146th Place", is proposed from Waverly Avenue to Springfield Avenue, and between 147th Street (IL83) and 146th Street. This roadway network change is the only one that affects the land usage as defined in the VCEP. The road would effectively shift the dividing line between residential and commercial uses to the north by a short distance, reducing the residential area slightly.

L2 → L5 The following items pertain directly to local road modifications and improvements in the southeast quadrant of 147th Street (IL83) and Pulaski Road. The improvements are required to accommodate a large scale, mixed use development with structured parking (shared for public and commuters). Refer to item 4 on the Concept Plan of Appendix A for a potential development footprint. The improvements include:

L2. Demolition and vacation of 147th Place from approximately 100' east of Pulaski Road to Waverly Avenue

L3. Reconstruct 148th Street from Pulaski Road to Waverly Avenue

L4. Removal of Waverly Avenue from 147th Street (IL83) to 147th Place

L5. Extension of Springfield Avenue south to 147th Pl to create a 4-leg intersection with 147th Street (IL83) and Springfield Avenue

L6. The removal of Hamlin Avenue from 147th Street (IL83) to 147th Place is proposed to eliminate the undesirable intersection of Hamlin Avenue adjacent to the Rock Island District Line at-grade crossing.

II.3.c. Commuter Parking and Associated Facilities, North of 147th St

P1. Modify the commuter parking facility North of 147th Street

The north parking lot design was shown very schematically on the Concept Plan and required additional considerations in regard to traffic flow of vehicles entering and exiting, as well as internal circulation.

- Local Road traffic changes related to the proposed north parking lot

  Traffic patterns on the local streets are expected to change in regard to the proposed consolidation of the parking into a proposed parking lot north of 147th Street (IL83) east of Waverly Avenue. Special attention needs to be paid to the revised traffic flow of the commuter traffic into and out of the relocated parking lot. The largest remote commuter parking lot is currently located south of 147th Street (IL83) and East of Pulaski Road, with direct access to both of those major routes. There are five other parking lots considered for consolidation up into the proposed parking lot north of 147th Street (IL83). Please see pages 4-15 through 4-18 of the VCEP for further information on the commuter lots proposed for consolidation and replacement. The proposed parking lot location has a less direct connection to both 147th Street (IL83) and to Pulaski Road, requiring that the commuter traffic pass through a residential area and possibly pass a school. A major portion of the traffic to and from the proposed parking lot is expected to flow across 146th St, proposed "146th Place", and Springfield Avenue to access 147th Street (IL83).

- Additional refinements to the proposed north parking lot

  The conceptual design of the proposed parking lot north of 147th St, which consolidates 486 spaces from 6 of the 7 existing lots, was designed in more detail with the goals of improving the entrance/exit locations, improving internal circulation, and to gain confidence that the proposed limits shown, and the amount of property required, will meet the minimum number of spaces required.

  Entrance locations:

  - To reduce traffic conflicts at the entrance/exit locations, it is suggested to move the entrances/exits up to line up better with the local roads on Waverly Avenue. The following changes are suggested:
  - The original connection to Hamlin Avenue has been modified to a proposed intersection with "146th Place"

- The driveway connection shown on the Concept Plan near Ridgeway Avenue has been moved slightly to line up better with Ridgeway Avenue
- The north limit of the parking lot shown on the Concept Plan has been shifted 140 feet north to Lawndale Avenue. A more detailed design revealed that the parking lot originally shown needed more land area to meet the minimum parking requirements of 486 stalls.
- The driveway entrance shown in the VCEP connecting to 147th Street (IL83) was removed since there is no entrance existing at that location. However, if an entrance is desired at that location, it is suggested to relocate the entrance to Waverly Avenue, away from the RR crossing.

Stall Layout: The three parking lot design options listed in Table 3 below were considered for alternates pertaining to the internal parking lot circulation. Each option used a similar overall footprint, typically using the north driveway at Lawndale Avenue as the north limit. Option 1 utilized 8.5' wide perpendicular stalls with long 2-way aisles and resulted in 542 spaces. Option 2 utilized 8.5' wide perpendicular stalls with short 2-way aisles, and resulted in 499 spaces. (Note that option 2 required a larger footprint). Option 3 utilized 9' wide 60 degree stalls with long 1-way aisles, and resulted in 496 spaces. Slightly wider stall widths were used to allow for more maneuverability when using the angled parking and the narrower 1-way aisles.

Table 3: Parking lot design options (refer to Appendix E for diagrams)

Design Options		Features	# of stalls obtained
1	Perpendicular stalls, with long 2-way aisles	Provides maximum space use and ease of understanding to the driver. Given that this layout exceeds the 486 space minimum requirement, the design can be shortened back to the south, but is not recommended.	542
2	Perpendicular stalls, with short 2-way aisles	Provides maximum circulation, simplest to understand, good opportunity to add lighting and landscape features; however takes more land area to meet the minimum number of stalls	499
3	Diagonal 60 degree stalls with long 1-way aisles	This option is more space efficient than short aisles, but less maneuverability given the 1-way aisles (traffic can be blocked by waiting vehicles). Also note that the flow in this design is "odd" given the odd number of 1-way aisles.	496

The result of the north parking lot design investigation favors Design Option 1, which is similar to that shown in the Concept Plan of the VCEP, with the slight revisions. The long 2-way aisle with parking on only one side was originally shown near Waverly Ave. This has been flipped to the Creek side for several reasons: moving the first aisle away from the entrances/exits offers more room for turning radii, and the drivers can then pick-up/drop-off along the creek side closer to the train platforms. Another suggested change is that the small section of parking lot, south of proposed "146th Place", be replaced with a loop of diagonal parking which results in better circulation and no need for the additional entrance shown in the Concept Plan.

P1A. Surface versus structure parking discussion

It should also be noted that a shared use parking structure, instead of a surface lot, has been suggested for the north parking lot location. Assessing the relative merits of surface parking versus structured parking at this location is beyond the scope of this report; however, if the Village wishes to investigate this issue further, the following items should be noted:

- An analysis comparing the reduced land area required for a structure versus the cost for a structure would have to be undertaken.
- Because of the constraints of the available parcels, further investigation would be required on assessing the feasibility of "fitting" a multi-level structure into the 175' wide corridor between Waverly Avenue and the creek.
- It should be determined if there are any other economically viable uses for the property, should it not be used for surface parking at that location.
- Use of surface parking for underground water retention could be explored here along with means of funding.

P2. Add Pedestrian Bridge

It is suggested to add a Pedestrian Bridge north of 147th Street over Midlothian Creek to serve the consolidated commuter parking lot proposed in that location. A proposed location of the bridge is shown in Appendix B with a conceptual illustration of the bridge shown in Appendix D. The bridge should be located to take advantage of the existing outbound platform north of 147th Street, thus negating the need to modify the existing platform. The Village, however, would need to obtain funding for the proposed pedestrian bridge. The existing pedestrian bridge south of 147th Street will be retained so that commuters who park at the proposed shared use parking structure to be located along Waverly Avenue between

148th and the proposed Springfield Avenue extension will continue to have access to the Metra commuter rail platforms located south of 147th Street.

P3. Shared Use Parking Structure

A 400 space shared use parking structure is to be part of the public/private redevelopment proposed in the southeast quadrant of 147th Street (IL83) and Pulaski Road. The parking structure would be built as part of a redevelopment and is to contain 196 spaces for commuter use, 204 spaces would be for other use.

The proposed replacement and new commuter parking spaces (surface or structured) would need to be designated commuter parking spaces with the option of shared-use only in the evenings and weekends.

III. Prioritization

Table 4A below shows the conceptual phasing order for the transportation improvements as listed in the original VCEP (dated 12/21/05).

Table 4A - Conceptual Phasing for the Improvements

Phase	Location and Description
1	Demolition and vacation of Hamlin Avenue from 147th Street to 147th Place
1	Demolition and vacation of 147th Place, removal of Waverly Avenue from 147th Street to 147th Place, and the extension of Springfield Avenue to 147th Place
2	Reconstruction and streetscaping of 147th Street (IL83)
3	Streetscaping of Pulaski Road

(From the VCEP, pp 4-10, 4-11)

The Midlothian VCEP describes a multi-phase improvement program for Village center parking. Phases One and Two of the Midlothian Parking Implementation Plan include the replacement and consolidation of 486 of the 623 total commuter parking spaces currently existing near the Midlothian Metra Station into the proposed replacement/expanded commuter parking facility north of 147th Street. The 137-space commuter lot just southeast of the Midlothian Metra Station and north of 147th Street (IL83) would remain. Phase Three includes developing a shared parking structure that would combine 196 additional commuter parking spaces with 204 general parking spaces within a redevelopment area south of 147th Street (IL83).

It was concluded that the original phasing order shown in the VCEP was general, but in line with functionality. An enhanced list of phases is shown in Table 4B which breaks down the roadway phases into the elements related to the 147th (IL83) modifications and the replacement/expanded commuter parking facility north of 147th Street. The items in the list are exclusive of redevelopment elements, such as purchasing property, relocating businesses or residences, and the creation of new elements for commercial or residential use as shown in the VCEP.

Table 4B - Refined Phasing for the Improvements

Ref.	*Phase*	*Location and Description*
L6	*1*	Closing the approach of Hamlin Avenue to 147th Street can initially be done by closing the approach and adding a cul-de-sac, and can likely be done through an IDOT permit. This improvement would enhance safety by reducing the chance of a car causing a queue over the Metra Rock Island District Line railroad tracks by waiting for a turning vehicle. Later private redevelopment can remove the remaining link from 147th Street to 147th Place as suggested in the VCEP.
L2, L3, L4, L5	*2*	Demolition and vacation of 147th Place, removal of Waverly Avenue from 147th Street to 147th Place, and the extension of Springfield Avenue to 147th Place can likely be done through an IDOT permit. This improvement could improve safety by reducing conflicts that result from offset intersections. A traffic signal warrant analysis should be done. The warrant analysis should include an analysis of the traffic changes due to the relocated consolidated parking lot.
M1, M2, M3	*3*	The addition of medians and improved channelization as part of the reconstruction of 147th Street (IL83) can likely be done through an IDOT permit. Safety can be improved by channelizing more turning vehicles into exclusive turn lanes. It would likely be cost effective to add the streetscaping elements of 147th Street (IL83), as discussed in the VCEP, with the reconstruction of 147th Street.
L1, P1, P3	*4*	The proposed 146th Place should be constructed in conjunction with the opening of the fully constructed replacement/expanded commuter parking facility to better serve the increased commuter traffic at this location. The north pedestrian bridge over Midlothian Creek should also be in place to provide a more direct path for commuters to the platforms. The replacement/expanded commuter parking facility north of 147th Street has several elements including accommodating a total of six existing commuter lots. The phasing of the construction of this commuter facility in conjunction with other commuter and shared parking facilities is explained on pages 4-15 through 4-18 of the VCEP (December 2005). As noted previously, Metra has a projected a

		need for 200 more commuter parking spaces by 2030 based on future development for the area and the Chicago Metropolitan Agency for Planning's 2030 household projections. The construction of the consolidated parking lot is dependent upon the development scenario for those parcels currently used for commuter parking. It is understood that as portions of the plan are implemented the Village will have to take into account the short term impacts on commuter parking availability so that arrangements can be made to assure adequate parking for commuters and businesses during construction phases. Throughout each step of the redevelopment process, the amount of Metra commuter parking at the Midlothian Metra Station must, at a minimum, remain at its current level resulting in no net loss of commuter parking during any of the phases. The displaced commuter parking spaces that may result from the proposed redevelopment cannot be replaced within other existing commuter parking lots.
M4	*5*	The suggested streetscaping of Pulaski Road can be done at any time since it does not tie into roadway or traffic modifications.

