



Appendix F

Supporting Technical Reports

F.9 Biological Environment Technical Report



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Biological Environment Technical Report

May 2016

Blue Line Extension Project Technical Report



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Executive Summary

This technical report summarizes the biological environment within the proposed METRO Blue Line Light Rail Transit (BLRT) Extension project area. The intent of this technical report is to support and augment the Final Environmental Impact Statement (Final EIS) being prepared for the proposed BLRT Extension project. Federally listed or monitored species potentially within the proposed BLRT Extension project corridor included the northern long-eared bat (*Myotis septentrionalis*; Federally Threatened) and the bald eagle (*Haliaeetus leucocephalus*; de-listed but on the “Watchlist”). State-listed species potentially within the proposed BLRT Extension project corridor include Blanding’s turtle (*Emydoidea blandingii*; State Threatened). Several swallows nests were identified under proposed BLRT Extension project area bridges, though the numbers of nests are very low. Swallows are under the purview of the Migratory Bird Treaty Act. Habitats throughout the proposed BLRT Extension project area are generally highly disturbed. As a result of disturbance, a variety of noxious weed species have infested undeveloped habitats throughout the proposed BLRT Extension project area.



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1 Introduction

1.1 Report Purpose

The purpose of this technical report is to augment the Final Environmental Impact Statement (Final EIS) that was prepared for the proposed METRO Blue Line Light Rail Transit (BLRT) Extension project. This technical report:

- Summarizes biological resources in and near the proposed BLRT Extension project area
- Discusses the potential for impacts to biological resources as a result of the proposed BLRT Extension project and the regulatory context associated with them
- Discusses measures to avoid, minimize and mitigate for potential impacts to biological resources within the proposed BLRT Extension project area

This report discusses both aquatic and terrestrial biological resources within the proposed BLRT Extension project area. Additional information concerning related aquatic resources in the proposed BLRT Extension project area is included in the Water Resources Technical Report (SEH, 2015).

1.2 Project Limits

The proposed BLRT Extension project includes a corridor from the Target Field Station in the City of Minneapolis that extends westward along Olson Memorial Highway (Trunk Highway [TH] 55) to the BNSF Railway (BNSF) rail corridor, then north and west along the BNSF rail corridor to approximately 73rd Avenue in the City of Brooklyn Park, then northeastward to West Broadway Avenue (County State-Aid Highway 103), then north to an area just north of TH 610. A portion of the alignment is within the separate West Broadway Avenue Reconstruction project which is being developed by Hennepin County. Biological resources within the West Broadway Avenue Reconstruction segment are described in the Environmental Assessment Worksheet (EAW) prepared for that Hennepin County project.

Figure 1 on page 17 provides a general location map for the proposed BLRT Extension project area. **Figure 2** starting on page 21 is a 24-page mapbook of the proposed BLRT Extension project area showing aerial imagery and notable terrestrial habitats within and near the proposed BLRT Extension project area.



2 Affected Environment and Environmental Consequences

Section 2.1 – Affected Environment discusses biological resources that have been documented, historically or recently, within or near the proposed BLRT Extension project area. In this section, each notable species or feature is assessed as to whether there is some potential for impact as a result of the proposed BLRT Extension project. Those species or features that have a negligible potential for impact as a result of the proposed BLRT Extension project are not discussed further, while those species or features for which impacts may potentially occur are discussed further (**Section 2.2 – Environmental Consequences**).

2.1 Affected Environment

Generally, the proposed BLRT Extension project area is characterized as fully urbanized land use from downtown Minneapolis west and north to TH 610, and urbanizing rural land use north of TH 610. Land north of TH 610 is a mosaic of agricultural fields, abandoned old agricultural fields, scattered forest patches, a manicured corporate campus, and limited development.

The portion of the proposed BLRT Extension project area from Theodore Wirth Regional Park (TWRP) eastward into downtown Minneapolis is highly urbanized with no natural habitat types present.

The large central portion of the proposed BLRT Extension project area from Olson Memorial Highway to approximately 36th Avenue North (cities of Minneapolis, Golden Valley, and Robbinsdale) is characterized by abundant parkland with a mosaic of forested habitat types and aquatic resources.

The portion of the proposed BLRT Extension project area that lies between approximately 36th Avenue North and TH 610 (cities of Robbinsdale, Crystal, and Brooklyn Park) is highly urbanized residential and industrial land with sparse open lands. Undeveloped property tends to be heavily disturbed, vacant land, or utilized for stormwater treatment.

The proposed BLRT Extension project area north of TH 610 lies at the southern edge of the Anoka Sand Plain. As such, existing plant communities are underlain by thick deposits of sand. The extent of wetlands within the Anoka Sand Plain has been diminishing over time as a result of sinking water tables.

2.1.1 Federally Listed Species (Endangered Species Act)

2.1.1.1 Regulatory Context

Rare species are regulated at the federal level by the US Fish and Wildlife Service (USFWS) under the Endangered Species Act and several related laws. The Endangered Species Act classifies species as Endangered, Threatened, or as Watchlist; “Endangered” meaning a species is in danger of extinction throughout all or a significant portion of its range, “Threatened” meaning a species is likely to become endangered within the foreseeable future and “Watchlist” meaning species that are rigorously monitored prior to listing or after de-listing.



Potential impacts to federally listed species require coordination with USFWS in a process known as Section 7 Endangered Species Act consultation. The end result of the Section 7 Endangered Species Act consultation is a determination of:

- **No Effect.** No impacts positive or negative on the subject species.
- **May Affect, Not Likely to Adversely Affect.** Any potential impacts are either beneficial, insignificant, or discountable.
- **May Affect, Likely to Adversely Affect.** Any potential impacts would be negative and beyond an insignificant or discountable level.

2.1.1.2 Potential Documented Species

Northern Long-Eared Bat (*Myotis septentrionalis*). The northern long-eared bat (NLEB) has a biogeographical range that includes all counties in Minnesota. The NLEB was listed as Federally Threatened in May 2015. The NLEB typically winters in large groups within caves (hibernacula) and migrates to forested areas for the spring, summer, and early fall. Known hibernacula are not present within the proposed BLRT Extension project area; however, several are known along the Mississippi River in the vicinity of the Twin Cities (USFWS, 2015). Known hibernacula would not be impacted as a result of the proposed BLRT Extension project. Pregnant female NLEB congregate in maternity colonies, often under the bark or in cavities of maternity roost trees. The NLEB then disperses to other forested areas to forage before migrating back to the hibernacula in the fall (USFWS, 2015a). There are no documented maternity roost trees in Hennepin County (NHIS, 2015). Typical summer foraging habitat (non maternity colonies) for the NLEB consists of larger forested area and forest remnants. Summer habitat may consist of any of approximately 35 tree species of a size 3 inches diameter at breast height (DBH) or larger.

Summer habitat (forest remnants) for the NLEB is present throughout portions of the proposed BLRT Extension project area. Some tree clearing and grubbing would be required for the proposed BLRT Extension project; therefore, it is discussed further in **Section 2.2 – Environmental Consequences**.

Bald Eagle (*Haliaeetus leucocephalus*). Some forested habitat adjacent to aquatic resources could be suitable for bald eagle nesting in and near the proposed BLRT Extension project. There are no nests currently known within the immediate vicinity of the proposed BLRT Extension project area; however, a single nest has been documented approximately 1 mile east of the proposed BLRT Extension project area. Bald eagle nest locations change over time; therefore, the bald eagle is discussed further in **Section 2.2 – Environmental Consequences**.

Dwarf Trout Lily (*Erythronium propullans*). Based on field data collection throughout the spring and summer of 2015, habitat for the dwarf trout lily is not likely present in the proposed BLRT Extension project area. However, this documented population of dwarf trout lilies was transplanted to the Eloise Butler Wildflower Sanctuary (part of TWRP about ½ to ¾ mile southwest of the proposed BLRT Extension project) early in the 20th century from a population in southern Minnesota. The dwarf trout lily typically requires rich maple basswood forest and relatively undisturbed elm and cottonwood dominated floodplain forests. Forests throughout the proposed



BLRT Extension project area are highly disturbed and not suitable habitat for this rare plant species.

Table 1 summarizes federally listed species discussed in this technical report (NHIS, 2015).

Table 1. Summary of Federally Listed Species Documented near the Proposed BLRT Extension Project Area

Species	Federal Status	Notes
Northern long-eared bat (<i>Myotis septentrionalis</i>)	Threatened	Listed per the Endangered Species Act in May 2015. Forested areas throughout Minnesota potentially used for summer roosting habitat.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Watchlist	De-listed from the federal list of threatened and endangered species; population still monitored. Documented nest east of the proposed BLRT Extension project.
Dwarf trout lily (<i>Erythronium propullans</i>)	Endangered	Re-discovered in 2005 in TWRP in the Eloise Butler Wildflower Garden well to the southwest of the proposed BLRT Extension project area (south of Olson Memorial Highway).

Source: Natural Heritage Information System database search (Licensing Agreement 722_2014)

2.1.2 Migratory Bird Treaty Act

2.1.2.1 Regulatory Context

The Migratory Bird Treaty Act (MBTA) was enacted in 1918 as a means of protecting migratory bird populations from over-harvesting. USFWS oversees and enforces the MBTA. USFWS issues depredation permits for destruction of active nests of species covered under the MBTA.

A depredation permit is not needed for destruction of nests that are not active. The Minnesota Department of Natural Resources (DNR) also has permit authority over the destruction of active bird nests.

2.1.2.2 Potential Documented Species

A large number of migratory bird species are covered under the MBTA. These species may pass through or nest in or near the proposed BLRT Extension project area as part of their seasonal migrations. Some species may nest in vegetated habitats and others, like the Barn Swallow and Cliff Swallow, have adapted to building mud nests under bridges and on other human-made structures.

Bridges and structures were examined during the summer of 2015 for the presence of barn and cliff swallows and nests. Several empty and occupied nests were observed on the underside of proposed BLRT Extension project area bridges; however, the number of nests was low. **Table 2** summarizes swallow nest locations and characteristics.



Table 2. Summary of Observed Swallow Nests within the Proposed BLRT Extension Project Area

Location	Nests Observed	Notes
Golden Valley Road Bridge	2 nests	Observed on June 10, 2015. No swallows were present.
Theodore Wirth Parkway Bridge	0 nests	Observed on June 10, 2015. No nests or swallows were observed.
Plymouth Avenue Bridge	1 nest	Observed on June 10, 2015. Swallow observed sitting on electrical conduit next to nest.
36th Avenue Bridge	0 nests	Observed on June 10, 2015. No swallows observed.

Source: Metropolitan Council (Council) Field Observations (2015)

2.1.3 State-Listed Species and Other Element Occurrences

2.1.3.1 Regulatory Context

Minnesota’s Endangered Species Statute (Minnesota Statutes, Section 84.0895) requires DNR to adopt rules designating species meeting the statutory definitions of endangered, threatened, or species of special concern. The resulting List of Endangered, Threatened, and Special Concern Species is codified as Minnesota Rules, Chapter 6134. The Endangered Species Statute also authorizes DNR to adopt rules that regulate treatment of species designated as endangered and threatened. These regulations are codified as Minnesota Rules, Parts 6212.1800 to 6212.2300.

Data concerning rare species and element occurrences derive from the Natural Heritage Information System (NHIS, 2015) and are summarized below per rules restricting the public disclosure of exact locations of rare species and features.

2.1.3.2 Potential Documented Species

The following species have been historically documented within approximately a 1 mile buffer of the proposed BLRT Extension project.

