#### FEASIBILITY STUDY

REPORT FOR:

#### Village of Orland Park



# I-80 and Wolf Road New Interchange Concept Feasibility Study

#### PREPARED BY:



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V3 Project No. 18244

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Appendix A Construction Cost Details



#### I. EXECUTIVE SUMMARY

V3 Companies has been retained by the Village of Orland Park to determine the feasibility of a new freeway interchange along I-80 between the existing interchanges at I-355 and US 45/LaGrange Road. This feasibility study will define the purpose and need for new access to the freeway network and develop alternatives for a new interchange.

The study area is generally along the I-80 corridor from west of Townline Road to east of Wolf Road and from 183<sup>rd</sup> Street/Orland Parkway to 187<sup>th</sup> Street. Existing freeway interchanges to the local roadway network are provided at US 30, approximately 6.1 miles west of Wolf Road, and at US 45/LaGrange Road, approximately 2.0 miles east of Wolf Road. There is a system interchange with I-355 approximately 3.5 miles to the west of Wolf Road. A site location map is illustrated in Figure 1.

The need for a new interchange along I-80 within Will County has been discussed since the 1990's when the I-80 Corridor Regional Planning Council evaluated interchange locations from Country Club Hills to New Lenox. Currently, there is an eight mile gap between existing local access interchanges along I-80 from US 30 to LaGrange Road/US 45 with a system interchange in between connecting I-80 to I-355. Currently, local traffic from Orland Park and Mokena wishing to access the freeway network must travel on local and state roads to the LaGrange Road or US 30 interchanges on I-80 or the US 6 interchange on I-355. This can create many circuitous and unnecessary vehicle trips on the local roadway network creating additional delay on the roadways and at intersections.

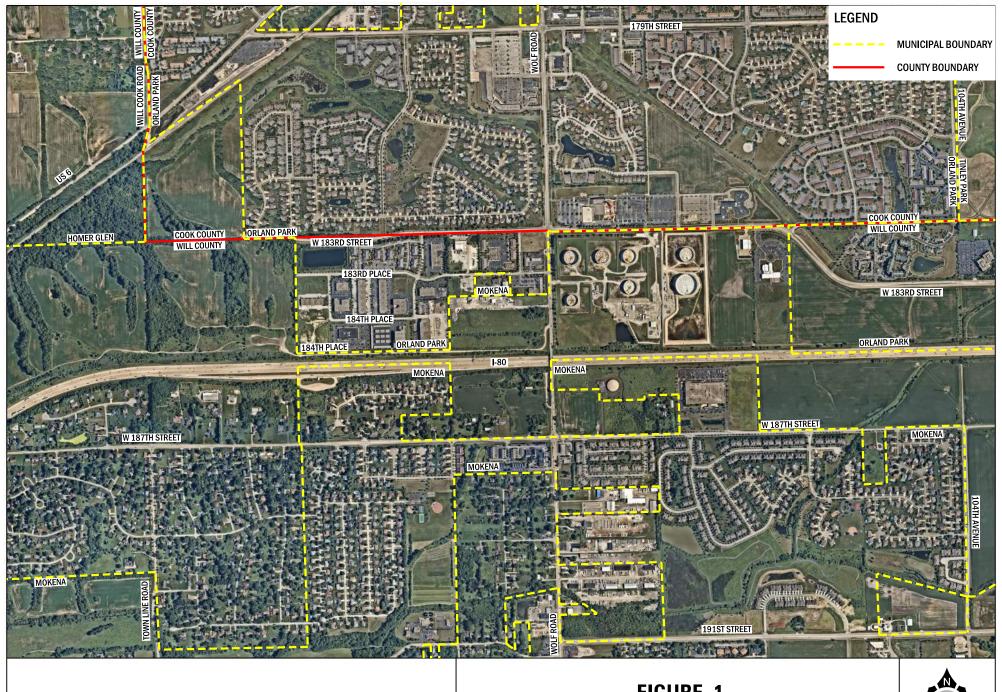
The primary purpose of this improvement is to provide access to I-80 within the existing eight miles between local interchanges at US 30 and LaGrange Road. Equity of access to the freeway network is vital to this area to support existing land uses and future growth. Continued growth and development in the area will challenge the ability to implement feasible solutions in the future. Other concerns include safety issues along the existing local roadway network that support the routes to the freeway access points.

In order to provide new access to I-80 at Wolf Road, six interchange alternatives have been developed that minimize the impacts to local residences and businesses, minimize the need for additional right of way, and maximize the amount of new access to the freeway. In addition, two alternatives have been developed at Townline Road and one additional alternative which combines interchange alternatives at both Wolf Road and Townline Road.

IDOT design standards were utilized in the development of the various design aspects, including freeway merge and diverge lengths, taper lengths, and design speeds.

The purpose of this report is to describe the existing conditions within the study area and evaluate the interchange alternatives.





**VILLAGE OF ORLAND PARK** 

FIGURE 1 SITE LOCATION MAP

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ORLAND PARK

**ILLINOIS** 

#### **II. EXISTING CONDITIONS**

#### Land Uses

A variety of land uses exist near the project site, including residential, retail, industrial, office, and residential uses. The surrounding land uses are illustrated in Figure 2.

#### Roadway System

The characteristics of the roadways in the vicinity of the site are presented below. The existing lane configuration in the study area is illustrated in Figure 3.

Interstate 80 is a limited access freeway with three travel lanes in each direction with inside and outside shoulders separated by a concrete barrier wall. Auxiliary lanes to provide merge and diverge lanes are provided at the interchanges with US 30, I-355, and US 45/LaGrange Road and at the weigh station located south of the freeway in the eastbound direction just west of Wolf Road. The posted speed limit is 65 mph with a minimum speed of 45 mph and 60 mph for trucks over four tons. The Federal Highway Administration (FHWA) and the Illinois Department of Transportation (IDOT) have jurisdiction of I-80.

Wolf Road is a north/south minor arterial as classified by IDOT. North of 183<sup>rd</sup> Street, Wolf Road provides one travel lane each direction with a striped center median and has left and right turn lanes at the intersection of 183<sup>rd</sup> Street. Sidewalks are provided on both sides of Wolf Road north of 183<sup>rd</sup> Street with marked pedestrian crossings and pedestrian signals on all legs at the intersection with 183<sup>rd</sup> Street. South of 183<sup>rd</sup> Place, Wolf Road narrows to one lane in each direction with no median or sidewalks and crosses over I-80 with a two lane bridge with no pedestrian or bicycle amenities. The roadway widens to provide left and right turn lanes at the intersection of 187<sup>th</sup> Street. South of 187<sup>th</sup> Street, Wolf Road provides one travel lane each direction with a striped center median and sidewalks on both sides of the road. The posted speed limit is 45 mph north of I-80 and 35 mph at the bridge over and south of I-80. Wolf Road is under the jurisdiction of IDOT north of 187<sup>th</sup> Street. Wolf Road is classified as a Class III Local Truck Route south of 187<sup>th</sup> Street by IDOT.

Townline Road is a north/south roadway striped with one travel lane in each direction south of 187<sup>th</sup> Street with left turn lanes at intersections and signed with a weight limit of 12 tons. The posted speed limit is 25 mph as there are numerous single family residences with driveways on Townline Road. Sidewalk is provided on both sides of the street beginning south of the intersection at 187<sup>th</sup> Street. A bridge south of Virginia Parkway is signed with weight limit of 20 tons.

183<sup>rd</sup> Street/Orland Parkway is an east/west roadway with one travel lane in each direction west of Wolf Road and one travel lane in each direction with a striped median east of Wolf Road. The posted speed limit is 20 mph and it is signed with a weight limit of 8 tons and directing



trucks to use 183<sup>rd</sup> Place west of Wolf Road. Sidewalk is provided on the north side of 183<sup>rd</sup> Street/Orland Parkway with marked pedestrian crossings and pedestrian signals at each leg of the Wolf Road intersection.

187<sup>th</sup> Street is an east/west roadway with one travel lane in each direction and a posted speed limit of 45 mph. There is a multiuse path along the south side of 187<sup>th</sup> Street and pedestrian signals at all four corners at the intersection of Wolf Road although there are only sidewalks and crossings on the south side of the intersection. West of Wolf Road, 187<sup>th</sup> Street is under the jurisdiction of Will County DOT and marked as County Route 38

#### Existing Daily Traffic Volumes

IDOT collects and publishes current and historical average daily traffic volumes throughout the state. Table 1 provides the daily volumes along I-80 within the vicinity of the study area. Table 2 provides a summary of daily volumes along the local roadway network.

**Table 1: Daily Traffic Volumes - Freeway** 

| Roadway | Section        | Year | Average Daily Traffic |
|---------|----------------|------|-----------------------|
|         |                | 2010 | 102,900               |
|         |                | 2012 | 79,200                |
|         | US 30 to I-355 | 2013 | 69,100                |
|         |                | 2014 | 72,400                |
|         |                | 2015 | 74,500                |
|         |                | 2017 | 105,800               |
|         |                | 2010 | 102,900               |
|         |                | 2012 | 67,100                |
| I-80    | I-355 to US 45 | 2013 | 90,100                |
| 1-00    |                | 2014 | 93,800                |
|         |                | 2015 | 96,000                |
|         |                | 2017 | 131,100               |
|         |                | 2010 | 104,200               |
|         |                | 2012 | 98,600                |
|         | US 45 to IL 43 | 2013 | 106,700               |
|         | 03 40 to IL 43 | 2014 | 111,800               |
|         |                | 2015 | 113,400               |
|         |                | 2017 | 140,100               |



Table 2: Daily Traffic Volumes - Local Roadways

| Roadway                  | Section                           | Year | Average Daily Traffic |
|--------------------------|-----------------------------------|------|-----------------------|
|                          | North of 183 <sup>rd</sup> Street | 2010 | 17,100                |
|                          | Notifi of 163.5 Street            | 2014 | 17,400                |
| Wolf Road                |                                   | 2008 | 15,600                |
| 192rd Ctroot             | South of 187 <sup>th</sup> Street | 2012 | 16,000                |
|                          |                                   | 2016 | 16,800                |
|                          | East of Wolf Road                 | 2008 | 1,600                 |
| 183 <sup>rd</sup> Street | East of Woll Road                 | 2016 | 4,450                 |
|                          |                                   | 2008 | 5,500                 |
|                          | West of Wolf Road                 | 2012 | 7,950                 |
| 107th Stroot             |                                   | 2016 | 9,150                 |
| 187 <sup>th</sup> Street |                                   | 2008 | 1,400                 |
|                          | East of Wolf Road                 | 2012 | 2,100                 |
|                          |                                   | 2016 | 2,350                 |
| Townline Dood            | South of 187th Street             | 2012 | 3,150                 |
| Townline Road            | South of 167 " Street             | 2016 | 3,450                 |

#### Existing Environmental Features

During this Feasibility Study, limited environmental studies have been completed for several disciplines in order to determine whether resources are present that would influence the comparison of alternatives. Based upon the data collected to date, there are no substantial differences among the alternatives based upon environmental issues with the exception of Option 7 which has a new bridge crossing over the Marley Creek, which is classified as a Waters of the US. Along Wolf Road, there is a 1.01 acre pond on the east side of the roadway north of I-80 that is classified as a Waters of the US. At Townline Road south of I-80, there is a 0.98 acre pond west of Townline Road and north of 187th Street. North of I-80, there are several wetland areas and Waters of the US along the US 6 corridor. An environmental inventory map is illustrated in Figure 4.

#### Existing Utility Assessment

A request for existing information was submitted to the various utility companies with services in the study area, including AT&T, ComEd, Nicor Gas, Comcast, the Villages of Orland Park, Mokena, and Homer Glen, and various pipeline companies. A summary of the various utilities is within the study area is illustrated in Figure 5.



