

## Tree Assessment and Report

### Henry Street Bridge

Indianapolis, Indiana

Contract No. ST-31-059F

02/08/2024

*Prepared for:*



### **Project Description**

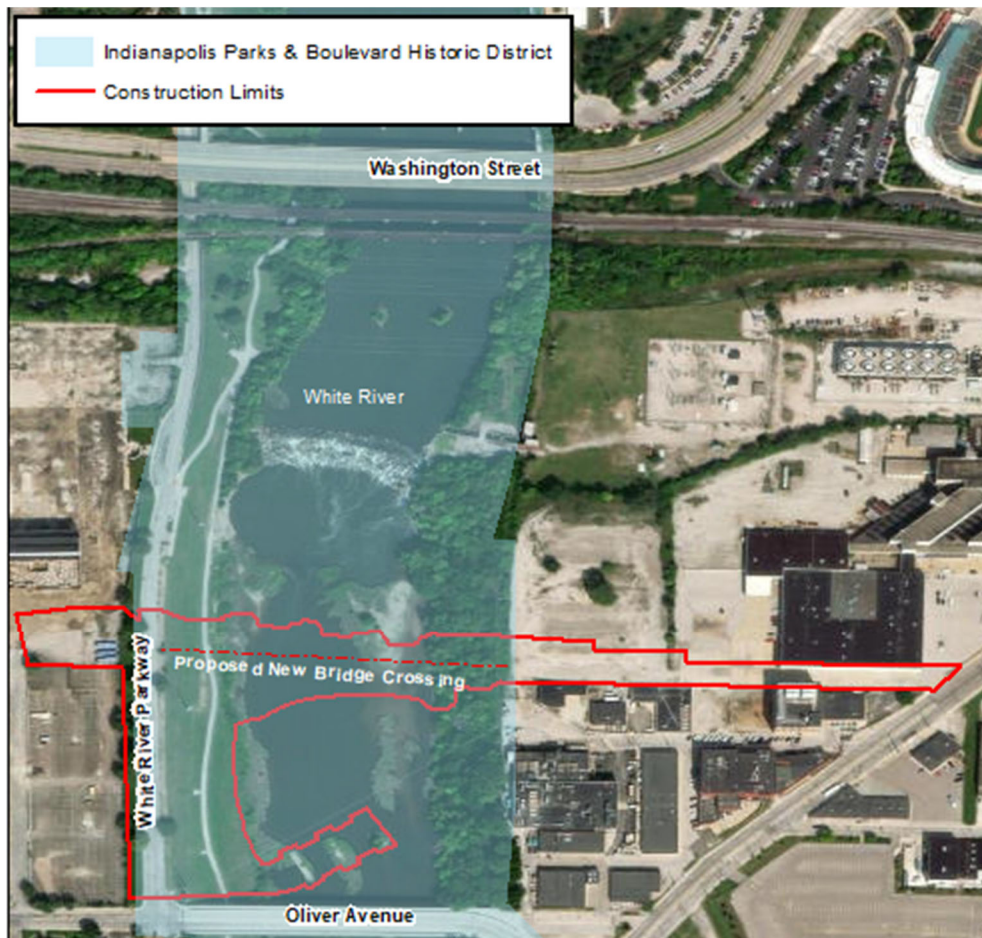
The proposed Henry Street bridge project (Project No. 30901248; Contract No. ST-31-059F) is located in downtown Indianapolis in Center Township, Marion County, Indiana. The project area is an approximate 680-foot stretch over the West Fork White River, 0.32 miles north of I-70. The project extends Henry Street west 0.09 mile across the river. The project is located within Section 10 and 11, Township 15 North, and Range 3 East within the Indianapolis West, Indiana 7.5-minute United States Geological Survey (USGS) Topographic Quadrangle and is approximately 0.38 mile in length.

The City of Indianapolis has two water crossings over the White River near the development of the former GM Stamping plant site: Washington Street to the north and Oliver Avenue to the south. The purpose of the proposed bridge project is to provide vehicular and pedestrian connectivity between facilities on each side of the White River and to reduce the existing congestion on adjacent roadways (Oliver Avenue and Washington Streets). The bridge is needed to address the existing and proposed congestion due to development and to provide improved access to area facilities. The development of the former GM Stamping plant site on the west side of the river (bounded by Harding Street to the west, the rail lines to the north, the White River to the east, and Oliver Street to the south) would be expected to increase the congestion currently experienced on area roadways, bridges, and intersections, both on the east and west sides of the White River in this area.

The proposed Henry Street bridge will be a two-lane Urban Collector within the project area, with one lane of traffic in each direction. The proposed roadway on the bridge consists of one eastbound lane and one

westbound lane; both lanes have a 2-foot shoulder and each lane is 11 feet wide. South White River Parkway is also being relocated approximately 250 feet to the west as a roadway project.

Three existing piers from a previous crossing over the White River are located just north of the Oliver Avenue bridge. Prior to construction of the proposed bridge, the existing stub piers will be removed. A temporary causeway will be placed in the stream to access the existing piers. After the demolition of the existing piers and removal of the existing causeway, a temporary causeway will be placed in the channel at the proposed bridge location with cofferdams around the proposed pier locations. Construction is anticipated to begin in July 2023 and be completed by December 2026. The project is being completed by the City of Indianapolis Department of Public Works and is not federally funded. The proposed project occurs within the Indianapolis Parks & Boulevard Historic District.



**Exhibit A – Existing Conditions**

### **Project Site Tree Assessment**

On October 28, 2022 Crawford, Murphy, & Tilly Inc. environmental scientists visited the project site to assess trees that will be potentially impacted by the construction of the Henry Street Bridge. Tree assessment survey limits are depicted on the attached [Tree Assessment – Overall](#) map. Within the survey limits, all planted trees were assessed and all volunteer trees with at least one stem that is 6" diameter at breast height (DBH) were assessed. This report discusses these trees which will be impacted by construction of the Henry Street Bridge project.

There are 65 trees anticipated to be impacted by the construction of the Henry Street Bridge. Dominant species of the impacted trees include White Mulberry (*Morus alba*), Hackberry (*Celtis occidentalis*),

and Sycamore (*Platanus occindentalis*). Most trees are volunteer trees located on the east bank of the White River among brush and honeysuckle shrubs. On the west side of the river, there are planted trees along White River Parkway and volunteer trees. The planted tree species are sugar maple (*Acer saccharum*) and Northern red oak (*Quercus rubra*). The volunteer tree species on the west side are predominantly Siberian elm (*Ulmus pumila*). None of the trees assessed display bat habitat characteristics.

Of the 65 trees to be impacted, 11 are to be preserved and the remaining 54 are to be removed. Details of species, condition, recommendation, and conflict are in the attached [Tree Assessment Table](#).

### Tree Mitigation

For the Henry Street Bridge project, there are several permits requiring mitigation. This includes the Indiana Department of Natural Resources Construction in a Floodway (CIF) Permit, United States Army Corps of Engineers (USACE) 404 waterway permit, and Indianapolis Department of Public Works (DPW) Flora Permit.

Project constraints prevent tree plantings in the majority of the construction limits of the Henry Street Bridge project. USACE guidelines do not recommend planting on the crown or within 15' of the toe of the levee to allow for a vegetation-free zone. This prevents feasible tree planting on the west bank of the White River within the construction limits of the project. On the east bank of the river, a minimum of 35' between the bridge and any proposed tree plantings per City of Indianapolis DPW reduces the available space for tree planting within the construction limits. These constraints inhibit on-site tree mitigation for the White River floodway and Indianapolis Parks & Boulevard Historic District. Therefore, tree plantings must also occur off-site to meet mitigation requirements.

Mitigation for the non-wetland forest habitat within the IDNR Floodway for the CIF permit will be off-site within the floodway of White River, downstream from the project area at Southwestway Park in Marion County. This mitigation plan is currently in production.

Mitigation for the Indianapolis DPW Flora Permit is proposed tree plantings as a part of the Henry Street Bridge project and Roadway construction as part of the Infrastructure Improvements for the Elanco and other developments on the west side of the River on the Former GM Stamping Plant site. The Flora Permit will require a mitigation amount of 70 trees for the impacts of this project, which is detailed in the [Tree Assessment Table](#) attached. White mulberry (*Morus alba*) and tree-of-heaven (*Ailanthus altissima*) are nuisance species found in the tree assessment that are prohibited for planting due to status as invasive plants per 312 IAC 18-3-25. Therefore, these tree species will not be mitigated for.

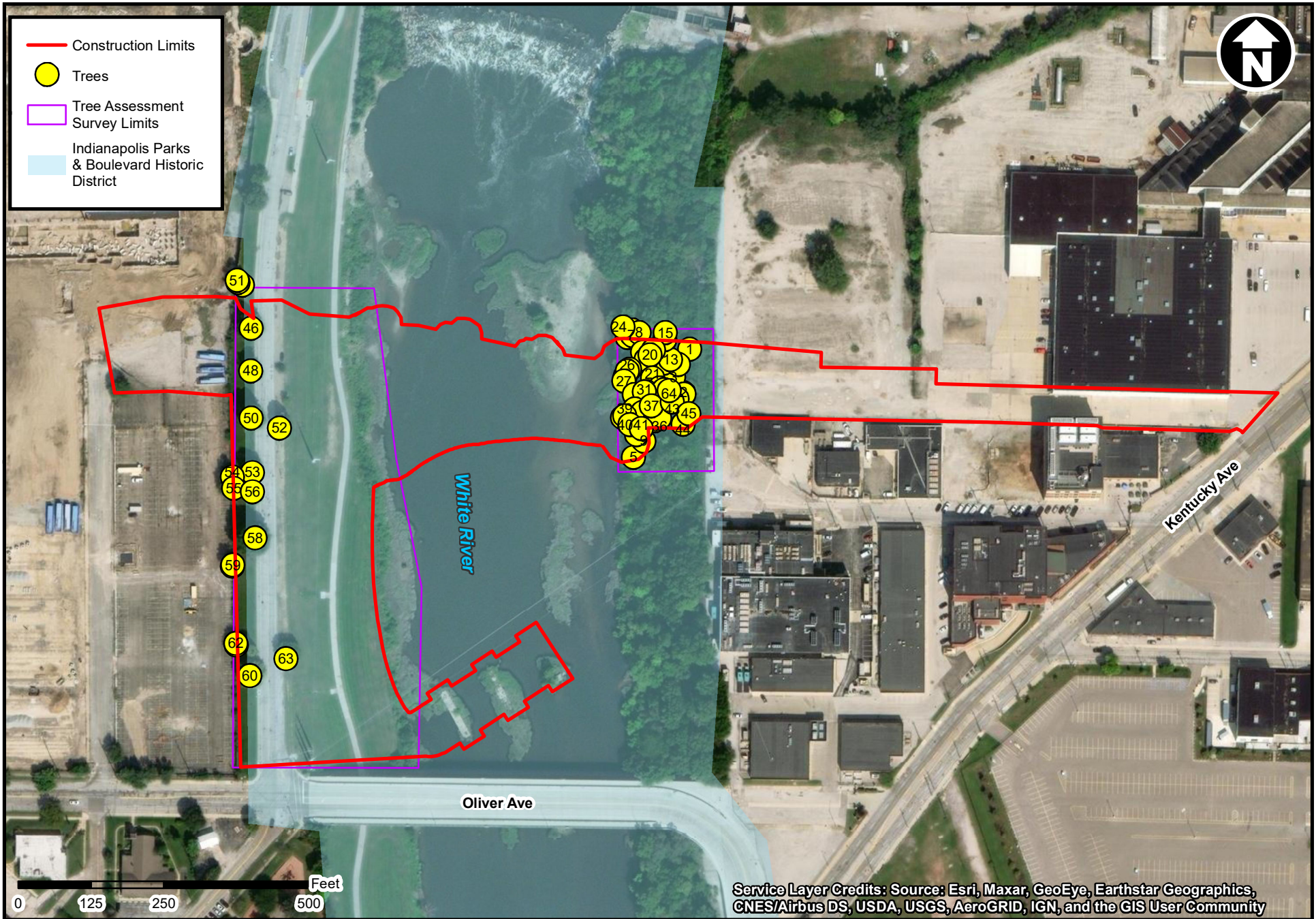
In the project area along the proposed relocated South White River Parkway, 88 trees at 2-1/2" caliper are currently proposed to be planted as well as 9 trees along Henry Street. The [White River Innovation District Infrastructure Project BOT Package 1 Plan Sheets](#) attached outline this planting plan. The plant schedule within the attached plan sheets also includes the list of deciduous native tree species proposed for the planting plan.