Long-Bearded Hawkweed (*Heiraceum longipilum*). Long-bearded hawkweed may be present in dry old field habitat north of TH 610, it is not State-listed; therefore, it is not discussed further in **Section 2.2 – Environmental Consequences.**

Water Willow (*Decodon verticillatus*). Water willow is not likely present in the proposed BLRT Extension project area and it is not a State-listed species; therefore, it is not discussed further in **Section 2.2.**

Valerian (*Valerian edulis var. ciliata*). The valerian, last observed in 1891 near but outside the proposed BLRT Extension project area, is not likely present; therefore, it will not be discussed further in **Section 2.2.**



Least Darter (*Etheostoma microperca*). The least darter is not likely present in the proposed BLRT Extension project area and it is not a State-listed species; therefore, it is not discussed further in **Section 2.2**.

Hooded Warbler (*Setophaga citrina*). The hooded warbler may be present in the proposed BLRT Extension project area; however, it is not a State-listed species; therefore, it is not discussed further in **Section 2.2**.

Bullfrog (*Lithobates catesbeiana*). The bullfrog is may be present in the proposed BLRT Extension project area; however, it is not a State-listed species; therefore, it is not discussed further in **Section 2.2**.

Peregrine Falcon (*Falco peregrinus*). The peregrine falcon is not likely present in the proposed BLRT Extension project area; therefore, it is not discussed further in **Section 2.2**.

Blanding’s Turtle (*Emydoidea blandingii*). The Blanding’s turtle is potentially present in the proposed BLRT Extension project area; therefore, it is discussed further in **Section 2.2**.

Table 3 summarizes status and documented observations of species listed as State Endangered, State Threatened, or state Special Concern (NHIS, 2015).

Table 3. Summary of State-Endangered, State-Threatened and State Special Concern Species Documented Near the Proposed BLRT Extension Project

Species	State Status	Notes
Long-bearded hawkweed (<i>Hieracium longipilum</i>)	Not-listed (State Watchlist)	Known from two dry prairie/old field locations north and east of the northern terminus of the proposed BLRT Extension project area.
Water willow (<i>Decodon verticillatus</i>)	Special Concern	Observed in the 1940s and 1950s in two lakes in the City of Robbinsdale outside (east) of the proposed BLRT Extension project area.
Valerian (<i>Valeriana edulis</i> var. <i>ciliata</i>)	Threatened	Last observed in 1891 outside (southwest) of the proposed BLRT Extension project area.
Least darter (<i>Etheostoma microperca</i>)	Special Concern	Observed in 1931 in a lake in the City of Robbinsdale outside (east) of the proposed BLRT Extension project area.
Hooded warbler (<i>Setophaga citrina</i>)	Special Concern	Observed during breeding season in 1979 in TWRP.
Bullfrog (<i>Lithobates catesbeianus</i>)	Not-listed (State Watchlist)	Observed in 2003, 2008, and 2011 in a shallow pond connected to Bassett Creek.
Peregrine falcon (<i>Falco peregrinus</i>)	Special Concern	Observed nesting in 2000, 2003 and 2011 in downtown Minneapolis on several skyscraper buildings.
Blanding’s turtle (<i>Emydoidea blandingii</i>)	Threatened	A dead female Blanding’s turtle was observed in 2000 on Olson Memorial Highway near TWRP.

Source: Natural Heritage Information System database search (Licensing Agreement # LA722_2014)



2.1.3.3 Documented Other Element Occurrences

Colonial Waterbird Nesting Areas. Colonial Waterbird Nesting Areas are not currently present in the proposed BLRT Extension project area; however, rookery locations do change over time and therefore locations will be monitored. Locations of colonial waterbird nesting areas are not discussed further in **Section 2.2 – Environmental Consequences**. Occupied rookeries, typically occupied by Great Blue Herons and Double-Crested Cormorants, are usually quite obvious. Rookery locations will be monitored over the course of planning and construction of the proposed BLRT Extension project.

Tamarack Swamp (Southern) Type. The Tamarack Swamp identified in the Natural Heritage database is not located within the proposed BLRT Extension project area; therefore, it is not discussed further in **Section 2.2**.

Table 4 summarizes rare features that have documented near the proposed BLRT Extension project area.

Table 4. Summary of Rare Features Documented near the Proposed BLRT Extension Project Area

Element Occurrence	State Status	Notes
Colonial Waterbird Nesting Area	Tracked by DNR Natural Heritage Program	Two locations observed in 1997, 1998 and 2010 outside (east and west) of the proposed BLRT Extension project area.
Tamarack Swamp (Southern) Type	Tracked by DNR Natural Heritage Program	Observed in 1998 within TWRP outside (southwest) of the proposed BLRT Extension project area.

Source: Natural Heritage Information System, 2015 (Licensing Agreement # LA 722_2014)

2.1.4 Noxious Weeds

The Minnesota and Federal Noxious and Prohibited Weed List (updated May 15, 2014) (DNR, 2014) was reviewed to determine the status of invasive species encountered during spring and summer (2015) fieldwork by SEH within the proposed BLRT Extension project area and associated facilities.

The urbanized and highly disturbed nature of much of the proposed BLRT Extension project area provides abundant suitable habitat for infestations of noxious and invasive plant species.

Table 5 summarizes common noxious plant species, their status, and general locations observed during fieldwork.



Table 5. Noxious Plant Species Observed within the Proposed BLRT Extension Project Area

Plant Species	Noxious Status ¹	Notes
Garlic mustard (<i>Alliaria petiolata</i>)	RN	Ubiquitous in forested plant communities throughout the proposed BLRT Extension study area.
Spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i>)	SN	Common on railroad ballast and adjacent dry ditches.
Canada thistle (<i>Cirsium arvense</i>)	SN	Common throughout the proposed BLRT Extension project area.
Leafy spurge (<i>Euphorbia esula</i>)	SN	Common on railroad ballast and adjacent dry ditches.
Wild parsnip (<i>Pastinaca sativa</i>)	SN	Common on disturbed embankments throughout the proposed BLRT Extension project area.
Japanese knotweed (<i>Polygonum cuspidatum</i>)	SN	Observed in highly disturbed forest.
European buckthorn (<i>Rhamnus cathartica</i>)	RN	Ubiquitous in the herbaceous, shrub and tree strata of forested areas throughout the proposed BLRT Extension project area and associated facilities.
Poison ivy (<i>Toxicodendron radicans</i>)	SN	Common in vegetated areas throughout the proposed BLRT Extension project area and associated facilities.

Source: The Minnesota and Federal Noxious and Prohibited Weed List (May 15, 2015, update) and field observations.

¹ RN = Restricted Noxious Weed, SN = State Noxious Weed



2.1.5 Notable Terrestrial and Aquatic Habitats within and near the Proposed BLRT Extension Project Area

Wildlife species that inhabit fallow land, terrestrial or aquatic, within and near the proposed BLRT Extension project area are generalist species adapted to urbanized conditions. These species are generally more tolerant of human presence and activities, including traffic (pedestrian, rail, and vehicular), and have demonstrated by their presence that they adapt readily to the human environment. **Table 6** and text below describe notable terrestrial and aquatic habitats, respectively.

The notable terrestrial habitats within and near the proposed BLRT Extension project area are relatively large forested areas in an urbanized setting. As such they provide feeding, loafing and resting habitat for generalist species adapted to urbanized conditions. Common generalist wildlife species that thrive in such urbanized terrestrial habitat include white-tailed deer, rabbit, coyote, red fox, raccoon, opossum, grey squirrel, chipmunk, wild turkey, red-tailed hawk, and a variety of common songbirds and migration stopover habitat for neo-tropical migratory songbird species. Additionally, notable terrestrial habitats within and near the proposed BLRT Extension project area may provide summer roosting habitat for the NLEB, a Federally Threatened species. The total acreage of notable terrestrial habitats in and near the proposed BLRT Extension project is approximately 269 acres.

Notable terrestrial habitats (i.e., large contiguous forest complexes) within and near the proposed BLRT Extension project area were identified with a combination of Minnesota Land Cover Classification System (MLCCS) and field data collection. MLCCS forest polygons were identified within approximately $\frac{1}{4}$ mile of the proposed BLRT Extension project. These polygons were compared to recent aerial photography to identify areas where forest had been cleared after the MLCCS data were gathered. The MLCCS polygons were trimmed accordingly. Areas of large contiguously forested areas were classified as notable terrestrial habitats (see **Table 6**).

The notable aquatic habitats identified in the proposed BLRT Extension project area provide refuge for a variety of frogs and toads, turtles, snakes, waterfowl and songbird species. The total acreage of notable aquatic habitat in and near the proposed BLRT Extension project area is approximately 49 acres. Notable aquatic habitats within and near the proposed BLRT Extension project area were identified through fieldwork conducted in the spring and summer of 2015.

MLCCS data did not identify any natural habitat within the proposed BLRT Extension project area of greater than a D letter grade. The majority of the habitat quality was given a grade of NN or NA as the habitat is considered non-native, altered, or disturbed. Field data collection during 2015 verified the disturbed nature of habitats within and near the proposed BLRT Extension project area.



Table 6. Notable Terrestrial and Aquatic Habitats within and near the Proposed BLRT Extension Project Area

Notable Habitat ID	Location	Total Size (ac)
101st Avenue North Complex (Terrestrial)	Northwest quadrant of Highway 169 and 101st Avenue North	16.8
Target Corp #1 Complex (Terrestrial)	North of TH 610 and east of Winnetka Avenue East	20.4
Target Corp #2 Complex (Terrestrial)	Adjacent to intersection of Winnetka Avenue North and West Broadway Avenue	23.2
Shingle Creek Complex (near the proposed BLRT Extension project) (Terrestrial)	Adjacent to Shingle Creek near the proposed BLRT Extension project	20.7
North Rice Pond – Sochacki Park Complex (Terrestrial)	West side of BNSF tracks from ~35th Avenue North to Golden Valley Road	57.5
Grimes Pond Complex (Terrestrial)	East side of BNSF tracks just south of Grimes Pond	11.9
Saint Mary Margaret – MPRB Complex (Terrestrial)	East side of BNSF tracks just north of Golden Valley Road	6.9
Theodore Wirth Complex (Terrestrial)	Both side of BNSF tracks from Golden Valley Road south to Olson Memorial Highway	62.1
Olson Memorial Highway Complex (Terrestrial)	South side of Olson Memorial Highway on both sides of existing BNSF tracks	24.7
Xerxes Complex (Terrestrial)	South side of Olson Memorial Highway near Glenwood Avenue and Xerxes Avenue North	24.9
North and South Rice Ponds (Aquatic)	Cities of Robbinsdale and Golden Valley on west side of existing BNSF tracks	24.72
Grimes Pond (Aquatic)	City of Robbinsdale on the east side of existing BNSF tracks	7.41
Golden Valley Road Ponds (Aquatic)	North side of Golden Valley Road on both sides of the existing BNSF tracks	5.08
TWRP (Bassett Creek and backwater) (Aquatic)	North and south of the Plymouth Avenue Bridge on the west side of the existing BNSF tracks	11.85

Source: MLCCS and field data collection (Council, 2015)



2.2 Environmental Consequences

2.2.1 Federally Listed Species

Species that are federally listed or on the Federal “Watchlist” that could potentially be affected by the proposed BLRT Extension project include the NLEB (Federally Threatened) and the bald eagle (on the federal “Watchlist”).

2.2.1.1 Measures to Avoid and Minimize Impacts

Northern Long-Eared Bat (*Myotis septentrionalis*). Potential impacts to the NLEB can be minimized by avoiding tree clearing and grubbing. For forested areas 15 acres or larger that cannot be avoided, tree clearing would be restricted between April 1 and October 1 as prescribed in the Interim 4(d) Guidelines developed for the NLEB (USFWS, 2015c). The proposed BLRT Extension project team is working closely with USFWS in order to assure that potential impacts to the NLEB are minimized to the extent practicable.