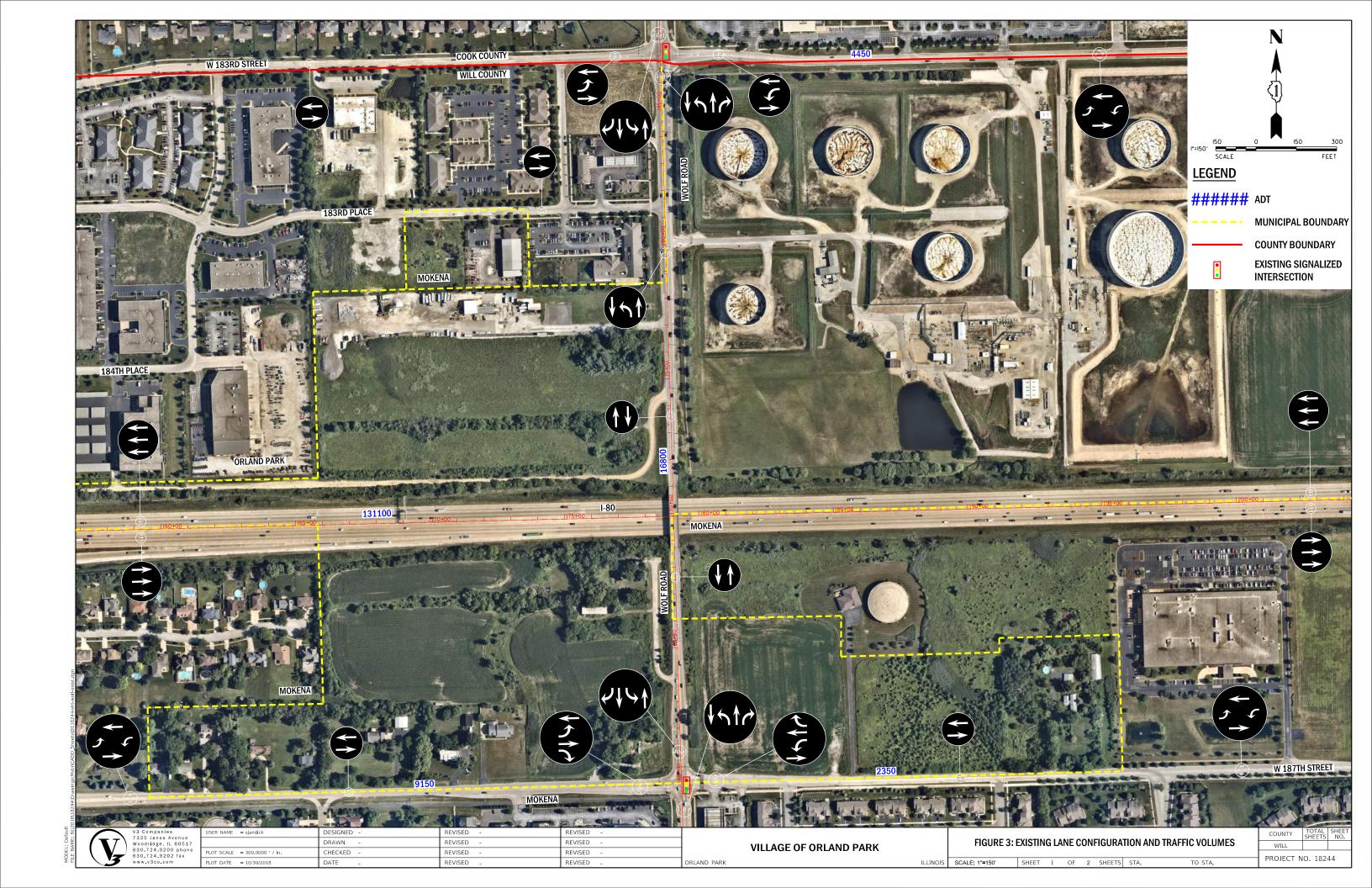


**VILLAGE OF ORLAND PARK** 

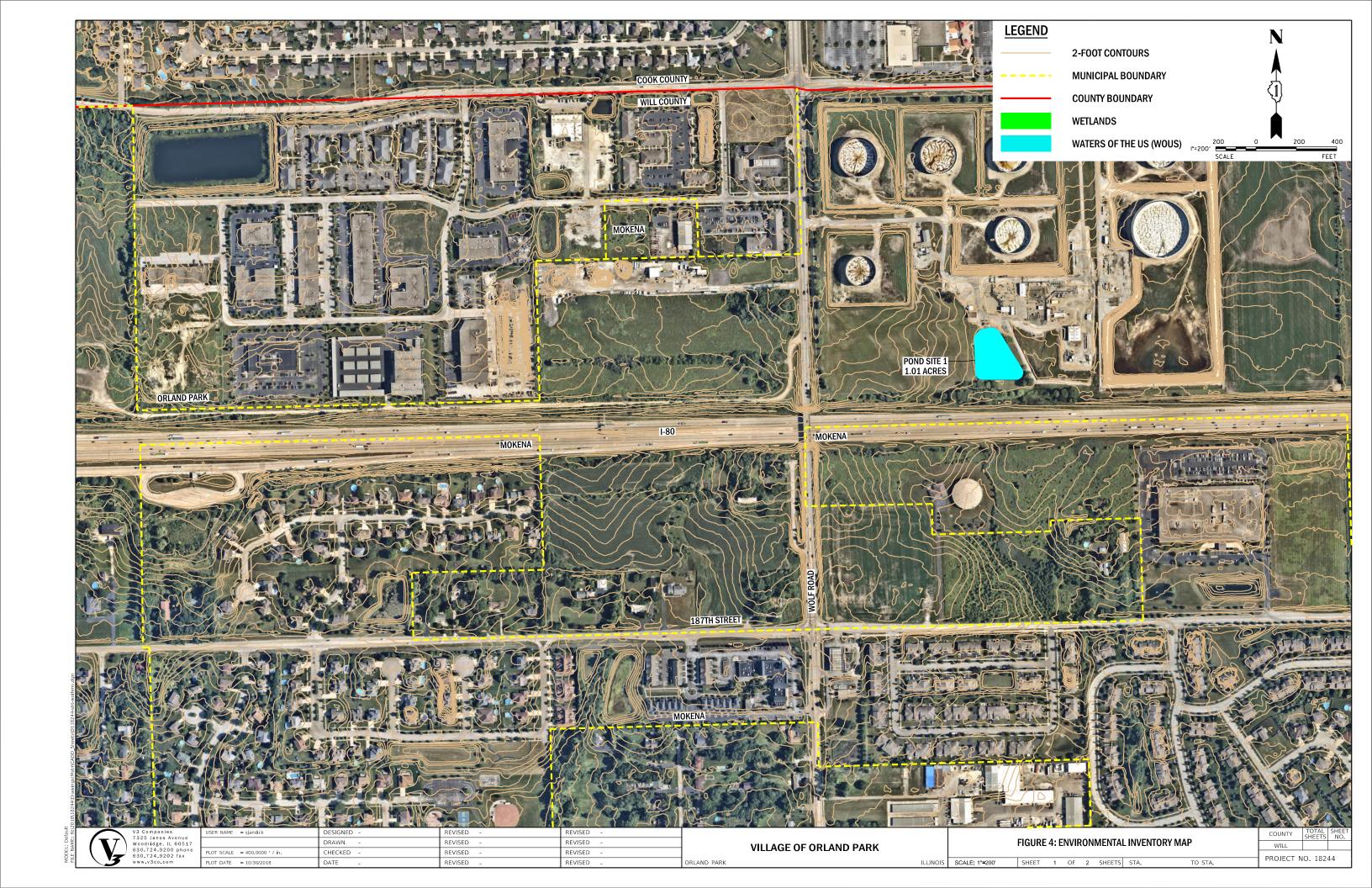
FIGURE 2 LAND USE MAP

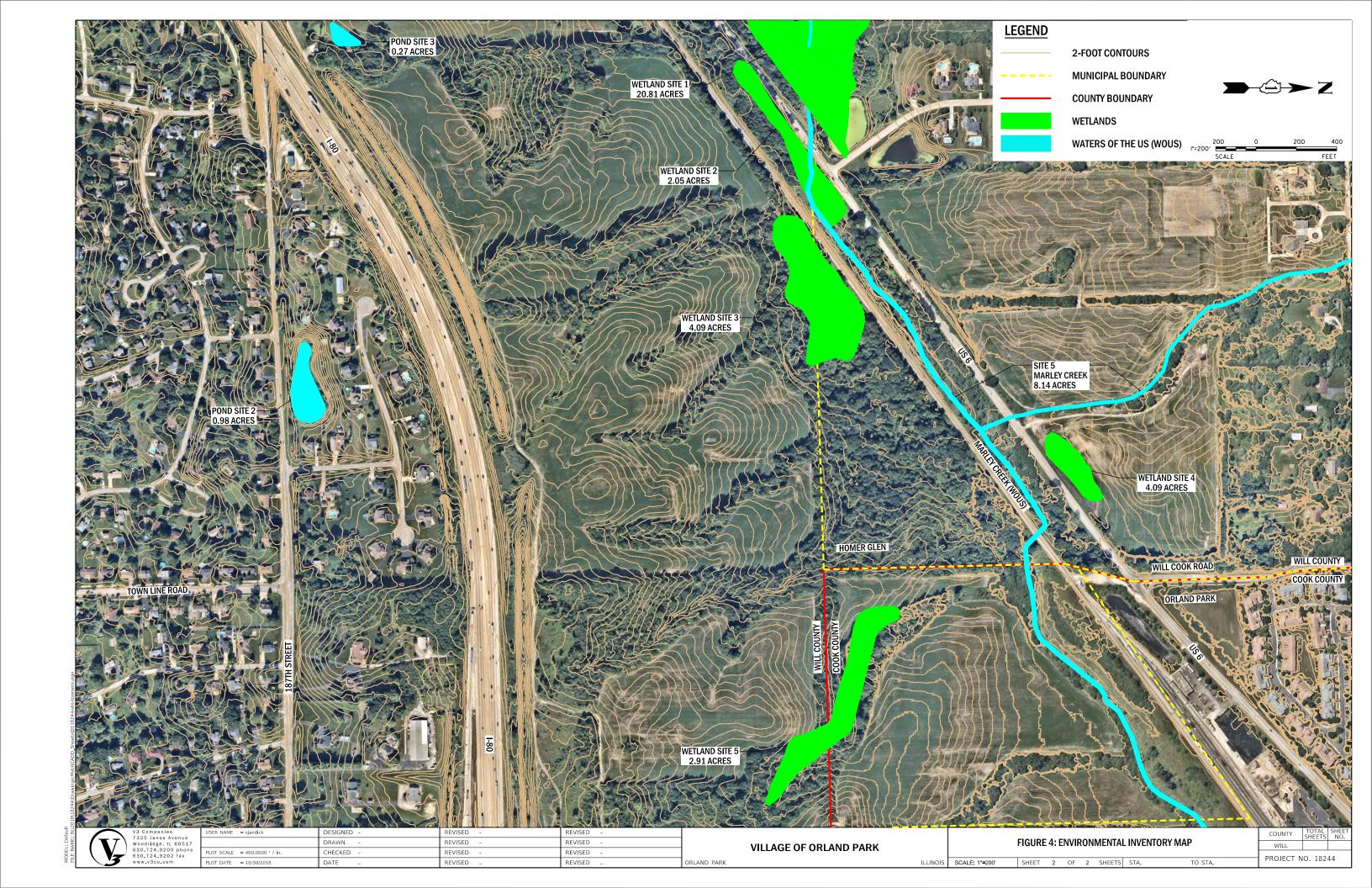
ORLAND PARK

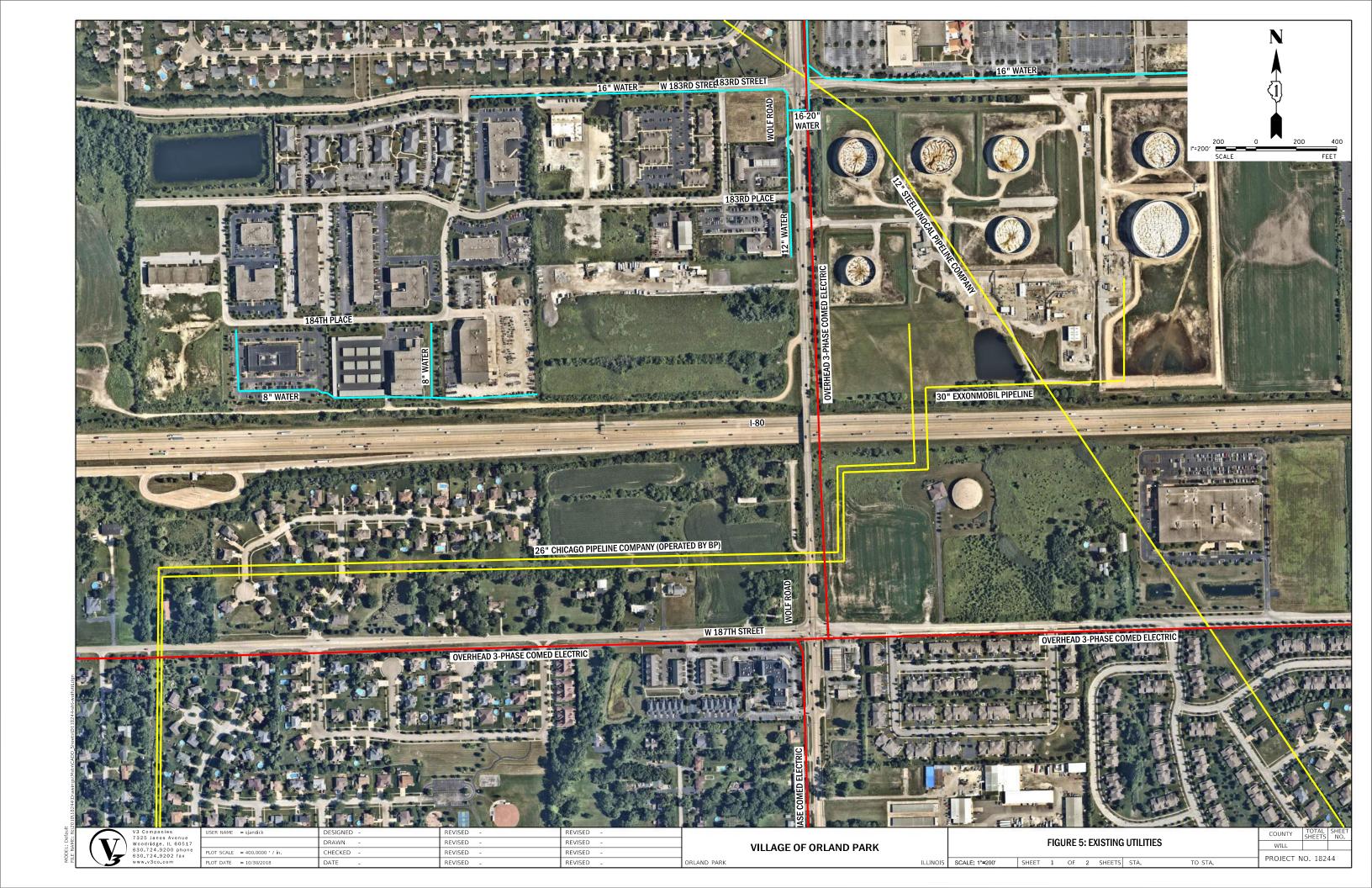
**ILLINOIS** 

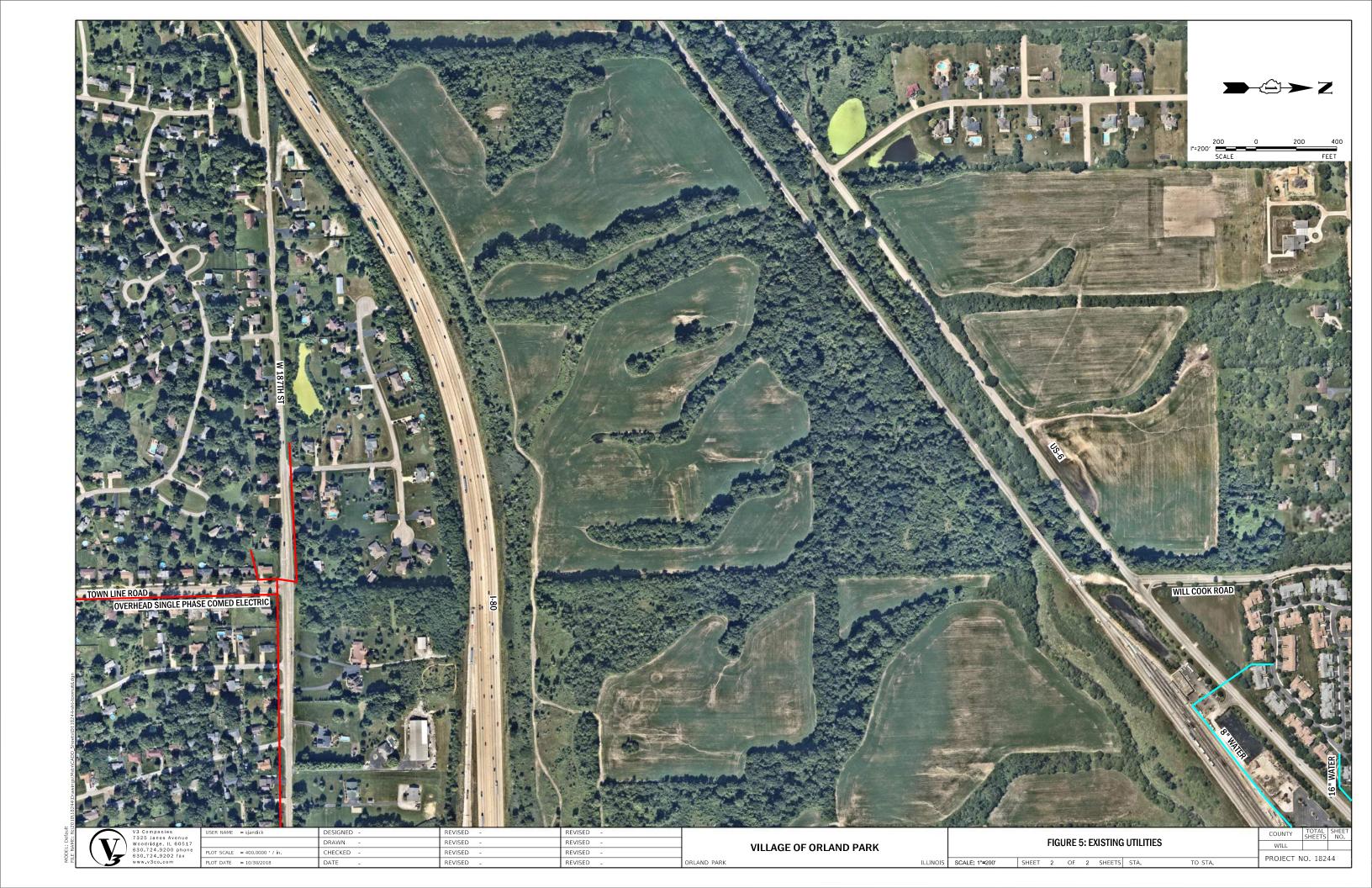












#### III. PURPOSE AND NEED

The need for a new interchange along I-80 within Will County has been discussed since the 1990's when the I-80 Corridor Regional Planning Council evaluated interchange locations from Country Club Hills to New Lenox. Currently, there is an eight mile gap between existing local access interchanges along I-80 from US 30 to LaGrange Road/US 45 with a system interchange in between connecting I-80 to I-355. Currently, local traffic from Orland Park and Mokena wishing to access the freeway network must travel on local and state roads to the LaGrange Road or US 30 interchanges on I-80 or the US 6 interchange on I-355. This can create many circuitous and unnecessary vehicle trips on the local roadway network creating additional delay on the roadways and at intersections.

The primary purpose of this improvement is to provide access to I-80 within the existing eight miles between local interchanges at US 30 and LaGrange Road. Equity of access to the freeway network is vital to this area to support existing land uses and future growth. Continued growth and development in the area will challenge the ability to implement feasible solutions in the future. Other concerns include safety issues along the existing local roadway network that support the routes to the freeway access points.



#### IV. INTERCHANGE ALTERNATIVES

In order to provide new access to I-80 at Wolf Road, six interchange alternatives have been developed that minimize the impacts to local residences and businesses, minimize the need for additional right of way, and maximize the amount of new access to the freeway. In addition, two alternatives have been developed at Townline Road and one additional alternative which combines interchange alternatives at both Wolf Road and Townline Road.

IDOT design standards were utilized in the development of the various design aspects, including freeway merge and diverge lengths, taper lengths, and design speeds. Table 3 provides a summary of the various design criteria utilized to develop the alternatives.

**Table 3: Design Criteria** 

| Design Element                  | Mainline I-80 | Directional Ramps | Loop Ramps |
|---------------------------------|---------------|-------------------|------------|
| Design Speed                    | 70 mph        | 50 mph            | 30 mph     |
| Design Vehicle                  | WB-67         | WB-67             | WB-67      |
| Pavement Width                  | 2 @ 36'       | 1 @ 16'           | 1 @ 16'    |
| Davied Chaulder Width           | L = 10'       | L = 4'            | L = 4'     |
| Paved Shoulder Width            | R = 10'       | R = 6'            | R = 6'     |
| Minimum Curve Radius            | 2,040'        | 758'              | 214'       |
| Maximum Superelevation          | 6%            | 8%                | 8%         |
| Maximum Grade                   | +4%, -5%      | +4%, -6%          | +4%, -6%   |
| Minimum Grade                   | 0.30%         | 0.30%             | 0.30%      |
| Rate of Curvature Crest         | 247           | 84                | 19         |
| Rate of Curvature Sag           | 181           | 96                | 37         |
| Minimum Stopping Sight Distance | 730'          | 425'              | 200'       |

It should be noted that any interchange alternative that provides access to southbound Wolf Road will include restrictions to trucks to minimize the impact to the local roadway network and to downtown Mokena. In addition, any interchange alternatives at Townline Road will also include truck restrictions to the south to minimize the impact to the residential neighborhood south of 187<sup>th</sup> Street. Signage should be posted along I-80 that directs all truck traffic traveling south of I-80 to use LaGrange Road.

In addition, each of the alternatives that provide access to I-80 at Wolf Road would require the closure of the Frontage Road traveling parallel on the north side of I-80 and its intersection along Wolf Road. The full access intersection is located just north of the Wolf Road bridge over I-80. The Frontage Road provides secondary access to one of the businesses located west of Wolf Road along 184<sup>th</sup> Place and terminates approximately 0.6 miles west of Wolf Road.



#### Option 1: Wolf Road Partial North Access - Directional Ramps

This alternative will provide new access for westbound I-80 traffic with a new westbound to northbound off ramp and a southbound to westbound on ramp at Wolf Road as illustrated in Figure 6. The directional ramps will be free flow between I-80 and Wolf Road so there will be no new intersections along Wolf Road. This alternative includes the following improvements:

- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street.
- Construct one-lane free flow southbound on ramp from Wolf Road to westbound I-80 with acceleration lane.
- Construct one-lane free flow westbound off ramp with deceleration lane from I-80 to northbound Wolf Road.
- Close Frontage Road and its intersection with Wolf Road.

This alternative will require right of way along the north side of I-80 and along Wolf Road. All four corners of the I-80 and Wolf Road interchange area would be available for development.

#### Option 2: Wolf Road Partial North Access - Partial Diamond

This alternative will provide new access for the westbound I-80 traffic with a new westbound off ramp and on ramp at Wolf Road as illustrated in Figure 7. The ramps will intersect Wolf Road at a new signalized intersection. The short term access would only provide a westbound to northbound right turn movement and a southbound to westbound right turn movement. The long term access would allow both right turn and left turn movements from the off ramp and allow southbound right turns and northbound left turns from Wolf Road to the westbound on ramp. This alternative includes the following improvements:

- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street
- Construct one-lane southbound on ramp from Wolf Road to westbound I-80 with acceleration lane and southbound right turn lane. Stripe northbound left turn lane on Wolf Road for long term access plan.
