



TREE PRESERVATION PLAN

Study Area
Corning, NY
NYSDEC Project ID 851046

May 15, 2020

A handwritten signature in cursive script that reads 'Jerry Bond'.

Jerry Bond
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ISA Certified Arborist

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Project Manager

Prepared for:

**Corning Incorporated
Corning, New York**

Prepared by:

AECOM Technical Services, Inc.

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APPENDIX A: CITY OF CORNING APPLICATION FOR TREE PLANTING

LIST OF ACRONYMS

AECOM	AECOM Technical Services, Inc.
DD	Decision Document
FFS/AA	Focused Feasibility Study/Alternatives Analysis
ft bgs	feet below ground surface
ISA	International Society of Arboriculture
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
OUs	operable units
RAWP	Remedial Action Work Plan
SCOs	Soil Cleanup Objectives
WESTON®	Weston Solutions, Inc.

1. INTRODUCTION

AECOM Technical Services, Inc. and Urban Forestry Analytics, LLC have prepared this Tree Preservation Plan, on behalf of Corning Incorporated, in accordance with the New York State Department of Environmental Conservation (NYSDEC) Decision Document (DD) for Operable Units (OUs) 1, 2 and 5 in the Study Area, Corning, NY (NYSDEC, 2017). The Study Area is located in the City of Corning, NY, as illustrated on Figure 1. In general, it is bounded by the Chemung River to the south; Post Creek and Interstate 86 to the east and north; and the Guthrie Medical Center, the City of Corning Fire Department, and Centerway to the west. The Study Area is separated into five OUs based on location and land use, to assist in advancing properties through the remedial process. The five OUs in the Study Area, depicted on Figure 2, are identified as follows:

- OU1 – Residential Area (includes 211 residential properties and Houghton Park)
- OU2 – Residential Area at the Eastern End of Corning Boulevard (includes five residential properties)
- OU3 – School/Community Use Areas (includes the Corning-Painted Post School District, Corning Christian Academy and City of Corning Memorial Stadium properties)
- OU4 – Flood Control Areas
- OU5 – Residential Expansion Area (includes 109 residential properties)

From 2014 through 2017, Weston Solutions, Inc. (WESTON), on behalf of Corning Incorporated, performed characterization activities in OU1 and OU2 under the June 2014 Order on Consent and Administrative Settlement (June 2014 Order on Consent). Based on the characterization sampling, WESTON, on behalf of Corning Incorporated, prepared a Focused Feasibility Study/Alternatives Analysis (FFS/AA) to evaluate remedial alternatives for the residential Operable Units (OU1, OU2 and OU5) contained in the Study Area (WESTON, 2017). The recommended alternative contained in the FFS/AA is to excavate up to 2 feet below ground surface (ft bgs) with a cover system.



NYSDEC issued the DD in June 2017, following a public comment period, describing the selected remedial alternative of excavation of up to 2 ft bgs with a cover system for properties in OU1, OU2 and OU5.

Effective December 14, 2017, Corning Incorporated entered into an Order on Consent and Administrative Settlement (December 2017 Order on Consent) with NYSDEC to perform remedial activities and additional characterization activities within the Study Area. Pursuant to the December 2017 Order on Consent, a Remedial Action Work Plan (RAWP) (WESTON, 2018) was prepared by WESTON, on behalf of Corning Incorporated, to perform remedial activities in the residential Operable Units of the Study Area (OU1, OU2 and OU5) as described in the NYSDEC DD. NYSDEC approved the RAWP on March 30, 2018.

The selected remedial alternative in the residential areas of the Study Area requires the removal and replacement of existing trees located within the delineated remediation boundaries on residential properties and/or the City of Corning rights-of-way. In addition, the selected remedial alternative requires the limited excavation and backfill of soils near existing trees located on residential properties and/or the City of Corning rights-of-way. This Tree Preservation Plan describes the general approach for the protection and/or the removal and replacement of trees located within or near delineated remediation boundaries.