IV. Cost Estimates

Table 5A below shows the conceptual cost estimates for the transportation improvements as listed in the original VCEP (dated 12/21/05).

Table 5A - Conceptual Cost Estimates for the Improvements

Location and Description	*Concept estimate*
1. Demolition and vacation of Hamlin Avenue from 147th Street to 147th Place	$50,000
2. Demolition and vacation of 147th Place, removal of Waverly Avenue from 147th Street to 147th Place, and the extension of Springfield Avenue to 147th Place	$1,050,000
3. Reconstruction and streetscaping of 147th Street (IL83)	$2,950,000
4. Streetscaping of Pulaski Road	$1,950,000

(From the VCEP, pp 4-10, 4-11)

Please note that while parking construction costs are shown in the VCEP (December 2005) on pages 4-16 through 4-19, costs have risen considerably since the publication of that report. For example, the estimated cost for surface parking has risen from an average of $5,000 per space to $10,000 per space. Accordingly, as the Village pursues implementation of parking facilities those costs should be reviewed and updated.

Table 5B below reflects refined cost estimates for the transportation improvements listed in the VCEP, and include the modifications and new priorities as suggested in this report. A detailed breakdown of the costs is included in the Appendix F. The order of the items generally follows the order shown previously in the Prioritization section.

Table 5B - Refined Cost Estimates for the Improvements

Reference	*Location and Description*	*Refined estimate*
L6	Demolition and vacation of Hamlin Avenue	$30,000
L2, L3, L4, L5	Demolition and vacation of 147th Place and realignment of Waverly Avenue to meet Springfield Avenue	$980,000
M1, M2	Reconstruction of 147th Street (IL83), and traffic signal	$1,290,000
M3	Streetscaping of 147th Street (IL83)	$1,380,000
L1, P3	Construction of 146th Place and New pedestrian bridge over Midlothian Creek	$680,000
M4	Streetscaping of Pulaski Road	$1,440,000

V. Funding

Certain types of projects, such as safety improvements, traffic congestion mitigation, and context sensitive solutions, are believed to have higher funding priorities with federal and state agencies, and some of the phases outlined in the VCEP and this report may fall into one of those categories.

V.1. 147th Street (IL83)

Given that 147th Street (IL83) has been recently repaved, improving 147th Street is not currently a priority to IDOT, and near term funding would likely be required from private sources. If the improvements to 147th (IL83) use private funds, they can likely be done through IDOT permitting in lieu

of a full Phase I study (through Programming), with only traffic study specific to the intended change to 147th (IL83) needed.

IDOT plans indicate that no projects within the study area are included in the current multi-year program. It is recommended that this report be submitted to the Illinois Department of Transportation to open discussions on the recommended improvements impacting 147th Street (IL83) particularly in light of the proposed study of potential interchanges between I-294 and I-57 and at I-294 and 147th Street (IL83).

V.2. Commuter Parking and Associated Facilities

One potential source of funding for those portions of the improvements that benefit commuters is the Congestion Mitigation & Air Quality Improvement Program (CMAQ). A brief discussion of the CMAQ program is presented in Appendix G. Transportation control measures covered by CMAQ, which may be pertinent to the Midlothian parking improvements program, include development of fringe and transportation corridor parking facilities serving transit. The proposed increased parking should increase transit capacity. Parking structures may be funded through the CMAQ program. However, CMAQ funding and other grant sources are typically not available for funding *replacement* commuter parking, such as for the reconfigured and expanded north parking lot.

In accordance with this plan, six of the seven commuter lots will be readapted into other land uses in support of Village transit-oriented redevelopment and a Village Green. A majority of these lots, mostly Metra-owned, were constructed or rehabilitated in the last few years. The Village and/or a developer would need to replace the spaces lost due to redevelopment. Plans call for including the 486 displaced commuter parking places into the proposed expanded commuter parking facility north of 147th Street that could accommodate up to 542 spaces, 56 spaces more than needed to meet replacement requirements. In addition, 196 additional new commuter parking spaces and 204 additional spaces for other uses are planned to be included in a shared parking structure south of 147th Street as proposed in the VCEP.

The following should be noted with regard to funding for the redevelopment of existing spaces proposed for replacement, for new spaces, and for structured commuter parking:

- Most grant dollars, including Metra's, are not available for financing the replacement of commuter parking spaces that are displaced from designated and/or historical commuter parking facilities.

- The financial obligations for any commuter parking lots proposed for redevelopment on land purchased by State and Federal funds will need to be discussed with IDOT. Federal and State interest in the land remains in perpetuity since the value of the land virtually always appreciates, maintaining a continuing Federal and State interest. Therefore, if the land is no longer used for commuter parking, then either the current value of the land is returned to the federal and state governments, or the interests are transferred to a replacement asset funded by the Village. Performance obligations associated with Federal and State funds need to be met by the Village via making certain the investment made previously stays in public transit.
- Parking structures are extremely costly to build, operate, and maintain. Consideration should be given to involving multiple partners (public and private) in order to share the spaces and costs of a proposed parking structure and any new infrastructure associated with the facility (roads, sidewalks, pedestrian bridges and tunnels, etc.).
- Metra only participates in building new parking spaces where demand warrants and funding is available.
- Grant dollars for the construction of structured parking has been limited to date and securing these funds is a highly competitive process.
- While Metra has participated in funding new commuter parking spaces within multi-use structures when there was a demand for additional spaces and when Metra had funding available, Metra's level of participation generally did not cover the cost per space but generally equated to the capital cost of surface spaces.
- Commuter parking fees within the proposed parking structures need to remain comparable and competitive with commuter parking fees within the Metra system.
- The Village would need to discuss the proposed structures and replacement of commuter parking with Metra’s Executive Director.

The Village would need to obtain funding for a new pedestrian bridge north of the tracks, any potential improvements to the north (outbound) platform to serve the proposed pedestrian bridge, and any related moving of the signals and gates of the railroad crossing due to the proposed raised median along 147th Street to the east side of the at-grade railroad crossing. Metra has no funding that might be allocated for these projects. Further discussion with Metra will be necessary for these projects.

Appendix A

Village of Midlothian

Village Center Enhancement Plan

December 21, 2005

URS Corporation
122 S. Michigan Avenue
Suite 1900
Chicago, Illinois 60603

Business Districts, Inc.
627 Grove Street
Evanston, Illinois 60201

Medium-Density Residential – Designation to provide transition from exiting neighborhood densities that average 6 du/ac. Attached town homes, 2-flats, 3-flats and six-flats are envisioned with parking along rear alleys.

- 14 du/ac recommended

Transportation and Circulation

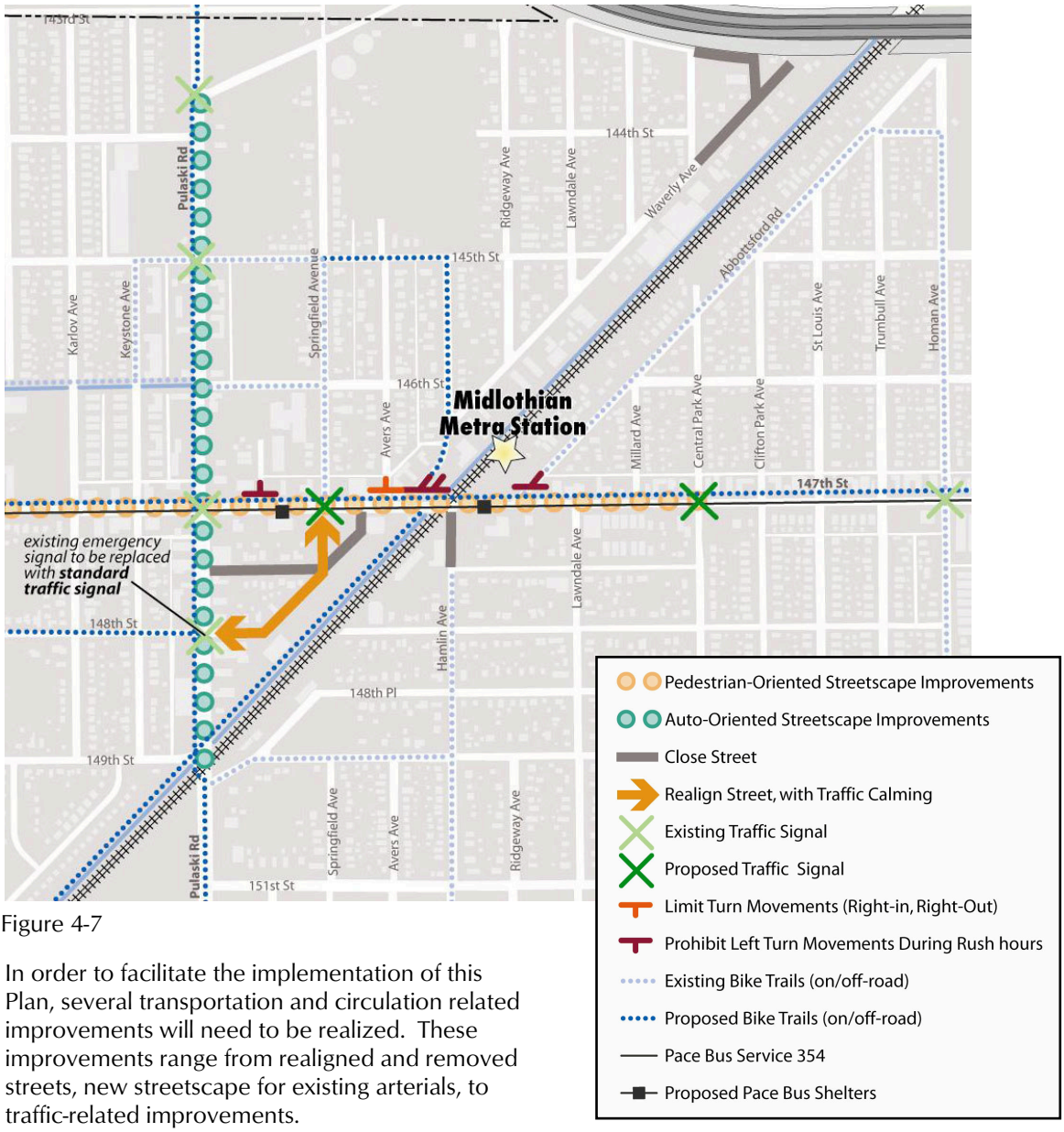


Figure 4-7

In order to facilitate the implementation of this Plan, several transportation and circulation related improvements will need to be realized. These improvements range from realigned and removed streets, new streetscape for existing arterials, to traffic-related improvements.