Bald Eagle (*Haliaeetus leucocephalus*). Though the bald eagle has been de-listed from the ESA, it is still protected under several other federal laws. Bald eagle nest locations change over time and there is the potential for bald eagles to nest in and near the proposed BLRT Extension project area. Bald eagles are particularly vulnerable during the nesting season which extends from late January to late July. The non-nesting season is from August to mid-January. Nest locations will be monitored throughout the planning and construction phases of the proposed BLRT Extension project. If new bald eagle nests are observed in close proximity to the construction limits of the proposed BLRT Extension project during the planning and construction phases of the proposed BLRT Extension project, USFWS will be consulted to determine appropriate actions or restrictions that may apply.

2.2.1.2 Unavoidable Impacts

Northern Long-Eared Bat. Based on its analysis of proposed tree clearing in the proposed BLRT Extension project area and adherence to the Final “4(d) Rule,” USFWS has concurred with the Federal Transit Administration’s (FTA) determination that the proposed BLRT Extension project merits a determination of “may affect, Incidental Take Not Prohibited” with respect to the NLEB.

Bald Eagle. With ongoing nest reconnaissance and adherence to acceptable permit provisions and seasonal work windows, the proposed action is not likely to negatively impact the bald eagle.



2.2.2 Migratory Bird Treaty Act

2.2.2.1 Measures to Avoid and Minimize Impacts

Generally, USFWS and DNR require seasonal work windows in order to comply with the MBTA and the DNR General Permit 2004 – 0001 provisions. The following measures are acceptable to USFWS and DNR:

- Bridge work may be performed (started and finished) outside of the nesting season (i.e., before May 15 or after September 1). No permit would be required for this activity.
- Bridge work may begin after May 15 and nest completion can be prevented by removing the nests (at least three times per week) as they are being built, or through the use of barriers to prevent nest establishment from occurring. The success of this measure depends on the number of nests on a bridge, and the ability to restrict access. If the bridge contains only a few nests, the birds should be easily deterred from nesting. Removal of unfinished nests is acceptable to USFWS, which considers this to be non-lethal harassment. No permits would be required for this activity.

Very few swallow nests were observed on bridge structures within the proposed BLRT Extension project area. Therefore, it should be feasible to remove existing nests or exclude new nest establishment during a seasonal period when they are inactive. During construction of the proposed BLRT Extension project, nest building should be prevented on the underside of bridge structures by removing nests as they are built, if needed.

2.2.2.2 Unavoidable Impacts

With the implementation of acceptable measures to minimize ([Section 2.2.2.1](#)) there would be no impacts resulting from the proposed BLRT Extension project to species covered under the MBTA.

2.2.3 State-Listed Species and Other Element Occurrences

2.2.3.1 Measures to Avoid and Minimize Impacts

DNR has issued guidelines on measures to minimize potential impacts to Blanding's turtle. These measures include provisions such as seasonal work windows, installation and removal of silt fences, and educational materials to use at the construction site to inform the contractor and workers what to look for, and how to handle occurrences.

2.2.3.2 Unavoidable Impacts

Blanding's Turtle. The Blanding's turtle may be present within the proposed BLRT Extension project area. With adherence to the DNR guidelines concerning minimization of impacts to Blanding's turtle, we conclude that potential impacts to this species would likely be negligible.

Other Element Occurrences. The proposed subject project would not impact any rare plant communities or animal aggregation areas (i.e., colonial waterbird nesting areas) that have been inventoried by DNR.



2.2.4 Noxious Weeds

Given the urban and highly disturbed nature of the proposed BLRT Extension LRT project area, noxious weeds are ubiquitous. Some measures, such as spot spraying with appropriate herbicides, can be taken to control invasive species within construction areas and staging areas. A vegetation management plan will be developed to include measures like these to control noxious weeds along the proposed BLRT Extension project. However, permanent eradication of invasive or noxious weeds within the proposed BLRT Extension project area will not be feasible.

2.2.5 Notable Terrestrial and Aquatic Habitats within the Proposed BLRT Extension Project Area

2.2.5.1 Measures to Avoid and Minimize Impacts

Complete avoidance of impacts to notable terrestrial and aquatic habitats within the proposed BLRT Extension project area was not feasible. Several opportunities to minimize impacts are under consideration in the design process, summarized as follows:

- **Rail bridge across Golden Valley Ponds.** The proposed BLRT Extension project will use a bridge to cross Golden Valley Ponds, an identified notable aquatic resource. The alternative design would have used a continuous embankment of fill which would have caused considerably more impacts to this aquatic resource.
- **Rail bridge across Grimes Pond.** The proposed BLRT Extension project will use a bridge to cross Grimes Pond, an identified notable aquatic resource. The alternative design would have used a continuous embankment of fill which would have had considerably more impacts to this aquatic resource.
- **Pre-treatment storm BMPs.** Several BMPs, such as infiltration, retention and detention will be part of the proposed BLRT Extension project and associated facilities. These BMPs will serve to improve the water quality of downslope or downstream aquatic resources.
- **Design of on-site mitigation areas that would minimize impacts to forested areas and existing aquatic resources.** Several on-site mitigation areas have been identified that would require negligible tree clearing and would restore aquatic habitat that has been lost as a result of fill or diminished hydrology.

2.2.5.2 Unavoidable Impacts

Notable terrestrial habitats (i.e., large contiguous forest complexes) identified within and near the proposed BLRT Extension project area may provide suitable summer roosting habitat for the NLEB as well as foraging and resting habitat for a variety of generalist wildlife species. Notable aquatic habitats identified within and near the proposed BLRT Extension project area provide refuge for a variety of frogs and toads, turtles, waterfowl, and songbirds. **Table 7** summarizes total size and potential impacts to Forest Complexes within and near the proposed BLRT Extension project area.

In addition to impacts to notable terrestrial habitat summarized in **Table 7**, 194 acres of numerous small forest remnants (76 forest patches) are present within approximately ¼ mile of the proposed



BLRT Extension project. Of these remnants, approximately 17 acres would be impacted by the proposed BLRT Extension project.

Table 7. Notable Terrestrial and Aquatic Habitat Impacts within the Proposed BLRT Extension Project Area

	Location	Total Size (ac)	Total Impacts (ac)
Terrestrial Habitats			
101st Avenue North Complex	Northwest quadrant of Highway 169 and 101st Avenue North	16.8	0.0
Target Corp #1 Complex	North of TH 610 and east of Winnetka Avenue East	20.4	0.51
Target Corp #2 Complex	Adjacent to intersection of Winnetka Avenue North and West Broadway Avenue	23.2	4.70
Shingle Creek Complex	Adjacent to Shingle Creek near the Blue Line LRT Extension project alignment	20.7	Part of West Broadway Avenue
North Rice Pond – Sochacki Park Complex	West side of BNSF tracks from ~35th Avenue North to Golden Valley Road	57.5	3.30
Grimes Pond Complex	East side of BNSF tracks just south of Grimes Pond	11.9	0.06
Saint Mary Margaret – MPRB Complex	East side of BNSF tracks just north of Golden Valley Road	6.9	0.29
Theodore Wirth Complex	Both side of BNSF tracks from Golden Valley Road south to Olson Memorial Highway	62.1	8.69
Olson Memorial Highway Complex	South side of Olson Memorial Highway on both sides of existing BNSF tracks	24.7	0.38
Xerxes Complex	South side of Olson Memorial Highway near Glenwood Avenue and Xerxes Avenue North	24.9	0.00
	Total notable terrestrial habitat and potential impacts	269	17.93
Aquatic Habitats			
North and South Rice Ponds	Cities of Robbinsdale and Golden Valley on west side of existing BNSF tracks	24.72	0.01
Grimes Pond	City of Robbinsdale on the east side of existing BNSF tracks	7.41	1.63
Golden Valley Road Ponds	North side of Golden Valley Road on both sides of the existing BNSF tracks	5.08	0.90
TWRP (Bassett Creek and backwater)	North and south of the Plymouth Avenue Bridge on the west side of the existing BNSF tracks	11.85	1.79
	Total notable aquatic habitat and potential impacts	49.06	4.33

Source: MLCCS Dataset and recent aerial photography



2.2.5.3 Mitigation for Unavoidable Impacts

Mitigation for unavoidable impacts to aquatic habitat will be accomplished through a combination of on-site wetland mitigation and purchase of suitable wetland credits from an established wetland mitigation bank.

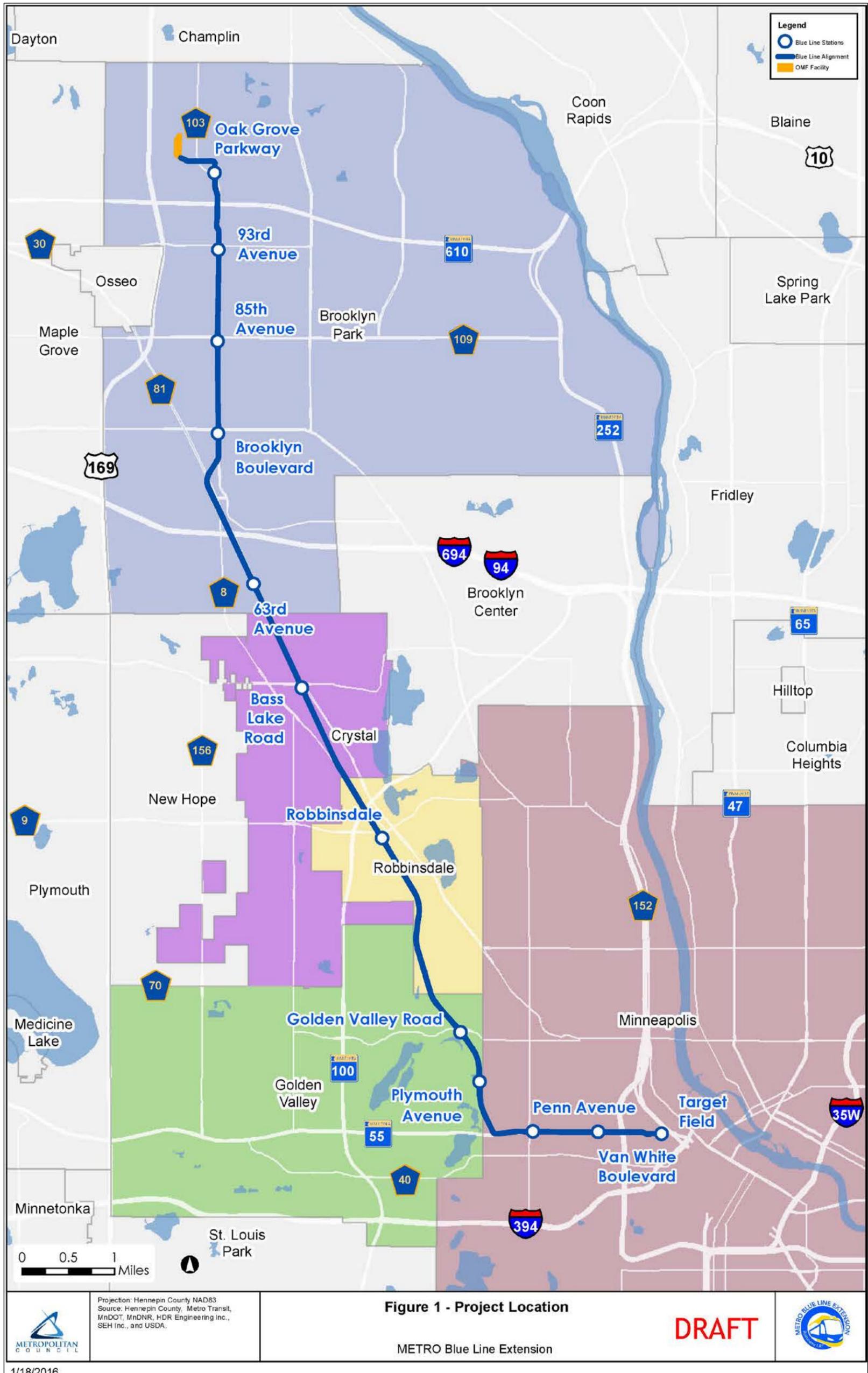
Mitigation for unavoidable impacts to notable terrestrial habitat will be accomplished through some tree plantings in and around TWRP and a few selected areas throughout the proposed BLRT Extension project area.