2. REMEDIAL APPROACH

Remediation boundaries at residential properties and City of Corning rights-of-way in the Study Area are defined by endpoint sample locations where soil concentrations are below applicable NYSDEC Soil Cleanup Objectives (SCOs; New York Codes, Rules and Regulations (NYCRR) Subpart 375-6), or by an impervious surface, structure or property boundary. Property features such as trees located within the defined limits of remediation will be removed and replaced in accordance with the NYSDEC-approved RAWP. Property features such as trees located in the vicinity of remediation boundaries will be preserved to the greatest extent practicable. Remediation activities in the vicinity of existing trees located outside remediation boundaries will be conducted as described in this plan.



The following process was implemented at the three residential properties remediated in 2018 and will be implemented going forward at properties requiring remediation within the residential OUs of the Study Area:

- Properties will be surveyed by a New York State licensed surveyor to locate property lines and features. During this survey, the location of all trees on the property will be surveyed. In addition, the approximate location of trees at adjacent residential properties that could be affected by the proposed remediation activities (i.e., within 15 feet of the property line) will be approximated. The locations of trees at adjacent properties will not be surveyed unless the property owner has provided written consent to access their property.
- An Arborist, certified by the International Society of Arboriculture (ISA) and practicing in New York State will perform an inventory and evaluation of trees present at each property and trees located within the City of Corning rights-of-way associated with the subject property. The inventory will be performed from the City of Corning rights-of-way and the subject property (for which access has been granted by the property owner). Where possible, the Arborist will also perform an inventory and evaluation of trees located on adjacent properties that could be affected by the proposed remediation activities (i.e., within 15 feet of the property line of the subject property), without accessing the neighboring property unless the property owner has provided written consent to access their property.
- The Arborist will determine a Root Protection Zone for each inventoried tree based on the Arborist's evaluation of the species, age and general health of the tree. The Root Protection Zone is an area around the tree where excavation or equipment operation could compromise the survivability of the tree. The Root Protection Zone will be shown on the property specific design drawings when they intersect with delineated remediation areas.

- Trees located within the remediation boundary have been or will be identified for removal and replacement. Trees that will be removed will be replaced with a similar species/type based on the recommendation of the Arborist with stock that is commercially available at local nurseries as described in the NYSDEC-approved RAWP.
- Based on the requirements of NYSDEC, invasive varieties of trees will not be replaced in kind, but rather replaced with non-invasive species, preferably native, as recommended by the Arborist and accepted by the property owner.
- Where possible, and only when approved by NYSDEC and the New York State Department of Health (NYSDOH), trees located near the boundary of a remediation area will be preserved. In areas where the Root Protection Zone established by the Arborist overlaps a remediation area, remedial activities within the Root Protection Zone will be conducted as described in Section 4 to preserve the existing tree.
- The Arborist's recommendations for replacement trees will be discussed with and approved by the property owner during the design review and prior to beginning remediation activities.
- No trees will be removed without property owner's consent.
- In the event that the property owner declines removal of a tree, it will be addressed as described in Section 4.
- No trees will be replaced if the property owner declines replacement.
- Trees located on property lines will require consent from each of the respective property owners prior to removal and replacement.
- Trees that are replaced during remedial activities will be inspected monthly during the growing season by Corning Incorporated's Representative to ensure they become established which is expected to take up to one year. Trees that do not survive or show

signs of non-establishment or irreversible decline during the first year after planting will be replaced at no cost to the property owner.

3. TREES IN THE CITY OF CORNING RIGHTS-OF-WAY

Trees identified for removal and replacement within the City of Corning rights-of-way will require a permit from the City of Corning prior to replanting activities. The permit application will be prepared and submitted by the Remediation Contractor for each property where trees will be removed and replaced in City of Corning rights-of-way. Species of trees approved for planting in the rights-of-way are listed in the permit application (see the City of Corning Application for Tree Planting provided in Appendix A). The application will include the type and size of the replacement tree(s) and a sketch showing the location of the tree(s) to be replaced in relation to all overhead and subsurface utilities.