Mitigation for the USACE 404 waterway permit requires appropriate replanting of trees to replace those removed within the Indianapolis Parks & Boulevard Historic District. 53 trees within this historic district are recommended for removal due to impacts of the project. Within the construction limits on the east bank of the river and within the Indianapolis Parks & Boulevard Historic District, 20 trees at a 1-1/2" caliper and spacing of 12' are proposed to be planted. This is depicted in the attached [Preliminary Tree Mitigation in Historic District](#). A City-funded tree planting project within the Historic District approximately three miles north of the project area along City-owned Fall Creek Trail will result in the planting of 33 trees at minimum. This is depicted in the attached [Fall Creek Trail – Barton & George Kessler Park](#).

An attached Indianapolis DPW list of tree species is attached and recommended for the plantings off-site in the historic district- please see the attached [Recommended Overstory Trees for City of Indianapolis ROW and Park Projects](#). Below are recommended tree species appropriate for a non-wetland floodplain forest for the on-site tree plantings.

Common Name	Species Name	Common Name	Species Name
Hackberry	<i>Celtis occidentalis</i>	Black Gum	<i>Nyssa sylvatica</i>
American Sycamore	<i>Platanus occidentalis</i>	Swamp White Oak	<i>Quercus bicolor</i>

This brings a total of 97 trees proposed for planting in the project area and 33 trees north of the project area within the Historic District, which will satisfy the Flora Permit requirement of 70 trees and will satisfy the USACE 404 permit mitigation to replant 53 trees within the Historic District.

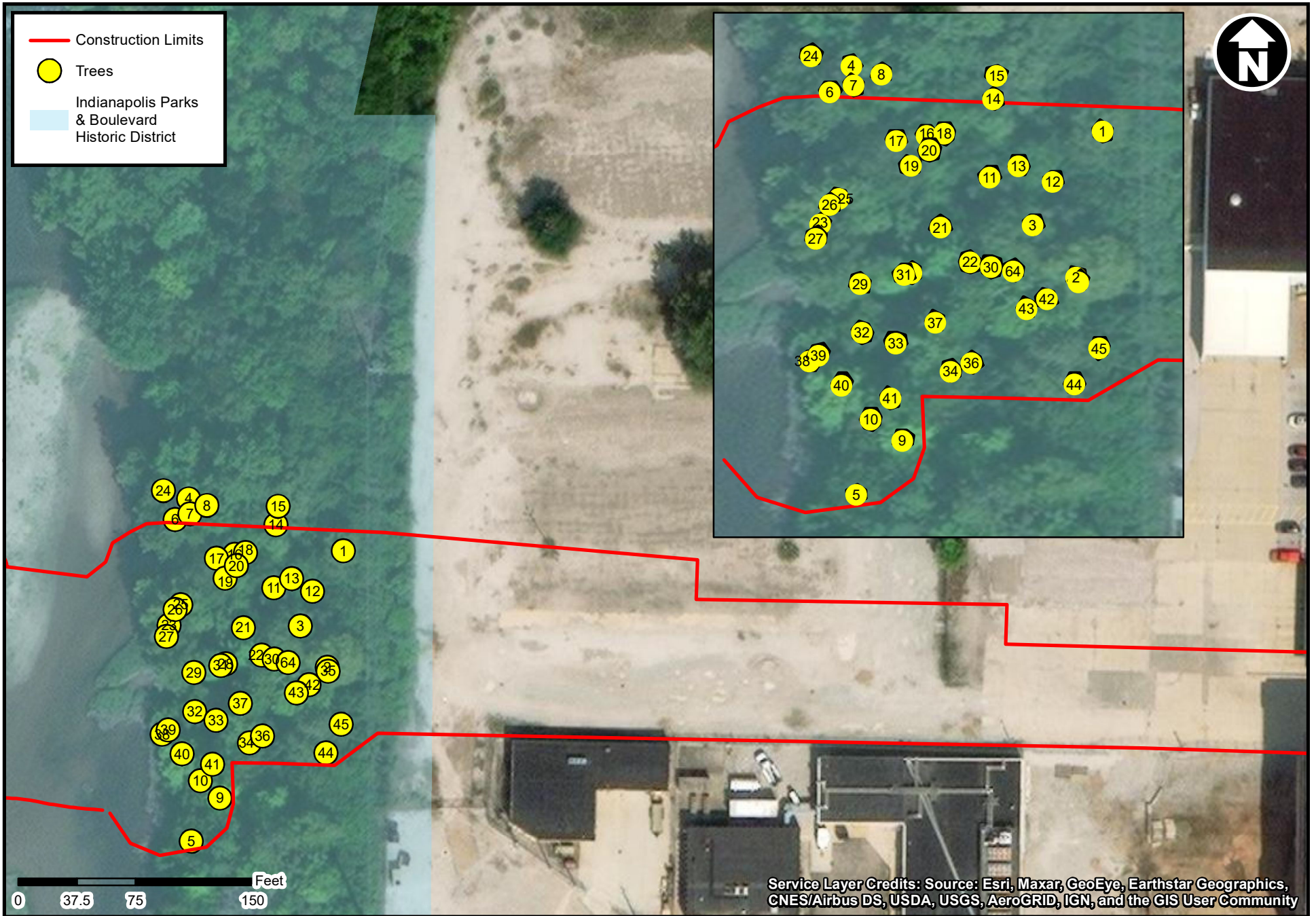


## Henry Street Bridge - Indianapolis, Marion County, IN

# Tree Assessment - Overall

Applicant: Indianapolis Department of Public Works; Agent: Crawford, Murphy & Tilly; Claudia McAllister-Peterson; 1/16/2023



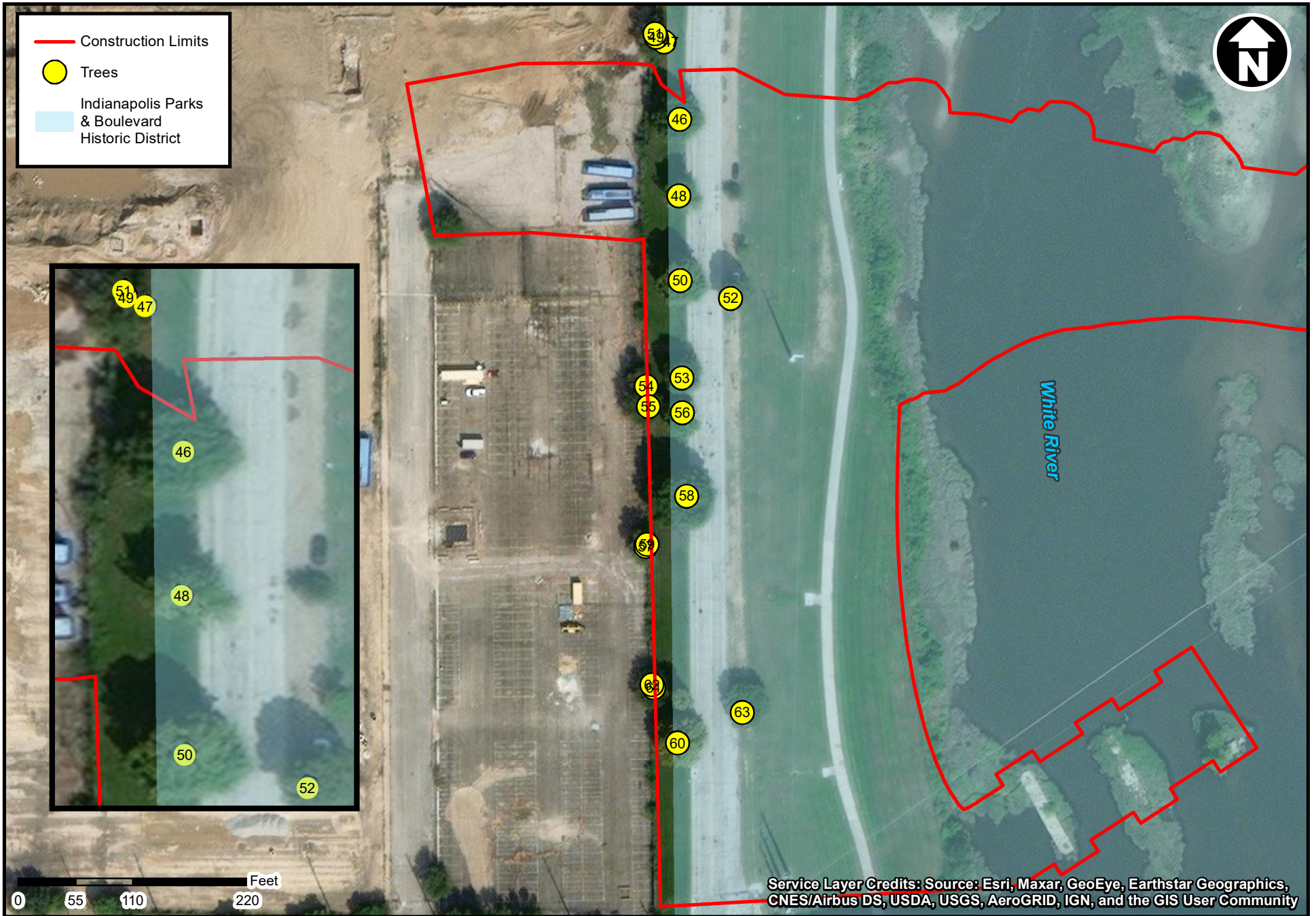


Henry Street Bridge - Indianapolis, Marion County, IN

# Tree Assessment - East Bank

Applicant: Indianapolis Department of Public Works; Agent: Crawford, Murphy & Tilly; Author: Claudia McAllister-Peterson; 1/16/2023





## Henry Street Bridge - Indianapolis, Marion County, IN

# Tree Assessment - West Bank

Applicant: Indianapolis Department of Public Works; Agent: Crawford, Murphy & Tilly; Author: Claudia McAllister-Peterson; 1/16/2023