Realigned and Removed Streets

The concept plan recommends the demolition of several roadways to accommodate future land uses as well as to reduce the number of offset or less optimal intersections in the Study Area. Each of these projects will require the procurement of design services and will have to go through permitting with the agencies with jurisdiction.

1. Hamlin Avenue between 147th Street and 147th Place will be permanently removed in order to eliminate the unfriendly intersection at 147th Street next to the existing Metra Rock Island tracks. Additionally, this will provide a pedestrian link from the redevelopment site between Hamlin and Lawndale to the Village Green. Illinois Department of Transportation (IDOT) approval of this project will be required as 147th Street is under their jurisdiction. (Phase 1)

2. 148th Street will be reconstructed from Pulaski Road to Waverly Avenue and Waverly Avenue will be reconstructed from 148th Street to 147th Place. The portion of Waverly Avenue between 147th Place and 147th Street will be demolished to accommodate a larger Village Green. Springfield Avenue will be extended south of 147th Street to 147th Place, which will meet with the reconstructed portions of Waverly Avenue. This will make the Springfield Avenue and 147th Street intersection and the 148th Street and Pulaski Road intersection key entrances to the north and south portions of the Study Area on the west side of the tracks. The existing emergency signal at the intersection of 148th Street and Pulaski Road will be replaced with a standard traffic signal. IDOT and Cook County Highway Department (CCHD) approval of this project will be required as Pulaski Road and 147th Street are under their jurisdiction. (Phase 2)
3. Waverly Avenue will be demolished and removed along with the alleys associated with this roadway between 144th Street and I-294. This will make room for the creation of Compensatory Storage Site D as discussed in the Floodplain Management Section. (Phase 2)
4. 147th Place between Pulaski Road and Waverly Avenue will be permanently removed in order to create a large site for a future development between Pulaski Road, 147th Street and the Rock Island tracks. CCHD approval of this project will be required as Pulaski Road is under their jurisdiction. (Phase3)

New Streetscapes

One of the major aspects of the proposed concept plan is to create a pedestrian friendly atmosphere for the development in this area. The following streetscape initiatives will assist with the implementation of this plan:

1. 147th Street will be reconstructed and streetscaped between Keeler and Central Park Avenues in order to create a pedestrian friendly experience. This streetscape project will maintain two through lanes in each direction as well as maintain the turn lanes as they exist now at the intersection of 147th Street and Pulaski Road.
    a. This project will be considered by IDOT as an improvement that will most likely require a Phase I engineering study. The signals that are proposed on 147th Street will need to meet the IDOT traffic signal warrants prior to installation.
    b. The streetscape improvements will have the following elements:
        i. Turn lanes and a signalized intersection will be constructed for the intersection of 147th Street and Springfield Avenue.
        ii. Left turn movements from 147th Street to Waverly Avenue, Abbotsford Road, proposed reconfigured and expanded commuter parking lot north of the tracks and the alley between Springfield Road and Pulaski Road will be restricted during the afternoon peak hours. Left-turn movements from Waverly Avenue, Abbotsford Road and the alley onto 147th Street will be restricted during morning peak hours.
        iii. On-street parking will be eliminated and planted medians will be installed between Karlov Avenue and the Rock Island tracks.
        iv. Avers Avenue will become a right-in/right-out intersection due to the proposed medians and the proximity of Avers Avenue and Waverly Avenue
        v. A new traffic signal will be installed at Central Park Avenue and 147th Street.
        vi. Sidewalks will be reconstructed and various landscape and hardscape improvements are recommended for the entire streetscape segment.
        vii. New decorative lighting will be installed to improve the character of the street.

2. Pulaski Road will be enhanced between the Rock Island tracks to the south and Clair Boulevard to the north, but will be maintained as an auto-oriented arterial. CCHD approval of this project will be required as Pulaski Road is under their jurisdiction.

    a. The nature of these improvements will be mostly outside the curb line and will include the following:

        i. New landscaping

        ii. New sidewalks

        iii. New lighting

        iv. Milling and resurface of existing roadway.

Metra and Pace

Improving existing transit facilities is an important part of the Village Center redevelopment. The commuter train station is a valuable asset to the Village of Midlothian and this Plan is focused on maximizing the station's potential to spur development.

This Plan does not suggest any changes to the Pace route location; however, if demand develops, increased frequency of buses would be recommended. This Plan does call for the installation of bus shelters on both sides of the Rock Island tracks and on both sides of 147th Street. This coordinates well with the pedestrian-oriented streetscape that is planned for 147th Street.

On a system-wide basis, Metra regularly monitors its service and capacity levels to determine if there is a need (and available funding) to add additional cars or service to a particular rail line. Due to projected population and household growth by 2030 in the Study Area, this Plan accounts for this anticipated growth by adding 200 new commuter spaces in the Study Area.

According to this Plan, the Village plans to redevelop six of the seven commuter lots, or 486 existing spaces, to make room for their transit-oriented redevelopment and Village Green. A majority of these mostly Metra-owned lots were recently constructed or rehabilitated in the last few years. Most grant dollars, including Metra's, are not available for financing the replacement of commuter parking spaces that are displaced from designated and/or historical commuter parking facilities. The Village and/or a developer would need to replace the spaces lost due to redevelopment.

Due to the Plan's reconfigured and expanded lot north of the tracks that would accommodate additional and replacement commuter spaces, the Village sees a need to construct a pedestrian bridge and any potential improvements to the platform from this lot to the north (outbound) platform. The Village would need to obtain funding for this pedestrian bridge and any improvements to the platform; Metra has no funding that might be allocated for such a project.

Phasing of Transportation Related Improvements

The phasing of the transportation related improvements that are listed above will be linked to the phasing of development as it occurs in the Study Area. The following is the order transportation improvements should be addressed:

1. Demolition and vacation of Hamlin Avenue is directly linked to the residential and commercial developments that surround this portion of roadway. Therefore, the Village should have the developer include this work in the design of the new development areas when it occurs. These two development sites are in Phase 1 as shown on the phasing diagram.

    Project Cost $50,000

2. Demolition and vacation of 147th Place and realignment of Waverly Avenue cannot be completed prior to the acquisition of properties that abut these roadways. Additionally, these improvements are linked to the floodplain management improvements that are being suggested in the floodplain management section of the report. The demolition, vacation and realignments will be completed as part of the Phase 1 Plan.

    Project Cost $1,050,000

3. The reconstruction and streetscaping of 147th Street will be a major improvement creating a pedestrian focus for the Study Area. However, 147th Street is a State route and the modifications proposed will have to be permitted through IDOT. Due to timing of these approvals and the fact that this improvement is not necessary to generate developable areas, the reconstruction and streetscapes should be associated with Phase 2 as shown on the phasing diagram.

   Project Cost $2,950,000

4. The streetscaping of Pulaski Road should be considered as part of the Phase 3 improvements due to the timing associated with the County approvals.