4. TREE PRESERVATION

4.1 PROPERTY OWNER REQUESTS

As stated in the RAWP, case-specific consideration will be applied by NYSDEC, where possible, to accommodate property owner concerns related to preservation of their property with respect to specific features of significance to the property owner, such as mature trees. In the event a property owner requests to preserve a specific tree during review of the property-specific design and prior to finalizing the remedial designs, the following process will be implemented:

- All property owner requests for preservation of tree(s) will be presented to NYSDEC for approval prior to finalizing the remedial design.
- The request to NYSDEC will be accompanied by the evaluation conducted by the Arborist of the overall health and stability of the tree(s) requested by the property owner to be preserved. This evaluation will take into account whether the preservation of a tree poses a significant risk to contractors performing work under the tree's canopy, and whether the tree poses a risk to structures and neighboring properties.

- Trees that NYSDEC agrees will be preserved will be identified on the final property-specific design drawings.

4.2 FIELD ACTIVITIES

Upon approval by NYSDEC, and prior to remediation activities, the following activities will occur in the field at trees identified for preservation including trees where the Root Protection Zone overlaps the remediation boundary:

- A field evaluation of the Root Protection Zone will be conducted with oversight provided by the Arborist, NYSDEC and Corning Incorporated's Representative.
- The purpose of the field evaluation is to refine, if necessary, the Root Protection Zone established by the Arborist and establish the allowable extent of excavation both horizontally and vertically that will reduce the risk to the long-term survivability of the tree.
- The field evaluation of the Root Protection Zone will be completed in two steps:
 1. The Arborist will probe for substantial shallow roots (e.g., one inch or greater in diameter) throughout the drip line of the tree using a thin rod to determine where shallow trenches described below can be initially excavated.
 2. The Remediation Contractor will use soft dig techniques such as hand excavation or vacuum extraction to excavate shallow trenches within the Root Protection Zone at locations identified by the Arborist. Additional shallow trenches may be excavated closer to, or further from the base of the tree, at the direction of the Arborist based on the presence of shallow roots observed in the trenches. Soil excavated from the shallow trenches will be disposed at an approved landfill in accordance with the RAWP.

3. The Arborist and NYSDEC will determine the limit of excavation that can be conducted in the vicinity of the tree based on the shallow roots observed in the shallow trenches and the species, age, and general health of the tree.
- If the field evaluation occurs in the spring or the summer, the entire field-refined Root Protection Zone will be covered with a 2-3 inch layer of hardwood mulch following the field evaluation and remedial irrigation supplied as deemed necessary. The mulched area will not be removed and restored to existing conditions following remediation activities to allow the tree to re-establish roots that were disturbed during the evaluation.
 - The boundaries of the field-refined Root Protection Zone, as defined by the Arborist, will be surveyed by a New York State licensed surveyor.
 - NYSDEC will determine if there are areas within the Root Protection Zone that require additional excavation of soils to meet remedial objectives. NYSDEC may consider limiting the depth of additional excavation in the Root Protection Zone to meet the remedial objectives. If NYSDEC determines additional excavation is required, and the Arborist determines the additional excavation will compromise the integrity of the tree's root system, the tree will have to be removed and replaced. If NYSDEC determines the tree will have to be removed and replaced, Corning Incorporated will inform the property owner of NYSDEC's decision to remove the tree and request the property owner's consent prior to the tree being removed.
 - Following excavation activities, the excavation will be surveyed to document the area of removal and backfilled with clean top soil immediately. Excavations within the field-refined Root Protection Zone, including the shallow root investigation trenches will be backfilled with Becks Topsoil, or approved equivalent, which contains approximately 20 percent peat moss (organic matter) at the completion of the field investigation. A temporary barrier, such as orange construction fencing, will be erected along the edge of the Root Protection Zone to preclude additional excavation or intrusion by heavy equipment within the Root Protection Zone.