- Construct one-lane free flow westbound off ramp with deceleration lane from I-80 with right turn lane to northbound Wolf Road. Widen to two lanes for the long term access plan to provide a westbound left turn lane to southbound Wolf Road.
- Close Frontage Road and its intersection with Wolf Road.

This alternative will require right of way along the north side of I-80 and along Wolf Road. All four corners of the I-80 and Wolf Road interchange area would be available for development.



#### Option 3: Wolf Road Partial North Access - Flyover Ramps

This alternative will provide new access for eastbound and westbound I-80 traffic to/from north Wolf Road with the construction of four ramps as illustrated in Figure 8. The directional ramps will be free flow between I-80 and Wolf Road so there will be no new intersections along Wolf Road. This alternative includes the following improvements:

- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street.
- Construct one-lane southbound on ramp from Wolf Road to westbound I-80 with acceleration lane
- Construct one-lane southbound on ramp from Wolf Road to eastbound I-80 with acceleration lane.
- Construct one-lane westbound off ramp from I-80 with deceleration lane to northbound Wolf Road.
- Construct one-lane westbound off ramp from I-80 with deceleration lane to northbound Wolf Road.
- Close Frontage Road and its intersection with Wolf Road.
- Construct two new bridges over I-80 and over Wolf Road for the eastbound to northbound and the southbound to eastbound flyover ramps.

This alternative will require right of way along the north and south side of I-80 and along Wolf Road. The northeast and northwest corners of the I-80 and Wolf Road interchange area would be available for development.

#### Option 4: Wolf Road Full Access – Diamond Interchange

This alternative will provide new access to all directions between I-80 and Wolf Road with the construction of a diamond interchange with two new signalized intersections on Wolf Road as illustrated in Figure 9. This alternative includes the following improvements:

- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street. Stripe two northbound and southbound left turn lanes at the diamond interchange intersections with an eight lane bridge over I-80.
- Construct one-lane westbound off ramp with deceleration lane from I-80 to Wolf Road that widens to two lanes at the signalized intersection with right turn lane to northbound Wolf Road and left turn lane to southbound Wolf Road.
- Construct two-lane westbound on ramp which tapers to one lane from Wolf Road to I-80 westbound with acceleration lane.
- Construct one-lane eastbound off ramp with deceleration lane from I-80 to Wolf Road that widens to two lanes at the signalized intersection with right turn lane to southbound Wolf Road and left turn lane to northbound Wolf Road.



- Construct two-lane eastbound on ramp which tapers to one lane from Wolf Road to I-80 eastbound with acceleration lane.
- Close Frontage Road and its intersection with Wolf Road.

This alternative will require right of way along the north side and south side of I-80 and along Wolf Road. The northeast and northwest corners of the I-80 and Wolf Road interchange area would be available for development.

#### Option 5: Wolf Road Full Access – Partial Cloverleaf Interchange

This alternative will provide new access to all directions between I-80 and Wolf Road with the construction of a partial cloverleaf interchange with two new signalized intersections on Wolf Road as illustrated in Figure 10. This alternative includes the following improvements:

- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street. Stripe single northbound left turn lanes at each of the two signalized intersections.
- Construct one-lane westbound on ramp from Wolf Road to I-80 westbound with acceleration lane.
- Construct one-lane westbound loop off ramp with deceleration lane from I-80 to Wolf Road that widens to two lanes at the signalized intersection with right turn lane to southbound Wolf Road and left turn lane to northbound Wolf Road.
- Construct one-lane eastbound loop on ramp from Wolf Road to I-80 with acceleration lane
- Construct one-lane eastbound off ramp with deceleration lane from I-80 eastbound with deceleration lane.
- Close Frontage Road and its intersection with Wolf Road.
- Signal timings along Wolf Road will need to be monitored since the new eastbound ramp signalized intersection will be approximately 400 feet north of the signalized intersection at 187<sup>th</sup> Street.

This alternative will require right of way along the north side and south side of I-80 and along Wolf Road. The northeast and southeast corners of the I-80 and Wolf Road interchange area would be available for development.

#### Option 6: Wolf Road Full Access - Single Point Urban Diamond Interchange

This alternative will provide new access to all directions between I-80 and Wolf Road with the construction of a single point urban diamond interchange with one new signalized intersection on Wolf Road as illustrated in Figure 11. This alternative includes the following improvements:



- Widen Wolf Road to provide two travel lanes in each direction and a striped median from north of 183<sup>rd</sup> Street to south of 187<sup>th</sup> Street. Stripe one northbound and southbound left turn lane at the single point intersection.
- Construct one-lane westbound off ramp with deceleration lane from I-80 to Wolf Road that widens to two lanes at the signalized intersection with right turn lane to northbound Wolf Road and left turn lane to southbound Wolf Road.
- Construct one-lane westbound on ramp from Wolf Road to I-80 westbound with acceleration lane.
- Construct one-lane eastbound off ramp with deceleration lane from I-80 to Wolf Road that widens to two lanes at the signalized intersection with right turn lane to southbound Wolf Road and left turn lane to northbound Wolf Road.
- Construct one-lane eastbound on ramp from Wolf Road to I-80 eastbound with acceleration lane.
- Close Frontage Road and its intersection with Wolf Road.

This alternative will require right of way along the north side and south side of I-80 and along Wolf Road. All four corners of the I-80 and Wolf Road interchange area would be available for development.