Project: Henry Street Bridge, Marion Co., IN								*Indianapolis Park & Boulevard Historic District			
Tree ID #	DBH (")	Form	Scientific Name	Tree Species	Condition	Owner/MGR	Condition Comments	Recommendations	Conflict	Additional Maintenance	Mitigation for Flora Permit*
1	10	SS	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW		REMOVE*	SIGNIFICANT		1
2	13	SS	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW		REMOVE*	SIGNIFICANT		2
3	12	SS	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW		REMOVE*	SIGNIFICANT		1
4	45	MULTI	<i>Acer saccharinum</i>	Silver maple	GOOD	ROW	Multi-stem (14+13+18)	REMOVE*	SIGNIFICANT		4
5	11	SS	<i>Robinia pseudoacacia</i>	Black locust	FAIR	ROW		REMOVE*	SIGNIFICANT		1
6	51.5	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (13+14+11+2.5+11)	REMOVE*	SIGNIFICANT		5
7	6.5	SS	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW		REMOVE*	SIGNIFICANT		1
8	13	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (8+5)	REMOVE*	SIGNIFICANT		0
9	19	MULTI	<i>Catalpa speciosa</i>	Northern catalpa	GOOD	ROW	Multi-stem (15+4)	REMOVE*	SIGNIFICANT		2
10	7	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	poison ivy vines strangling	REMOVE*	SIGNIFICANT		0
11	8	SS	<i>Ailanthus altissima</i>	Tree of heaven	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
12	14	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (8+6)	REMOVE*	SIGNIFICANT		0
13	24	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (15+6+3)	REMOVE*	SIGNIFICANT		0
14	10	SS	<i>Acer negundo</i>	Box elder	FAIR	ROW		REMOVE*	SIGNIFICANT		1
15	17	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (8+9)	REMOVE*	SIGNIFICANT		0
16	35	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (11+8+9+5+2)	REMOVE*	SIGNIFICANT		0
17	14	SS	<i>Gleditsia triacanthos</i>	Honey locust	GOOD	ROW		REMOVE*	SIGNIFICANT		2
18	6	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
19	12	SS	<i>Maclura pomifera</i>	Osage orange	FAIR	ROW		REMOVE*	SIGNIFICANT		1
20	6.5	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
21	7	SS	<i>Acer negundo</i>	Box elder	GOOD	ROW		REMOVE*	SIGNIFICANT		1
22	8	SS	<i>Acer negundo</i>	Box elder	GOOD	ROW		REMOVE*	SIGNIFICANT		1
23	12	SS	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW		REMOVE*	SIGNIFICANT		1
24	30	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (11+8+4+7)	REMOVE*	SIGNIFICANT		3
25	12	SS	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW		REMOVE*	SIGNIFICANT		1
26	27	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (15+7+5)	REMOVE*	SIGNIFICANT		3
27	22	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (11+11)	REMOVE*	SIGNIFICANT		2
28	11	SS	<i>Catalpa speciosa</i>	Norther catalpa	GOOD	ROW		REMOVE*	SIGNIFICANT		1
29	28	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (19+9)	REMOVE*	SIGNIFICANT		3
30	12	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (6.5+5.5)	REMOVE*	SIGNIFICANT		0
31	13	SS	<i>Catalpa speciosa</i>	Northern catalpa	FAIR	ROW	Roots on concrete and tree starting to fall	REMOVE*	SIGNIFICANT		2
32	18	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
33	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE*	SIGNIFICANT		1
34	14	SS	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW		REMOVE*	SIGNIFICANT		2
35	6.5	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
36	6	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Honeysuckle overtaking tree	REMOVE*	SIGNIFICANT		0
37	9	SS	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW		REMOVE*	SIGNIFICANT		1
38	10	SS	<i>Acer saccharinum</i>	Silver maple	FAIR	ROW	Roots exposed from erosion	REMOVE*	SIGNIFICANT		1
39	8	SS	<i>Acer saccharinum</i>	Silver maple	FAIR	ROW	Roots exposed from erosion	REMOVE*	SIGNIFICANT		1
40	15	SS	<i>Acer saccharinum</i>	Silver maple	GOOD	ROW		REMOVE*	SIGNIFICANT		2
41	14	MULTI	<i>Platanus occidentalis</i>	Sycamore	GOOD	ROW	Multi-stem (10+4)	REMOVE*	SIGNIFICANT		2
42	14	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
43	38	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (11+17+4+6)	REMOVE*	SIGNIFICANT		0
44	21	MULTI	<i>Celtis occidentalis</i>	Hackberry	GOOD	ROW	Multi-stem (11+10)	REMOVE*	SIGNIFICANT		2
45	8	SS	<i>Morus alba</i>	White mulberry	NUISANCE	ROW		REMOVE*	SIGNIFICANT		0
46	34	SS	<i>Quercus rubra</i>	Northern red oak	GOOD	ROW	Planted	REMOVE*	SIGNIFICANT		3
47	9	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT		1
48	27	SS	<i>Quercus rubra</i>	Northern red oak	FAIR	ROW	Large dead branches; Planted	REMOVE*	SIGNIFICANT	CLEAN	3
49	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT		1
50	27	SS	<i>Acer saccharum</i>	Sugar maple	GOOD	ROW	Planted	REMOVE*	SIGNIFICANT		3
51	7	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		REMOVE	SIGNIFICANT		1
52	23	SS	<i>Quercus rubra</i>	Northern red oak	GOOD	ROW	Planted	REMOVE*	SIGNIFICANT		2
53	33	SS	<i>Quercus rubra</i>	Northern red oak	GOOD	ROW	Planted	PRESERVE*	MINOR		0
54	10	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		PRESERVE	MINOR		0



55	13	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		PRESERVE	MINOR		0
56	26	SS	<i>Acer saccharum</i>	Sugar maple	FAIR	ROW	Several large dead branches; Planted	PRESERVE*	MINOR	CLEAN	0
57	14	MULTI	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW	Multi-stem (5+9)	PRESERVE	MINOR		0
58	45	SS	<i>Quercus rubra</i>	Northern red oak	GOOD	ROW	Planted	PRESERVE*	MINOR		0
59	8	SS	<i>Ulmus pumila</i>	Siberian elm	GOOD	ROW		PRESERVE	MINOR		0
60	32	SS	<i>Acer saccharum</i>	Sugar maple	FAIR	ROW	Top center of tree is dead; Planted	PRESERVE*	MINOR		0
61	19	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (11+9)	PRESERVE	MINOR		0
62	16	MULTI	<i>Morus alba</i>	White mulberry	NUISANCE	ROW	Multi-stem (6+10)	PRESERVE	MINOR		0
63	31	SS	<i>Quercus rubra</i>	Northern red oak	GOOD	ROW	Planted	REMOVE*	SIGNIFICANT		3
64	13	MULTI	<i>Catalpa speciosa</i>	Northern catalpa	GOOD	ROW	Multi-stem (7.5+5.5)	REMOVE*	SIGNIFICANT		2
										Total Mitigation Amount	70

# CITY OF INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS WHITE RIVER INNOVATION DISTRICT INFRASTRUCTURE PROJECT BOT Package 1

RECEIVED FOR PUBLIC  
BID

07/18/2023  
DATE

*Ericka Miller*

ERICKA MILLER, DEPUTY DIRECTOR AND PROJECT MANAGER –  
ENGINEERING DEPARTMENT OF PUBLIC WORKS

MARION COUNTY  
CENTER TOWNSHIP  
PROJECT NO. ST-31-059 J  
MAYOR: JOSEPH H. HOGSETT  
DIRECTOR: BRANDON HERGET



CITY OF INDIANAPOLIS  
DEPARTMENT OF PUBLIC WORKS  
1200 MADISON AVENUE,  
SUITE 200  
INDIANAPOLIS, IN 46225

PROJECT AREA

**PROJECT LOCATIONS**

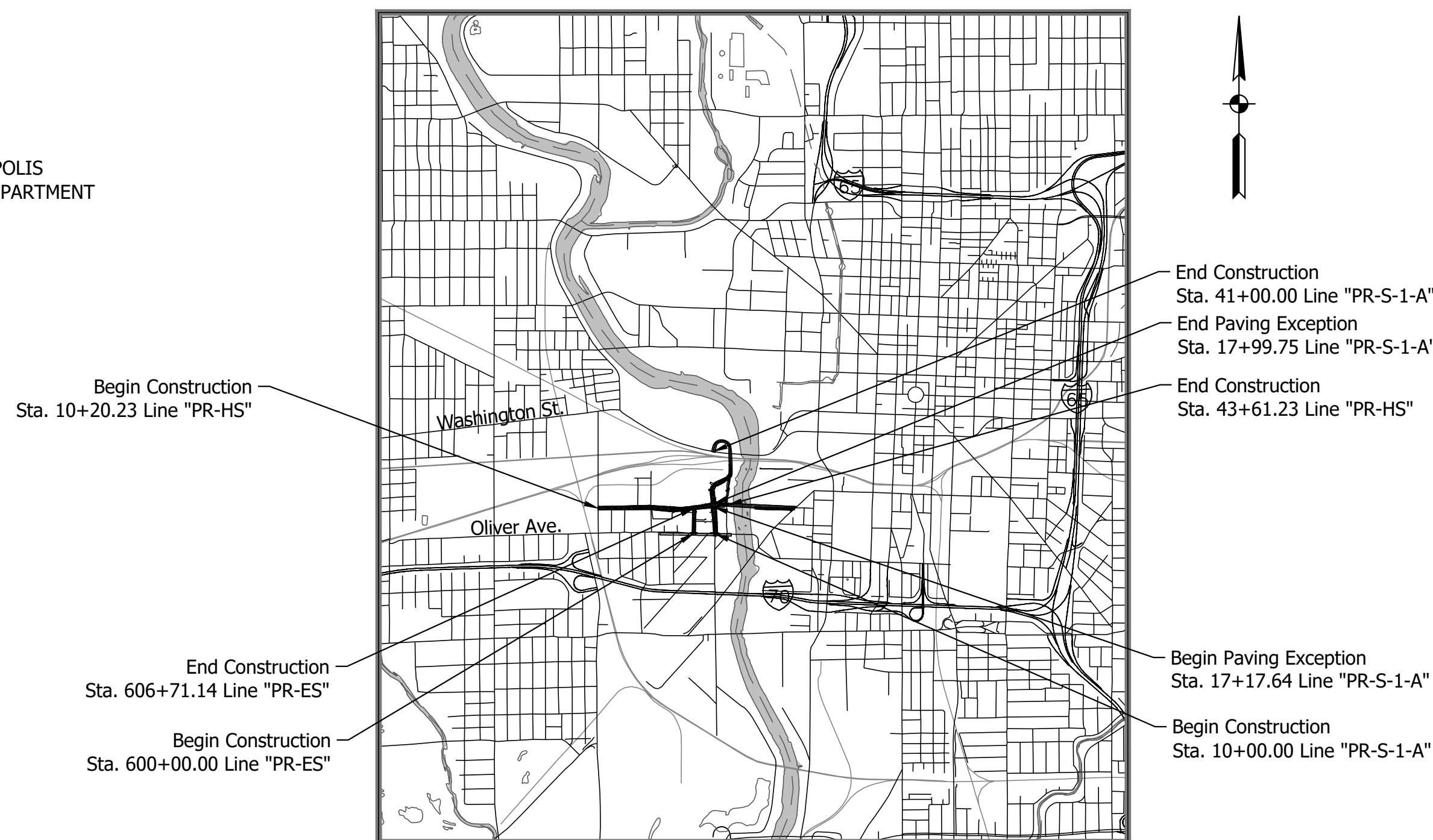
Line "PR-HS", Henry St. from S. Harding St. to  
Proposed Street Bridge over the White River.  
Line "PR-S-1-A", White River Pkwy. from Oliver Ave.  
to W. Washington St.  
Line "PR-ES", Holly St. from Oliver Ave. to Henry St.

LINE "PR-HS" GROSS LENGTH: 0.633 MI.  
LINE "PR-HS" NET LENGTH: 0.633 MI.

LINE "PR-S-1-A" GROSS LENGTH: 0.587 MI.  
LINE "PR-S-1-A" NET LENGTH: 0.572 MI.

LINE "PR-ES" GROSS LENGTH: 0.127 MI.  
LINE "PR-ES" NET LENGTH: 0.127 MI.

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2022, INDIANAPOLIS  
DEPARTMENT OF PUBLIC WORKS (DPW) SANITARY DISTRICT STANDARDS 2006, INDIANAPOLIS DEPARTMENT  
OF PUBLIC WORKS (DPW) TRANSPORTATION STANDARDS MANUAL 2021, AND THE CURRENT DPW  
STORMWATER DESIGN AND CONSTRUCTION MANUAL ARE TO BE USED WITH THESE PLANS.