Where effective and feasible, suitable wildlife crossings will be accommodated within proposed culverts to allow some wildlife species to cross from one side of the proposed BLRT Extension project and freight rail tracks to the other.



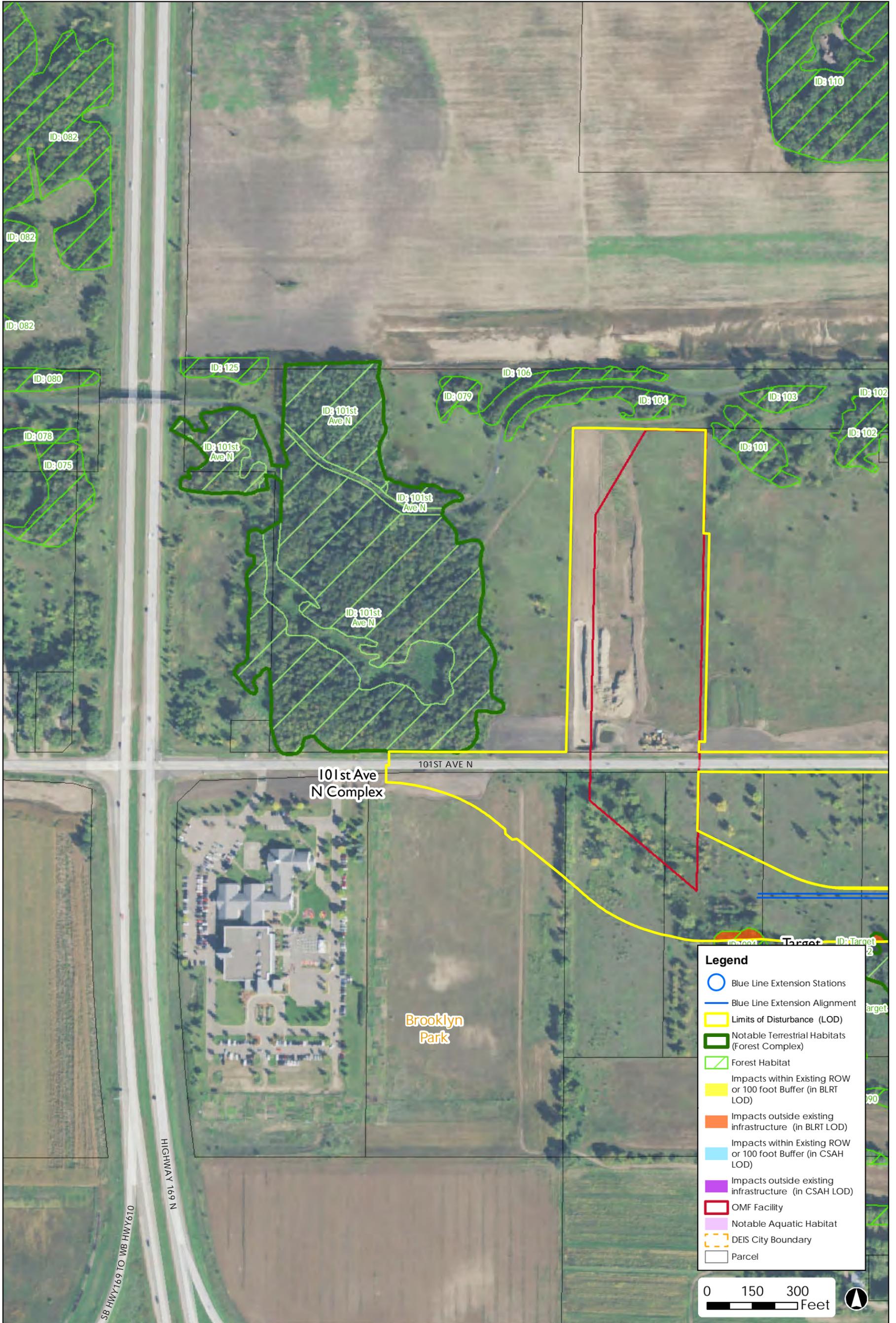
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Figure 1. General Location Map of the Proposed BLRT Extension Project





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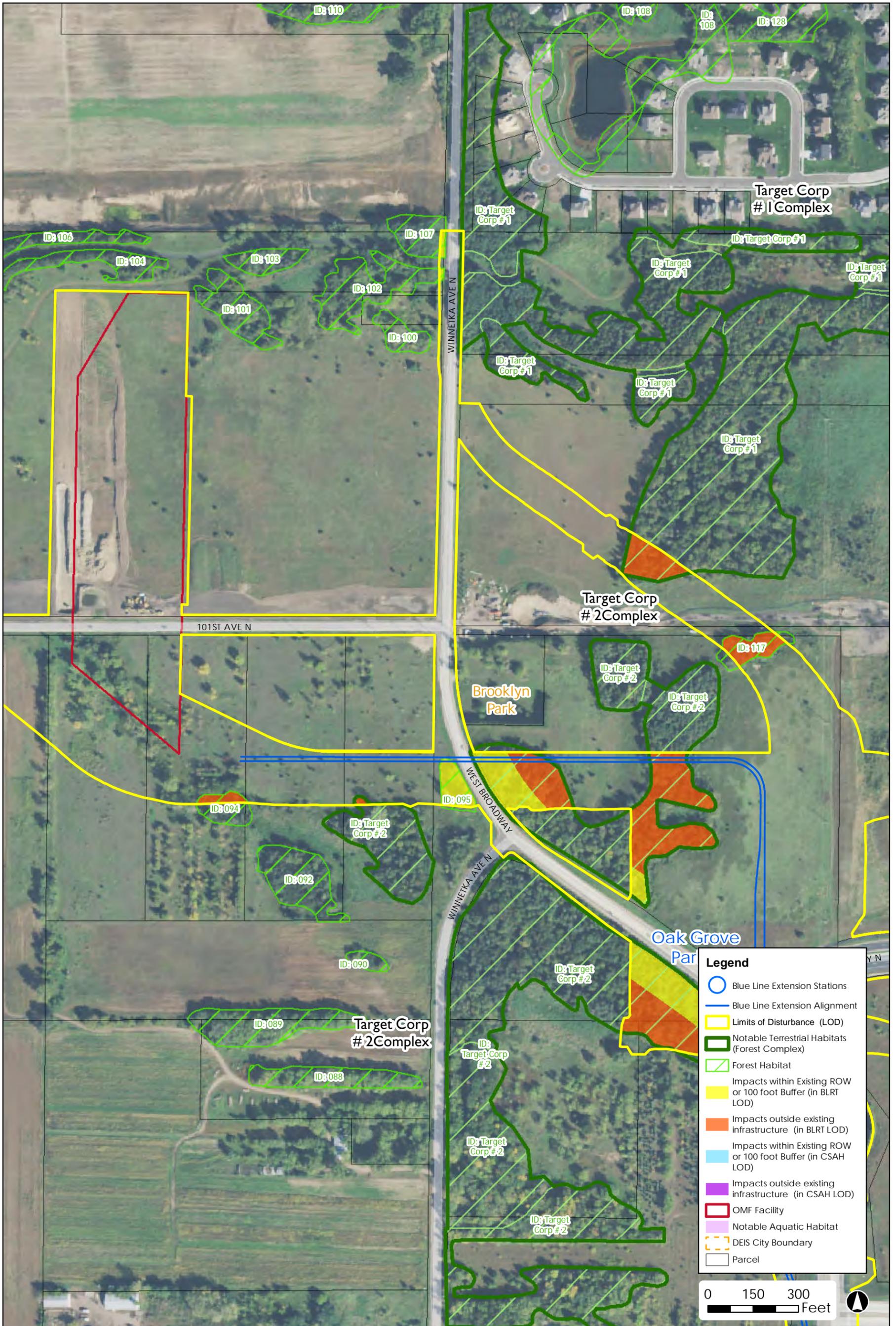
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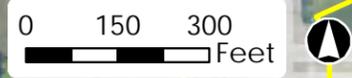
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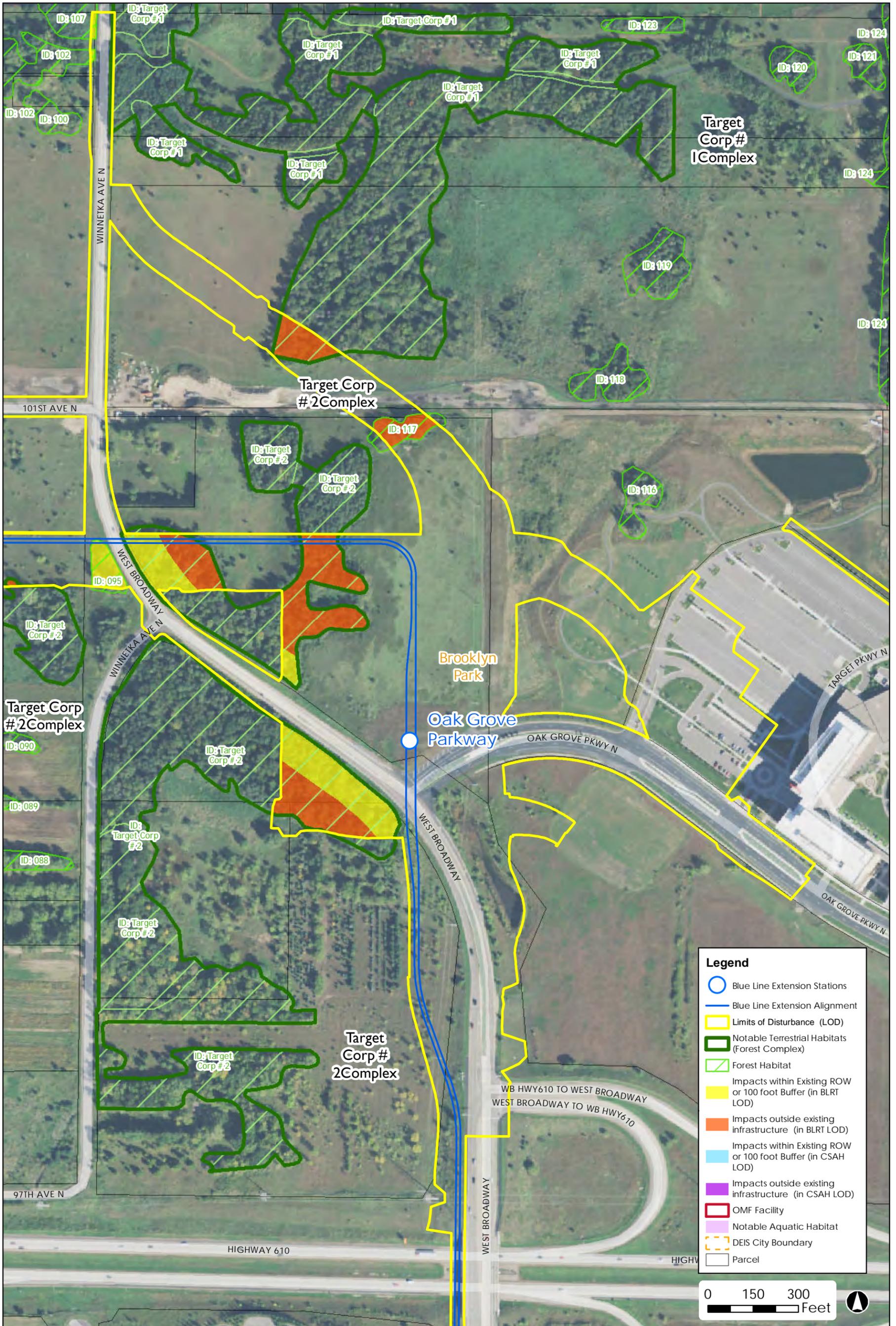


