

developed with WBBM/CBS to be followed during construction. See subsection 3.4.4.3 for more detailed descriptions of safety precautions required during construction.

If the Illinois Tollway obtains roadway ownership in the vicinity of the antennas and vehicle-mounted transponders are used to collect tolls, there could be interference with the AM radio transmission. The transponders use Radio Frequency Identification (RFID) technology (RFID tagging). Interference could occur if the RFID tag frequency is the same as the AM radio broadcasting frequency.

Interference with the AM RF could also occur with RFID technology associated with social media through mobile devices, such as smart phones. Commercial and consumer products and marketers are evaluating the potential use of RFID technology to reach their market segment via cell phones. It is not clear at this time if this would interfere with the AM radio broadcast as mobile phones in vehicles pass by the AM antenna.

3.4.4.3 Measures to Minimize Harm and Mitigation

Construction personnel for this project are not anticipated to enter the perimeter of the transmitting antennas, which produce the high-energy RF fields. Coordination with WBBM/CBS would take place prior to construction in the vicinity of the antennas, as necessary, to confirm requirements. Potential safety considerations during the construction phase of the project are described below. All requirements may be assembled into a safety manual for use at the construction site.

- When working near the antennas, construction workers must be cognizant of land disturbance and vibration generated by heavy equipment. Because the buried 10-gauge copper wire is fragile, vibration monitoring may be required.
- Dust generated during construction and equipment noise should be minimized by implementing best management practices to reduce potential impacts.
- Safety measures, such as shielding construction equipment from the electromagnetic signals, would be used as necessary during construction to minimize potential for injury. Grounding and shielding requirements may include grounding metal, such as a chain-link fence installed at the roadway right-of-way with a separate electrode. However, because the fence would likely be located outside the radio transmission site, this may not be required.
- During construction, contractor radios may interfere with radio transmission, if the contractor RF is the same as the AM radio broadcasting frequency.
- If microwaves are transmitted from the tower, obstructions to the signal should be avoided. Microwaves work on a line-of-sight technology; therefore, signals would not penetrate through objects.

3.5 Public Facilities and Services

3.5.1 Affected Environment

The project corridor consists of well established communities with a full range of community facilities, including libraries, schools, and medical services. Following is a

description of community facilities either located along or servicing the project corridor (see Exhibit 3-10).

3.5.1.1 Medical and Public Safety Services

Sherman Hospital in Elgin (not shown on Exhibit 3-10 because it is outside of the view), Alexian Brothers Medical Center in Elk Grove Village, and Kindred Hospital of Northlake are the hospitals located nearest the project corridor. No medical facility is located within the project corridor.

A number of the communities have mutual aid agreements with nearby communities to provide reciprocal emergency services when necessary. Mutual aid agreements exist between Elk Grove Village and Itasca for I-290; between Elk Grove Village and Roselle and between Elk Grove Village and Itasca for the Elgin-O'Hare Expressway; and between Bensenville, Franklin Park, and Leyden Township for the Bensenville Yard.

Hanover Park, Schaumburg, Roselle, Elk Grove Village, Franklin Park, Elmhurst, Des Plaines, and Mount Prospect have municipal fire departments to respond to emergencies within municipal limits. The Itasca Fire Protection District is a separate governmental entity that provides emergency services to portions of Itasca and Wood Dale. The Wood Dale, Bensenville, and Northlake Fire Protection Districts are also separate governmental bodies serving residents in their respective municipalities. Fire departments along the project corridor consider population, density, land uses, and traffic flow in locating their fire stations. Some fire departments have multiple stations and service areas. Routing emergency vehicles across railroad tracks is avoided where possible, and having alternative routes available when primary routes are temporarily out of service is preferred. Because time is critical in the delivery of medical attention for patient survival, fire departments strive to meet the National Fire Protection Association's 1710 Standard that recommends six minutes or less response time to an incident.

All core communities have municipal police departments that provide public safety for their respective communities. Police response along freeways and tollways is provided by the Illinois State Police. On occasion, the State Police may request additional freeway/tollway response from various local agencies. Police protection services strive for a response time of three minutes.