- In the event that fill material containing ash, brick and/or glass is encountered in either the investigation trenches, or in any excavations completed within the field-refined Root Protection Zone, NYSDEC will be informed and each issue will be addressed on a case-by-case basis. If the fill material containing ash, brick and/or glass cannot be removed without compromising the integrity of the tree, the tree will have to be removed. If NYSDEC determines the tree will have to be removed, Corning Incorporated will inform the property owner of NYSDEC's decision to remove the tree and request the property owner's consent prior to the tree being removed.

It should be noted that the establishment of the Root Protection Zone will not guarantee that remedial activities will not impact the health of a tree. Any tree that was preserved and does not survive or shows signs of irreversible decline within a full year following remediation activities will be replaced in kind, with the property owner's consent, at no cost to the property owner.

Changes to elements of the Root Protection Zone, from the NYSDEC approved design drawings, will be documented in writing in a Field Change Form that will be reviewed with NYSDEC prior to submittal to the property owner. In addition, key portions of the field investigation will be photographed, including the perimeter of the Root Protection Zone, as well as the limits of shallow excavation and backfill within the established zone, as approved by NYSDEC.

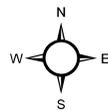
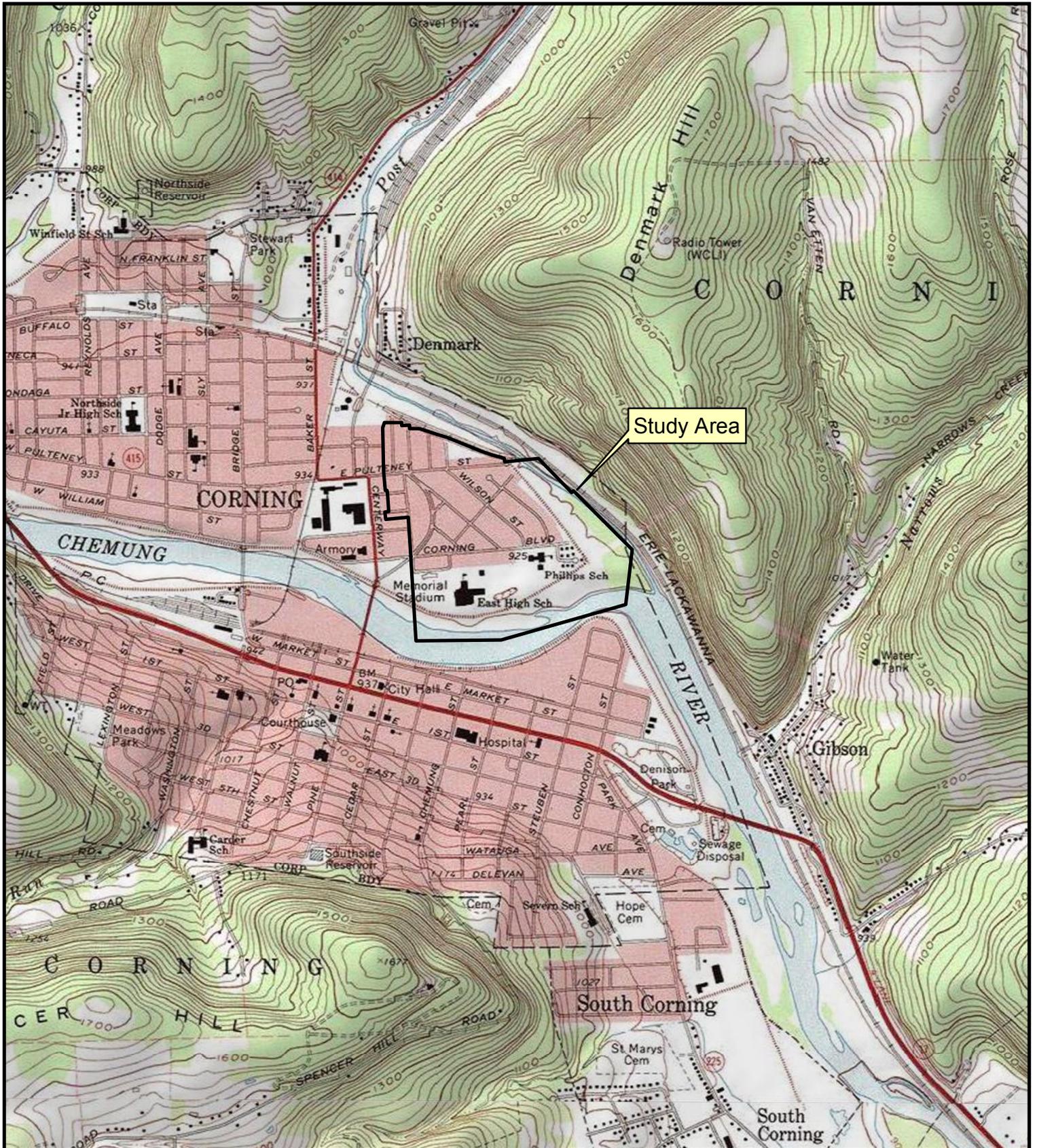
5 REFERENCES