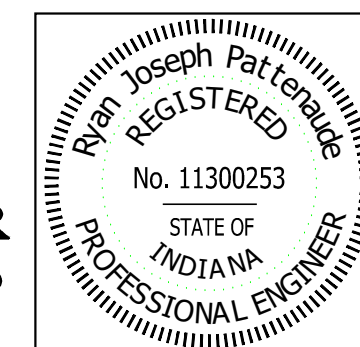
LOCATION MAP  
1" = 3000'

BRIEF PROJECT DESCRIPTION

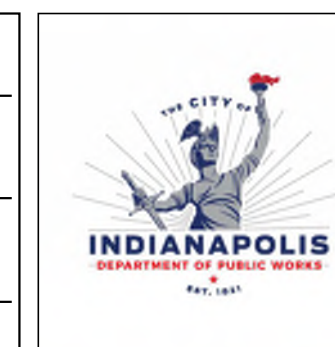
**Relocation of White River Parkway from Oliver to Washington Street  
Construction of Holly Street from Oliver to Henry Street  
Construction of Henry Street from Harding Street to Proposed Henry Street  
Bridge over the White River**

Date: Jul 15, 2023, 3:15pm User: Name: RPa/tenacade  
File: S:\L2019\219-0024\Road\CAD\Plans\Title Sheet.dwg

REVISIONS		
DATE	DESCRIPTION	BY



PLANS PREPARED BY:	Lochmueller Group, Inc.
CERTIFIED BY:	<i>Ryan Patenaude</i> 7/19/2023
APPROVED FOR LETTING:	CITY OF INDIANAPOLIS - DPW



CITY OF INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
TITLE

HORIZONTAL SCALE	As Noted
VERTICAL SCALE	N/A
PROJECT NUMBER	ST-31-059 J
SHEETS NUMBER	1 OF 518

## GENERAL NOTES

All Proposed Storm Sewer and Drainage Appurtenances Shall be in Conformance with Chapters 400 and 500 of the City of Indianapolis Stormwater Specifications Manual, latest edition. Discrepancies Between the Plans and the Manual Shall Not Alleviate the Contractor from Adhering to the Requirements as Set Forth in the Manual.

Contractor Shall Verify All Drainage Structures and Pipe Types, Material, Wall Thickness, Inverts, Depths, Diameters, Sizes, and Conditions Prior to Ordering Material for Adjustments, Connections, Extensions, Core Drilling, or Alterations. Contractor Shall Assume Responsibility for Proper Fit.

Where Connections are Made to Existing Manholes or Inlet Structures, Those Structures Shall be Rehabilitated or Replaced to Those Minimum Standards Outlined in Chapters 400 and 500 of the City of Indianapolis Stormwater Specifications Manual, Latest Edition. The Rehabilitation Shall Include the Installation of Bench Walls, as Well as Prescribed Measures to Eliminate the Potential for Migration of Backfill Materials into the Stormwater System.

Replacement of Existing Connections to the Combined Sewer Shall be Made in Accordance with Citizens Energy Group's Sanitary Standards.

Connections to Existing Combined Sewer Lines Shall Comply With the CEG Sanitary Standards Manual, Latest Edition. Sections 202.12 and 202.13 Govern Connections to Existing Wastewater Lines.

Removal Items Will Not be Measured for Payment. Unless Noted All Removals Will be Included in the Cost of "Clearing of Right Way".

There is an Underground Storage Tank in the Southeast Quadrant of Henry Street and Relocated South White River Parkway Outside the "Right of Entry Limits". The Contractor Shall take Precautions to Not Disturb the Tank

After advertisement Henry Street has been renamed to Innovator Way. All Reference to Henry Street in the Plans and Contract Documents shall refer to Innovator Way.

**Structure Backfill is Required for All Storm Sewer Pipes Unless Otherwise Noted.**

**For all geotextile for underdrains, Geotextile for Underdrain, Type 2A shall be used.**

## CONTROL POINTS

CP #	Northing	Easting	Elevation	Description
3000	286055.998	779810.803	689.37	PMAG
3001	286256.611	779777.141	689.34	PMAG
3002	286737.944	780237.424	688.67	PMAG
3003	286678.058	780327.109	691.86	PMAG
3004	286216.446	782390.106	703.719	PMAG
3005	285779.721	782082.159	700.391	PMAG
3006	285830.683	781466.304	699.119	PMAG
3007	285349.293	781482.88	696.615	PMAG
3008	284814.064	781070.567	703.162	PMAG
3009	285160.911	781024.391	702.269	PMAG
3010	285110.983	780322.027	699.17	PMAG
3011	285170.035	779221.39	684.494	PMAG
3012	285183.791	778529.613	684.04	PMAG
3013	285168.13	777589.447	684.398	PMAG
3014	285111.224	776952.944	686.355	PMAG
3015	286089.796	776941.518	689.732	PMAG
3016	287067.403	776935.292	695.921	PRE5
3017	288055.667	776938.158	691.353	PMAG

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## UTILITIES

Utility Name	Utility Type(s)	Contact Name	EMAIL	PHONE	US_MAIL_AD	CITY	STATE	ZIP
AES Distribution	Electric	Brenton Vogt	<a href="mailto:brenton.vogt@aes.com">brenton.vogt@aes.com</a>	317-261-8085	1230 W. Morris St.	Indianapolis	IN	46221
AES Transmission	Electric	Tom Pottschmidt	<a href="mailto:thomas.pottschmidt@aes.com">thomas.pottschmidt@aes.com</a>	317-261-8085	1230 W. Morris St.	Indianapolis	IN	46221
AT&T Distribution	Communication	Brian Peter	<a href="mailto:bp2673@att.com">bp2673@att.com</a>	317-459-7468	240 N. Meridian St., Room 1791	Indianapolis	IN	46204
AT&T Long Lines	Communication	Luke Dillow	<a href="mailto:luke.dillow@imceainc.com">luke.dillow@imceainc.com</a>	317-361-0594	110 N. Main St.	Culver	IN	46511
Charter Communicationunications	Communication	Byron Posey	<a href="mailto:byron.posey@charter.com">byron.posey@charter.com</a>	317-538-2016	3030 Roosevelt Ave.	Indianapolis	IN	46218
Chillicothe Telephone Co	Communication	Jim Lump	<a href="mailto:jim.lump@horizonconnects.com">jim.lump@horizonconnects.com</a>	742-703-8689	1123 Goodale Blvd.	Columbus	OH	43212
Citizens Energy Group Gas	Gas	Rich Miller	<a href="mailto:rmiller@citizensenergygroup.com">rmiller@citizensenergygroup.com</a>	317-696-4041	2150 Dr. Martin Luther King Jr. St	Indianapolis	IN	46202
Citizens Energy Group Sanitary	Sanitary	David Clark	<a href="mailto:dclark@citizensenergygroup.com">dclark@citizensenergygroup.com</a>	317-429-3993	2150 Dr. Martin Luther King Jr. St	Indianapolis	IN	46202
Citizens Engery Group Water	Water	Scott Ritter	<a href="mailto:sritter@citizensenergygroup.com">sritter@citizensenergygroup.com</a>	317-927-4434	2150 Dr. Martin Luther King Jr. St	Indianapolis	IN	46202
Citizens Energy Group Thermal	Thermal	Philip Searcy	<a href="mailto:psearcy@citizensenergygroup.com">psearcy@citizensenergygroup.com</a>	317-308-9910	2150 Dr. Martin Luther King Jr. St	Indianapolis	IN	46202
City of Indianapolis	Storm Sewers / Traffic Lights	Theresa Mendoza	<a href="mailto:UtilityCoordination@indy.gov">UtilityCoordination@indy.gov</a>	317-327-2302	1200 S. Madison Ave., Suite 200	Indianapolis	IN	46225
Comcast Cable	Communication	William Morris	<a href="mailto:william.morris@comcast.com">william.morris@comcast.com</a>	317-710-0602	5330 East 65th St.	Indianapolis	IN	46220
Crown Castle	Communication	Craig Brown	<a href="mailto:craig.brown@crowncastle.com">craig.brown@crowncastle.com</a>	317-819-8648	800 Oliver Ave., Suite 1	Indianapolis	IN	46225
Everstream	Communication	Eddie Fields	<a href="mailto:efields@everstream.net">efields@everstream.net</a>	317-832-1710	342 Massachusetts Ave.	Indianapolis	IN	46204
Lumen	Communication	Sierra Barks	<a href="mailto:sierra.barks@lumen.com">sierra.barks@lumen.com</a>	317-991-1608	4625 W. 86th St.	Indianapolis	IN	46268
MCI/Verizon	Communication	Rolland (Dennis) Craig	<a href="mailto:dennis.craig@verizon.com">dennis.craig@verizon.com</a>	317-498-1242	6835 Hillsdale Ct.	Indianapolis	IN	46250
Purdue University Fiber	Communication	Chris Teague	<a href="mailto:cmteague@purdue.edu">cmteague@purdue.edu</a>	765-496-7914	191 N. University St.	West Lafayette, IN	IN	47907
RVP Fiber Co.	Communication	Ryan Miedema	<a href="mailto:rjmiedema@ussignals.com">rjmiedema@ussignals.com</a>	616-223-7144	201 Ionia Ave. SW	Grand Rapids	MI	49503
Smithville Telephone	Communication	Joe Bryniarski	<a href="mailto:joe.bryniarski@smithville.com">joe.bryniarski@smithville.com</a>	812-320-9317	1600 W. Temperance St.	Ellettsville	IN	47429
Sprint / Nextel	Communication	Steve Hughes	<a href="mailto:steve.hughes@sprint.com">steve.hughes@sprint.com</a>	814-553-2300	11370 Enterprise Park	Sharonville	OH	45241
TCS Communicationunications	Communication	Jimmie Holmes	<a href="mailto:jimmie.holmes@tcscommunication.com">jimmie.holmes@tcscommunication.com</a>	317-697-9514	4355 Lafayette Blvd.	Indianapolis	IN	46254
Windstream	Communication	Shawn Riley	<a href="mailto:shawn.riley@windstream.com">shawn.riley@windstream.com</a>	812-461-7450	5020 Smythe Dr	Evansville	IN	47715
Zayo Bandwidth	Communication	Waylon Higgins	<a href="mailto:waylon.higgins@zayo.com">waylon.higgins@zayo.com</a>	765-341-1199	9209 Castlegate Dr.	Indianapolis	IN	46256

### REVISIONS

DATE	DESCRIPTION	BY
8/14/2023	ADDED GENERAL NOTE FOR GEOTEXTILE FOR UNDERDRAINS; REVISED SHEET NUMBERING	RJP
8/23/2023	ADDED CONTROL POINTS	RJP