   Project Cost $1,950,000

Floodplain Management

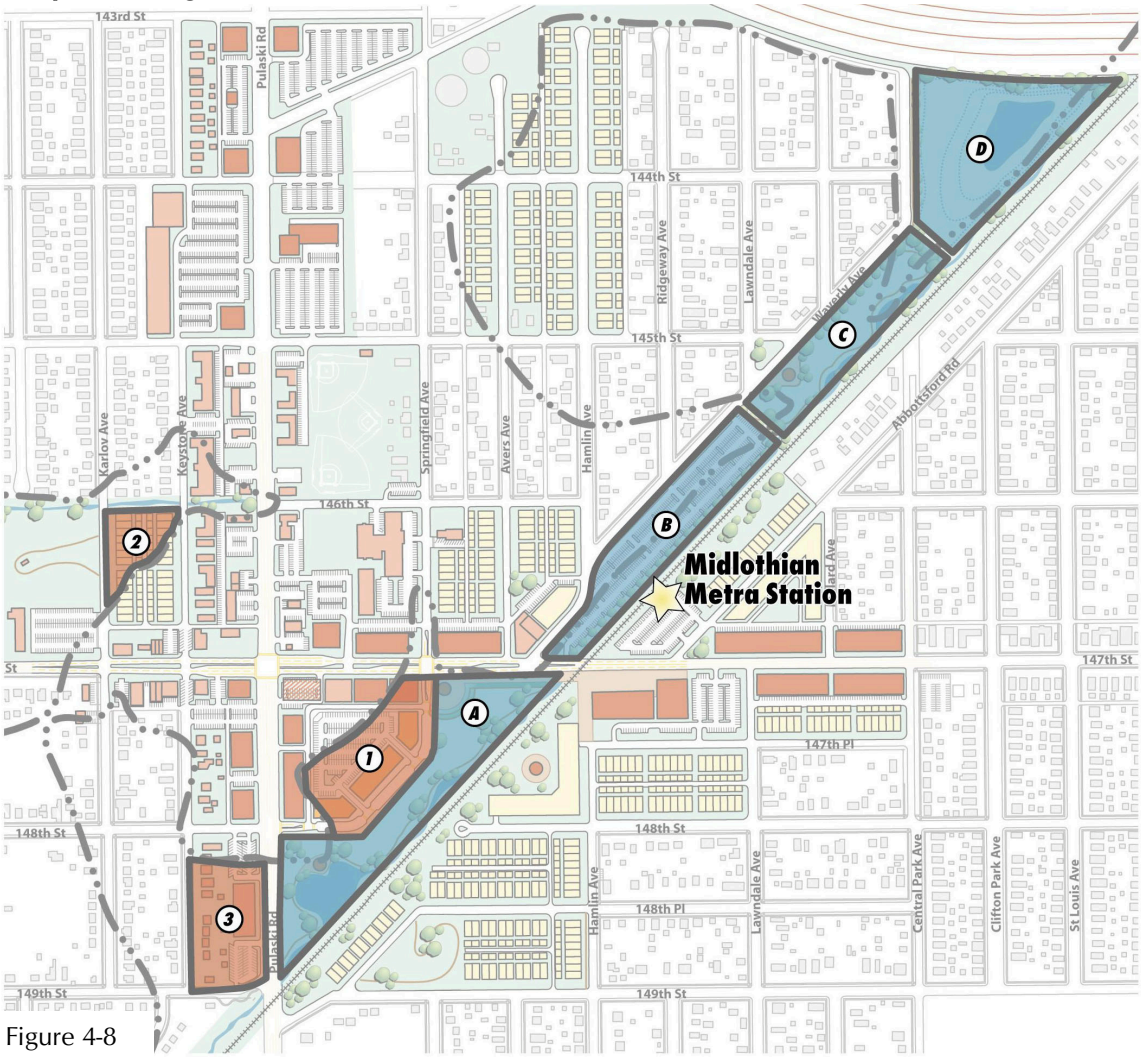


Figure 4-8

Floodplain/Floodway Fill

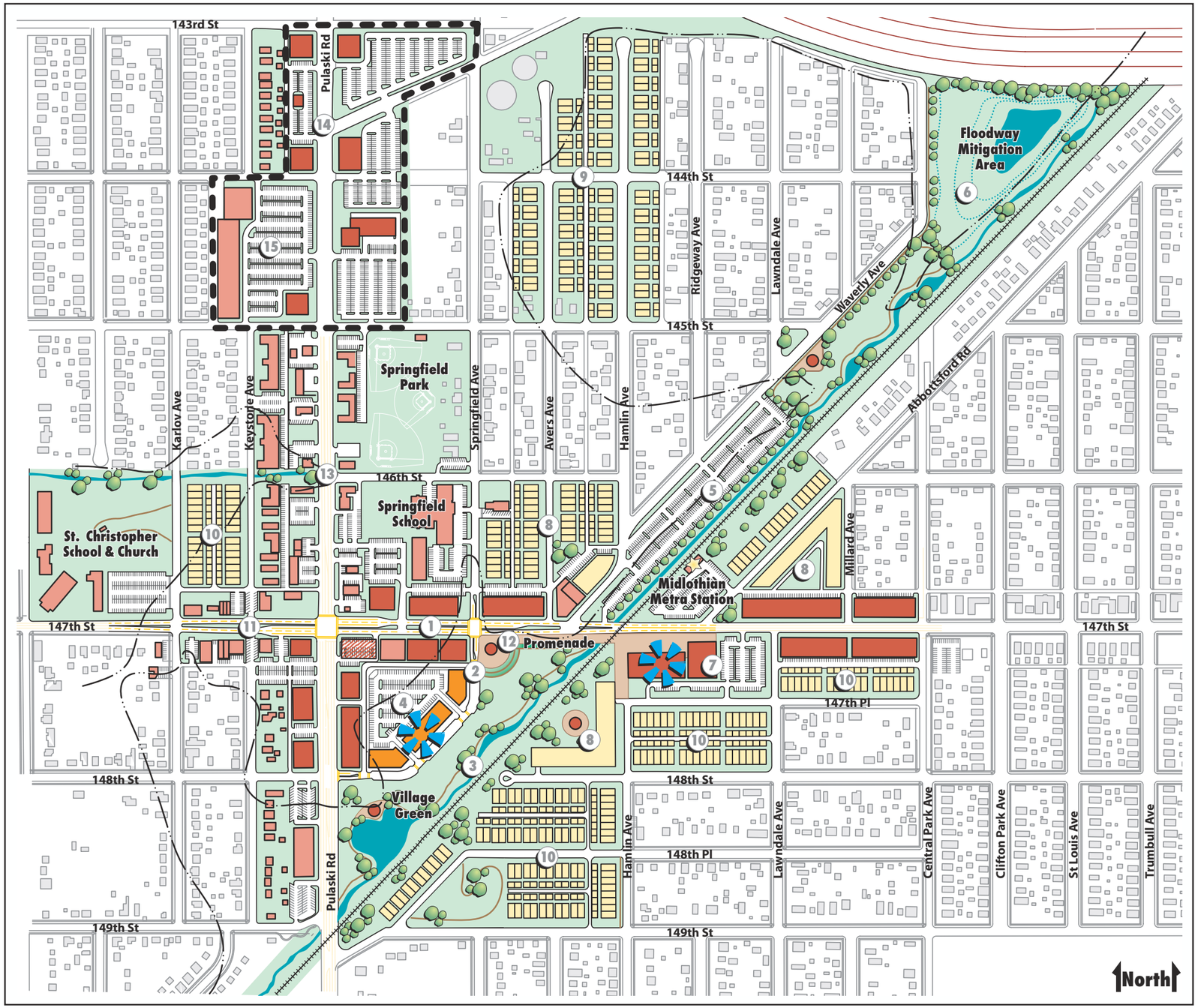
1. Major Mixed Use Redevelopment Site
2. Residential Infill Area west to St. Christopher's
3. Far Future Commercial Redevelopment Site

Compensatory Storage Sites

A. Village Green Midlothian Creek Enhancement
B. Commuter Parking/Compensatory Storage
C. Central Compensatory Storage Opportunity Site
D. Major Compensatory Storage Opportunity Site

Figure 4-4

Concept Plan



- Near Term Commercial/Mixed Use
- Long Term Mixed Use
- Residential Redevelopment Priority Site
- Existing Structures
- Village Hall Options
- Auto Sales Opportunity Areas

Notes:

Pedestrian-Oriented Core

1. Pedestrian-oriented core with mixed-use buildings.
2. New road segment to connect area to north and west neighborhoods.
3. The "Midlothian" Village Green.
4. A large-scale, mixed use development with structured parking (for public and commuters) once floodplain issues have been resolved. Potential Village Hall location.
5. Commuter parking expansion area.
6. Floodplain mitigation area.
7. Large-scale, mixed-use opportunity site and potential Village Hall location.

Residential

8. Large parcel residential redevelopment sites.
9. Residential development on wooded site.
10. Residential redevelopment as feasible.

Streetscape

11. 147th Street streetscape treatments.
12. Pedestrian promenade to link east and west side of railroad tracks.
13. Pulaski Road streetscape treatments.

Auto-Oriented Uses

14. Auto sales opportunity areas.
15. Facade, parking lot and landscape enhancements, outlot development, and/or site reuse.

Village of Midlothian

Village Center Enhancement Plan

prepared by: URS

MIDLOTHIAN TRANSPORTATION STUDY
Prepared for: Inclusion in the Village of Midlothian TOD
April 14, 2005

This memo presents preliminary information obtained from IDOT, Pace, Metra, and URS field observations related to the existing conditions of the Midlothian Village Center's transportation circulation, access, and transit services. At this stage, the following information was obtained and observed:

- Current access to Midlothian
- Intersection capacity analysis information for intersections of concern
- Commuter Rail
- Bus
- Parking
- Wayfinding Signage
- Pedestrian and Bicycle

The Village of Midlothian Village Center and related Metra train station is accessible by the major east-west street of 147th Street (Illinois Route 83), and the major north-south street of Pulaski Road. 147th Street provides accesses to Interstate 57 at approximately 1.8 miles east of the village center and 1.5 miles to the south. The project study area is shown in the attached Figure 1, which presents existing information from Metra, IDOT, and field observations from URS.

Within the downtown area, the regional arterials are 147th Street and Pulaski Road. The intersection of 147th Street and Pulaski Road is the main signalized intersection in the core downtown area. The other streets within the study area consist of local residential or commercial streets. The intersections of these local streets with 147th Street or Pulaski Road are all stop sign controlled, except the intersections of 145th Street / Pulaski Road and Homan Avenue / 147th Street, which are signalized. Other intersections include four-way stops or two-way stops.

Vehicular access from the north and south is provided primarily along Pulaski Road. Pulaski runs south of Midlothian to 159th Street (US Route 6), which then ties into Interstates 57 and 294. Access from the west and east is provided primarily along 147th Street. A full access interchange with Interstate 57 is located a short distance to the east. 147th Street runs east to tie into Interstate 57. 147th Street is a State-owned and maintained highway. Pulaski Road is under the jurisdiction and maintenance of Cook County. All other streets are under the jurisdiction of the Village of Midlothian.

The Metra/Rock Island tracks cross 147th Street at grade (from the northeast to the southwest) about 1,500 feet east of the 147th/Pulaski intersection between Waverly and Hamlin Avenue. On 147th Street, traffic backs up while outbound trains cross and stop to load and unload passengers. Due to commuter parking being on both sides of 147th Street, the design of the outbound platform overlapping 147th Street is to provide commuters safety and extra time to cross the street after disembarking the train. Inbound trains completely clear 147th Street before loading and unloading passengers on the north side of 147th Street, allowing the gates to cycle and minimally impact traffic. The Metra/Rock Island tracks cross Pulaski Road at 149th Street, about 1,400 feet to the south of the 147th Street / Pulaski Road intersection; the train does not stop on this crossing and the impact to traffic appears minimal. Warning lights and gates are present at both railroad crossings (147th Street and Pulaski Road).

<u>Intersection Capacity Analysis</u>
A traffic analysis was performed for several of the key intersections within the Midlothian Village Center study area. The intersections chosen for the study represent the major intersections with the highest volume of traffic within the area, as well as key intersections of interest to the community for reasons of pedestrian and vehicular accessibility and safety. This study obtained a preliminary sampling of turning movements and traffic volume calculations for the peak hour.

A team of seven technicians paired off to count cars, heavy trucks, buses and pedestrians. Each team conducted two consecutive half-hour counts at two intersections: one intersection count occurred around 4:30 PM, and the second

intersection count occurred around 5:10 PM on a typical mid-week day. The counts were then prorated to obtain peak hour volumes.

Electronic counters were downloaded and numbers generated for each of the seven intersections. The existing peak hour volumes for these intersections reflecting turning movements are shown on the attached Figure 1. The following table reflects the total number of cars per direction (regardless of turn) through each intersection, the percentage of heavy trucks and buses, and a pedestrian count for peak hour.

Peak Hour Intersection Counts

Intersection	Vehicles per hour (Approach volumes each leg)	Percentage of Heavy Trucks and Buses	Pedestrians
Pulaski / 148th Street	1416 (N)	1.3	4
Minor intersection – Fire access	1010 (S)	0.4	7
	80 (W)	0	1
	68 (E)	0	0
Pulaski / 147th Street	1382 (N)	1.1	3
Major intersection of Village Center	825 (S)	1.7	3
	1170 (W)	0.2	0
	1026 (E)	0.6	4
147th / Springfield Avenue	44 (N)	0	0
Intersection associated with	922 (W)	0.5	10
Springfield School	866 (E)	0.5	15
147th / Waverly Avenue (south)	36 (S)	0	1
Intersection related to Metra	893 (W)	0.6	8
parking	971 (E)	0.7	22
147th / Waverly Avenue (north)	66 (N)	0	0
Intersection related to Metra	910 (W)	0.9	1
parking	968 (E)	1.5	15
147th / Hamlin Avenue	64 (S)	0	6
Collector Street parallel to Metra	858 (W)	0.6	6
tracks	938 (E)	1.1	11
147th / Abbottsford Road	104 (N)	0	1
Collector Street parallel to Metra	982 (W)	0.7	17
tracks	922 (E)	0.6	4

Note that the counts in the directions of the regional arterials (namely Pulaski Road and 147thStreet) are significantly higher and account for all of the heavy truck and bus traffic observed during this traffic count. Although no excessive congestion was observed during this count – that is, a queue of traffic cleared the intersection within one signal cycle, the Village expressed the following concerns regarding the state of current traffic control in the area:

- Consider signalizing the intersection at 147th Street and Springfield Avenue, as the school to the north generates young pedestrian traffic and it is difficult and dangerous to cross the street.
- At the 147th Street railroad crossing and one intersection east and west of the tracks, traffic is often backed up behind cars that attempt to turn left after the crossing gates lift. This often congests the roadway and only makes one lane truly useful: consider a turning lanes and prohibited movements during peak hours through the Village Center.
- Consider a signal at Central Park Avenue, as it is currently difficult and dangerous to cross, and consider eliminating the signal at Homan Avenue. A fire station exists at 147th Street / Homan Avenue.

Village Public Works expressed a concern that the infrastructure on the east side of the tracks to Millard Street is in poor condition, as the watermain breaks often in this area. Consider replacing the watermain, which lies 2 feet from the back of the north curb of 147th Street under the existing sidewalk.