NYSDEC (New York State Department of Environmental Conservation). 2017. Decision Document, Study Area, Operable Units (OUs) 1, 2 and 5, Corning, Steuben County, New York, Site ID No. 851046, July 2017.

WESTON (Weston Solutions, Inc.). 2017. Focused Feasibility Study/Alternatives Analysis, Residential Areas (OU1, OU2 and OU5), 23 March 2017. Prepared by Weston Solutions, Inc. for Corning Incorporated.

WESTON (Weston Solutions, Inc.). 2018. Remedial Action Work Plan, Residential Areas (OU1, OU2 and OU5) Study Area, 6 April 2018. Prepared by Weston Solutions, Inc. for Corning Incorporated.

FIGURES



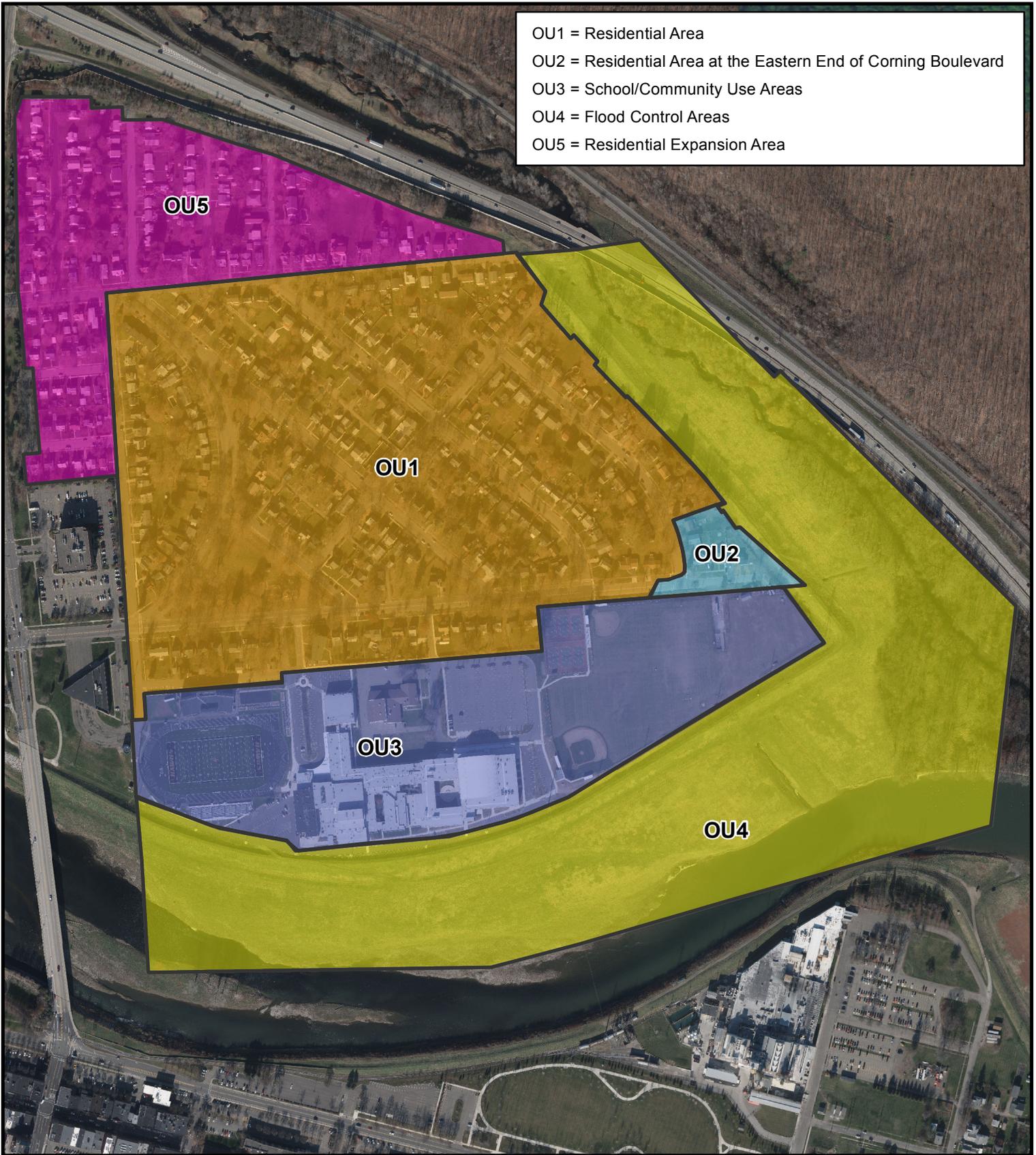
AECOM

0 1,000 2,000 Feet

USGS 7.5 Minute Quadrangle Corning NY, 1971

Figure 1-1
Location of Study Area

Corning, NY



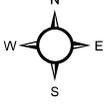
OU1 = Residential Area
 OU2 = Residential Area at the Eastern End of Corning Boulevard
 OU3 = School/Community Use Areas
 OU4 = Flood Control Areas
 OU5 = Residential Expansion Area

Legend

Operable Units

- OU1
- OU2
- OU3
- OU4
- OU5

AECOM


 0 250 500
 Feet

Base Imagery: Robinson Aerial Imagery, Dec 2015
 Coordinate System: NAD 1983 State Plane
 New York Central Feet
 Datum: NAD83. Units: Feet

Figure 1-2
Study Area Operable Units
 Corning, NY



APPENDIX A

CITY OF CORNING APPLICATION FOR TREE PLANTING



CITY OF CORNING

APPLICATION FOR TREE PLANTING

Name: _____

Planting Location: _____

Phone: _____

Date: _____

PROCEDURES:

1. The City maintains a list of tree species and varieties approved for planting on the City right-of-way. Trees are selected for insect and disease resistance, adaptability to local climate and soils, resistance to ice and wind damage and sound structure and desirable growth habits. Check our list of approved and unapproved species. Not all species are approved for all sites for a number of reasons, such as, width of planting area, overhead utility line, sewer, water, and gas lines, existing trees and traffic flow. The City reserves the right of approval of the species for each site and will offer the best recommendation possible for the most appropriate tree for your site.

2. Approved trees for City Streets:

Attention property owners: A permit to plant any tree(s) on City Property needs to be obtained BEFORE planting is done.

Minimum tree trunk size is one (1") inch in diameter.