#### Option 7: Townline Road Full Access - Single Point Urban Diamond Interchange

This alternative will provide new access to all directions between I-80 and the proposed extension of Townline Road with the construction of a new single point urban diamond interchange illustrated in Figure 12. This alternative includes the following improvements:

- Construct approximately 0.80 miles of new five-lane roadway from the existing intersection of Will Cook Road and US 6 south to the existing intersection of Townline Road and 187<sup>th</sup> Street. This will include a new five-lane bridge over I-80.
- Widen US 6 with eastbound right turn lane, eastbound left turn lane, and westbound left turn lane at the new signalized intersection with the Townline Road extension.
- Widen Will Cook Road with southbound left turn lane at the new signalized intersection with the Townline Road extension.
- Widen Townline Road to provide two travel lanes in each direction and a striped median south of 187<sup>th</sup> Street.
- Install new traffic signal at Townline Road and 187<sup>th</sup> Street.
- Construct one-lane westbound off ramp with deceleration lane from I-80 to Townline Road extension that widens to two lanes at the signalized intersection with right turn lane to northbound Townline Road and left turn lane to southbound Townline Road.
- Construct one-lane westbound on ramp from Townline Road extension to I-80 westbound with acceleration lane.
- Construct one-lane eastbound off ramp with deceleration lane from I-80 to Townline Road extension that widens to two lanes at the signalized intersection with right turn lane to southbound Townline Road and left turn lane to northbound Townline Road.



- Construct one-lane eastbound on ramp from Townline Road extension to I-80 eastbound with acceleration lane.
- Construct new five-lane bridge along Townline Road extension over Marley Creek.
- Construct new railroad crossing along Townline Road extension just south of new intersection with US 6.

This alternative will require right of way along the Townline Road extension north to US 6 and on the north side and south side of I-80. This alternative would require a new at-grade railroad crossing with the Townline Road extension.

#### Option 8: Townline Road Partial South Access – Directional Ramps

This alternative will provide new access for eastbound I-80 traffic with a new eastbound to southbound off ramp and a northbound to eastbound on ramp at Townline Road as illustrated in Figure 13. The directional ramps will be free flow between I-80 and Townline Road and connect to the existing intersection at Townline Road and 187<sup>th</sup> Street. This alternative includes the following improvements:

- Construct new extension of Townline Road approximately 500 feet north of 187<sup>th</sup> Street with one lane in each direction and a southbound left turn lane at 187<sup>th</sup> Street.
- Install new traffic signal at Townline Road and 187<sup>th</sup> Street.
- Construct one-lane free flow eastbound off ramp from I-80 with deceleration lane to southbound Townline Road.
- Construct one-lane free flow eastbound on ramp from northbound Townline Road to eastbound I-80 with acceleration lane.

This alternative will require right of way along the Townline Road extension north of 187<sup>th</sup> Street and on the north side and south side of I-80.

### Option 9: Wolf Road Partial North Access and Townline Road Partial South Access – Directional Ramps

This alternative combines the westbound on ramp and off ramp at Wolf Road from Option 1 with the eastbound on ramp and off ramp at Townline Road with Option 8 as illustrated in Figure 14.



#### Cost Estimates

A preliminary construction cost estimate for each proposed interchange alternative has been developed. The methodology for estimating follows general procedures for this level of design and follows local procedures and unit costs. Items that could be quantified were calculated and unit prices were applied. Right of way costs will be estimated and included based upon the potential need for additional property needed to construct the various elements of the interchange. A 25 percent contingency was included, and costs will be updated as plans are developed further. Table 4 provides a summary of the total construction cost estimate with the contingency for each alternative but does not include the cost of right of way acquisition. Appendix A provides additional cost detail for each alternative.

**Table 4: Construction Cost Estimates** 

| Interchange<br>Alternative | Estimated Construction<br>Cost |
|----------------------------|--------------------------------|
| Option 1                   | \$ 21,544,000                  |
| Option 2                   | \$ 20,975,000                  |
| Option 3                   | \$ 74,969,000                  |
| Option 4                   | \$ 36,016,000                  |
| Option 5                   | \$ 35,013,000                  |
| Option 6                   | \$ 38,225,000                  |
| Option 7                   | \$ 40,626,000                  |
| Option 8                   | \$ 13,166,000                  |
| Option 9                   | \$ 34,172,000                  |



#### Alternative Comparison

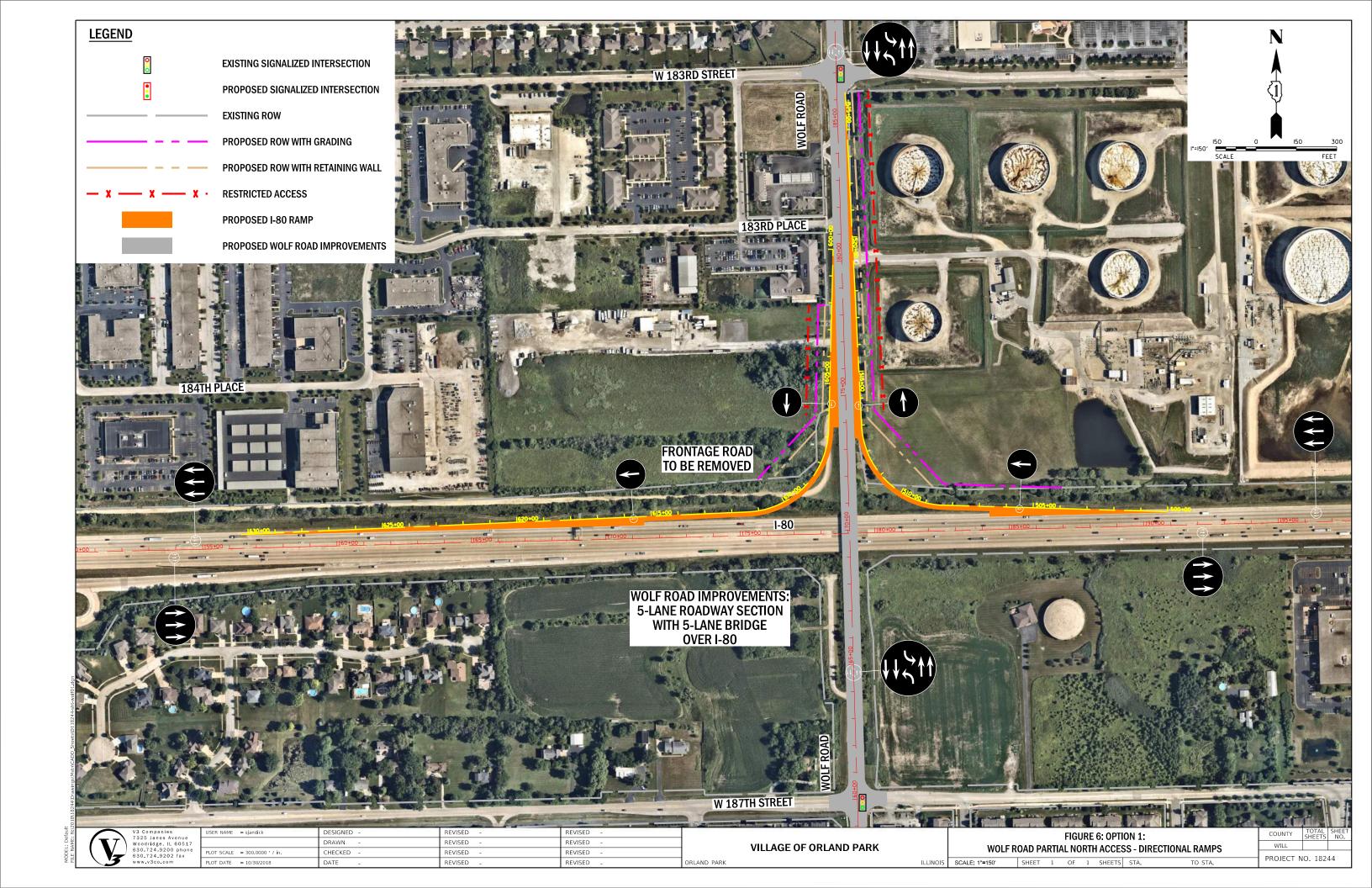
Key factors of each alternative evaluated are summarized in Table 5 with color coded scoring to indicate positive and negative attributes when compared to the other alternatives.