3.5.1.2 Schools

The project area is served by 10 public school districts. Table 3-18 lists the communities within the project corridor that are served by these school districts and what types of schools serve project corridor residents. Two colleges (DeVry University and Robert Morris University) are located along the project corridor. A public intermediate school (Elmer J. Franzen Intermediate School), a parochial school (St. John Evangelical Lutheran Preschool), one private school (Metro Prep/Laureate Day School), and a private daycare/preschool (KinderCare) are located nearby.

TABLE 3-18
School Districts Serving the Project Corridor

| Name of School District | School Type Included | Project Corridor Communities Served |
|---|--|--|
| School District 54 | Elementary and Junior High Schools | Elk Grove Village, Roselle, Schaumburg, Hanover Park |
| Township High School District 211 | High Schools | Elk Grove Village, Roselle, Schaumburg, Hanover Park |
| Lake Park High School District 108 | High School | Hanover Park, Roselle, Itasca |
| Wood Dale District 7 | Elementary and Junior High Schools | Itasca, Wood Dale, Elk Grove Village, Bensenville |
| Itasca School District 10 | Primary, Intermediate and Middle Schools | Itasca, Wood Dale |
| School District 100 | High School | Itasca, Elk Grove Village, Wood Dale, Bensenville |
| Township High School District 214 | High Schools | Mount Prospect, Des Plaines, Elk Grove Village |
| Community Consolidated School District 59 | Elementary and Junior High Schools; Family Center for Learning | Mount Prospect, Des Plaines, Elk Grove Village |
| Elmhurst Community Unit School District 205 | Elementary, Middle, and High Schools | Elmhurst, Bensenville |
| Bensenville School District 2 | Elementary and Middle Schools | Bensenville |

3.5.1.3 Religious Institutions

Two religious institutions are located within the project corridor – Masjid-al-huda and the Christian Meditation Center in Schaumburg. Three religious institutions are located nearby – St. John Evangelical Lutheran Church and Kingdom Hall in Schaumburg, and the Bethel Protestant Reformed Church in Roselle.

3.5.1.4 Cemeteries

Two cemeteries are located along the project corridor. They include Mount Emblem Cemetery and Arlington Cemetery in Elmhurst. Two cemeteries are located nearby – St. John Evangelical Lutheran Church Cemetery in Schaumburg and Elm Lawn Cemetery in Elmhurst.

3.5.1.5 Utilities

The project corridor is in a maturely developed area and, therefore, has a dense utility network. Utilities within the project area include electricity, natural gas, oil and petroleum, water, wastewater and stormwater collection, and telecommunications. Information obtained from utility providers is discussed and includes location, utility owner/operator, size, and type of material for large transmission mains. Field surveys to collect more accurate locational information were conducted in key locations throughout the corridor

where structures are proposed and subsurface activity during construction is likely. A more detailed investigation would likely be conducted during geometric plan development and during the final design phase. Utility companies would also have the opportunity to do their own investigations to locate utilities that are along the project corridor before and during construction. Specific utility conflicts are described in subsection 3.5.2.3.

3.5.1.6 Other Public Facilities

Three other public facilities are located within the project area. A City of Chicago canine training facility is located in Des Plaines, the Elk Grove Detention Pond is located in Elk Grove Village, and the Majewski Athletic Complex is located in Mount Prospect.

3.5.2 Environmental Consequences

The proposed improvements would not displace any medical or public safety facilities, schools, religious institutions or encroach on any cemeteries. Two religious institutions, the canine training facility, Majewski Athletic Complex, and Elk Grove Detention Pond would be affected (see subsection 3.5.2.4). School bus routes are developed annually in advance of the school year and, therefore, would take into consideration any permanent roadway modifications resulting from the proposed improvements. Emergency response services would benefit from the implementation of the improvements. Utility conflicts would be present during construction. Coordination would occur to ensure the least impact to emergency response and utility services during and after construction.