Further traffic and infrastructure studies, which reflect the plans for the Midlothian Village Center and current conditions, are recommended to best guide and prioritize needs of the community vehicular and pedestrian traffic, safety, and accessibility to the downtown businesses and services. Locations where new traffic signals are desired will require a traffic signal warrant analysis to be performed. If the results of the analysis indicate that warrants are met, the Village may propose the installation of the signal.

Commuter Rail

Metra provides passenger service on the Rock Island District Main Line. This line runs from Chicago to Joliet and passes through the Village Center of Midlothian. The effective use of Metra parking in March 2005 was 96%. Effective uses are defined as assuming the number of permits sold is equal to the numbers of permits used up to the capacity of the lot. The parking lots are near capacity due to convenient service to and from Chicago. The majority of commuters using the Midlothian Station (69%) drive to the station alone, while 13% walk, 11% are dropped off, 5% carpool, and 1% use Pace. Only 40% of the commuters using the station have a Midlothian address. Residents of Crestwood, Oak Forest, Orland Park, Markham and Posen account for another 38%.

During the weekday, trains begin inbound service at the Midlothian Station at 5:39 AM to the Chicago LaSalle Street Station, providing express service until 8:15 A.M. and regular service throughout the day. Outbound service begins from the Chicago LaSalle Street Station and arrives at the Midlothian Station at 7:31 AM with regular service throughout the day, and express service from Chicago LaSalle Street Station and Midlothian Station between 2:55 P.M. and 6:15 P.M. There are 23 weekday inbound and 23 weekday outbound trains. Metra also provides service on the weekend with 10 trains in both directions on Saturday and 8 trains in both directions on Sunday.

Ridership counts that Metra conducted on October 29, 2002 showed a weekday inbound ridership of 1,162 boardings and 24 alightings and a weekday outbound ridership of 17 boardings and 1,193 alightings.

Bus

Existing Pace bus service consists of Route 354 (Harvey – Tinley Park) that serves downtown Midlothian along 147th Street. During the weekday, the line consists of hourly bus service in the morning beginning about 6:20 AM for eastbound trips, and 6:06 for westbound trips. The service runs hourly all day ending around 7:16 PM for eastbound and 6:06 PM westbound. Bus service does not increase during the rush hours, according to the Pace schedule. Pace is currently exploring the idea of rearranging the entire south suburban bus routes.

Parking

Metra surveyed the existing seven commuter parking lots within the Midlothian Station area in March 2005. The attached figure illustrates the existing lots and the parking spaces contained within each lot. The total capacity of Metra parking in the downtown area is 611 spaces, including 12 handicapped spaces. On a typical day, the overall effective use of the Metra parking lots is 96%. Monthly permits cost $20-25, and daily parking costs $1. Therefore, any increased ridership as a result of development downtown would require additional parking for Metra and the area. Additional on-street parking that is not considered Metra parking is also located within the Study Area.

Wayfinding Signage

With a significant increase in proposed parking and the possibility of shared-use parking, development of a comprehensive and easily understood wayfinding system should be implemented. Directional signs should be installed at key entry points, as well as within the downtown area, guiding motorists to downtown destinations and to the various types of parking available such as permit, shopper, and daily parking. Information kiosks describing the retail establishments and showing parking locations placed at various points within the downtown area would be an added benefit to those visiting the downtown area. Upcoming events within the downtown area and the Village could be posted to provide additional visibility.

Pedestrian and Bicycle

Several plans have been created throughout the community, including the *Midlothian Pathway Plan prepared by Camiros, Ltd, April 28, 2000,* that propose to bring bicycle and pedestrian access routes to the area from all sides of the Village. According to the *South Suburban Mayors and Management Association Bikeway Plan, July 2001,* there are both existing and proposed trails within the area. These existing and proposed trails are shown on Figure 1. Additionally, Figure 1 shows suitable local roads for trails, and proposed on-road trail improvements. According to Metra's

Figure 1:
Existing Transportation

The existing transportation system in tMidlothian's Village Center Area consists of arterial, collector and local streets arranged in a grid system bisected by the Metra/Rock Island District Line. The area is served by both bus and train public transportation. Figure 1 highlights the existing transportation network, based on research and field surveys undertaken by the Consultant.

Highway Access - The arterials within the area are 147th Street and Pulaski Road. Pulaski connects to Route 6 which ties into I-57 and I-294.

Bus Service - Pace Bus Route 354 serves the central portion of the area along 147th Street providing access to the Midlothian Metra Station from Tinley Park in the west to Harvey in the east.

Intersection Capacity - An analysis was conducted in April 2005 of key intersections focusing upon turning movements and traffic volume for peak hours. The intersections of Pulaski and 147th /148th had the highest count within the area.

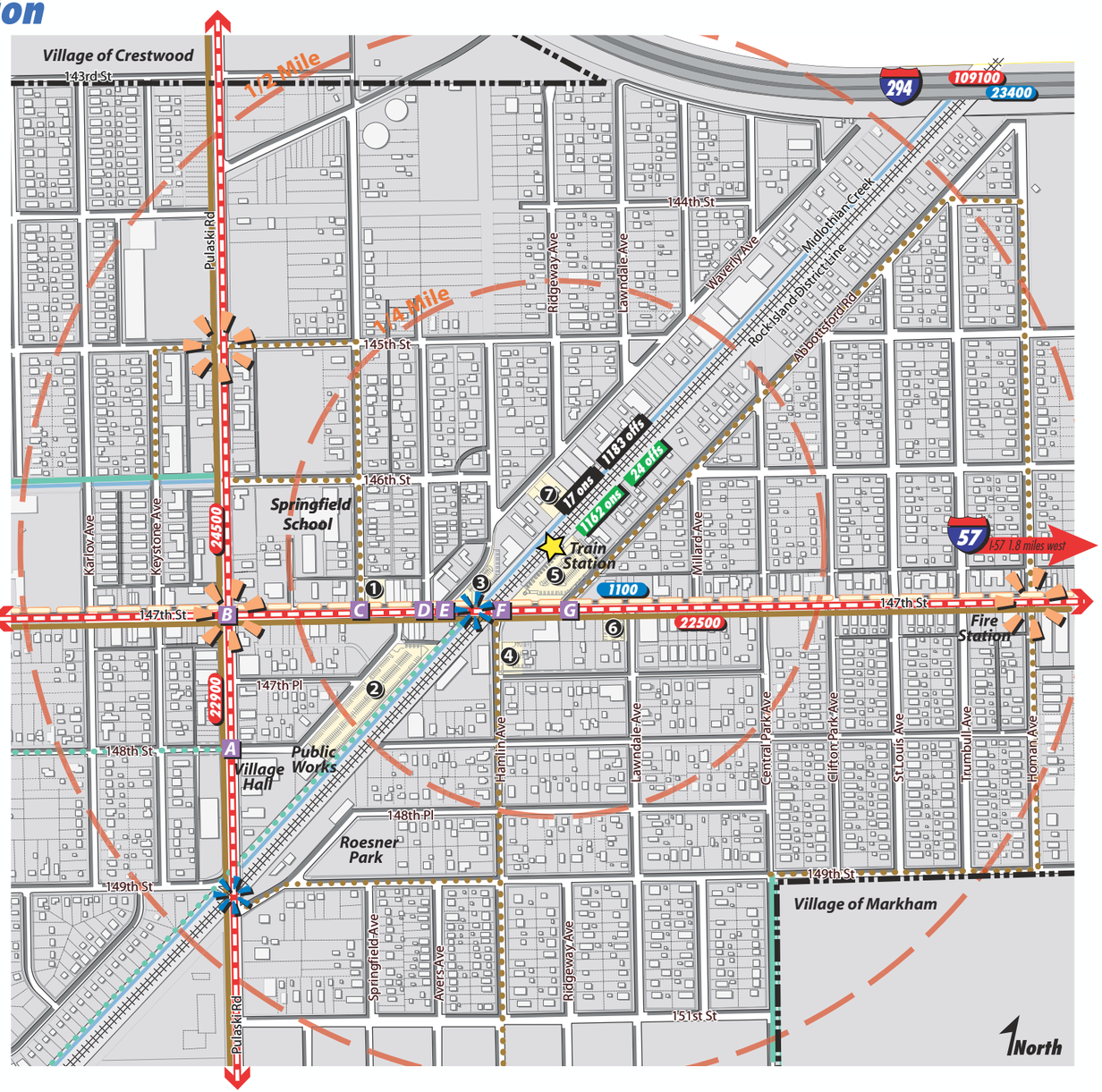
Trails - Several plans exist that propose to bring bicycle access routes to the area from all sides of the Village. The Village's own *Midlothian Pathway Plan* (2000) outlines a connected trail system for both pedestrians and cyclists. According to the *South Suburban Mayors and Managers Association Bikeway Plan, July 2001*, there are both existing and proposed trails within the area.

Existing Trail (On and Off-Road)
Proposed Trail (On and Off-Road)
Proposed On-Road Trail
Suitable Road for Trail

Commuter Rail - Metra provides passenger service on the Rock Island District Main Line from the Midlothian Metra Station. Servise is provided between Joliet and Chicago's LaSalle Street Station.

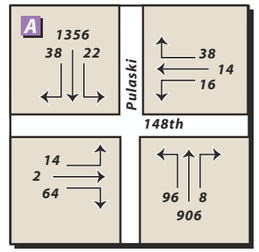
Commuter Rail Parking - Seven paved Metra Commuter parking lots with a total of 611 spaces are located within the Area.