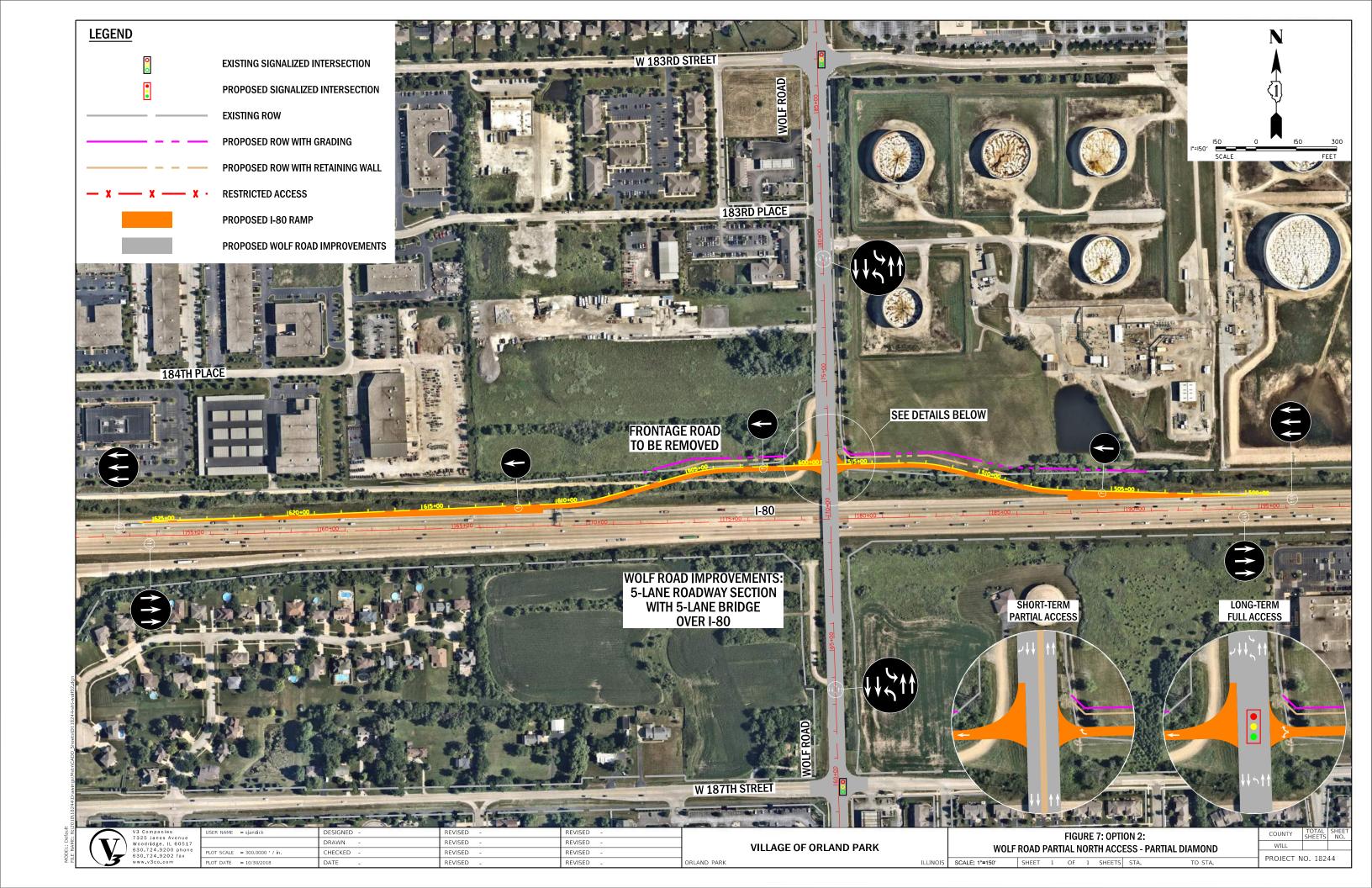
**Table 5: Alternative Evaluation** 

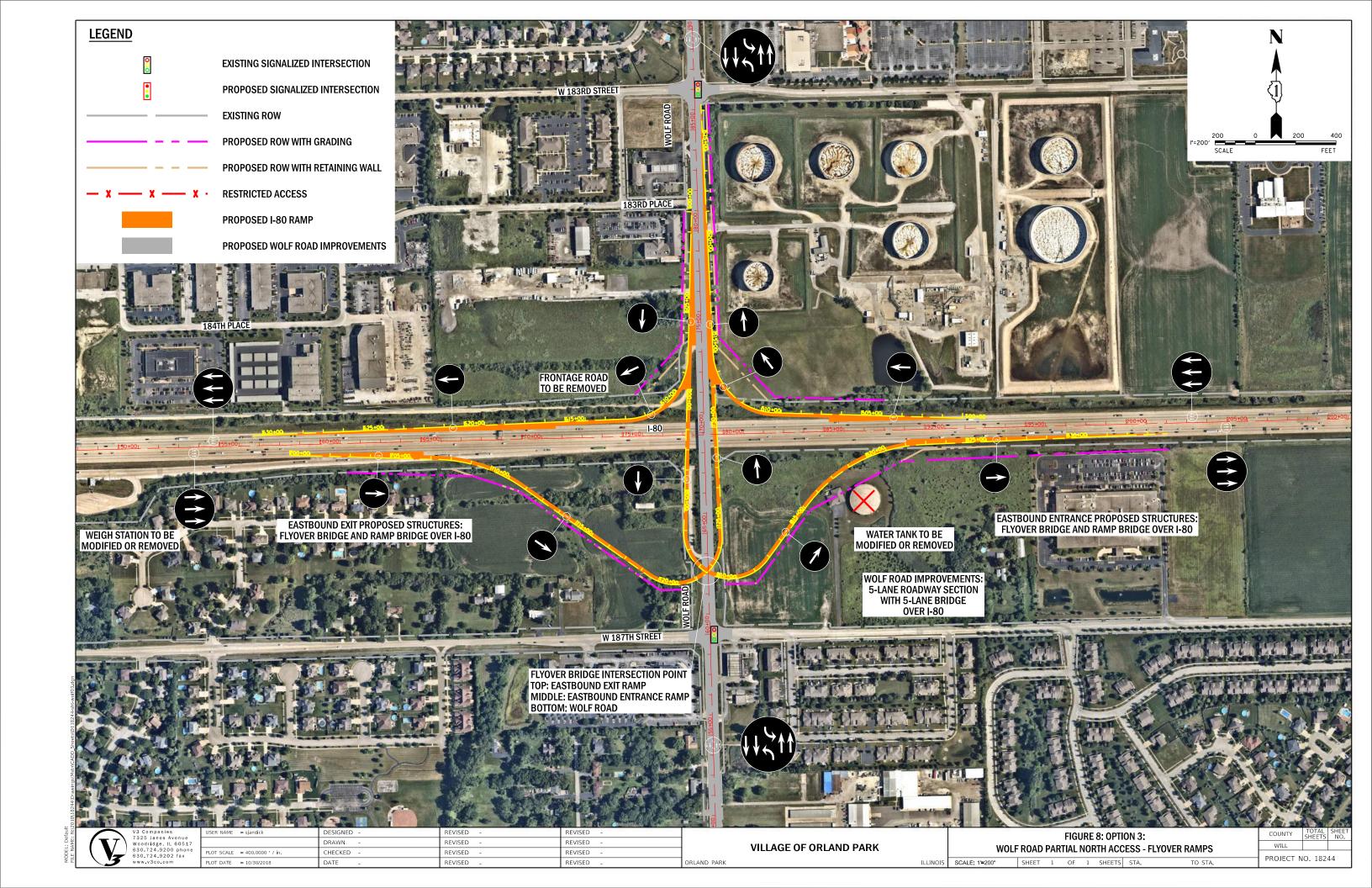
| Evaluation Criteria             | Option 1 | Option 2 | Option 3 | Option 4 | Option 5 | Option 6 | Option 7 | Option 8 | Option 9 |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Residential Impacts (# homes)   | 0        | 0        | 2        | 1        | 1        | 1        | 4        | 5        | 5        |
| Business Impacts (# businesses) | 0        | 0        | 1        | 0        | 0        | 0        | 0        | 0        | 0        |
| Required Right of Way (acres)   | 3.75     | 1.5      | 21.5     | 7.25     | 17       | 3.75     | 12.5     | 5        | 8.75     |
| Improved Access to I-80         |          |          |          |          |          |          |          |          |          |
| Cost Estimate (in millions)     | \$21.6   | \$21.0   | \$75.0   | \$36.0   | \$35.0   | \$38.2   | \$40.6   | \$13.2   | \$34.2   |
| Impact to Weigh Station         |          |          |          |          |          |          |          |          |          |
| Impact to Water Tower           |          |          |          |          |          |          |          |          |          |
| Impact to Utilities             |          |          |          |          |          |          |          |          |          |
| Impact to Waters of the US      |          |          |          |          |          |          |          |          |          |
| Requires New Railroad Crossing  |          |          |          |          |          |          |          |          |          |
| Legend:                         |          | Small Im | pact     |          | Moderate | e Impact |          | Large Im | pact     |

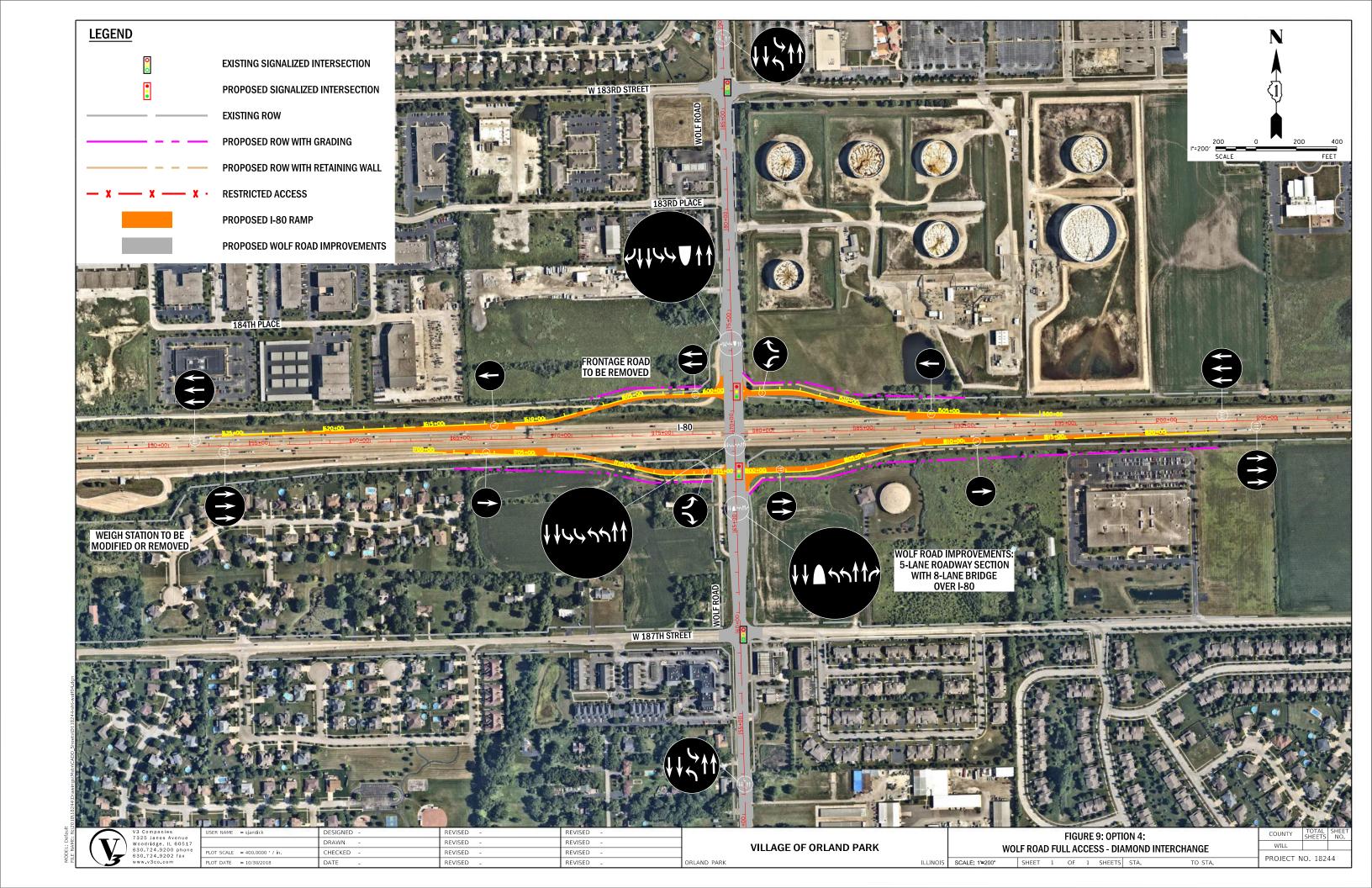
Note: The required right of way assumes grading the roadways to existing ground elevations