3.5.2.1 Emergency Response Services

Both the Elgin O'Hare and West Bypass corridors introduce new challenges for emergency response. Access to and from, as well as across, the improved Elgin O'Hare corridor is limited. Cross roads are provided, but access to them is through a discontinuous system of frontage roads, which in itself presents additional access challenges. The West Bypass corridor is also a limited-access facility with limited access across the corridor. Although one-way frontage roads are not present along the West Bypass corridor, the existing geography is riddled with railroad mainline tracks, rail spur lines, and one-way streets. Access in, out, and through the area is further limited by O'Hare Airport, I-294, and the Bensenville Yard, which limits access to these areas.

3.5.2.2 Religious Institutions

A sliver of undeveloped property adjacent to the roadway would be required from two religious institutions, the Masjid-al-huda and the Christian Meditation Center, to accommodate the lengthening of the right turn lane along Irving Park Road. Approximately 627 square feet would be required from the Masjid-al-huda, and approximately 351 square feet would be required from the Christian Mediation Center.

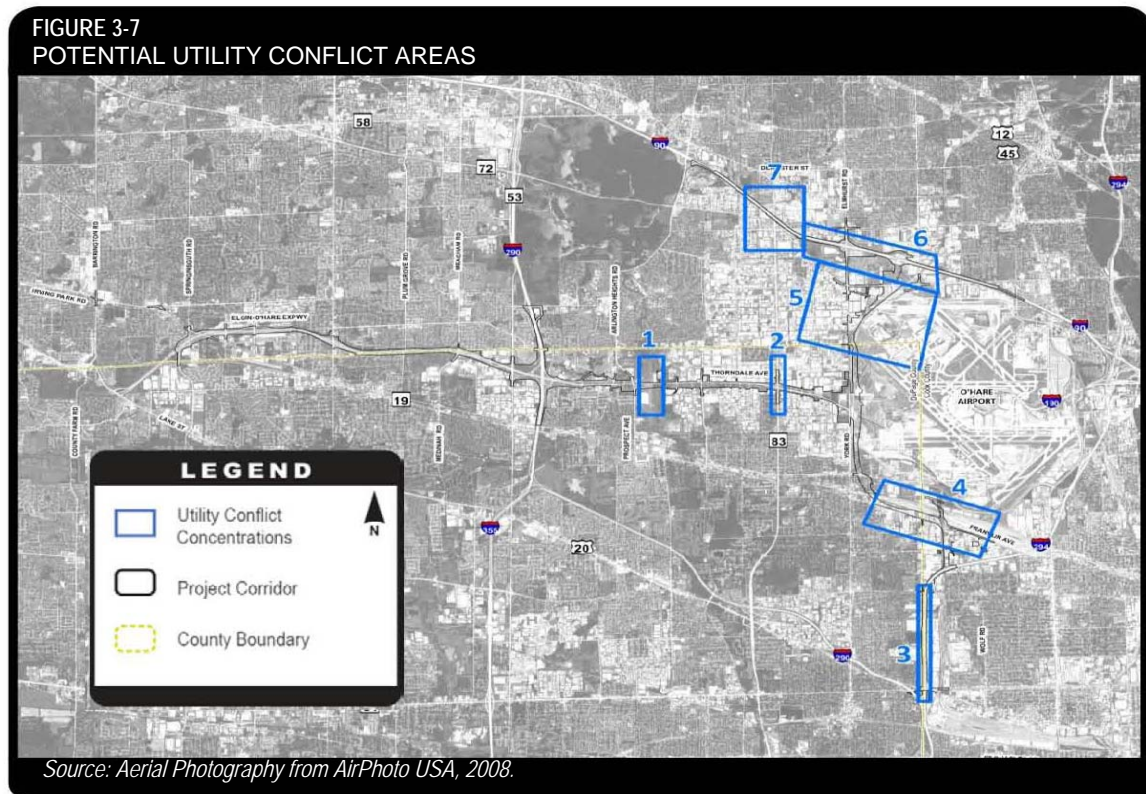
3.5.2.3 Utility Conflicts

Construction will require relocation or adjustment of utility lines or facilities. Because relocations of many utilities are required within the project corridor, a long lead time for coordinating and negotiating the relocation would be necessary to avoid compromising the project construction schedule.