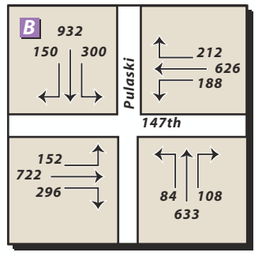
Commuter Parking Key	
❶ 22 spaces	❹ 44 spaces
❷ 278 spaces	❺ 137 spaces
❸ 57 spaces	❻ 17 spaces
	❼ 68 spaces

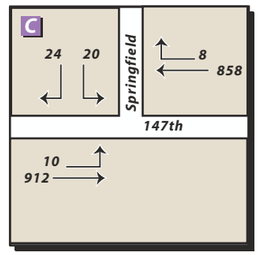


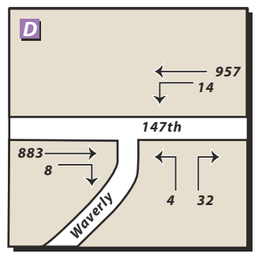
Legend:

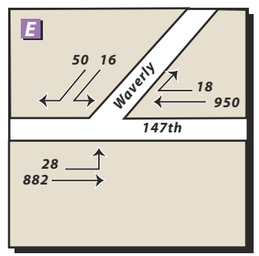
- *Freeway*
- *Arterial Streets*
- *Midlothian Metra Station*
- *Metra Inbound Ridership (2002)*
- *Metra Outbound Ridership (2002)*
- *IDOT Car ADT (Average Daily Travel)*
- *IDOT Truck ADT (Average Daily Travel)*
- *Intersection P.M. Peak Hour Counts*
- *At-grade R.R. Crossings*
- *Pace Bus Route 354*
- *Commuter Parking Lots*
- *Signalized Intersections*

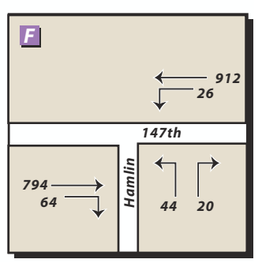


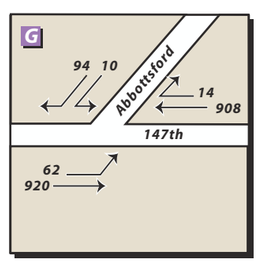






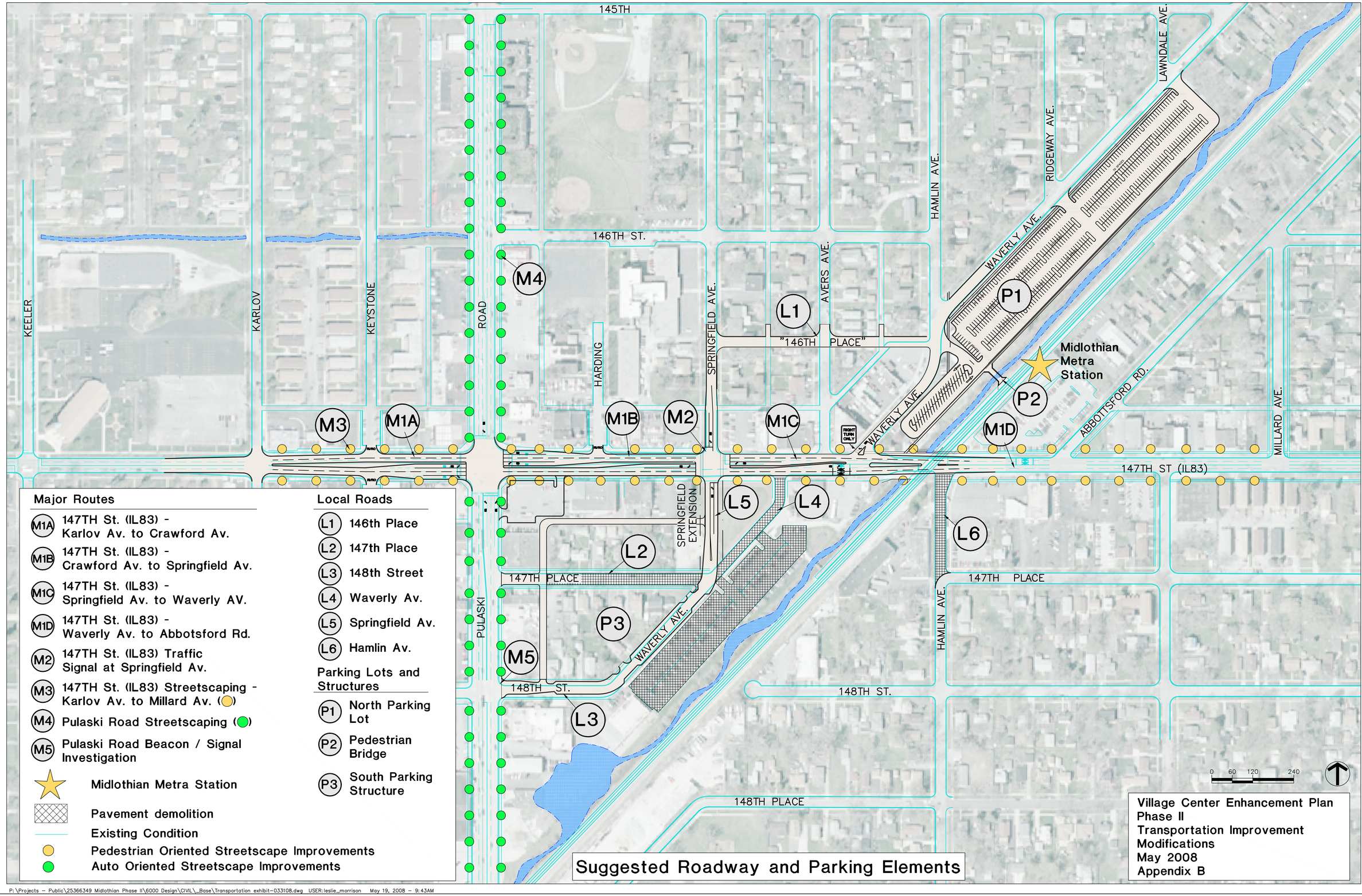






September 2003 bicycle-parking inventory, there are 21 bicycle-parking spaces available at the Midlothian Station. Twenty-nine percent, or 6, of the spaces are utilized.

Appendix B



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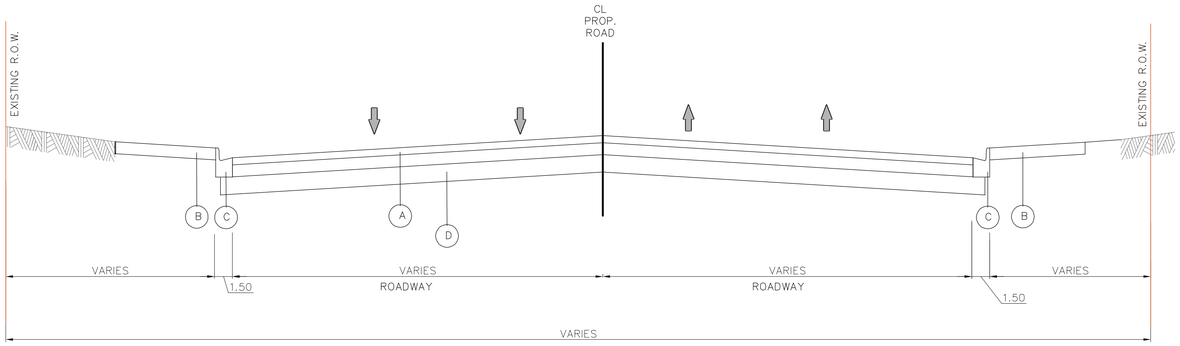
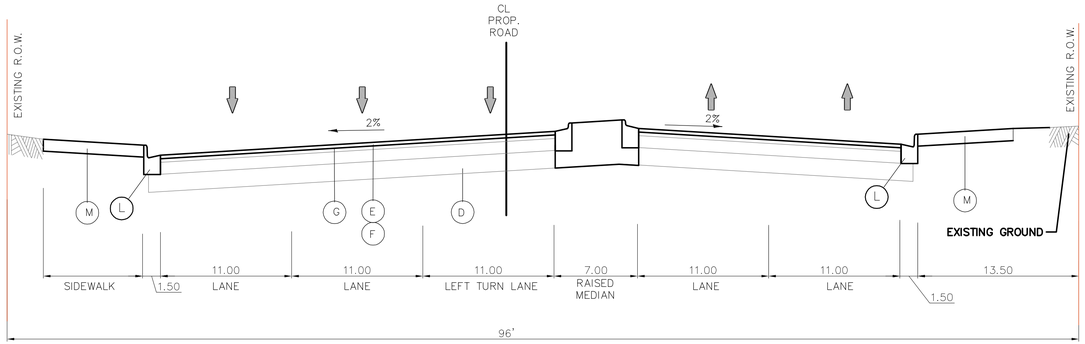
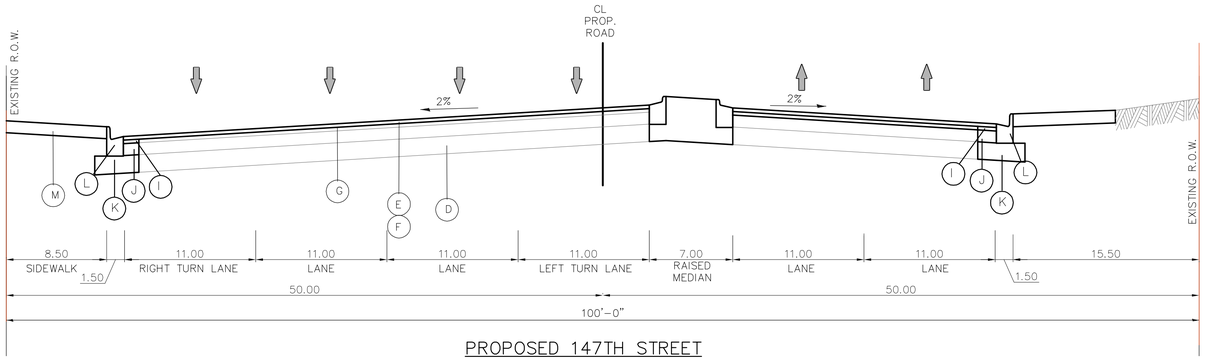
Appendix C