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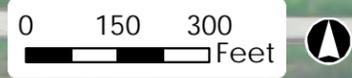


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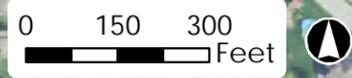


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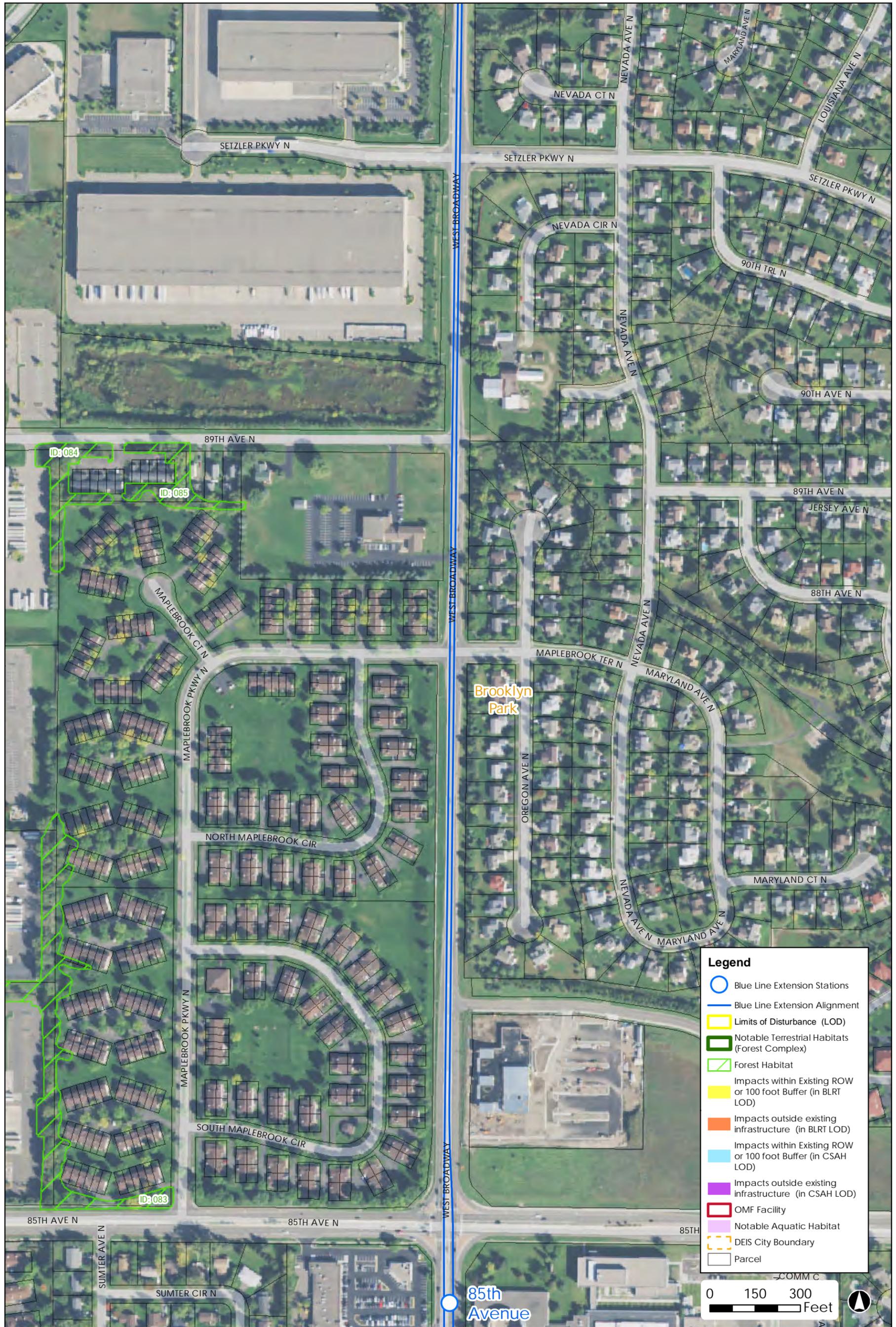
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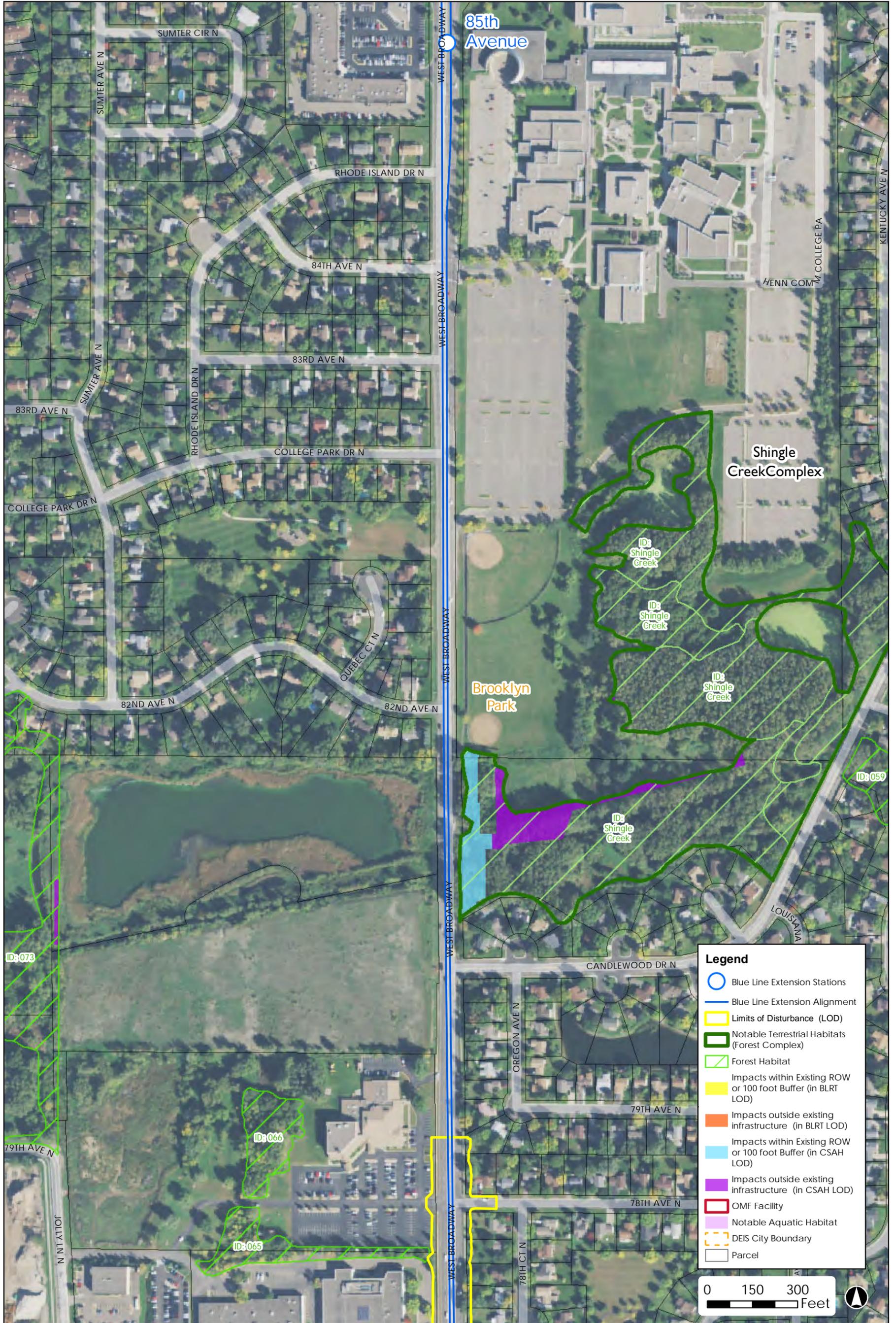
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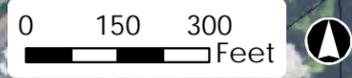