Individual utility providers were contacted early to identify specific utility locations and would be contacted and would have an opportunity to conduct their own investigation to

identify horizontal and vertical conflicts and to identify any disruptions of service or operational equipment that the proposed EO-WB improvements may have on their facilities before, during, and after construction. Coordination will occur with utility providers during the engineering and site relocation of displaced utilities.

There are seven potential conflict areas. These are discussed in the following subsections and depicted in Figure 3-7.



Section 1 – Located near Salt Creek at the Elgin O’Hare Corridor

This area has a number of utilities oriented in a north-south direction along a utility corridor that is immediately west of Salt Creek and spans Thorndale Avenue. Utilities located in this section include the Commonwealth Edison Itasca substation located between Prospect Avenue and Mittel Drive, south of the Elgin O’Hare corridor, with a number of electric transmission power lines tied to the substation, which then span Thorndale Avenue. Nicor has a subsurface 36-inch natural gas transmission main in this section.

Section 2 – Located near IL 83 at the Elgin O’Hare Corridor

This area has a number of utilities located parallel to IL 83 on both the east and west sides of the roadway. This corridor is unique in that a number of large transmission mains belong to pipeline companies that serve O’Hare Airport. Two pipelines, owned by West Shore Oil, are located to the east of IL 83. In addition, two pipelines (one pipeline owned by West Shore Oil and the other is a transmission main [Manhattan North-O’Hare main] owned by British Petroleum) are both located to the west of IL 83.

Section 3 – Located between Grand Avenue and IL 64 near I-294

This area has a number of utilities located parallel to I-294. Preliminary review indicates that electric, water, gas, telephone, oil, and fiber optic utilities are located in this section. There are two electrical substations, one located approximately 0.5 mile south of Grand Avenue near County Line Road and one near Northwest Avenue, with electric transmission lines spanning County Line Road, I-294, and Northwest Avenue in a southwest to northeast orientation.

A water main, oriented north-south along Northwest Avenue and parallel to I-294, connects to Northlake's 500,000-gallon elevated water tower. The EO-WB project design would not require relocation of the water tower.

Section 4 – Located near the Franklin Avenue and West Bypass Corridor

This is another area with many closely situated utilities near EO-WB project areas. Nicor has a gas transmission main on York Road that angles onto Franklin Avenue and then angles to Wolf Road where it T's into a main that runs along IL 64. Ties to Nicor's distribution system are located on Franklin Avenue near County Line Road and Taft Avenue. Additionally, the Magellan Oil pipeline runs along Franklin Avenue to a tank farm located east of I-294 in Franklin Park, and a number of electrical lines that supply power to O'Hare Airport are parallel to the UP railroad over the Bensenville Yard.

Section 5 – Located near IL 72, Elmhurst Road, and the West Bypass Corridor

The utilities located in this section are densely packed with many fiber optic cables and natural gas pipelines located near IL 72. Because the EO-WB project has proposed grade-separations at IL 72/West Bypass and Higgins Creek/UP railroad, coordination and relocations of a number of utilities would be required. In addition, a British Petroleum tank farm is located at the corner of Elmhurst Road and IL 72. These tanks provide O'Hare Airport with jet fuel from British Petroleum's Manhattan North-O'Hare transmission main. The main also extends south to the tank farm located on O'Hare Airport property east of Carmen Drive and immediately south of Coyle Avenue. This transmission main then extends west along Devon Avenue to IL 83 and south to the Village of Manhattan.

Also in this section, flood control along Higgins Creek is provided by the MWRDGC Touhy Avenue Reservoir located between I-90 and IL 72 just west of Mount Prospect Road. The reservoir consists of two deep cells, working in tandem to hold floodwater and runoff from Higgins Creek. Following an event, spillways and pump stations pump water from the cells back to Higgins Creek. Cell 1 and Cell 2 are hydraulically connected to the Touhy Avenue Reservoir by two concrete pipelines (one 42 inches in diameter and one 72 inches in diameter).