RECOMMENDED FOR APPROVAL:		DATE	
DESIGNED:	KRT	DRAWN:	KRT
CHECKED:	RJP	CHECKED:	RJP



**CITY OF INDIANAPOLIS  
DEPARTMENT OF PUBLIC WORKS**

INDEX

HORIZONTAL SCALE	N/A
VERTICAL SCALE	N/A
PROJECT NUMBER	ST-31-059 J
SHEETS NUMBER	2 OF 518

**PLANT SCHEDULE**

KEY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	CONDITION	NOTES	QTY
<b>DECIDUOUS SHADE TREES</b>							
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	16
CL KE	Cladrastis kentuckea	Yellowwood	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	12
GL TR	Gleditsia triacanthos 'Skyline'	Skyline Thornless Honeylocust	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	30
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	8
LI TU	Liriodendron tulipifera	Tuliptree	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	12
NY SY	Nyssa sylvatica	Sourgum / Blackgum	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	27
OS VI	Ostrya virginiana	Ironwood	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	11
PL AC	Platanus x acerfolia 'Bloodgood'	Bloodgood London Plane Tree	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	58
QU MA	Quercus macrocarpa	Bur Oak	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	25
UL AM	Ulmus americana 'Princeton'	Princeton American Elm	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	25
<b>DECIDUOUS ORNAMENTAL TREES</b>							
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	6' HT.	AS INDICATED	B&B OR #10 CONT.	MULTISTEM	9
CE CA	Cercis canadensis	Redbud	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	21
CA CA	Carpinus caroliniana	American Hornbeam	2.5" CAL.	AS INDICATED	B&B	6' BRANCHING HT.	14
<b>SHRUBS</b>							
HY QU	Hydrangea quercifolia 'Snow Queen'	Snow Queen Oakleaf Hydrangea	30" HT.	48" O.C.	B&B OR #5 CONT.	---	295
IL GL	Ilex glabra 'Gem Box'	Inkberry Holly	18" HT.	AS INDICATED	B&B OR #5 CONT.	---	784
<b>PERENNIALS</b>							
AC MI	Achillea millefolium	Yarrow	QUART	12" O.C.	---	---	189
AC MO	Achillea 'Moonshine'	Moonshine Yarrow	QUART	12" O.C.	---	---	347
AM CA	Amorpha canescens	Leadplant	1 GAL	24" O.C.	---	---	62
AM TA	Amsonia tabernaemontana 'Storm Cloud'	Bluestar	1 GAL	30" O.C.	---	---	274
AS SP	Asclepias syriaca	Common Milkweed	QUART	12" O.C.	---	---	36
AS TU	Asclepias tuberosa	Butterfly Milkweed	QUART	12" O.C.	---	---	306
BO GR	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Grama Grass	1 GAL	18" O.C.	---	---	3876
CA BI	Carex bicknellii	Prairie Sedge	1 GAL	18" O.C.	---	---	2593
CA VU	Carex vulpinoidea	Fox Sedge	1 GAL	24" O.C.	---	---	4505
CA SC	Camassia scilloides	Wild Hyacinth	BULB	12" O.C.	---	---	175
EC PU	Echinacea purpurea 'Magnus'	Magnus Coneflower	QUART	18" O.C.	---	---	315
EC RI	Echinops ritro 'Veitch's Blue'	Veitch's Blue Globe Thistle	QUART	12" O.C.	---	---	209
ER YU	Eryngium yuccifolium	Rattlesnake Master	QUART	12" O.C.	---	---	64
ME VI	Mertensia virginica	Virginia Bluebells	QUART	12" O.C.	---	---	835
MO RV	Monarda 'Red Velvet'	Red Velvet Beebalm	1 GAL	30" O.C.	---	---	137
PE AT	Perovskia atriplicifolia 'Blue Spire'	Blue Spire Russian Sage	1 GAL	24" O.C.	---	---	181
RA CO	Ratibida columnifera 'Red Midget'	Red Midget Upright Prairie Coneflower	QUART	18" O.C.	---	---	277
RU FU	Rudbeckia fulgida 'Goldsturm'	Goldsturm Black Eyed Susan	1 GAL	18" O.C.	---	---	672
SE AL	Sedum album	White Stonecrop	QUART	15" O.C.	---	---	406
SE AU	Sedum 'Autumn Joy'	Autumn Joy Stonecrop	QUART	15" O.C.	---	---	270
SI AN	Sisyrinchium angustifolium 'Lucerne'	Blue Eyed Grass	QUART	12" O.C.	---	---	2457
SO SP	Solidago speciosa	Showy Goldenrod	1 GAL	30" O.C.	---	---	52
SP HE	Sporobolus heterolepis	Prairie Dropseed	1 GAL	18" O.C.	---	---	2788
SY NO	Symphyotrichum novae-angliae 'Purple Dome'	Purple Dome New England Aster	1 GAL	18" O.C.	---	---	332
VE ST	Verbena stricta	Hoary Vervain	QUART	12" O.C.	---	---	165
---	See Specs	Seeded Turf	---	---	---	---	10702.8 SY
---	See Specs	Sodded Turf	---	---	---	---	1534 SY
<b>PERENNIAL MIX</b>							
AL CE	Allium cernuum	Nodding Wild Onion	BULB	12" O.C.	---	INTERPLANT IN-BETWEEN GRASSES IN GROUPS OF 5-15	845
CA LE	Carex leavenworthii	Leavenworth's Sedge	QUART	12" O.C.	---	DISTRIBUTE IN GROUPS OF 60-120.	5591
KO MA	Koeleria macrantha	Junegrass	1 GAL	24" O.C.	---	DISTRIBUTE IN GROUPS OF 15-30.	1399
PE DI	Penstemon digitalis	Foxglove Beardtongue	1 GAL	18" O.C.	---	INTERPLANT IN-BETWEEN GRASSES IN GROUPS OF 5-10	377
SC SC	Schizachyrium scoparium	Little Bluestem	1 GAL	18" O.C.	---	DISTRIBUTE IN GROUPS OF 40-80.	2483

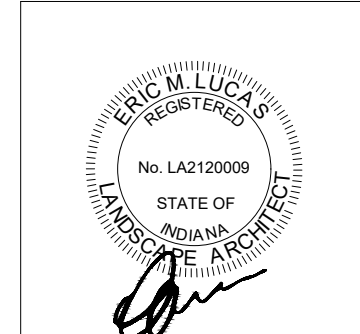
NOTES: GRASSES SHOULD BE LAID OUT IN TRIANGULAR SPACING IN DRIFTS THAT RUN PARALLEL TO THE ROAD. WHEN TRANSITIONING BETWEEN GRASS SPECIES, DRIFTS SHOULD BE TAPERED IN WIDTH OVER A DISTANCE OF 15'-30'.

**PLANTING NOTES**

- ANY AREAS DISTURBED OUTSIDE OF THE LIMIT OF WORK SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE CLIENT.
- ALL PLANTS SHALL BE PLANTED AT THE TIME OF DELIVERY DUE TO LIMITED STORAGE ON SITE. PLANTS IN THE SAME PLANTING BED SHALL BE PLANTED AT THE SAME TIME. ANY PLANTS REMAINING UNPLANTED ON THE SITE FOR MORE THAN 24 HOURS SHALL BE PROTECTED AND MAINTAINED INCLUDING BUT NOT LIMITED TO PROVIDING WATER AND SHADE. ANY PLANTS THAT DIE OR ARE DAMAGED DUE TO ON-SITE STORAGE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- SECURE PLANT MATERIAL AS SPECIFIED ON PLANS. THERE WILL BE NO SUBSTITUTIONS OF PLANT MATERIAL WITHOUT PRIOR WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE. THE EXPECTATION IS THAT THESE PLANTS WILL BE CONTRACT GROWN TO THE SPECIFICATIONS AND SCHEDULE OF THIS PROJECT.
- MATERIAL WILL BE INSPECTED AND APPROVED AT PLACE OF GROWTH BY THE OWNER'S REPRESENTATIVE. HOWEVER, PLANT MATERIAL WHICH HAS BECOME DAMAGED OR DISEASED OR WHICH IS UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE MAY BE REJECTED UPON DELIVERY TO THE SITE.
- SHOULD THERE BE ANY DISCREPANCIES BETWEEN THE QUANTITIES CALLED FOR ON THE PLANT LIST AND THOSE INDICATED ON THE PLAN, NOTIFY THE OWNER'S REPRESENTATIVE FOR CLARIFICATION.
- AT ALL TIMES, THE SITE SHALL BE KEPT NEAT AND FREE OF DEBRIS LEFT FROM THE PLANTING OPERATION.
- ALL PLANT MATERIAL SHALL BE KEPT VIGOROUS, AND FREE OF ANY INJURY AND DEFECTS. ALL PLANT MATERIAL SHALL BE A TRUE REPRESENTATION OF SPECIES.
- PLANT GROUPINGS AND LOCATIONS ARE DIAGRAMMATIC. THE LOCATION OF PLANTS SHALL BE APPROVED IN THE FIELD BY THE OWNER'S REPRESENTATIVE PRIOR TO THE INSTALLATION. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO MAKE ADJUSTMENTS TO ANY AND ALL PLANTING LAYOUT IN THE FIELD AT NO ADDITIONAL COST TO THE OWNER.
- ALL PLANT TAGS MUST REMAIN ON THE PLANT MATERIAL UNTIL THE OWNER'S REPRESENTATIVE REVIEWS THE LAYOUT AND APPROVES THE QUANTITIES.
- PLANTING BEDS SHALL RECEIVE A 2" THICK LAYER OF MULCH, INDICATED ON THE PLANTING DETAILS.
- PROTECT PLANT MATERIAL DURING DELIVERY TO PREVENT DAMAGE TO ROOT BALLS, TRUNKS, BRANCHES AND THE DESICCATION OF LEAVES. PROTECT PLANT MATERIAL DURING SHIPPING WITH SHADE CLOTH OR SHIP WITH ENCLOSED TRANSPORT. MAINTAIN PROTECTIONS AND HEALTH OF PLANT MATERIAL STORED ON SITE. HANDLE TREES WITH NYLON STRAPS. NO CHAINS OR CABLES WILL BE ALLOWED. REMOVE UNACCEPTABLE PLANT MATERIAL IMMEDIATELY FROM THE SITE.
- PLANT MATERIAL DELIVERED TO THE SITE IS SUBJECT TO THE REVIEW OF THE OWNER'S REPRESENTATIVE BEFORE, DURING AND AFTER INSTALLATION.
- VERIFY PLANTING PRODUCTS, PLANT MATERIAL, AND PLANT QUANTITIES DELIVERED TO THE SITE MATCH WHAT IS INDICATED ON THE PLANS AND SPECIFICATIONS.
- STAKE BED LINES AND TREE LOCATIONS FOR THE OWNER'S REPRESENTATIVE'S REVIEW PRIOR TO INSTALLATION. PLANTING PROCEDURES ARE SUBJECT TO THE REVIEW OF THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR SHALL CORRECT ANY DEFICIENCIES FOUND AT NO ADDITIONAL COST TO THE OWNER.
- REFER TO THE PLANTING DETAILS FOR MINIMUM SIZE AND WIDTH OF PLANTING PITS AND BEDS, MULCHING, AND OTHER PLANTING REQUIREMENTS.
- ROOT BALLS SHALL CONFORM TO THE SIZE STANDARDS SET FORTH IN "AMERICAN STANDARDS FOR NURSERY STOCK".
- TEST FILL EACH TREE AND PLANTING PIT WITH WATER, PRIOR TO PLANTING TO ASSURE PROPER SOIL PERCOLATION. PITS WHICH DO NOT ADEQUATELY DRAIN SHALL BE FURTHER SCARIFIED ALONG OUTER EDGES AND SIDES OF PIT. DO NOT DISTURB AREA SUPPORTING TREE BALL. REPEAT TEST. ALLOWANCES WILL NOT BE MADE FOR PLANT MATERIAL LOSS DUE TO IMPROPER DRAINAGE.
- PLANT MATERIALS, INCLUDING RELOCATED PLANT MATERIAL, SHALL BE PLANTED IN A PROFESSIONAL MANNER TYPICAL TO THE INDUSTRY STANDARDS OF THE AREA TO ASSURE COMPLETE SURVIVABILITY OF PLANT MATERIALS AS WELL AS TO PROVIDE AN AESTHETICALLY APPROVED PROJECT.
- PLANTING AREAS SHALL BE WEED FREE PRIOR TO PLANTING INSTALLATION AND MAINTAINED WEED FREE THROUGH FINAL ACCEPTANCE.
- TREES PLANTED ADJACENT TO ANY PUBLIC STREET, ALLEY, RIGHT-OF-WAY, PLACE OR PARK SHALL HAVE A CLEAR HEIGHT OF AT LEAST EIGHT (8) FEET ABOVE THE SURFACE OF ANY ABUTTING RIGHT-OF-WAY, PUBLIC STREET OR ALLEY.
- TREES SHALL BE PLACED SO THAT NO TREE OR FLORA OBSTRUCTS THE VISION OR FREE PASSAGE OF PEDESTRIANS OR MOTORISTS ALONG THE STREETS OR PUBLIC RIGHT-OF-WAY. MATERIAL SHOULD BE PLACED IN A MANNER THAT DOES NOT IMPED VISIBILITY BETWEEN THE HEIGHTS OF TWO AND ONE-HALF (2 1/2) FEET AND EIGHT (8) FEET ABOVE GRADE LEVEL OF THE ADJOINING RIGHT-OF-WAY WITHIN A CLEAR SIGHT TRIANGULAR AREA.
- A MINIMUM THREE (3) FOOT RADIUS AROUND FIRE HYDRANTS, VALVE VAULTS, HOSE BIBS, MANHOLES, HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE PROVIDED AND FREE OF TREES AND FLORA.
- ALL LANDSCAPING MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANTING PROCEDURES ESTABLISHED BY THE ANSI A300 TREE CARE OPERATIONS; STANDARD PRACTICES FOR TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE.
- DEAD, MISSING, OR DAMAGED PLANTINGS THAT SUPPORT LESS THAN 50% HEALTHY LEAF GROWTH OR SHOWS DEAD BRANCHES OVER A MINIMUM OF 50% OF THE NORMAL BRANCHING PATTERN SHALL BE REPLACED WITH HEALTHY, LIVE PLANTS.
- A LANDSCAPE MAINTENANCE MANUAL MUST BE SUBMITTED WITH IMPROVEMENT LOCATION PERMIT FOR THE PROPERTY. THE MAINTENANCE MANUAL SHALL IDENTIFY MONTHLY, ANNUAL, AND BIENNIAL MAINTENANCE REGIMES FOR ALL PLANTINGS.
- PROJECT MUST MEET GREEN FACTOR OF .22 OR HIGHER PER CITY OF INDIANAPOLIS CODE SEC. 744-509.