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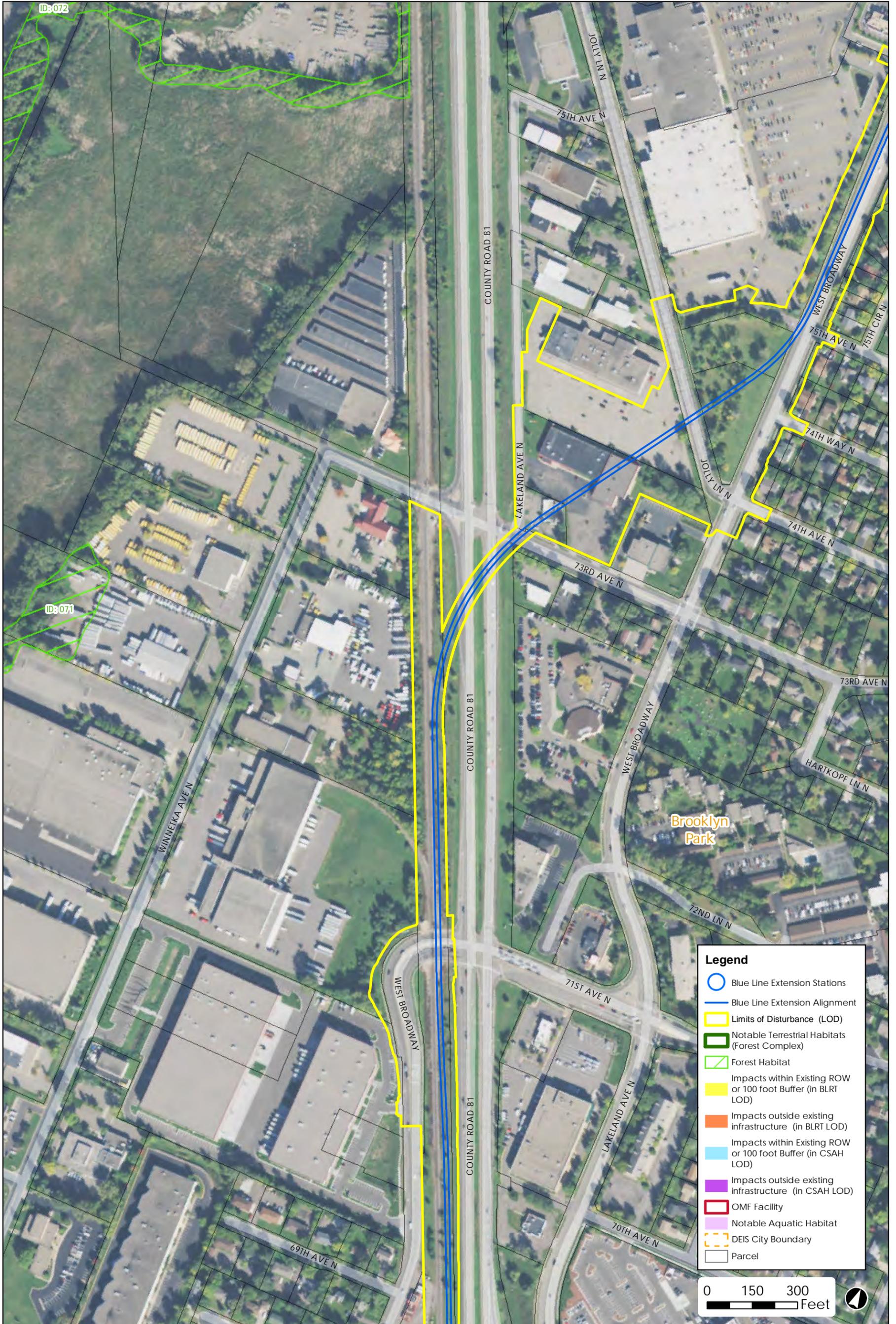
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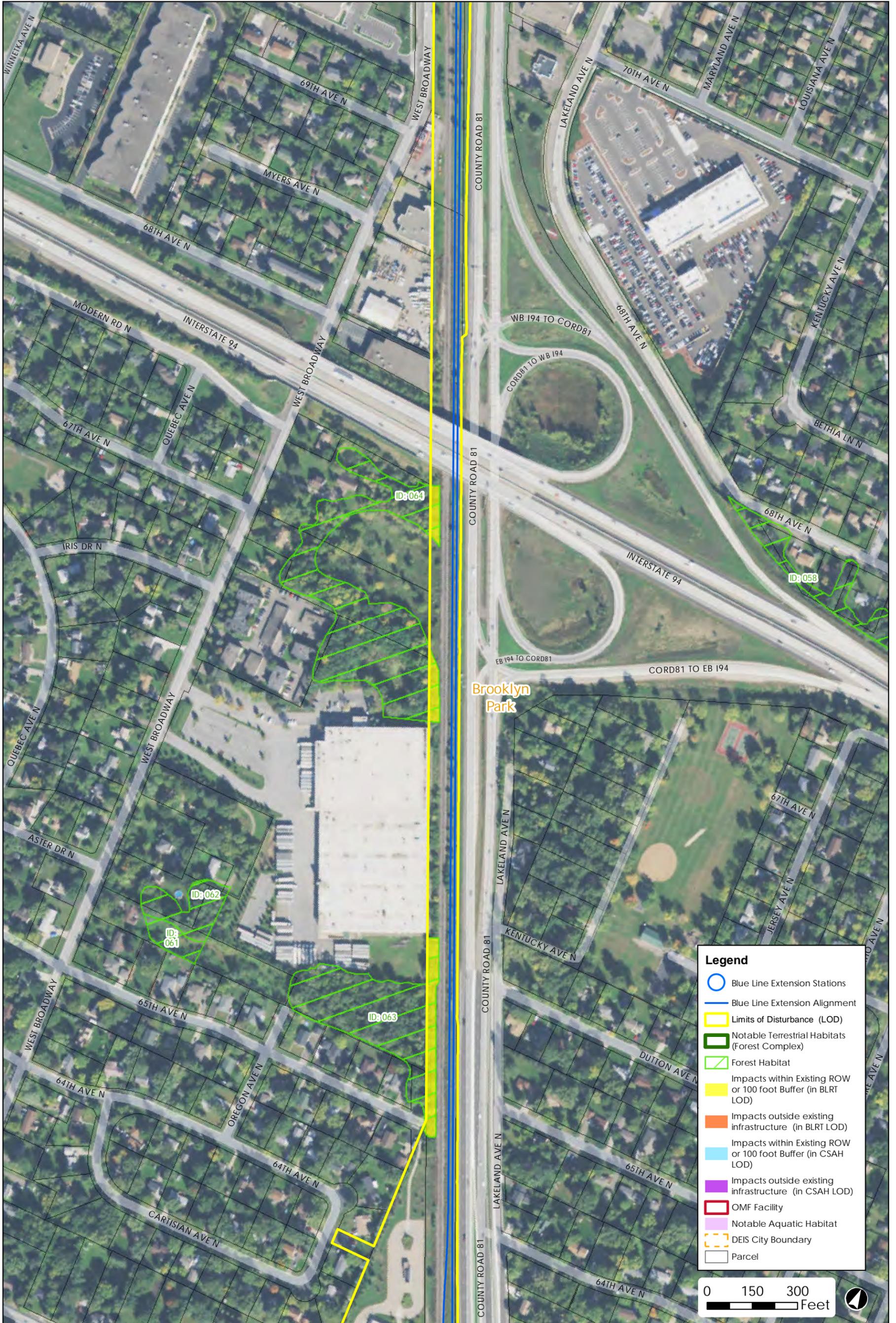


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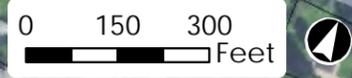
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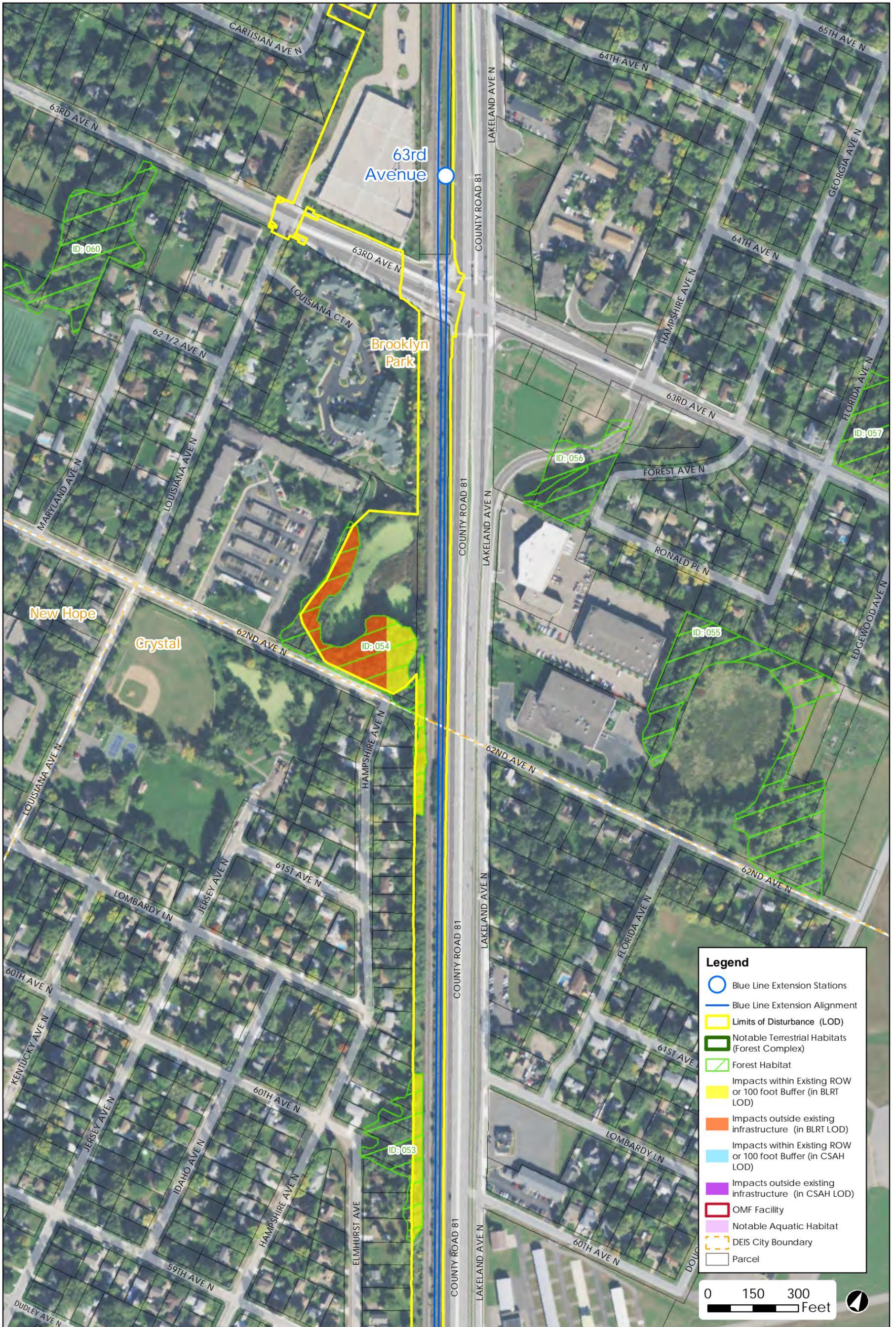


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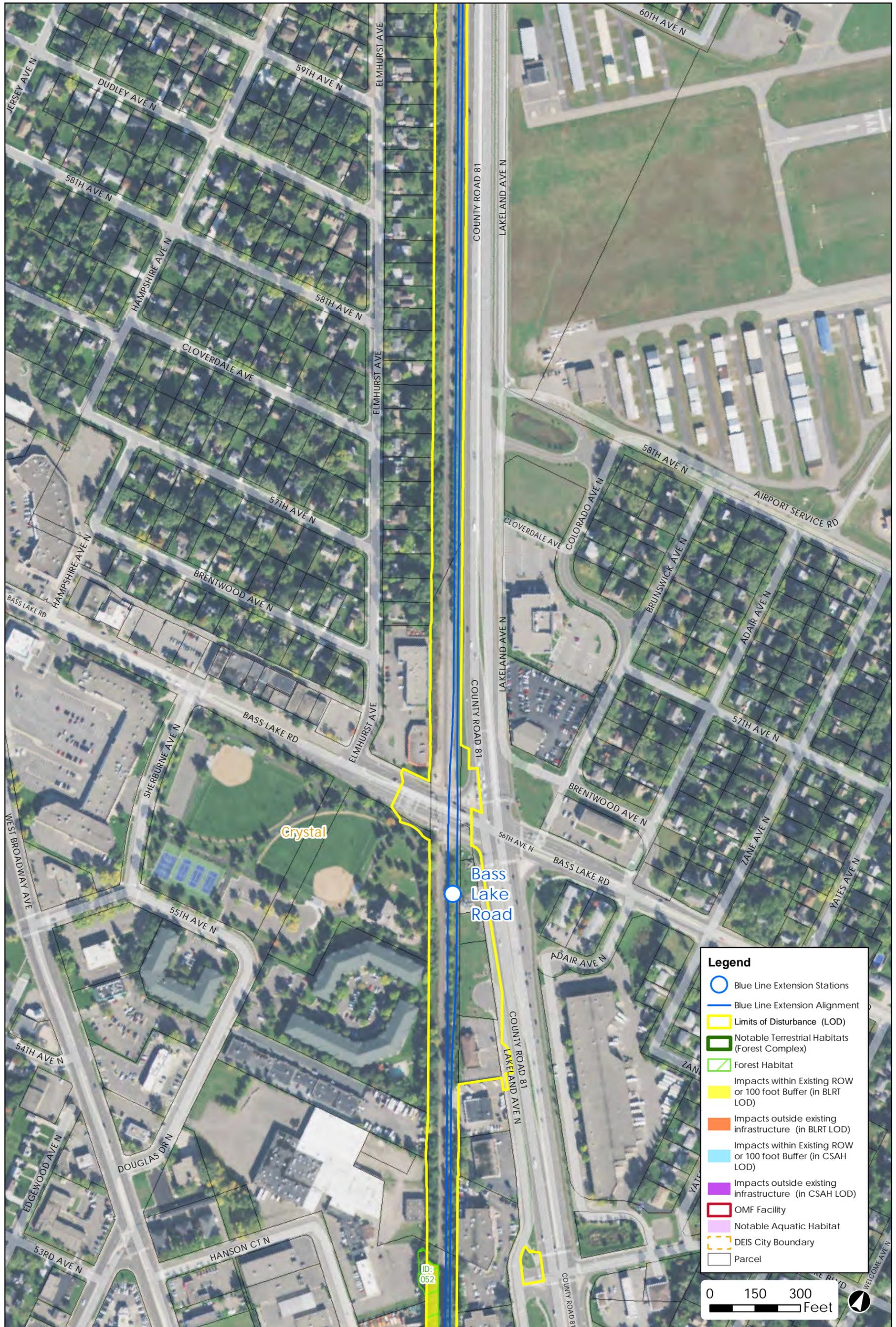
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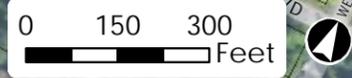