	NAME	COMMON NAME	HEIGHT	CROWN	REMARKS
S M A L L	AMELANCHIER CANADENSIS	SHADBLow SERVICEBERRY	20	20	TREE FORM/FLOWERING/WHITE
	AMELANCHIER X gr.	AUTUMN BRILLIANCE SERVICE BERRY	20	15	FLOWERING/WHITE
	SYRINGA RETICULATA	IVORY SILK' TREE LILAC	20	15	FLOWERING/WHITE
	ACER PLAT. CRIMSON SENTRY	CRIMSON SENTRY MAPLE	25	15	MAROON LEAVES
	ACER CAMPESTRE	HEDGE MAPLE	30	30	
	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	30	25	
	PYRUS CALLERYANA	CLEVELAND SELECT PEAR	30	18	FLOWERING/WHITE
	PYRUS CALLERYANA	RED SPIRE PEAR	30	20	FLOWERING/PINK
M E D I U M	ACER CAMPESTRE	QUEEN ELIZABETH MAPLE	35	30	FAST GROWING
	GLEDITSIA T.I.'IMPERIAL'	IMPERIAL HONEYLOCUST	35	35	
	SORBUS ALNIFOLIA	KOREAN MOUNTIAN ASH	35	30	
	SORBUS THURIGIACA	OAKLEAF MOUNTIAN ASH	35	20	COLUMNAR
	ACER PLAT. CRIMSON KING	CRIMSON KING MAPLE	40	35	MAROON LEAVES
	ACER RUBRUM ' BOWHALL'	BOWHALL MAPLE	40	15	
	CARPINUS BETULUS	EUROPEAN HORNBEAM	40	25	BRANCHED UP FORM
	CARPINUS BETULUS	FASTIGIATA' PERIMIDAL HORNBEAM	40	25	
	PRUNUS SARGENTTI	SERGEANT CHERRY	40	25	FLOWERING/PINK
L A R G E	ACER PLAT. COLUMNAR	COLUMUARE NORWAY MAPLE	45	20	
	ACER RUBRUM 'KARPICK'	KARPICK MAPLE	45	20	GREAT STREET TREE
	GLEDITSIA T. I.'SHADEMASTER	SHADEMASTERHONEY LOCUST	45	35	
	GLEDITSIA T.I.'SKYLINE'	SKYLINE HONEY LOCUST	45	35	
	QUERCUS ROBUR'SKYMASTER'	SKYMASTER OAK	45	15	
	TILIA TOMENTOSA 'STERLING'	STERLING SILVER LINDEN	45	35	
	ACER PLAT. EMERALD QUEEN	EMERALD QUEEN MAPLE	50	35	
	ACER X FREEMANII	CELEBRATION MAPLE	50	25	
	ACER X FREEMANII' ARMSTRONG'	ARMSTRONG MAPLE	50	15	
	FRAXINUS 'EMPIRE'	EMPIRE ASH	50	25	
	FRAXINUS 'ROSEHILL'	ROSEHILL WHITE ASH	50	40	NON-FRUITING
	FRAXINUS 'URBANITE'	URBANITE GREEN ASH	50	40	
	ZELKOVA SERRATA	GREENVASE ZELKOVA	50	40	
QUERCUS ROBUR	ATTENTION OAK	60	15		
QUERCUS ROBUR	COLUMNAR ENGLISH OAK	60	15		
	MALUS	PINK SPIRE CRAB APPLE	UPRIGHT W/FRUIT/FLOWERING/PINK		
	MALUS	SPRING SNOW CRAB APPLE	WHITE PYRAMIDAL NO FRUIT/FLOWERING		

· TREES THAT ARE NOT PERMITTED AS STREET TREES

All poplars

Non Approved Elms

Silver Maple

Horse Chestnut

Box Elder

Tree of Heaven

Birch

Russian Olive

Cotton Wood

All evergreens

Apple

Norway Maple (except those approved)

Pear (except those approved)