Date: Nov 16, 2023, 12:35pm User Name: snusbaum File: C:\Projects\2021\121224-white\_river Parkway\121210-Planting\_Schedule.dwg

REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



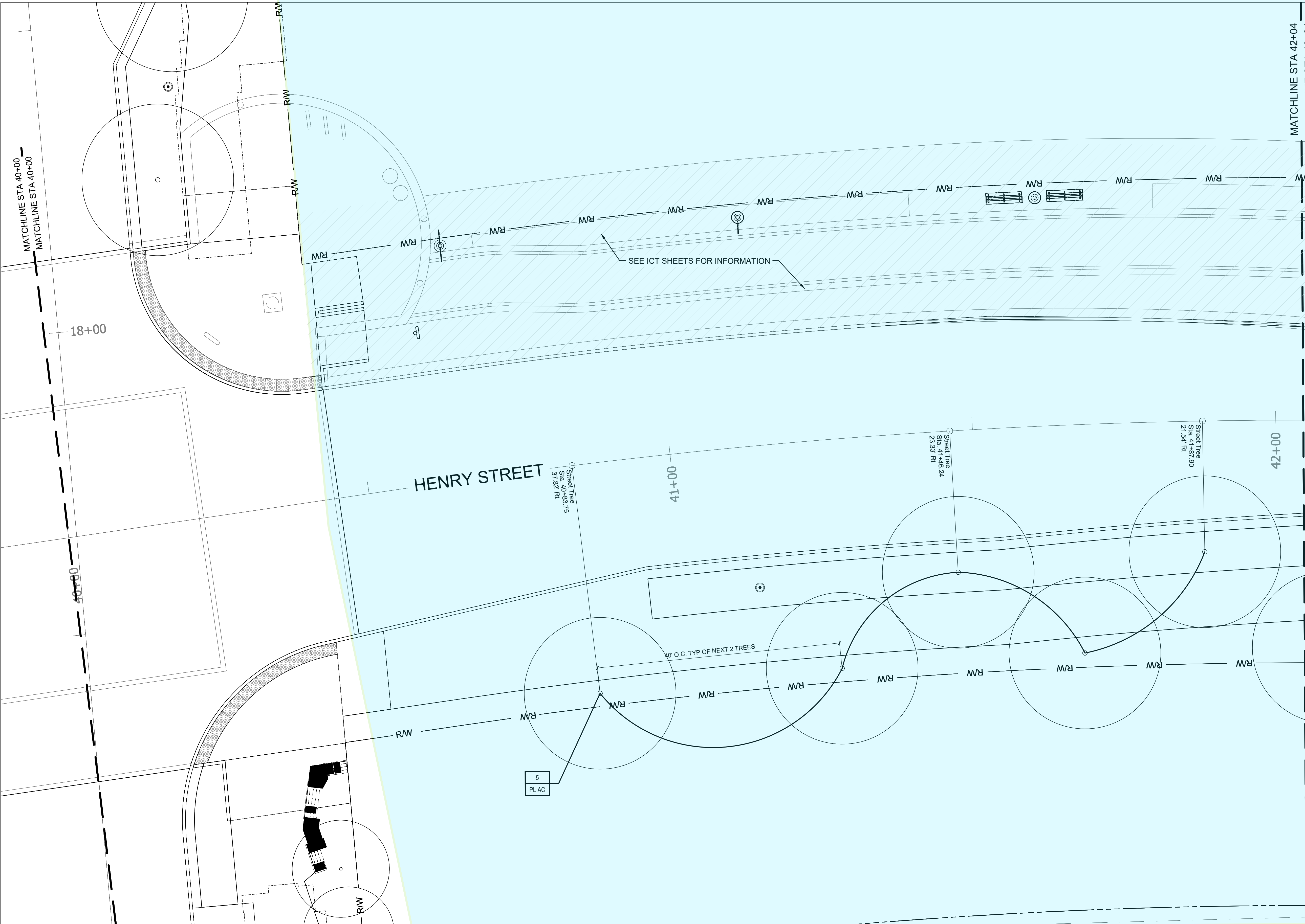
RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE
DESIGNED:	CM	DRAWN: DA, SN
CHECKED:	DJ	CHECKED: DJ



INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
L5.00 PLANTING SCHEDULE

HORIZONTAL SCALE	N / A
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	275 OF 518

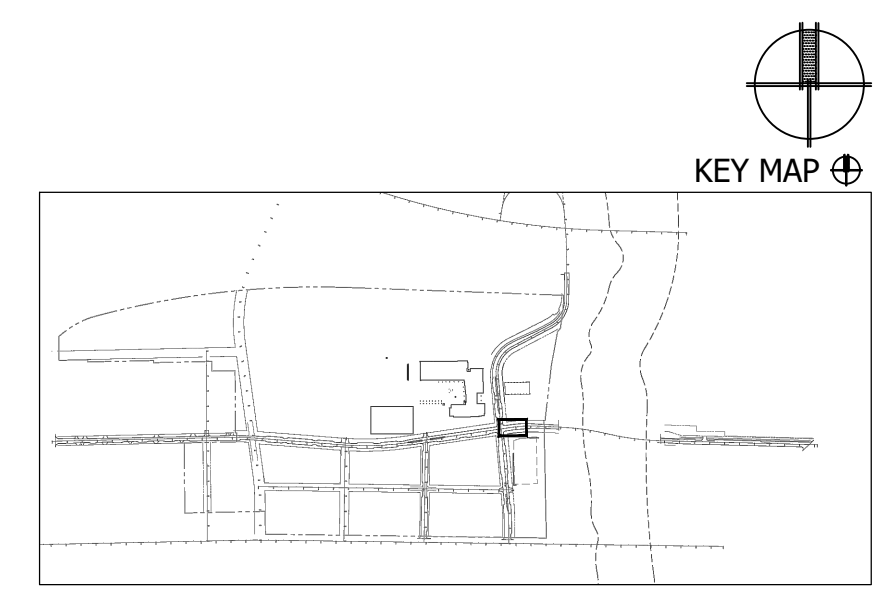
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**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
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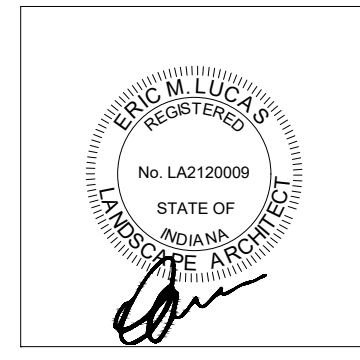
Indianapolis Parks & Boulevard District



REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



**MKSK**  
 LANDSCAPE ARCHITECTURE + URBAN PLANNING  
 200 SOUTH MERIDIAN AVE, SUITE 450  
 INDIANAPOLIS, IN 46204  
 317 423 9600 MKSKSTUDIOS.COM



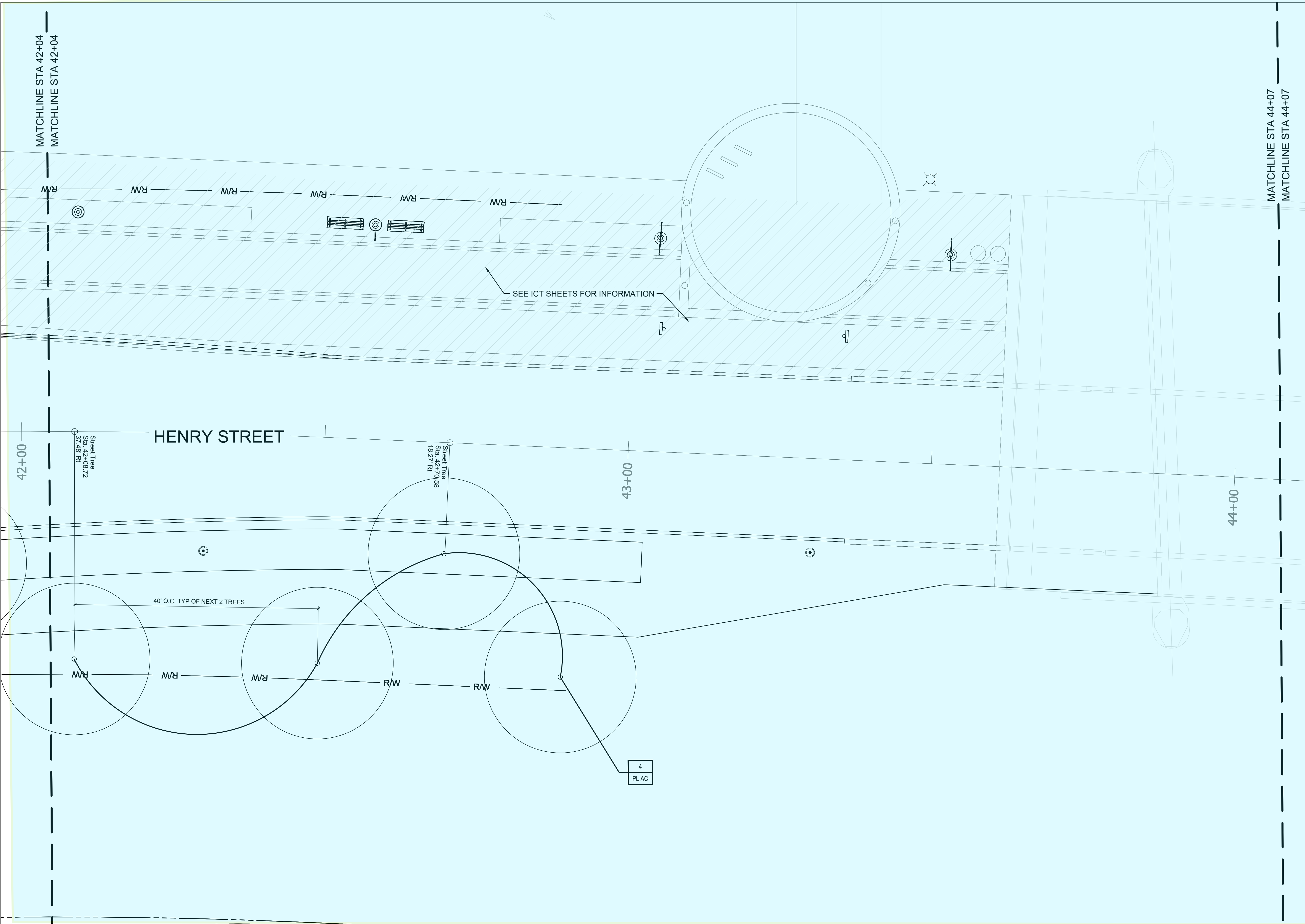
RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE
DESIGNED:	CM	DRAWN: DA, SN
CHECKED:	DJ	CHECKED: DJ



**INDIANAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**L5.16 TREE PLAN HENRY STREET**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	291 OF 518

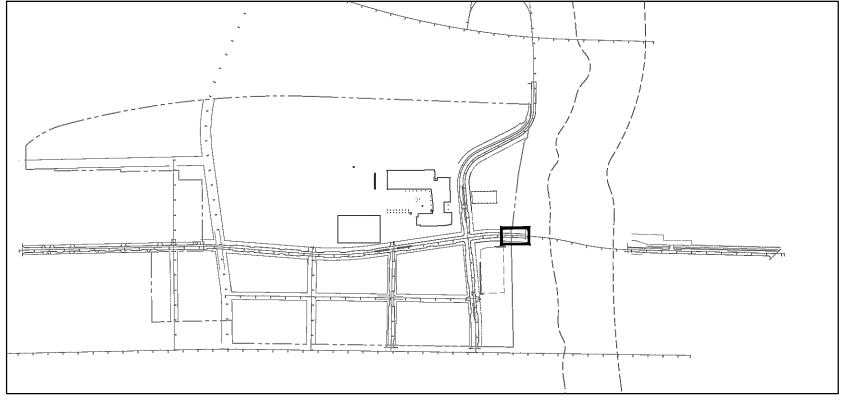
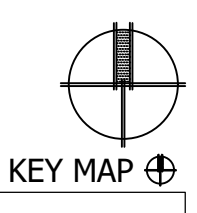
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**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
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AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
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AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

Indianapolis Parks & Boulevard District

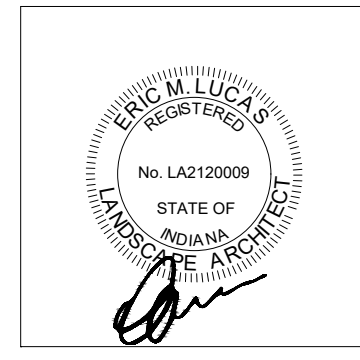


**REVISIONS**

DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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 200 SOUTH MERIDIAN AVE, SUITE 450  
 INDIANAPOLIS, IN 46204  
 317 423 9600 MKSKSTUDIOS.COM



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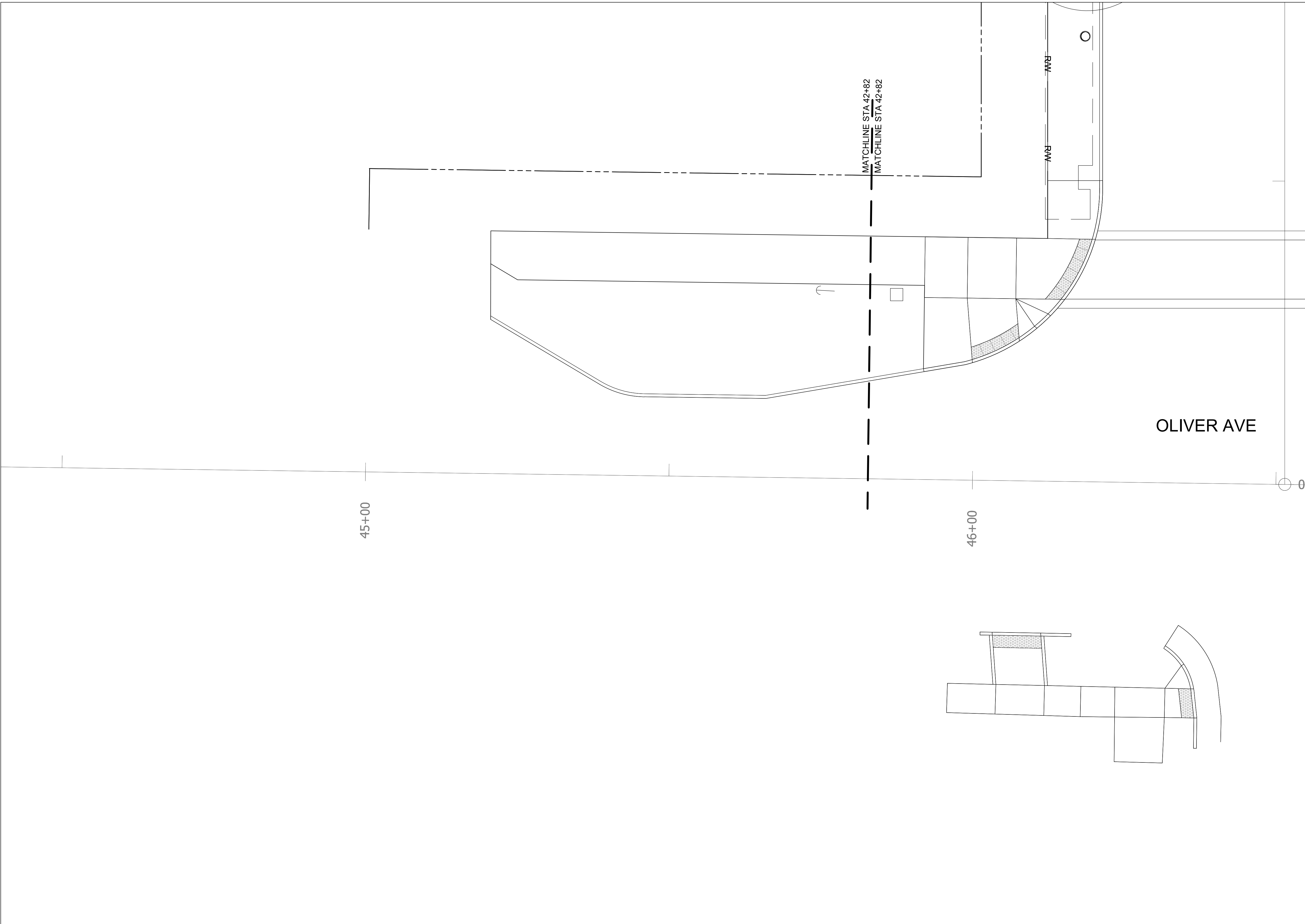
DESIGNED: CM	DRAWN: DA, SN
CHECKED: DJ	CHECKED: DJ



**INDIANAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**L5.16-1 TREE PLAN HENRY STREET**

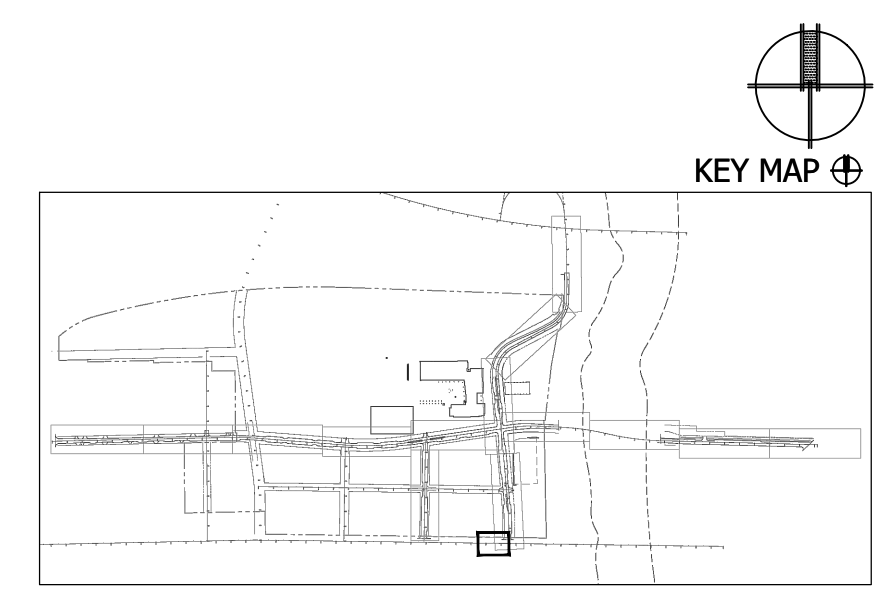
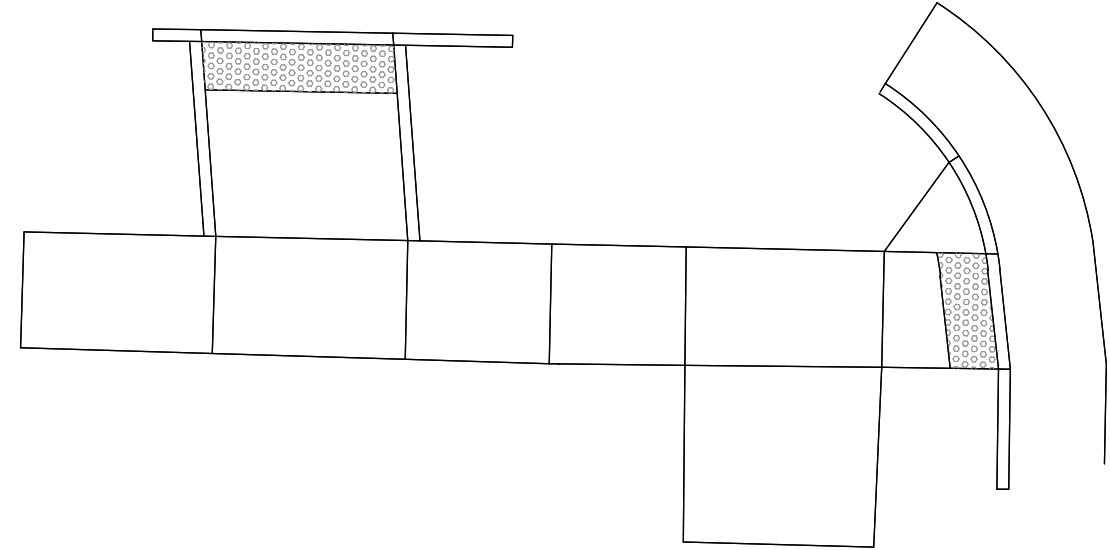
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VERTICAL SCALE N / A
PROJECT NUMBER ST-31-059
SHEETS NUMBER 291-1 OF 518

Date: Nov 16, 2023, 12:24pm User Name: snusbaum  
 File: C:\Projects\2021\121224-white\_river\_parkway\bin\_cad\_gis\CAD\01\_Sheets\121210-Planting\_Plan\_WRP.dwg



**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerfolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

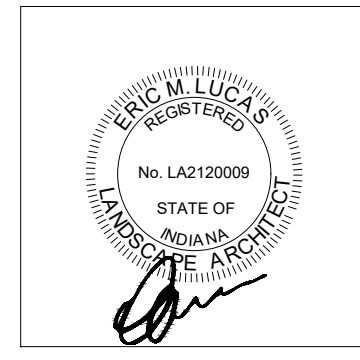


REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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DESIGNED:	CM	DRAWN:	DA, SN
CHECKED:	DJ	CHECKED:	DJ