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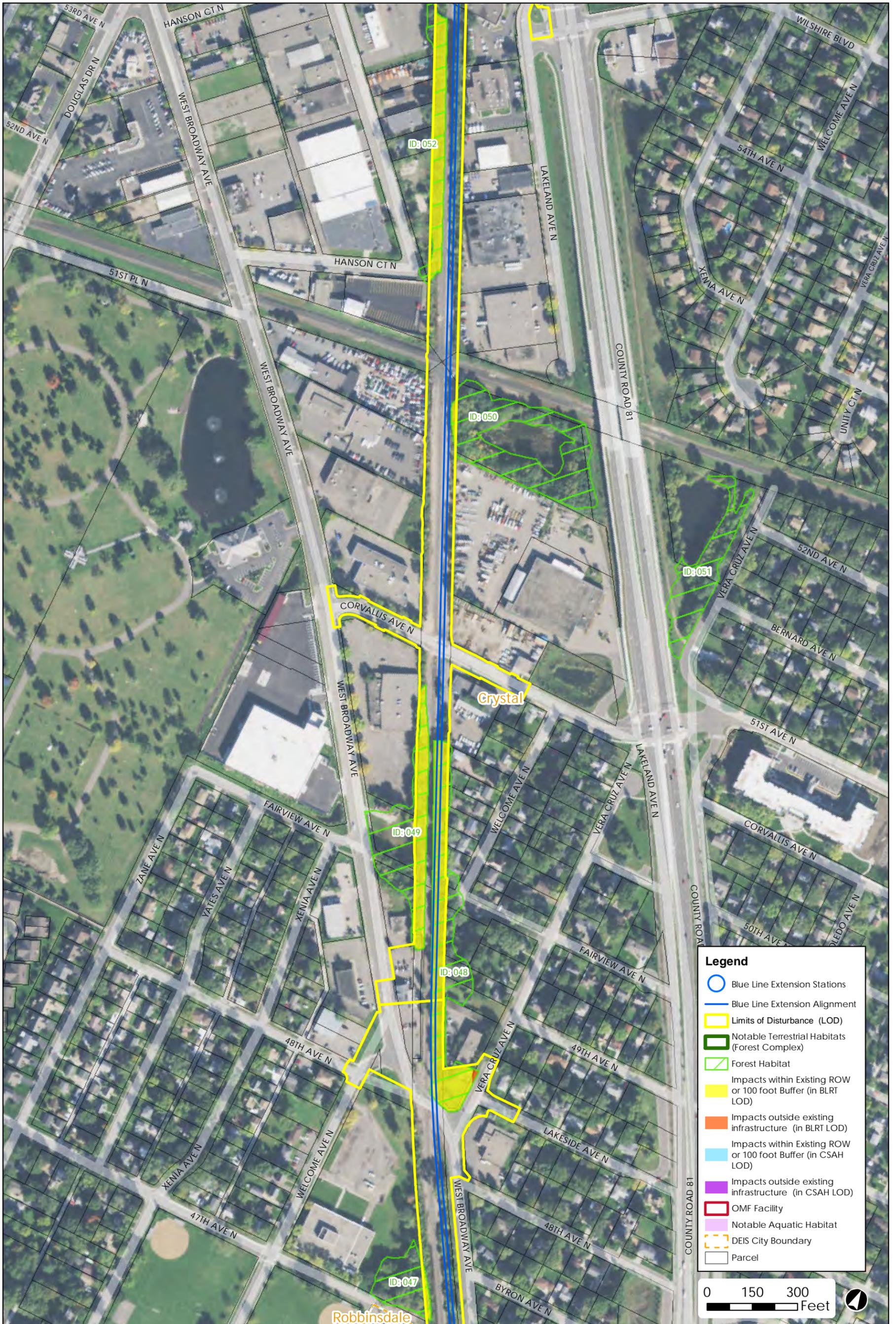


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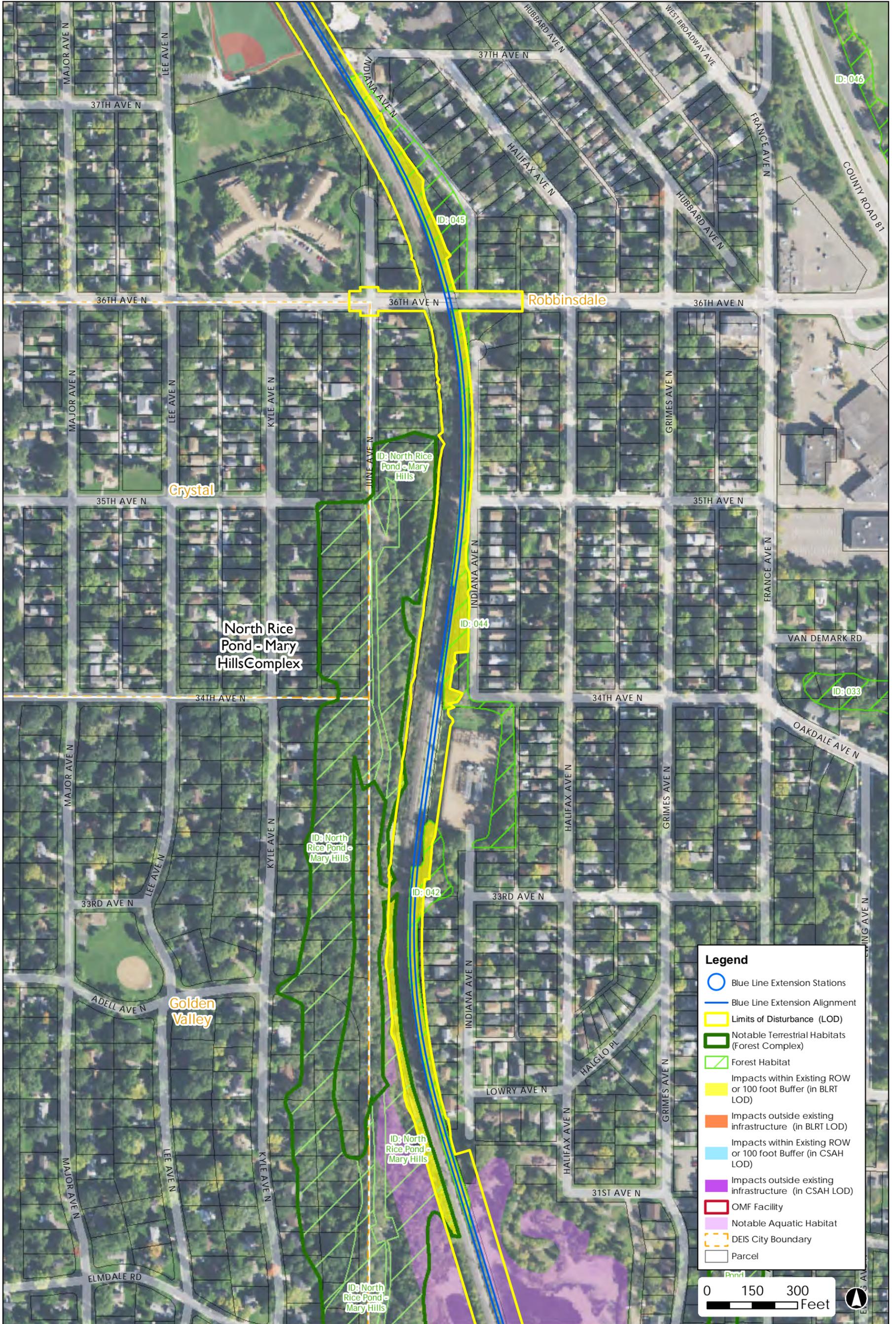