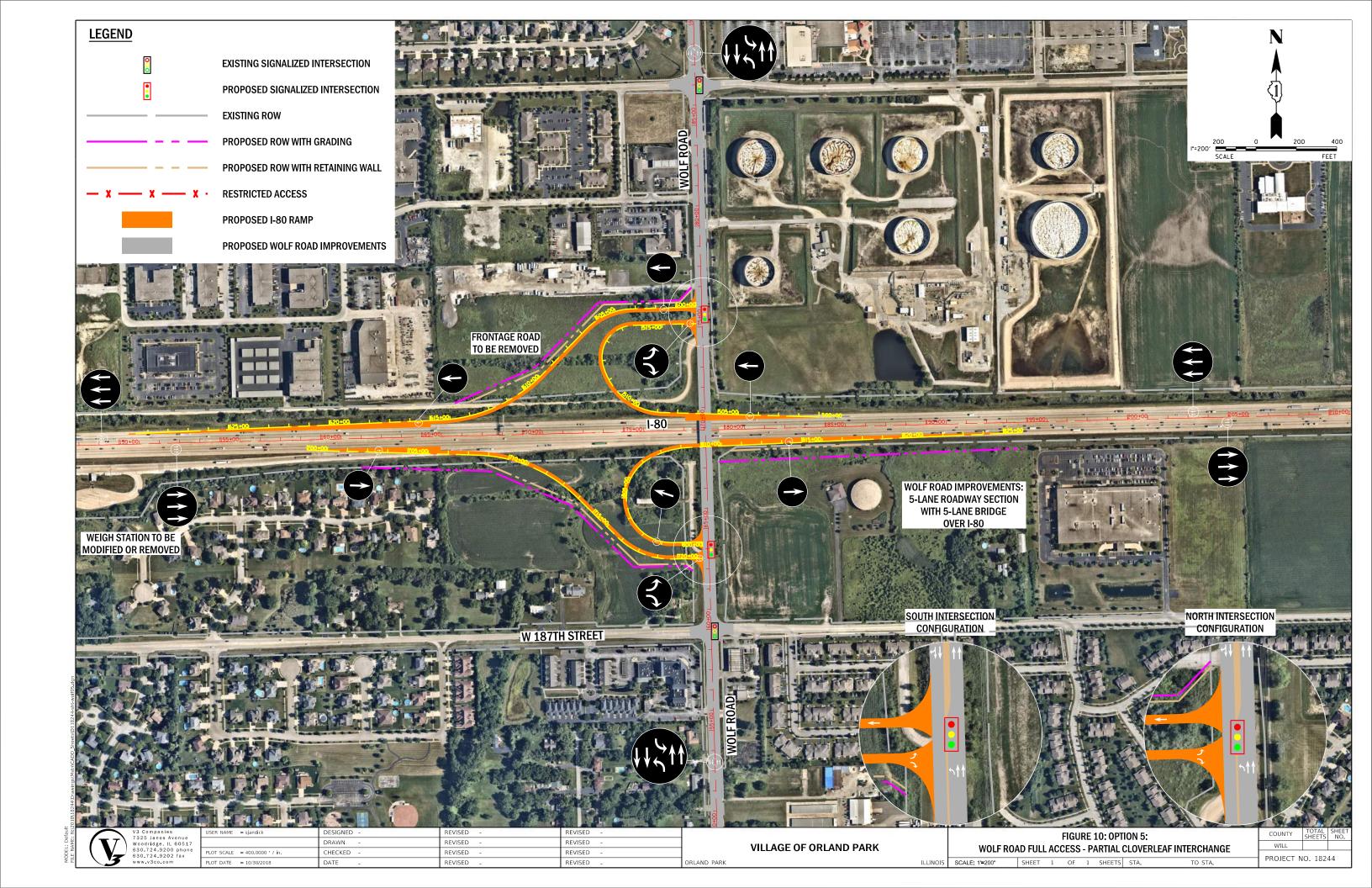


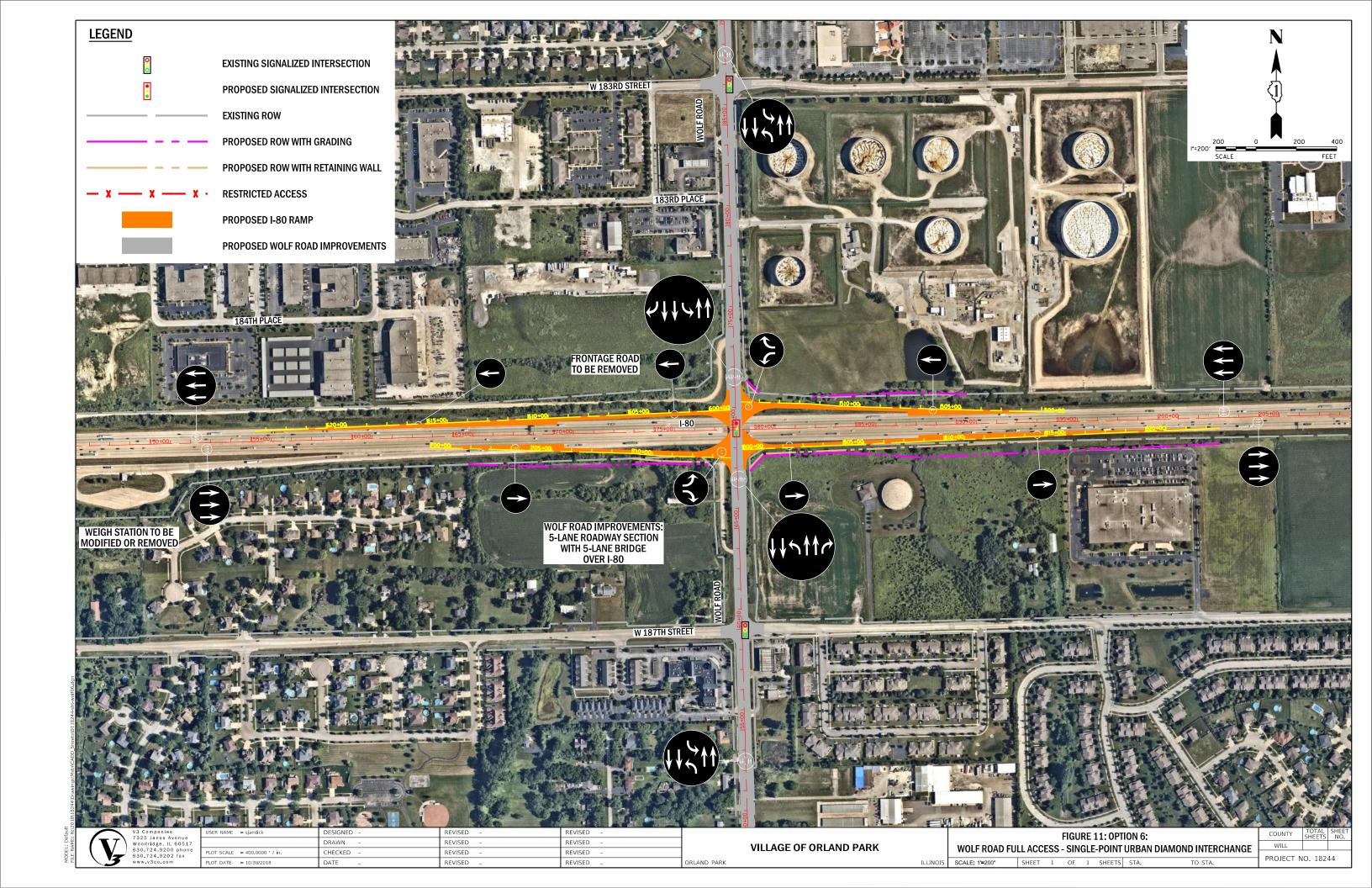


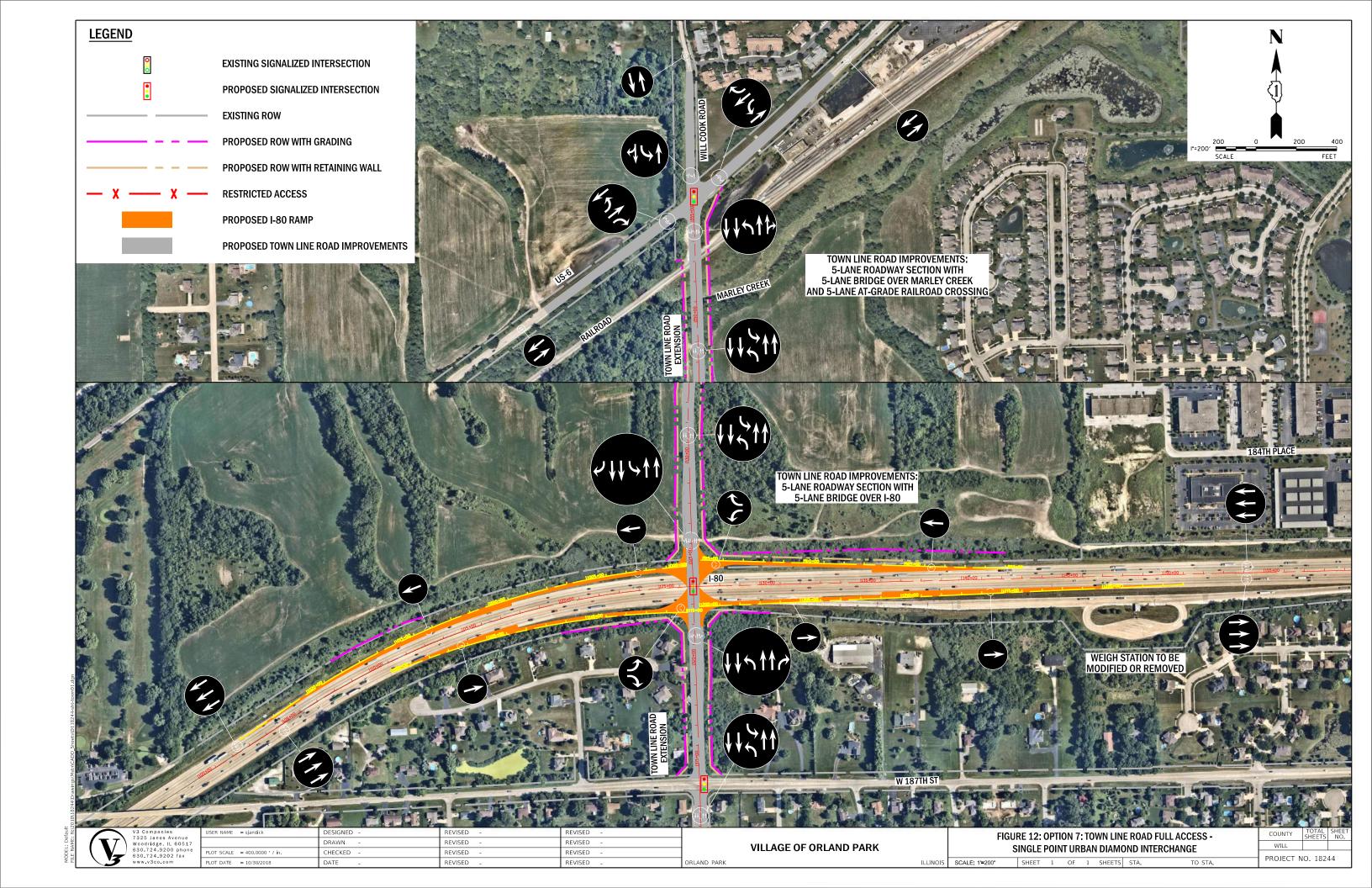


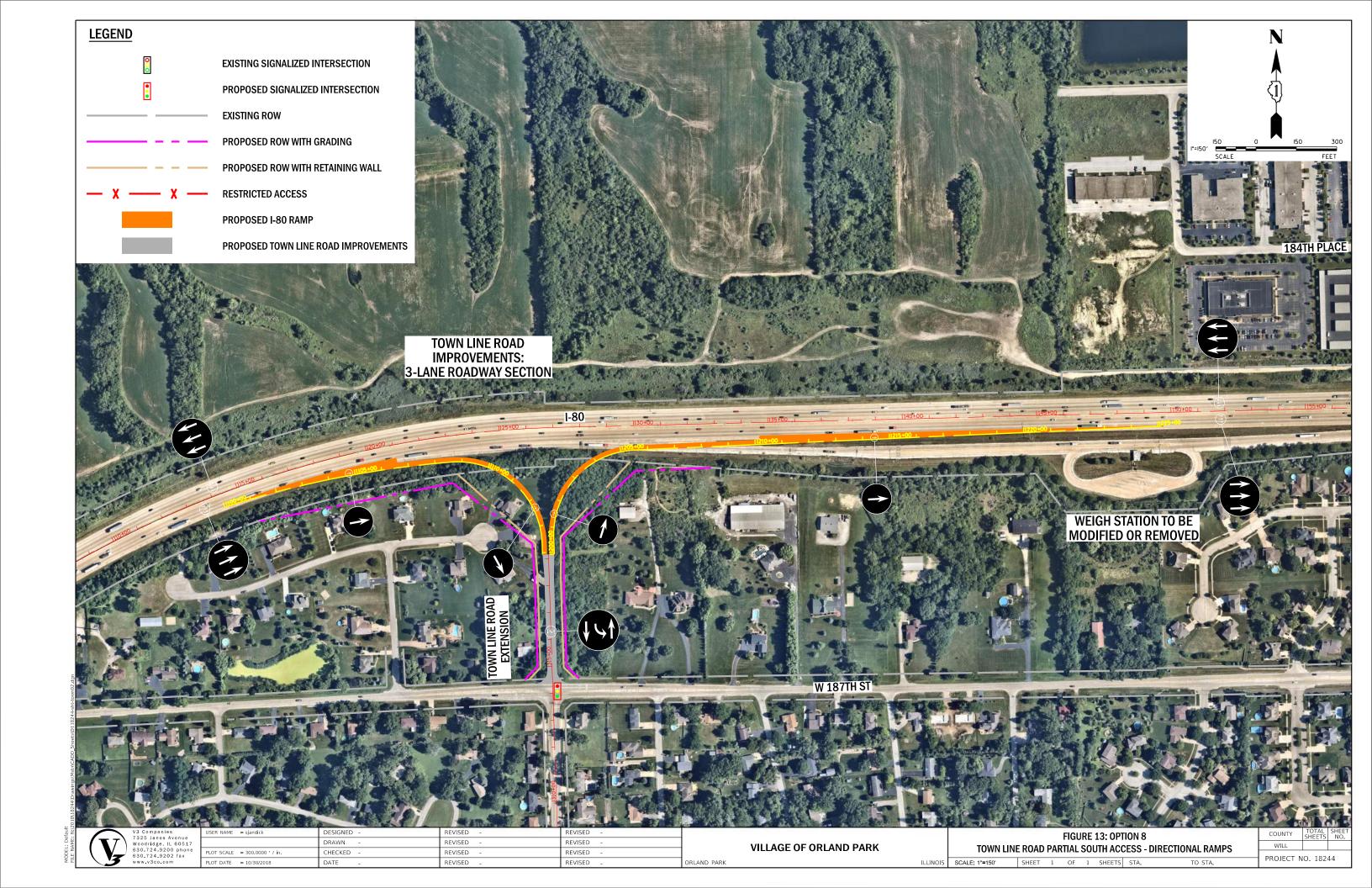


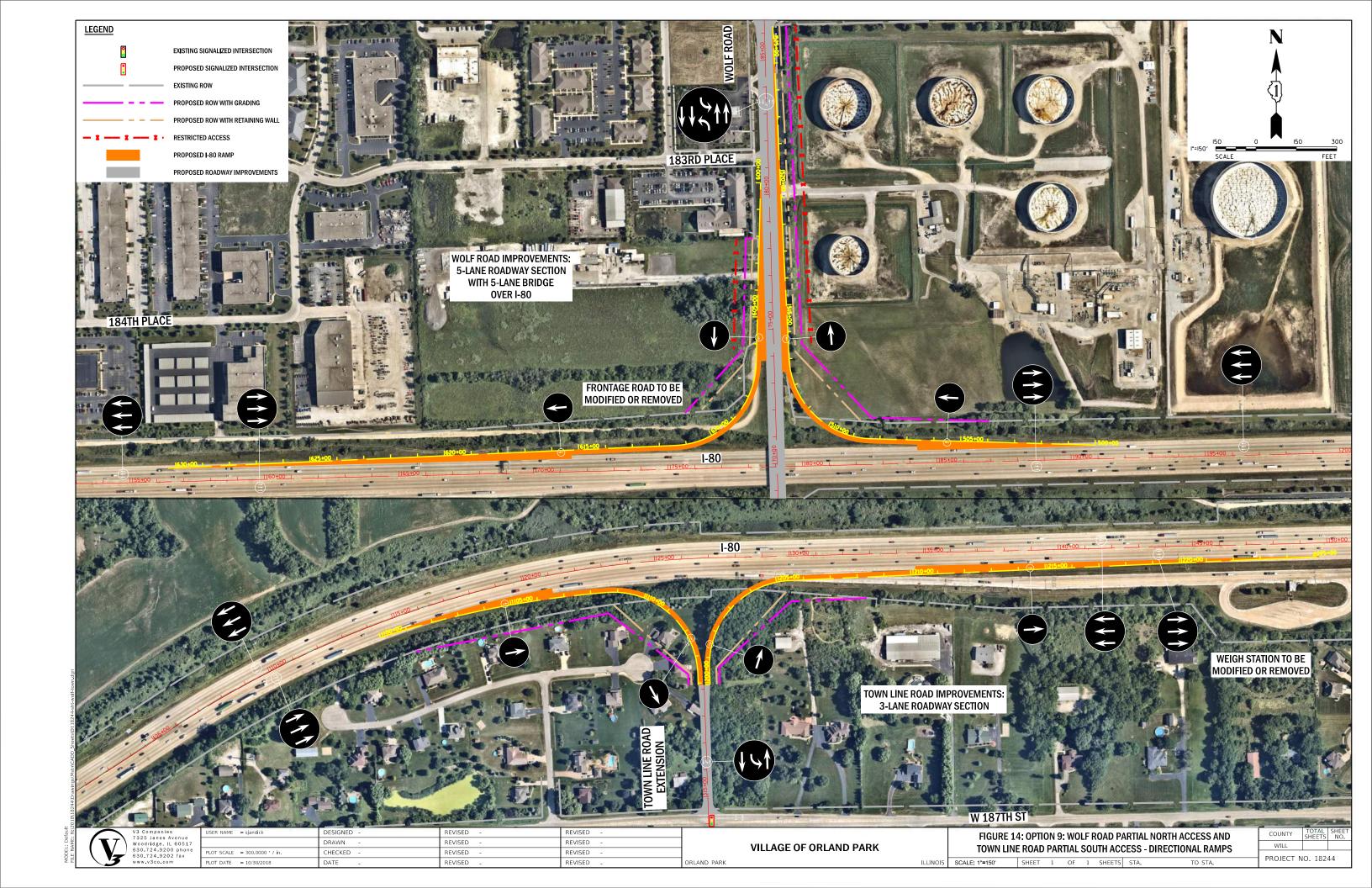












#### III. LOCAL COORDINATION and NEXT STEPS

Village of Orland Park

Village of Mokena

Illinois Department of Transportation

Illinois Tollway

#### Next Steps

A new interchange along I-80 between I-355 and LaGrange Road is not currently in the long range plan for the Chicago Metropolitan Agency for Planning (CMAP), the local villages, and Will County. The first step would be to introduce the project into the long range plans for the various agencies, which would include agency coordination between FHWA, IDOT, CMAP, Will County, Cook County, the Village of Orland Park, and the Village of Mokena. A Phase I study will have to be completed that will assess each alternative and its impact on the environment and lead to the selection of a Preferred Alternative. An Access Justification Report will need to be completed for the Preferred Alternative and approved by FHWA and IDOT. Final engineering plans will need to be completed and right of way acquired before construction can begin.