Section 6 – Located between Elmhurst Road and Lee Street near the West Bypass Corridor and I-90 System Interchange

This section is located between Elmhurst Road and Lee Street along I-90. There are four Joint Action Water Agency transmission mains (54 inches to 90 inches in diameter) located near I-90. The Mount Prospect Transmission Main extends from the Village on Elmhurst Road to Touhy Avenue, where it connects to the Elk Grove Transmission Main and extends west along Touhy Avenue to Barrington Road in Hanover Park. The O'Hare Transmission Main begins at the ground storage reservoir and the main pumping station on the east side of O'Hare Airport. The pipeline extends along the south side of I-90 to the Northwest

Transmission Main, which continues west along I-90 past IL 59. Delivery points to the local system are located at Elmhurst Road and Oakton Street, at Touhy Avenue and Busse Road, and at I-90 and Arlington Heights Road.

Both the Mount Prospect Transmission Main and a 72-inch water main cross I-90 near Elmhurst Road and near Wolf Road. A number of fiber optic cables are along I-90, serving the Illinois Tollway ITS system. A 36-inch Natural Gas Pipeline Company's transmission main connects to Nicor's distribution system south of the MWRDGC O'Hare Chicago Underflow Plan (CUP) reservoir and west of Elmhurst Road near Nicor's regulating station on Elmhurst Road. Kinder Morgan has a 30-inch pipeline that runs along this same corridor south of the MWRDGC O'Hare CUP reservoir. Buckeye Partners pipeline crosses I-90 just west of Elmhurst Road and connects to the tank farm north of I-90 just east of Busse Road; the pipeline continues to O'Hare Airport's tank farm. There is also a 20-foot-deep MWRDGC tunnel sewer (Upper Des Plaines) that extends from Mount Prospect to the MWRDGC O'Hare CUP reservoir along Elmhurst Road, and it connects to the Kirie Water Reclamation Plant at Oakton Street off Elmhurst Road.

Section 7 – Located near Busse Road and I-90

This section has a number of utilities oriented in a north-south direction along a utility corridor just west of Busse Road, and the corridor crosses I-90. Preliminary review indicates that there are electric transmission lines and Nicor's 36-inch transmission main (which continues to the utility corridor near Salt Creek and Thorndale Avenue), as well as Nicor's Transmission Station 129. The MWRDGC Upper Des Plaines deep tunnel sewer extends west from Elmhurst Road on Oakton Street and crosses I-90 just east of IL 83. The MWRDGC's 18-inch O'Hare-Egan solids pipeline (sludge) is oriented east-west and located south of the MWRDGC CUP reservoir. The Joint Action Water Agency transmission mains located in Section 6, above, are also located in this section.

3.5.2.4 Other Public Facilities

City of Chicago Canine Training Facility

The City of Chicago canine training facility would be displaced by the north leg of the West Bypass corridor. Communication has occurred with City of Chicago representatives, and relocation options for the canine training facility are available within close proximity to the project corridor.

Majewski Athletic Complex

A strip, approximately 1.8 acres in area, would be required from the south edge of the Majewski Athletic Complex. Due to severe constraints at this location, other options are not practical without seriously compromising the LOS along this section of road. The land required from the complex is grassland; thus, no amenities would be affected. Access to the Majewski Athletic Complex would not change at the main entrance at Mount Prospect Road, but access from Elmhurst Road would be restricted to right-in and right-out only.

Elk Grove Detention Pond

The proposed improvements would displace approximately 4 acre-feet (approximately half) of the Elk Grove Detention Pond. The pond is located along the north leg of the proposed West Bypass. Placement of the proposed alignment is limited by horizontal and vertical restrictions. The proposed location minimizes impacts to the industrial area on the west side of Elmhurst Road and avoids impacts to the CP/UP railroad tracks and O'Hare Airport's

tank farm on the east side of the alignment. If the alignment were shifted to the west, additional structures (office buildings and industrial properties) would likely be displaced, and access to some remaining structures would be compromised or eliminated. Placement of the alignment to the east is impractical due to the active railroad tracks and the O'Hare Airport's tank farm. All detention lost by the removal of part of the facility will be mitigated by augmenting the remainder of the detention pond with additional detention capacity, as well as implementing new detention facilities in the vicinity of the pond.