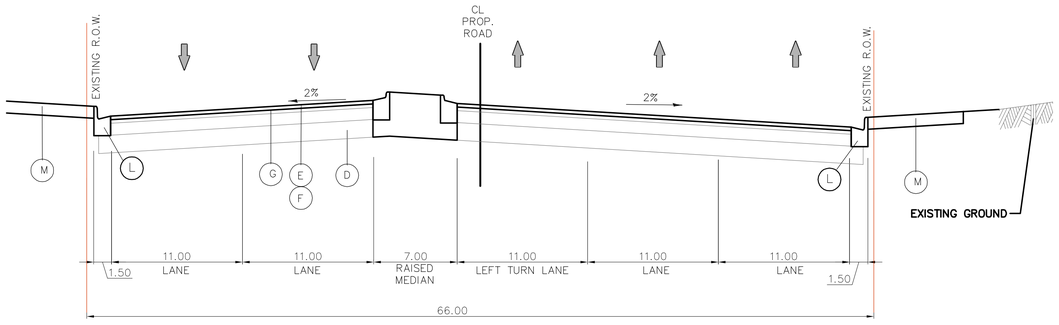
EXISTING 147TH STREET
TYPICAL SECTION



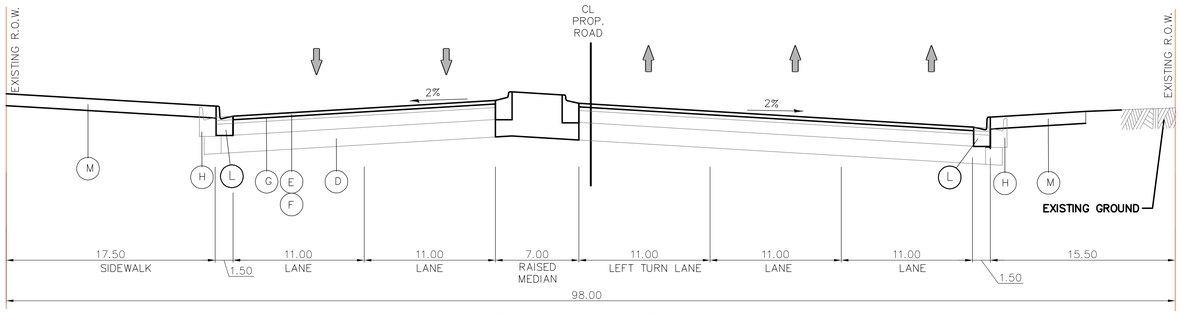
PROPOSED 147TH STREET
SECTION C–C



PROPOSED 147TH STREET
SECTION A–A

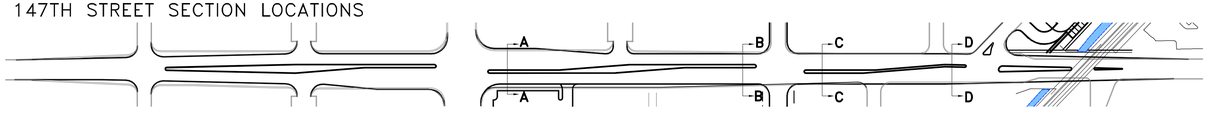


PROPOSED 147TH STREET
SECTION D–D



PROPOSED 147TH STREET
SECTION B–B

147TH STREET SECTION LOCATIONS



L E G E N D

- (A) EXISTING BITUMINOUS PAVEMENT STRUCTURE
- (B) EXISTING P.C.C. SIDEWALK
- (C) EXISTING CC&G
- (D) EXISTING BASE COURSE
- (E) PROPOSED ASPHALT SURFACE COURSE
- (F) PROPOSED ASPHALT SURFACE REMOVAL (MILLING)
- (G) PROPOSED LEVELING BINDER
- (H) FULL DEPTH PAVEMENT AND CURB REMOVAL
- (I) PROPOSED ASPHALT BINDER COURSE
- (J) PROPOSED ASPHALT BASE COURSE
- (K) PROPOSED AGGREGATE BASE COURSE
- (L) PROPOSED CONCRETE CURB AND GUTTER
- (M) PROPOSED P.C.C. SIDEWALK

Village Center Enhancement Plan
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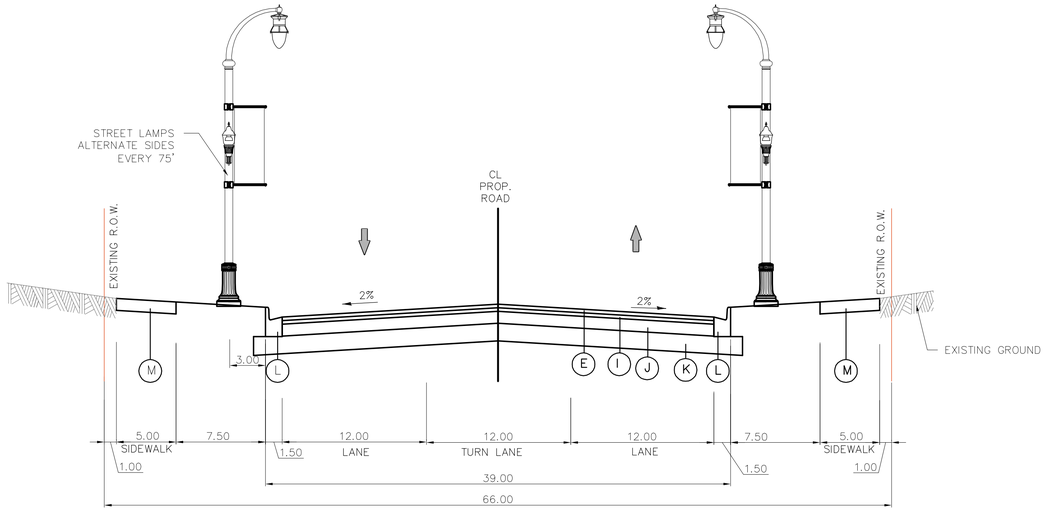
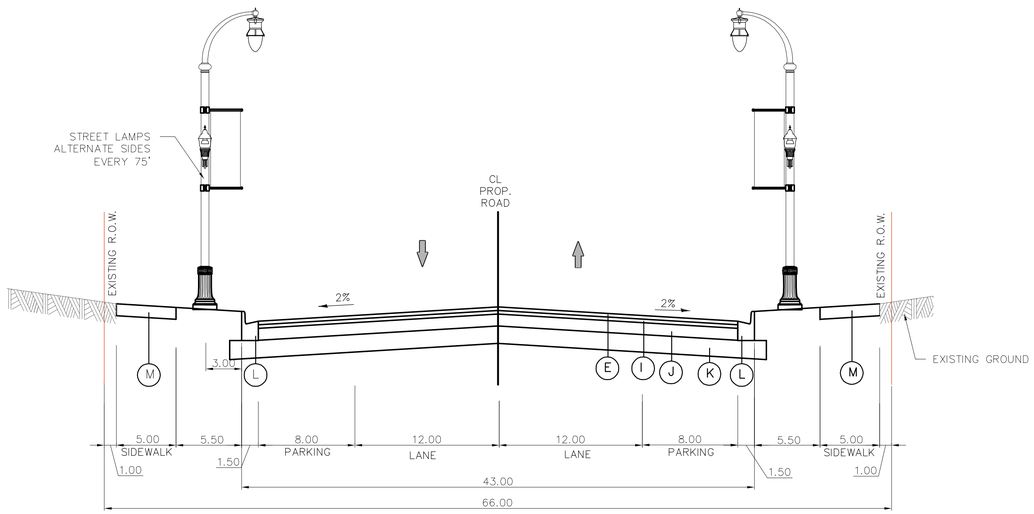
147th Street Sections



PROPOSED WAVERLY STREET
TYPICAL SECTION AT LEFT TURN LANE



PROPOSED WAVERLY STREET AND 146TH PLACE
TYPICAL SECTION

LEGEND

- (A) EXISTING BITUMINOUS PAVEMENT STRUCTURE
- (B) EXISTING P.C.C. SIDEWALK
- (C) EXISTING CC&G
- (D) EXISTING BASE COURSE
- (E) PROPOSED ASPHALT SURFACE COURSE
- (F) PROPOSED ASPHALT SURFACE REMOVAL (MILLING)
- (G) PROPOSED LEVELING BINDER
- (H) FULL DEPTH PAVEMENT AND CURB REMOVAL
- (I) PROPOSED ASPHALT BINDER COURSE
- (J) PROPOSED ASPHALT BASE COURSE
- (K) PROPOSED AGGREGATE BASE COURSE
- (L) PROPOSED CONCRETE CURB AND GUTTER
- (M) PROPOSED P.C.C. SIDEWALK

Village Center Enhancement Plan
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146th Place and Waverly Street Sections

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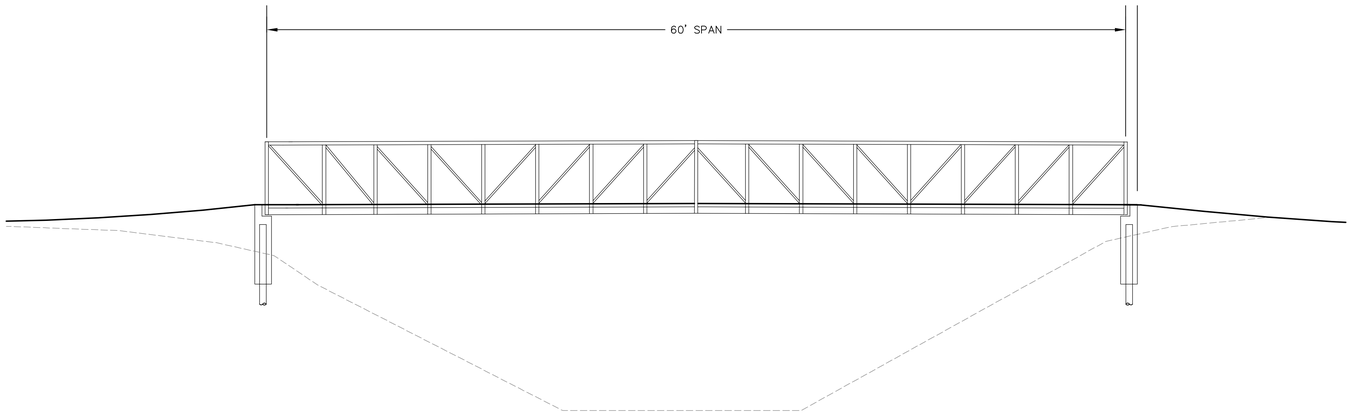
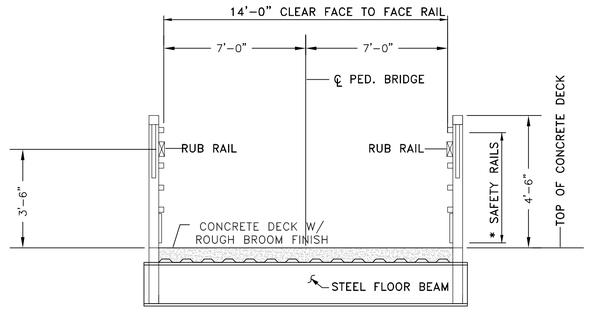
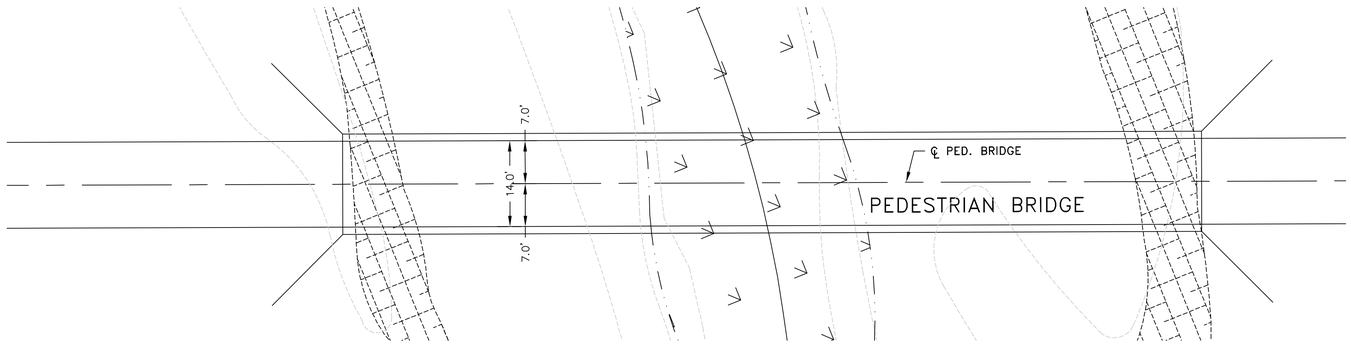
Appendix D