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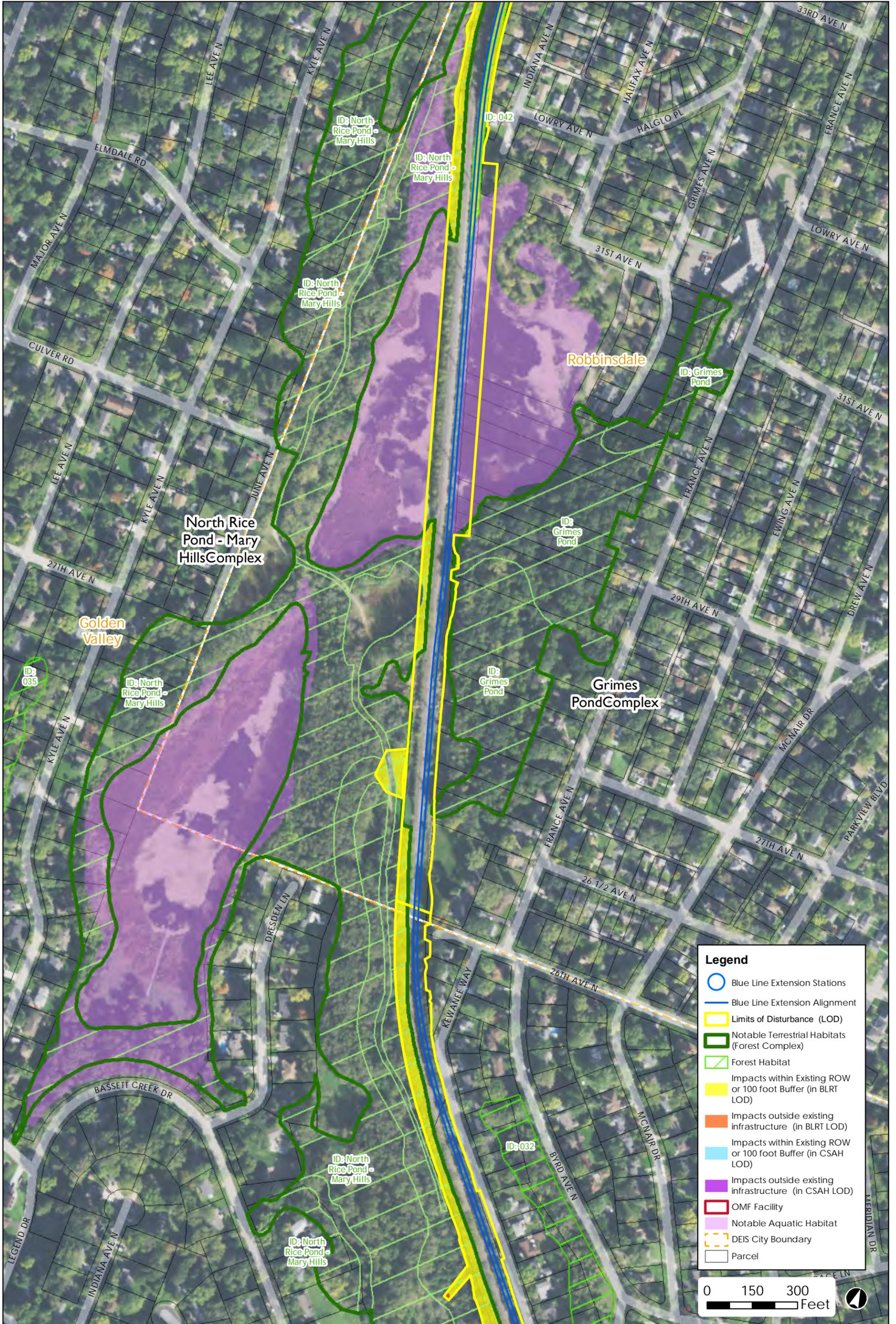
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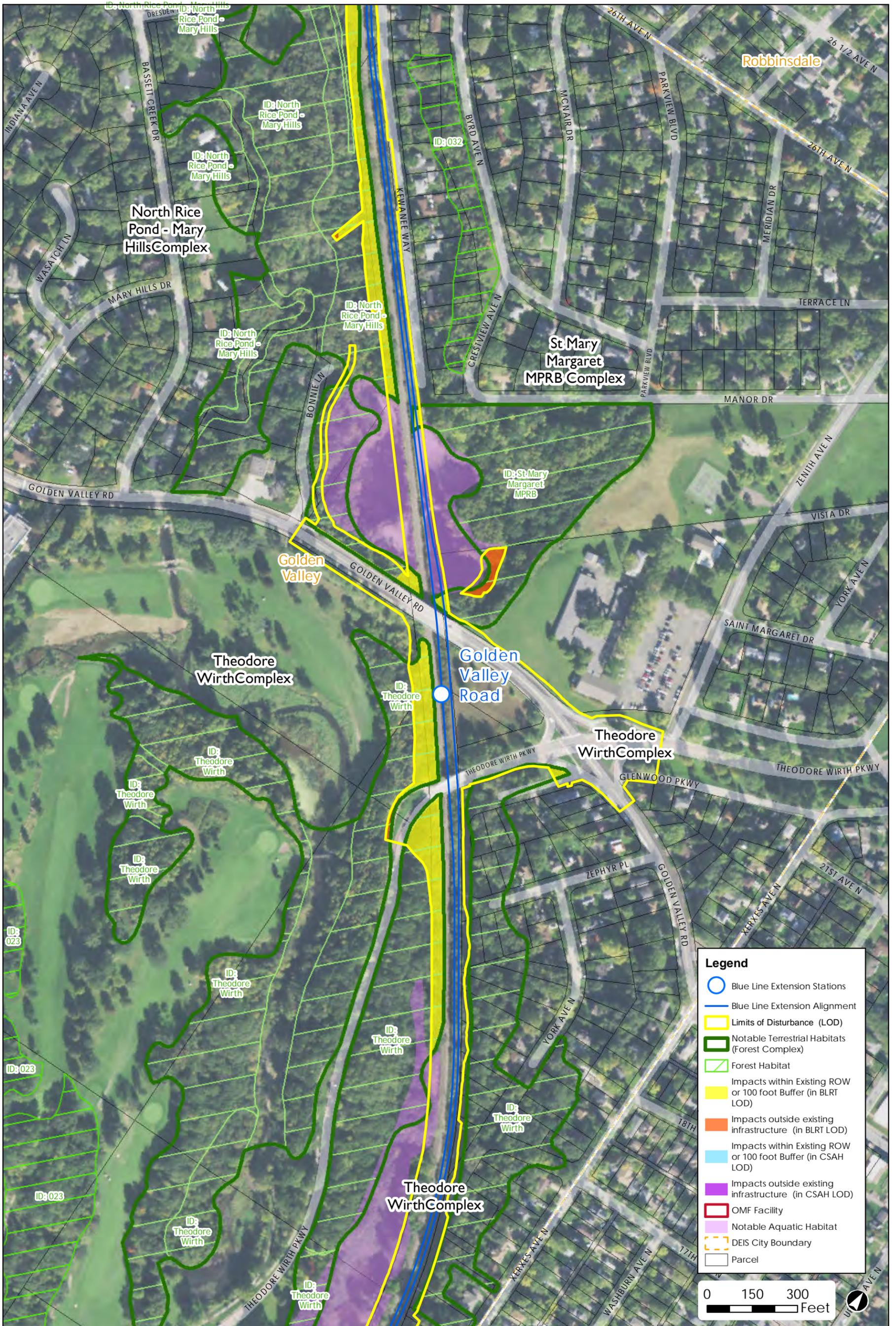
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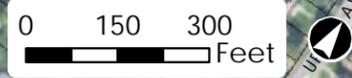
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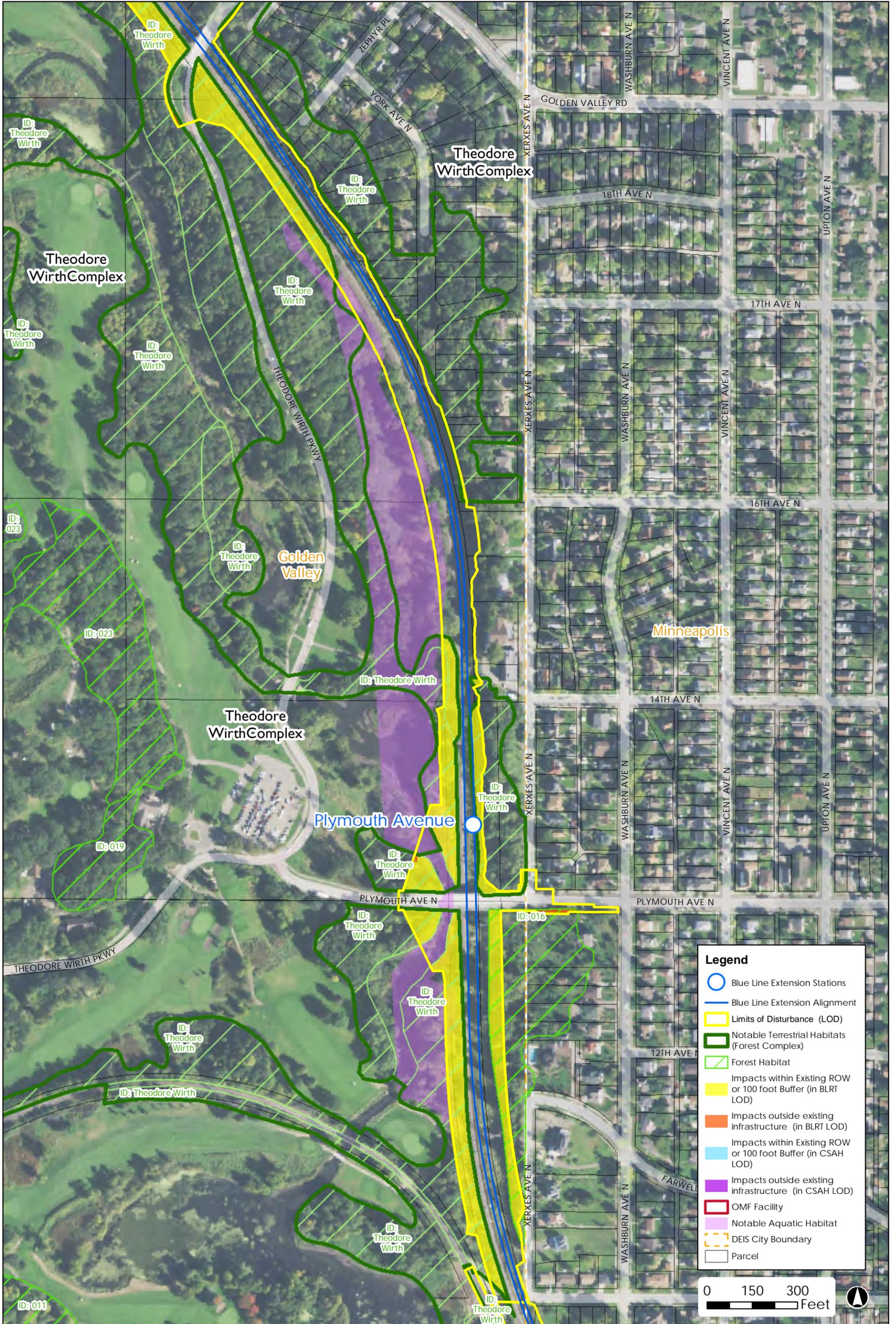


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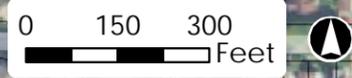


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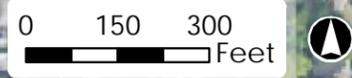
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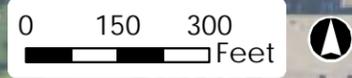


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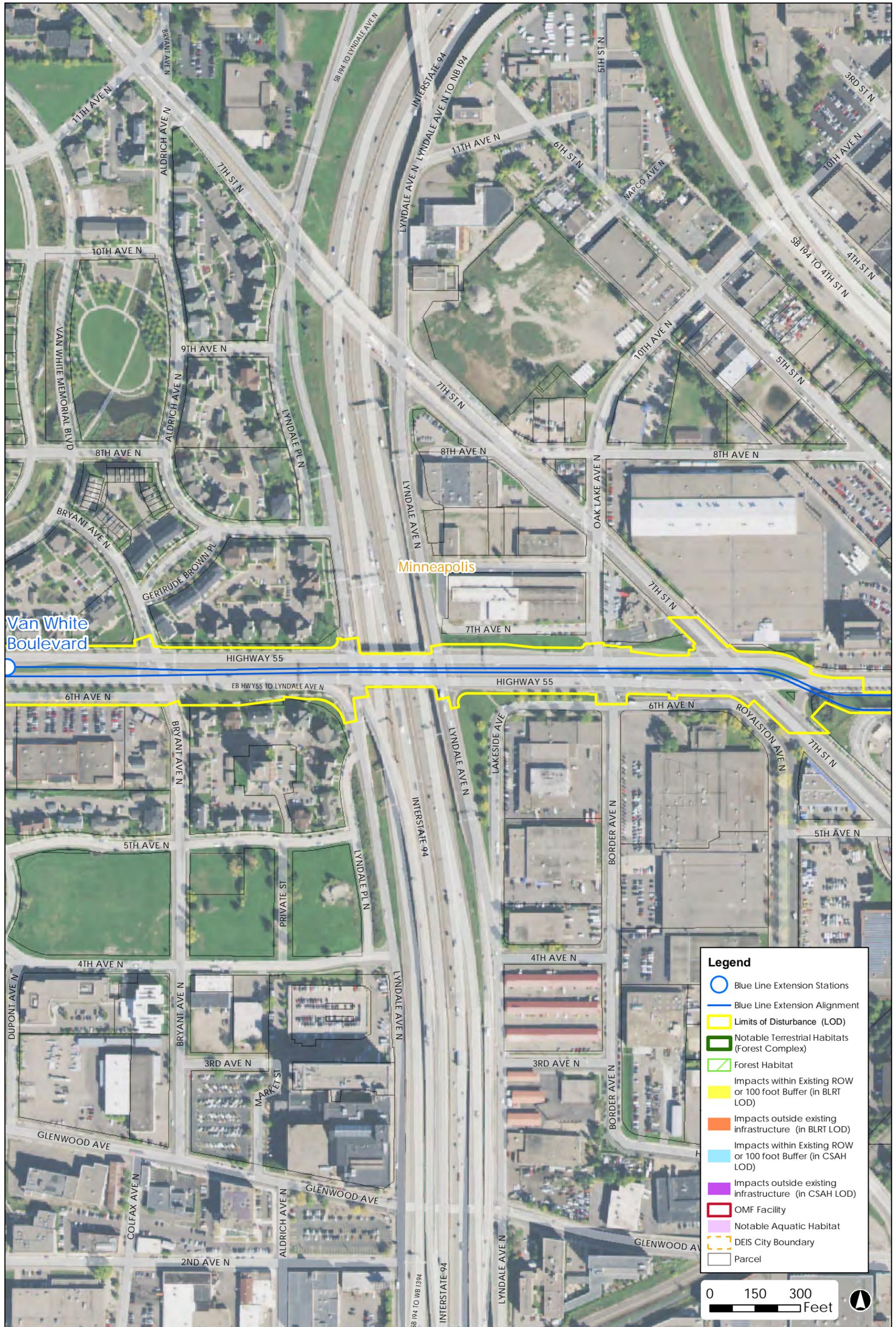
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3 References

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