3.5.3 Construction Impacts

Impacts to emergency response activities and routes from the addition of the proposed EO-WB project improvements are anticipated, with the greatest challenge centered on maintaining local access during and after construction. During construction, rerouting of emergency response vehicles is problematic in many areas due to the abundance of active railroad tracks, one-way streets, limited access to tollways and freeways, and an abundance of fragmented sections of arterial roadways that would impede cross-regional travel. Detour routes would be developed with local emergency response providers to minimize the impacts on response times and local access. Furthermore, because there is a potential for onsite accidents or incidents, emergency responders and police security would require access to construction sites and staging areas to patrol the areas, discouraging theft, vandalism, and trespassing or to provide emergency services onsite.

Similarly, school bus routes may be affected during construction; however, it would likely be minimal because there is not an abundance of residences along the proposed improvements. Communication with school districts to apprise them of construction-related activities and road closures is critical for operations to remain intact.

3.5.4 Measures to Minimize Harm and Mitigation

Minimization and mitigation measures for impacts to emergency response services were evaluated. Emergency response department representatives indicated that local access must be maintained before, during, and after construction, and the extension of response times must be minimized. There are four means to do this:

1. Emergency Response Plans
2. Mutual Aid Agreements
3. Construction Activities Sequencing
4. Emergency Access Routes

To mitigate impacts, an Emergency Response Plan would be developed by the Illinois Tollway and emergency providers; coordination would be undertaken with emergency providers to develop acceptable response times and routes. The plan would involve organizing Mutual Aid Agreements between all emergency responders in the project area. It would identify which resources are available and would have contingency plans in place to make up for any deficiencies. Whatever the situation, people, equipment, facilities, and materials needed for emergency response would be identified, and where they would come from must be determined in advance. Moreover, the people supplying these resources must be made aware of their role in the plan, a key to effective emergency response being a communications system that can relay accurate information quickly. As a result, reliable communication equipment must be used, procedures developed, personnel trained, and a

backup system in place. Accordingly, the Emergency Response Plan would identify a list of site personnel with cellular phones, email addresses, and/or two-way radios.

Another means to mitigate impacts is to sequence construction activities such as road or ramp closures, so that local access is maintained at all times. However, in areas where sequencing of work cannot be instituted, temporary access routes for emergency routing during construction activities may be required. These locations would be identified with input from emergency responders in the area.

3.6 Agriculture

The project corridor does not have any property with agricultural use. Further, the project corridor is located within the Chicago, Illinois-Indiana urbanized area, as defined by the U.S. Bureau of the Census (U.S. Bureau of the Census, 2000⁶). Per the cooperative agreements between IDOT and the IDOA, coordination with IDOA and the Natural Resource Conservation Service (NRCS) is not required.

3.7 Cultural Resources

Cultural resources include archaeological sites and standing structures with architectural integrity that adequately represent American history and culture. The National Historic Preservation Act and its implementing regulations require that federal agencies consider the impact that their actions have on such resources and allow the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. Section 4(f) of the Department of Transportation Act of 1966 also protects historic properties.

No cultural resources subject to the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended, or of Section 4(f) of the Department of Transportation Act of 1966 were found in the project corridor. Where field surveys were conducted, the Illinois State Historic Preservation Officer (SHPO) has concurred in this finding (see Appendix B). Elsewhere, the professional IDOT cultural resources staff, under the provisions of an agreement between the Illinois SHPO, FHWA, and IDOT, made the determination without field surveys (see Appendix B).

Each of the eight Tribal governments (see subsection 5.1.3 of the Tier One Final EIS for the list) with an interest in Cook and DuPage Counties was invited to be a participating agency and Section 106 consulting party. The Peoria Tribe of Indians of Oklahoma was the only respondent (see Appendix B). The Peoria indicated they are unaware of any link between Indian Religious Sites and the proposed project and have no objection to construction of the proposed project. According to SAFETEA-LU Section 6002, Tribal agencies that did not respond are considered to have declined the invitation to be NEPA participating agencies. However, they will be contacted immediately if human remains are uncovered during construction.



⁶ Urbanized areas determined for the 2000 Census is the most recent available information. The urbanized areas have not yet been published for the 2010 Census.