# APPENDIX A CONSTRUCTION COST DETAILS





### ENGINEER'S PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST I-80 ACCESS STUDY

Will County, IL Date 10/29/18

| OPTION  | COST             |
|---|------------------|
| OPTION 1: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS   | \$<br>21,543,750 |
| OPTION 2: I-80 WOLF ROAD PARTIAL NORTH ACCESS - PARTIAL DIAMOND   | \$<br>20,975,000 |
| OPTION 3: I-80 WOLF ROAD PARTIAL NORTH ACCESS - FLYOVER RAMPS   | \$<br>74,968,750 |
| OPTION 4: I-80 WOLF ROAD FULL ACCESS - DIAMOND INTERCHANGE  | \$<br>36,015,625 |
| OPTION 5: I-80 WOLF ROAD FULL ACCESS - PARTIAL CLOVERLEAF INTERCHANGE   | \$<br>35,012,500 |
| OPTION 6: I-80 WOLF ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE   | \$<br>38,225,000 |
| OPTION 7: I-80 TOWN LINE ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE  | \$<br>40,626,094 |
| OPTION 8: I-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS  | \$<br>13,165,625 |
| OPTION 9: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS<br>I-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS | \$<br>34,171,875 |

#### Notes

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### ENGINEER'S PRELIMINARY OPINION OF PROBABLE LAND ACQUISITION I-80 ACCESS STUDY

Will County, IL Date 10/29/18

| OPTION   | ACRES |
|--|-------|
| OPTION 1: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS  | 3.75  |
| OPTION 2: I-80 WOLF ROAD PARTIAL NORTH ACCESS - PARTIAL DIAMOND  | 1.5   |
| OPTION 3: I-80 WOLF ROAD PARTIAL NORTH ACCESS - FLYOVER RAMPS  | 21.5  |
| PTION 4: I-80 WOLF ROAD FULL ACCESS - DIAMOND INTERCHANGE  | 7.25  |
| PTION 5: I-80 WOLF ROAD FULL ACCESS - PARTIAL CLOVERLEAF INTERCHANGE   | 17.00 |
| PTION 6: I-80 WOLF ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE   | 3.75  |
| PTION 7: I-80 TOWN LINE ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE  | 12.50 |
| OPTION 8: I-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS   | 5.00  |
| OPTION 9: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS<br>-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS | 8.75  |



### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 1: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS

Will County, IL Date 10/29/18

| 1.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS               | U.  | NIT PRICE |    | COST       |
|------|---|----------|---------------------|-----|-----------|----|------------|
| 1.1  | WOLF ROAD URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 2,400    | lf                  | \$  | 650       | \$ | 1,560,000  |
| 1.2  | WOLF ROAD 5-LANE BRIDGE STRUCTURE OVER I-80                           | 24,000   | sf                  | \$  | 200       | \$ | 4,800,000  |
| 1.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | lf                  | \$  | 100       | \$ | 240,000    |
| 1.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                  | \$  | 600,000   | \$ | 600,000    |
| 1.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                  | \$  | 500,000   | \$ | 500,000    |
| 1.6  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                  | \$  | 2,000,000 | \$ | 2,000,000  |
| 1.7  | EXIT RAMP I-80 WB TO WOLF ROAD NB                                     | 2,600    | lf                  | \$  | 150       | \$ | 390,000    |
| 1.8  | ENTRANCE RAMP WOLF ROAD SB TO I-80 WB                                 | 3,100    | lf                  | \$  | 150       | \$ | 465,000    |
| 1.9  | APPROXIMATE FURNISHED EXCAVATION                                      | 156,000  | cy                  | \$  | 30        | \$ | 4,680,000  |
| 1.10 | UTILITY REMOVAL/RELOCATION  | 1        | ls                  | \$  | 2,000,000 | \$ | 2,000,000  |
|      |   |          | Contingency (25%    | 6)  |           | \$ | 4,308,750  |
|      |   |          | Subtotal Division 1 | .0: |           | S  | 21,543,750 |

| L1.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L1.1 ROW ACQUISITION ACRES | 3.75     | ac    | \$ 300,000 | \$ 1,125,000 |

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Typical Units

 $\begin{tabular}{ll} If = linear feet & cy = cubic yards & ac = acre \\ sf = square feet & ea = each & allowance \\ sy = square yards & ls = lump sum & ton \end{tabular}$ 



### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 2: I-80 WOLF ROAD PARTIAL NORTH ACCESS - PARTIAL DIAMOND

Will County, IL Date 10/29/18

| 2.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS                | UNI | T PRICE   | COST             |
|------|---|----------|----------------------|-----|-----------|------------------|
| 2.1  | WOLF ROAD URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 2,400    | lf                   | \$  | 650       | \$<br>1,560,000  |
| 2.2  | WOLF ROAD 5 LANE BRIDGE STRUCTURE OVER I-80                           | 24,000   | sf                   | \$  | 200       | \$<br>4,800,000  |
| 2.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | lf                   | \$  | 100       | \$<br>240,000    |
| 2.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                   | \$  | 600,000   | \$<br>600,000    |
| 2.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                   | \$  | 500,000   | \$<br>500,000    |
| 2.6  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ INTERCHANGE                   | 1        | ls                   | \$  | 250,000   | \$<br>250,000    |
| 2.7  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                   | \$  | 2,000,000 | \$<br>2,000,000  |
| 2.8  | EXIT RAMP I-80 WB TO WOLF ROAD NB                                     | 1,600    | lf                   | \$  | 150       | \$<br>240,000    |
| 2.9  | ENTRANCE RAMP WOLF ROAD SB TO I-80 WB                                 | 2,600    | lf                   | \$  | 150       | \$<br>390,000    |
| 2.10 | APPROXIMATE FURNISHED EXCAVATION                                      | 140,000  | cy                   | \$  | 30        | \$<br>4,200,000  |
| 2.11 | UTILITY REMOVAL/RELOCATION  | 1        | ls                   | \$  | 2,000,000 | \$<br>2,000,000  |
|      |   |          | Contingency (25%     | )   |           | \$<br>4,195,000  |
|      |   |          | Subtotal Division 2. | 0:  | •         | \$<br>20,975,000 |

| L2.0 | LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST       |
|------|-----------------------|----------|-------|------------|------------|
| L2.1 | ROW ACQUISITION ACRES | 1.5      | ac    | \$ 300,000 | \$ 450,000 |

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Typical Units

If = linear feet cy = cubic yards ac = acre sf = square feet ea = each allowance sy = square yards ls = lump sum ton



### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 3: I-80 WOLF ROAD PARTIAL NORTH ACCESS - FLYOVER RAMPS

Will County, IL Date 10/29/18

| 3.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS               | Ul  | NIT PRICE | COST             |
|------|---|----------|---------------------|-----|-----------|------------------|
| 3.1  | WOLF ROAD URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 2,400    | lf                  | \$  | 650       | \$<br>1,560,000  |
| 3.2  | WOLF ROAD 5-LANE BRIDGE STRUCTURE OVER I-80                           | 24,000   | sf                  | \$  | 200       | \$<br>4,800,000  |
| 3.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | lf                  | \$  | 100       | \$<br>240,000    |
| 3.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                  | \$  | 600,000   | \$<br>600,000    |
| 3.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                  | \$  | 500,000   | \$<br>500,000    |
| 3.6  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                  | \$  | 2,000,000 | \$<br>2,000,000  |
| 3.7  | EXIT RAMP I-80 WB TO WOLF ROAD NB                                     | 2,700    | lf                  | \$  | 150       | \$<br>405,000    |
| 3.8  | ENTRANCE RAMP WOLF ROAD SB TO I-80 WB                                 | 3,100    | lf                  | \$  | 150       | \$<br>465,000    |
| 3.9  | EXIT RAMP I-80 EB TO WOLF ROAD NB                                     | 1,500    | lf                  | \$  | 150       | \$<br>225,000    |
| 3.10 | ENTRANCE RAMP WOLF ROAD SB TO I-80 EB                                 | 2,000    | lf                  | \$  | 150       | \$<br>300,000    |
| 3.11 | FLYOVER BRIDGE STRUCTURE I-80 EB TO WOLF ROAD NB                      | 51,000   | sf                  | \$  | 200       | \$<br>10,200,000 |
| 3.12 | FLYOVER BRIDGE STRUCTURE WOLF ROAD SB TO I-80 EB                      | 45,000   | sf                  | \$  | 200       | \$<br>9,000,000  |
| 3.13 | FLYOVER RETAINING WALLS   | 1        | ls                  | \$  | 8,000,000 | \$<br>8,000,000  |
| 3.14 | APPROXIMATE FURNISHED EXCAVATION                                      | 356,000  | cy                  | \$  | 30        | \$<br>10,680,000 |
| 3.15 | WATER STORAGE TANK MODIFICATIONS / REMOVAL                            | 1        | ls                  | \$  | 3,000,000 | \$<br>3,000,000  |
| 3.16 | WEIGH STATION MODIFICATIONS / REMOVAL                                 | 1        | ls                  | \$  | 4,000,000 | \$<br>4,000,000  |
| 3.17 | UTILITY REMOVAL/RELOCATION  | 1        | ls                  | \$  | 4,000,000 | \$<br>4,000,000  |
|      |   |          | Contingency (25%    | (o) |           | \$<br>14,993,750 |
|      |   |          | Subtotal Division 3 | .0: |           | \$<br>74,968,750 |

| L3.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L3.1 ROW ACQUISITION ACRES | 21.5     | ac    | \$ 300,000 | \$ 6,450,000 |

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Typical Units

$$\begin{split} & \text{If} = \text{linear feet} & & \text{cy} = \text{cubic yards} & & \text{ac} = \text{acre} \\ & \text{sf} = \text{square feet} & & \text{ea} = \text{each} & & \text{allowance} \\ & \text{sy} = \text{square yards} & & \text{ls} = \text{lump sum} & & \text{ton} \end{split}$$



#### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 4: I-80 WOLF ROAD FULL ACCESS - DIAMOND INTERCHANGE

Will County, IL Date 10/29/18

| 4.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS                | U  | NIT PRICE | COST             |
|------|---|----------|----------------------|----|-----------|------------------|
| 4.1  | WOLF ROAD URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 1,300    | 1f                   | \$ | 650       | \$<br>845,000    |
| 4.2  | WOLF ROAD URBAN 8-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 1,100    | 1f                   | \$ | 875       | \$<br>962,500    |
| 4.3  | WOLF ROAD 8-LANE BRIDGE STRUCTURE OVER I-80                           | 31,200   | sf                   | \$ | 200       | \$<br>6,240,000  |
| 4.4  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | 1f                   | \$ | 100       | \$<br>240,000    |
| 4.5  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                   | \$ | 600,000   | \$<br>600,000    |
| 4.6  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                   | \$ | 500,000   | \$<br>500,000    |
| 4.7  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ INTERCHANGES                  | 1        | ls                   | \$ | 500,000   | \$<br>500,000    |
| 4.8  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                   | \$ | 2,000,000 | \$<br>2,000,000  |
| 4.9  | EXIT RAMP I-80 WB TO WOLF ROAD NB/SB                                  | 1,500    | 1f                   | \$ | 150       | \$<br>225,000    |
| 4.10 | ENTRANCE RAMP WOLF ROAD NB/SB TO I-80 WB                              | 2,600    | 1f                   | \$ | 150       | \$<br>390,000    |
| 4.11 | EXIT RAMP I-80 EB TO WOLF ROAD NB/SB                                  | 1,600    | 1f                   | \$ | 150       | \$<br>240,000    |
| 4.12 | ENTRANCE RAMP WOLF ROAD NB/SB TO I-80 EB                              | 2,400    | 1f                   | \$ | 150       | \$<br>360,000    |
| 4.13 | APPROXIMATE FURNISHED EXCAVATION                                      | 257,000  | cy                   | \$ | 30        | \$<br>7,710,000  |
| 4.14 | WEIGH STATION MODIFICATION/REMOVAL                                    | 1        | ls                   | \$ | 4,000,000 | \$<br>4,000,000  |
| 4.15 | UTILITY REMOVAL/RELOCATION  | 1        | ls                   | \$ | 4,000,000 | \$<br>4,000,000  |
|      |   |          | Contingency (25%     | )  |           | \$<br>7,203,125  |
|      |   | _        | Subtotal Division 4. | 0. |           | \$<br>36.015.625 |

| L4.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L4.1 ROW ACQUISITION ACRES | 7.25     | ac    | \$ 300,000 | \$ 2,175,000 |

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Typical Units

 $\mathbf{cy} = \mathbf{cubic} \ \mathbf{yards}$ If = linear feet ac = acre sf = square feetea = each allowance sy = square yards ls = lump sum ton



#### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 5: I-80 WOLF ROAD FULL ACCESS - PARTIAL CLOVERLEAF INTERCHANGE

Will County, IL Date 10/29/18

| 5.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS                        | UNIT PRICE   | COST          |
|------|---|----------|------------------------------|--------------|---------------|
| 5.1  | WOLF ROAD URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION               | 2,400    | 1f                           | \$ 650       | \$ 1,560,000  |
| 5.2  | WOLF ROAD 5-LANE BRIDGE STRUCTURE OVER I-80                           | 24,000   | sf                           | \$ 200       | \$ 4,800,000  |
| 5.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | lf                           | \$ 100       | \$ 240,000    |
| 5.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                           | \$ 600,000   | \$ 600,000    |
| 5.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                           | \$ 500,000   | \$ 500,000    |
| 5.6  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ INTERCHANGES                  | 1        | ls                           | \$ 500,000   | \$ 500,000    |
| 5.7  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                           | \$ 2,000,000 | \$ 2,000,000  |
| 5.8  | EXIT RAMP I-80 WB TO WOLF ROAD NB/SB                                  | 1,800    | lf                           | \$ 150       | \$ 270,000    |
| 5.9  | ENTRANCE RAMP WOLF ROAD SB/NB TO I-80 WB                              | 3,000    | lf                           | \$ 150       | \$ 450,000    |
| 5.10 | EXIT RAMP I-80 EB TO WOLF ROAD NB/SB                                  | 2,200    | lf                           | \$ 150       | \$ 330,000    |
| 5.11 | ENTRANCE RAMP WOLF ROAD NB/SB TO I-80 EB                              | 2,600    | lf                           | \$ 150       | \$ 390,000    |
| 5.12 | APPROXIMATE FURNISHED EXCAVATION                                      | 279,000  | cy                           | \$ 30        | \$ 8,370,000  |
| 5.13 | WEIGH STATION MODIFICATION/REMOVAL                                    | 1        | ls                           | \$ 4,000,000 | \$ 4,000,000  |
| 5.14 | UTILITY REMOVAL/RELOCATION  | 1        | ls                           | \$ 4,000,000 | \$ 4,000,000  |
|      |   |          | Contingency (25%)            |              | \$ 7,002,500  |
|      |   |          | <b>Subtotal Division 5.0</b> | :            | \$ 35,012,500 |

| L5.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L5.1 ROW ACQUISITION ACRES | 17.00    | ac    | \$ 300,000 | \$ 5,100,000 |