ELEVATION OF BRIDGE OVER MIDLOTHIAN CREEK CREEK
NOT TO SCALE



TYPICAL CROSS SECTION



NOT TO SCALE

Village Center Enhancement Plan
Phase II
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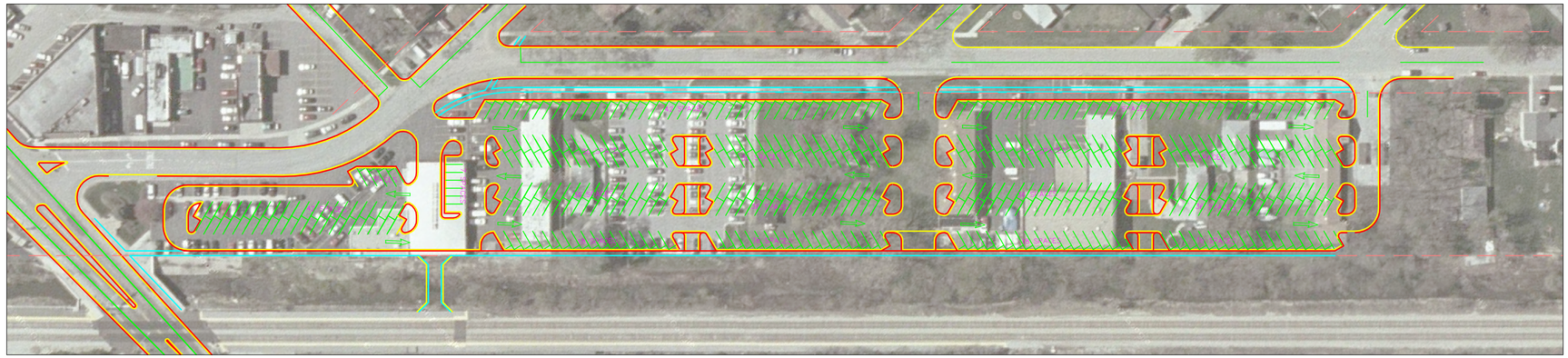
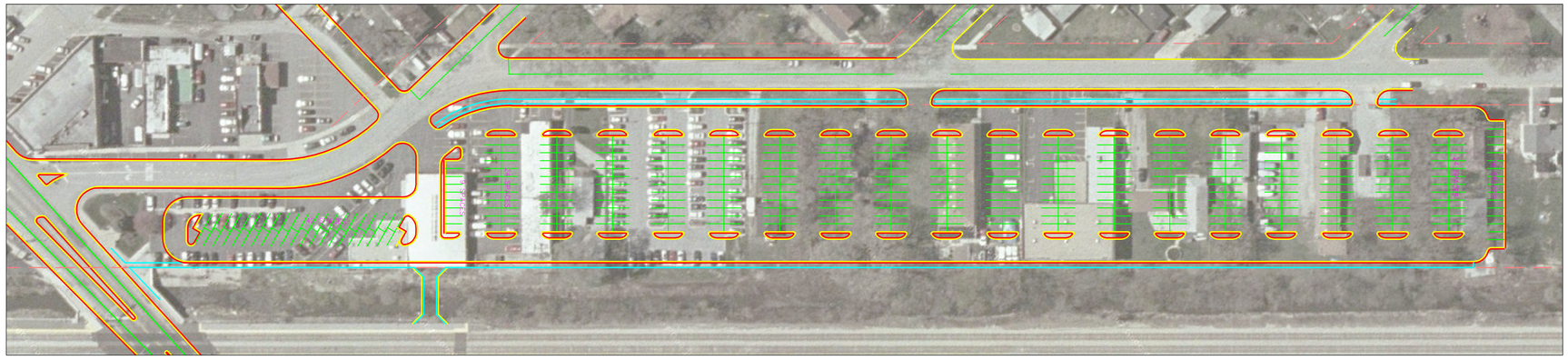
Appendix D

Proposed Pedestrian Bridge at North Parking Lot

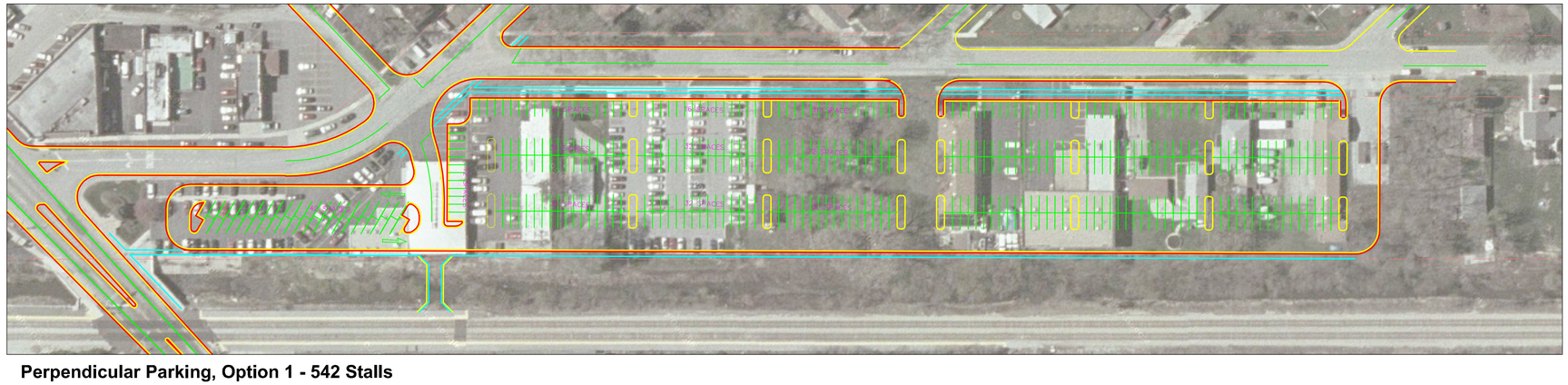
Appendix E



Angled Parking, Option 3 - 496 Stalls



Perpendicular Parking, Option 2 - 499 Stalls



Perpendicular Parking, Option 1 - 542 Stalls

Metra North Parking Lot Options

Village Center Enhancement Plan
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Not to Scale

Appendix F

URS

DETAILED BREAKDOWN OF COSTS

ROADWAY IMPROVEMENTS	quantity	units	unit cost	cost
1 Demolition of Hamlin Avenue				
Pavement Removal	1,167	sq yds	$15	$17,500
Site grading & seeding	1	acres	$2,000	$2,000
Curb replacement	100	foot	$15	$1,500
Sidewalk replacement	500	sq ft	$5	$2,500
			Subtotal	$23,500
			25% Contingency	$5,875
			Total	$29,375
2 Demolition of Waverly and new 148th/Springfield Roadway				
Demolition of 147th Place & Waverly				
Pavement Removal	3,306	sq yds	$15	$49,583
Site grading & seeding	1	acres	$2,000	$1,366
Extension of 148th/Springfiedl Roadway 1,050'				
Pavement	4,667	sq yds	$40	$186,667
Curb & gutter	2,100	foot	$15	$31,500
Lighting 150' spacing each side	14	per fixture	$18,000	$252,000
Inlets, manholes@300', catch basins@200'	14	each	$1,500	$21,000
Storm sewer main & laterals	1,260	foot	$75	$94,500
6-inch watermain	1,050	foot	$60	$63,000
Fire hydrants@300'	4	each	$2,500	$8,750
5' Sidewalk	10,500	sq ft	$5	$52,500
Sodding/Seeding	3,033	sq yds	$7	$21,233
			Subtotal	$782,099
			25% Contingency	$195,525
			Total	$977,624
3 Reconstruction and Improved Channelization of 147th St. - 2,460'				
Milling	18,822	sq yds	$5	$94,111
Curb gutter removal and replacement	500	foot	$20	$10,000
Raised median	1,656	sq yds	$100	$165,556
Traffic signals at Springfield	1	L Sum	$150,000	$150,000
Resurfacing $75/ton; 3 inches overall	18,822	sq yds	$13	$237,160
Traffic control	1	L Sum	$75,000	$75,000
RR gate and signal modification/platform extension	1	L Sum	$250,000	$250,000
Utility and inlet adjustments	1	L Sum	$50,000	$50,000
			Subtotal	$1,031,827
			25% Contingency	$257,957
			Total	$1,289,783
4 Add 146th Place 625'				
Pavement	2,778	sq yds	$40	$111,111
Curb & gutter	1,250	foot	$15	$18,750
Lighting 150' spacing each side	8	per fixture	$18,000	$150,000
Inlets, manholes@300', catch basins@200'	6	each	$1,500	$9,125
Storm sewer main & laterals	750	foot	$75	$56,250
6-inch watermain	625	foot	$60	$37,500
Fire hydrants@300'	2	each	$2,500	$5,208
5' Sidewalk	6,250	sq ft	$5	$31,250
Sodding/Seeding	1,806	sq yds	$7	$12,639
New Pedestrian bridge over Midlothian Creek north of 147th Street				
60' x 14' Pedestrian bridge & approaches	840	sq ft	$125	$105,000
			Subtotal	$536,833
			25% Contingency	$134,208
			Total	$671,042
5 Streetscaping of 147th St.				
	3,450	foot	$400	$1,380,000
6 Pulaski Avenue Streetscaping				
	3,600	foot	$400	$1,440,000

Appendix G

Appendix G

The Congestion Mitigation & Air Quality Improvement Program (CMAQ)

The Congestion Mitigation & Air Quality Improvement Program (CMAQ) was instituted in 1991 as a component of the Intermodal Surface Transportation Act (ISTEA) to improve air quality and reduce congestion, objectives incorporated in the 1990 Clean Air Act amendment. CMAQ has been continued in subsequent reauthorizations of the surface transportation act, including SAFETEA-LU in 2005. That reauthorization included $8.6-billion for the years 2005-2009 for the entire country.

The CMAQ program in northeastern Illinois is administered by the Chicago Area Transportation Study (CATS), part of the Chicago Metropolitan Agency for Planning (CMAP). Don Kopek, CATS Deputy Director for Planning and Programming, manages the CMAQ program in the Chicago Area.

CMAQ grants require that local (i.e. non-federal) sources fund at least 20% of the project cost. Projects with higher local contributions are often regarded more favorably in the selection process.

Applications for CMAQ funding must be made to CMAP before a cutoff date in early February preceding the year of the desired funds (e.g. 2/2/2007 for 2008 funds). The basic two-page application requires the following information:

- description of the location and scale of the increased commuter parking,
- a comprehensive cost estimate, the sources of local matching funds,
- measures (e.g. vehicle miles of travel to be eliminated by the increased parking) to be used by CMAP to estimate air quality improvements,
- utilization rate of existing transit parking, (should exceed 85% for favorable consideration)
- status of design and property acquisition

Applications for commuter parking structures require additional information:

- a financial plan for reimbursing CMAQ funds if the project is not completed,
- a parking study and plan,
- prevailing land values determination,
- parking fee structure,
- alternative transit access availability,

- status of various project components (land acquisition, design, planning and zoning approvals, traffic and circulation study),
- description of public and other agency participation,
- related transit oriented development plans

Upon receiving CMAQ grant applications for the coming year, CMAP staff ranks the projects with respect to cost per unit of pollutant reductions, reduced vehicle miles of travel, and reduced automobile trips. With reference to the project rankings, the CMAP CMAQ Project Selection Committee recommends CMAQ projects in northeastern Illinois to the CMAP Transportation Committee. After considering the recommendations, the Transportation Committee releases a list of proposed projects for public comment. After reviewing the comments, the Transportation Committee recommends a proposed program to the MPO Policy Committee. The Policy Committee considers the proposed program and approves a final program for funding. Sponsors are notified of project eligibility and funding availability in November. IDOT administers the CMAQ construction program.