#### Notes:

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Typical Units

If = linear feet cy = cubic yards ac = acre ea = each allowance sf = square feetsy = square yards ls = lump sum



#### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 6: I-80 WOLF ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE

Will County, IL Date 10/29/18

| 6.0  | ROADWAY IMPROVEMENTS  | QUANTITY | UNITS               | Ul         | NIT PRICE |    | COST       |
|------|---|----------|---------------------|------------|-----------|----|------------|
| 6.1  | WOLF ROAD NEW URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION           | 2,400    | lf                  | \$         | 650       | \$ | 1,560,000  |
| 6.2  | WOLF ROAD 5 LANE SPUI BRIDGE STRUCTURE OVER I-80                      | 45,000   | sf                  | \$         | 200       | \$ | 9,000,000  |
| 6.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400    | lf                  | \$         | 100       | \$ | 240,000    |
| 6.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1        | ls                  | \$         | 600,000   | \$ | 600,000    |
| 6.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1        | ls                  | \$         | 500,000   | \$ | 500,000    |
| 6.6  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ INTERCHANGE                   | 1        | ls                  | \$         | 400,000   | \$ | 400,000    |
| 6.7  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1        | ls                  | \$         | 2,000,000 | \$ | 2,000,000  |
| 6.8  | EXIT RAMP I-80 WB TO WOLF ROAD NB/SB                                  | 1,500    | lf                  | \$         | 150       | \$ | 225,000    |
| 6.9  | ENTRANCE RAMP WOLF ROAD SB/NB TO I-80 WB                              | 2,400    | lf                  | \$         | 150       | \$ | 360,000    |
| 6.10 | EXIT RAMP I-80 EB TO WOLF ROAD NB/SB                                  | 1,500    | lf                  | \$         | 150       | \$ | 225,000    |
| 6.11 | ENTRANCE RAMP WOLF ROAD NB/SB TO I-80 EB                              | 2,400    | lf                  | \$         | 150       | \$ | 360,000    |
| 6.12 | APPROXIMATE FURNISHED EXCAVATION                                      | 237,000  | cy                  | \$         | 30        | \$ | 7,110,000  |
| 6.13 | WEIGH STATION MODIFICATION/REMOVAL                                    | 1        | ls                  | \$         | 4,000,000 | \$ | 4,000,000  |
| 6.14 | UTILITY REMOVAL/RELOCATION  | 1        | ls                  | \$         | 4,000,000 | \$ | 4,000,000  |
|      |   |          | Contingency (25%    | <b>6</b> ) |           | \$ | 7,645,000  |
|      |   |          | Subtotal Division 6 | 5.0:       | -         | S  | 38,225,000 |

| L6.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L6.1 ROW ACQUISITION ACRES | 3.75     | ac    | \$ 300,000 | \$ 1,125,000 |

#### Notes:

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   3) The land acquisition costs are based on acquisition of undeveloped land. Actual land acquisition costs will vary based on property status.

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Typical Units

If = linear feet cy = cubic yards sf = square feet ea = each allowance sy = square yards ls = lump sum ton



### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 7: I-80 TOWN LINE ROAD FULL ACCESS - SINGLE-POINT URBAN DIAMOND INTERCHANGE

Will County, IL Date 10/29/18

| 7.0  | ROADWAY IMPROVEMENTS   | QUANTITY | UNITS                  | Ul  | NIT PRICE |    | COST       |
|------|--|----------|------------------------|-----|-----------|----|------------|
| 7.1  | TOWN LINE ROAD NEW URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION         | 3,900    | lf                     | \$  | 650       | \$ | 2,535,000  |
| 7.2  | SOUTHWEST HIGHWAY US 6 NEW URBAN 4-LANE, BITUMINOUS ROADWAY CONSTRUCTION | 1,900    | lf                     | \$  | 550       | \$ | 1,045,000  |
| 7.3  | WILL COOK ROAD NEW URBAN 3-LANE, BITUMINOUS ROADWAY CONSTRUCTION         | 625      | lf                     | \$  | 475       | \$ | 296,875    |
| 7.4  | TOWN LINE ROAD 5-LANE SPUI BRIDGE STRUCTURE OVER I-80                    | 45,000   | sf                     | \$  | 200       | \$ | 9,000,000  |
| 7.5  | TOWN LINE ROAD NEW BRIDGE STRUCTURE OVER MARLEY CREEK                    | 6,000    | sf                     | \$  | 200       | \$ | 1,200,000  |
| 7.6  | TOWN LINE ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 187TH STREET AND US 6       | 1        | ls                     | \$  | 500,000   | \$ | 500,000    |
| 7.7  | TOWN LINE ROAD TRAFFIC SIGNAL IMPROVEMENTS @ INTERCHANGE                 | 1        | ls                     | \$  | 400,000   | \$ | 400,000    |
| 7.8  | SOUTHWEST HIGHWAY US 6 EXISTING ROADWAY REMOVAL                          | 1,900    | lf                     | \$  | 90        | \$ | 171,000    |
| 7.9  | WILL COOK ROAD EXISTING ROADWAY REMOVAL                                  | 700      | lf                     | \$  | 90        | \$ | 63,000     |
| 7.1  | EXIT RAMP I-80 WB TO TOWN LINE ROAD NB/SB                                | 1,600    | lf                     | \$  | 150       | \$ | 240,000    |
| 7.11 | ENTRANCE RAMP TOWN LINE ROAD SB/NB TO I-80 WB                            | 2,500    | lf                     | \$  | 150       | \$ | 375,000    |
| 7.12 | EXIT RAMP I-80 EB TO TOWN LINE ROAD NB/SB                                | 1,600    | lf                     | \$  | 150       | \$ | 240,000    |
| 7.13 | ENTRANCE RAMP TOWN LINE ROAD NB/SB TO I-80 EB                            | 2,500    | lf                     | \$  | 150       | \$ | 375,000    |
| 7.14 | RAILROAD CROSSING OVER METRA RAIL LINE                                   | 1        | ls                     | \$  | 3,000,000 | \$ | 3,000,000  |
| 7.15 | APPROXIMATE FURNISHED EXCAVATION   | 202,000  | cy                     | \$  | 30        | \$ | 6,060,000  |
| 7.16 | WEIGH STATION MODIFICATION/REMOVAL                                       | 1        | ls                     | \$  | 4,000,000 | \$ | 4,000,000  |
| 7.17 | UTILITY REMOVAL/RELOCATION   | 1        | ls                     | \$  | 3,000,000 | \$ | 3,000,000  |
|      |  |          | Contingency (25%       | (o) |           | \$ | 8,125,219  |
|      |  |          | Subtotal Division 7.0: |     |           |    | 40,626,094 |

| L7.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L7.1 ROW ACQUISITION ACRES | 12.50    | ac    | \$ 300,000 | \$ 3,750,000 |

#### Notes:

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- 3) The land acquisition costs are based on acquisition of undeveloped land. Actual land acquisition costs will vary based on property status.

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Typical Units

$$\begin{split} & \text{If} = \text{linear feet} & & \text{cy} = \text{cubic yards} & & \text{ac} = \text{acre} \\ & \text{sf} = \text{square feet} & & \text{ea} = \text{each} & & \text{allowance} \\ & \text{sy} = \text{square yards} & & \text{ls} = \text{lump sum} & & \text{ton} \end{split}$$



### ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 8: I-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS

Will County, IL Date 10/29/18

| 8.0 | ROADWAY IMPROVEMENTS   | QUANTITY               | UNITS             | UNIT P | RICE    | COST             |
|-----|--|------------------------|-------------------|--------|---------|------------------|
| 8.1 | TOWN LINE ROAD NEW URBAN 3-LANE, BITUMINOUS ROADWAY CONSTRUCTION | 500                    | lf                | \$     | 475     | \$<br>237,500    |
| 8.2 | TOWN LINE ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 187TH STREET        | 1                      | ls                | \$     | 250,000 | \$<br>250,000    |
| 8.3 | EXIT RAMP I-80 EB TO TOWN LINE ROAD SB                           | 1,500                  | lf                | \$     | 150     | \$<br>225,000    |
| 8.4 | ENTRANCE RAMP TOWN LINE ROAD NB TO I-80 EB                       | 2,600                  | lf                | \$     | 150     | \$<br>390,000    |
| 8.5 | APPROXIMATE FURNISHED EXCAVATION                                 | 131,000                | cy                | \$     | 30      | \$<br>3,930,000  |
| 8.6 | WEIGH STATION MODFICATION/REMOVAL                                | 1                      | ls                | \$ 4,  | 000,000 | \$<br>4,000,000  |
| 8.7 | UTILITY REMOVAL/RELOCATION                                       | 1                      | ls                | \$ 1,  | 500,000 | \$<br>1,500,000  |
|     |  |                        | Contingency (25%) |        |         | \$<br>2,633,125  |
|     |  | Subtotal Division 8.0: |                   |        |         | \$<br>13,165,625 |

| L8.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L8.1 ROW ACQUISITION ACRES | 5.00     | ac    | \$ 300,000 | \$ 1,500,000 |

#### Notes:

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Typical Units

 $\begin{array}{lll} & \text{If = linear feet} & \text{cy = cubic yards} & \text{ac = acre} \\ & \text{sf = square feet} & \text{ea = each} & \text{allowance} \\ & \text{sy = square yards} & \text{ls = lump sum} & \text{ton} \\ \end{array}$ 



## ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST FOR OPTION 9: I-80 WOLF ROAD PARTIAL NORTH ACCESS - DIRECTIONAL RAMPS I-80 TOWN LINE ROAD PARTIAL SOUTH ACCESS - DIRECTIONAL RAMPS

Will County, IL Date 10/29/18

| 9.0  | ROADWAY IMPROVEMENTS  | QUANTITY                                 | UNITS | UNIT PRICE   | COST             |
|------|---|--|-------|--------------|------------------|
| 9.1  | WOLF ROAD NEW URBAN 5-LANE, BITUMINOUS ROADWAY CONSTRUCTION           | 2,400                                    | lf    | \$ 650       | \$<br>1,560,000  |
| 9.2  | WOLF ROAD 5-LANE BRIDGE STRUCTURE OVER I-80                           | 24,000                                   | sf    | \$ 200       | \$<br>4,800,000  |
| 9.3  | WOLF ROAD EXISTING ROADWAY REMOVAL                                    | 2,400                                    | lf    | \$ 100       | \$<br>240,000    |
| 9.4  | WOLF ROAD EXISTING BRIDGE STRUCTURE REMOVAL                           | 1  | ls    | \$ 200,000   | \$<br>200,000    |
| 9.5  | WOLF ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 183RD STREET AND 187TH STREET | 1  | ls    | \$ 500,000   | \$<br>500,000    |
| 9.6  | WOLF ROAD INTERSECTION IMPROVEMENTS @ 183RD STREET AND 187TH STREET   | 1  | ls    | \$ 2,000,000 | \$<br>2,000,000  |
| 9.7  | EXIT RAMP I-80 WB TO WOLF ROAD NB                                     | 2,600                                    | lf    | \$ 150       | \$<br>390,000    |
| 9.8  | ENTRANCE RAMP WOLF ROAD SB TO I-80 WB                                 | 3,100                                    | lf    | \$ 150       | \$<br>465,000    |
| 9.9  | TOWN LINE ROAD NEW URBAN 3-LANE, BITUMINOUS ROADWAY CONSTRUCTION      | 500                                      | lf    | \$ 475       | \$<br>237,500    |
| 9.10 | TOWN LINE ROAD TRAFFIC SIGNAL IMPROVEMENTS @ 187TH STREET             | 1  | ls    | \$ 250,000   | \$<br>250,000    |
| 9.11 | EXIT RAMP I-80 EB TO TOWN LINE ROAD SB                                | 1,500                                    | lf    | \$ 150       | \$<br>225,000    |
| 9.12 | ENTRANCE RAMP TOWN LINE ROAD NB TO I-80 EB                            | 2,600                                    | lf    | \$ 150       | \$<br>390,000    |
| 9.13 | APPROXIMATE FURNISHED EXCAVATION                                      | 286,000                                  | cy    | \$ 30        | \$<br>8,580,000  |
| 9.14 | WEIGH STATION MODIFICATION/REMOVAL                                    | 1  | ls    | \$ 4,000,000 | \$<br>4,000,000  |
| 9.15 | UTILITY REMOVAL/RELOCATION  | 1  | ls    | \$ 3,500,000 | \$<br>3,500,000  |
|      |   | Contingency (25%) Subtotal Division 9.0: |       |              | \$<br>6,834,375  |
|      |   |  |       |              | \$<br>34,171,875 |

| L9.0 LAND ACQUISITION      | QUANTITY | UNITS | UNIT PRICE | COST         |
|----------------------------|----------|-------|------------|--------------|
| L9.1 ROW ACQUISITION ACRES | 8.75     | ac    | \$ 300,000 | \$ 2,625,000 |

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Typical Units

If = linear feet cy = cubic yards ac = acresf = square feet ea = each allowance

 $sy = square \ yards \qquad ls = lump \ sum \qquad \qquad ton$