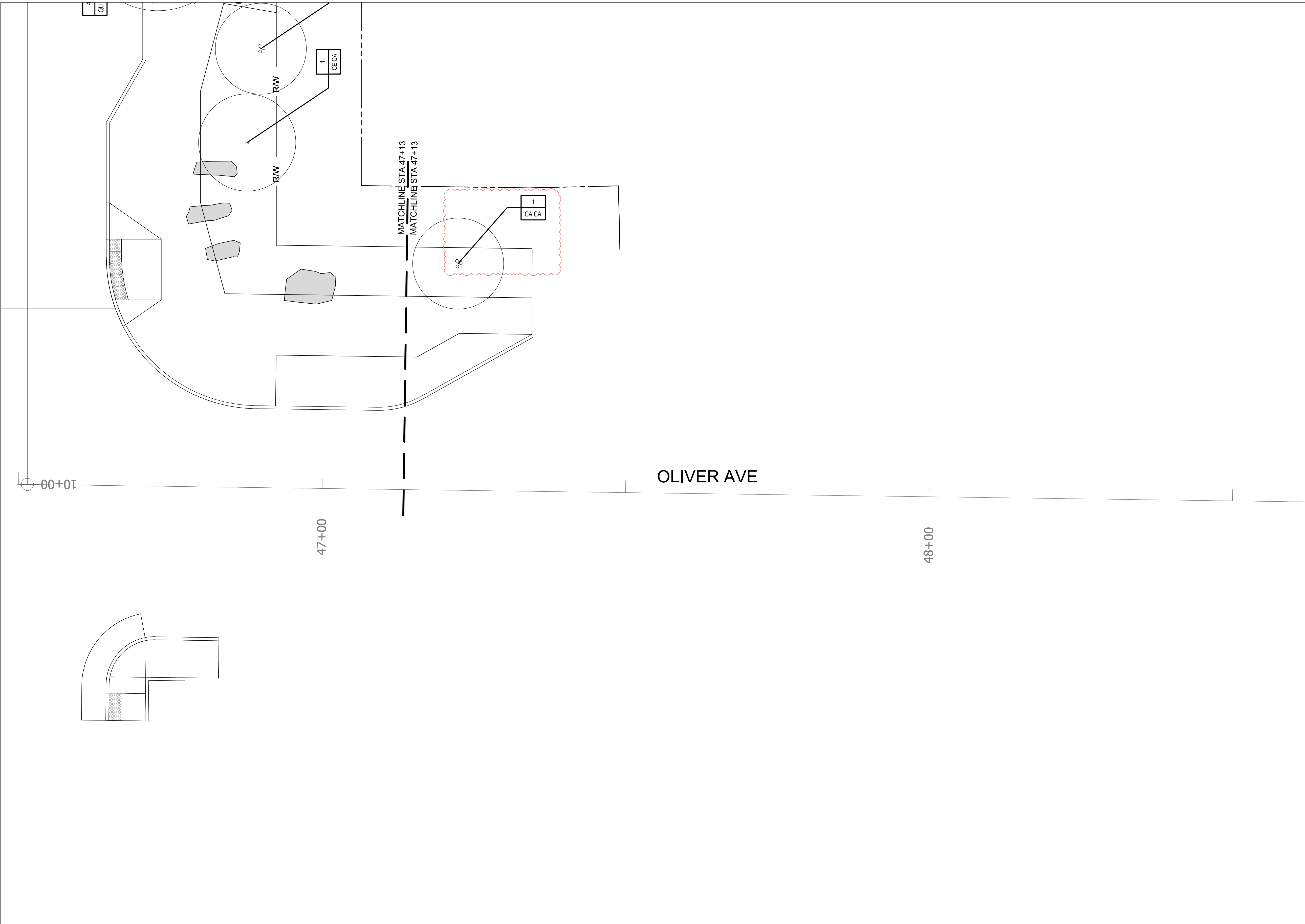


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**L5.17 TREE PLAN WRP & OLIVER AVE**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	292 OF 518

Date: Nov 16, 2023, 12:14pm User Name: snusbaum  
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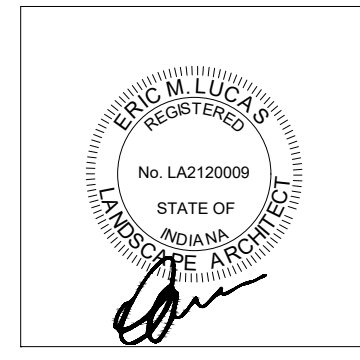
**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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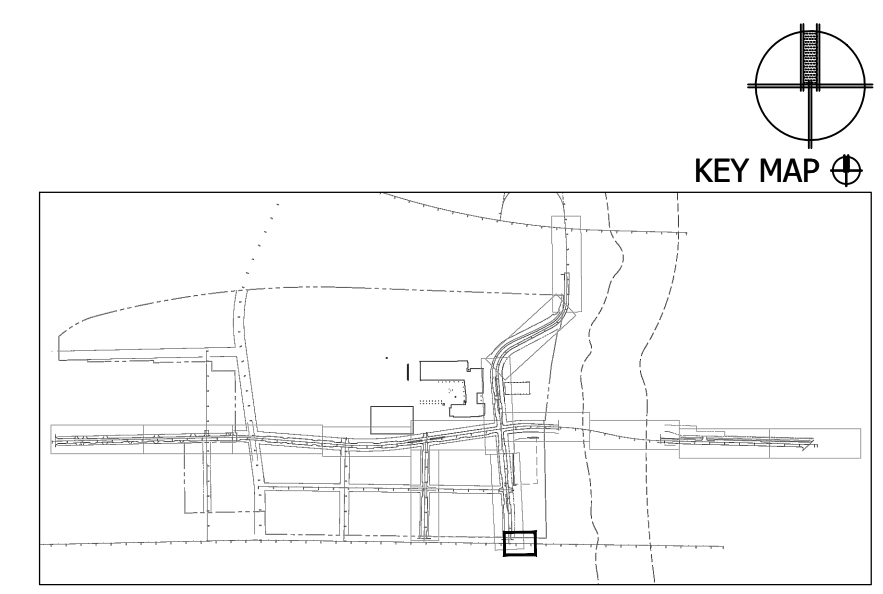


RECOMMENDED FOR APPROVAL: DESIGN ENGINEER		DATE
DESIGNED: CM	DRAWN: DA, SN	
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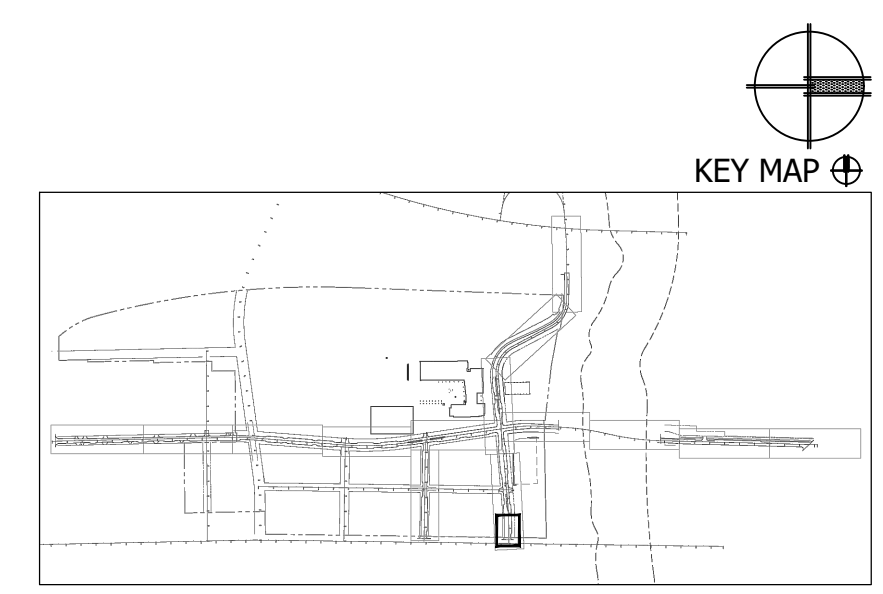
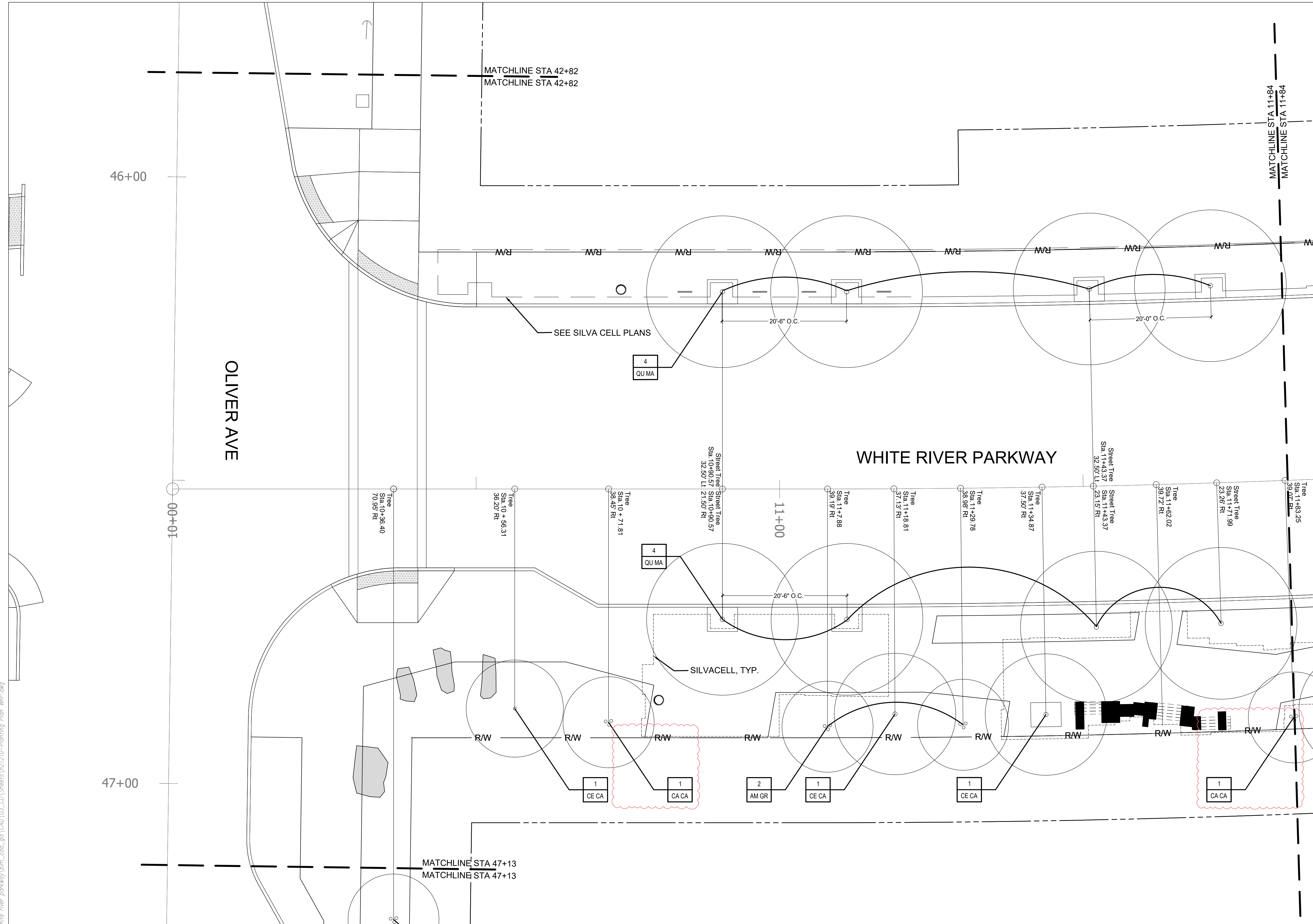
**INDIANAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**L5.18 TREE PLAN WRP & OLIVER AVE**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	293 OF 518





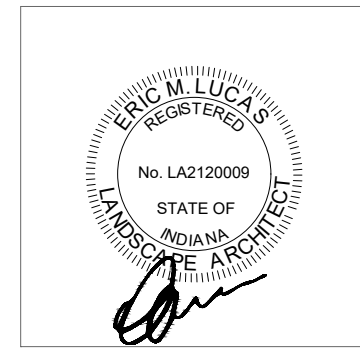
KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam



REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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DESIGNED:	CM	DRAWN: DA, SN
CHECKED:	DJ	CHECKED: DJ

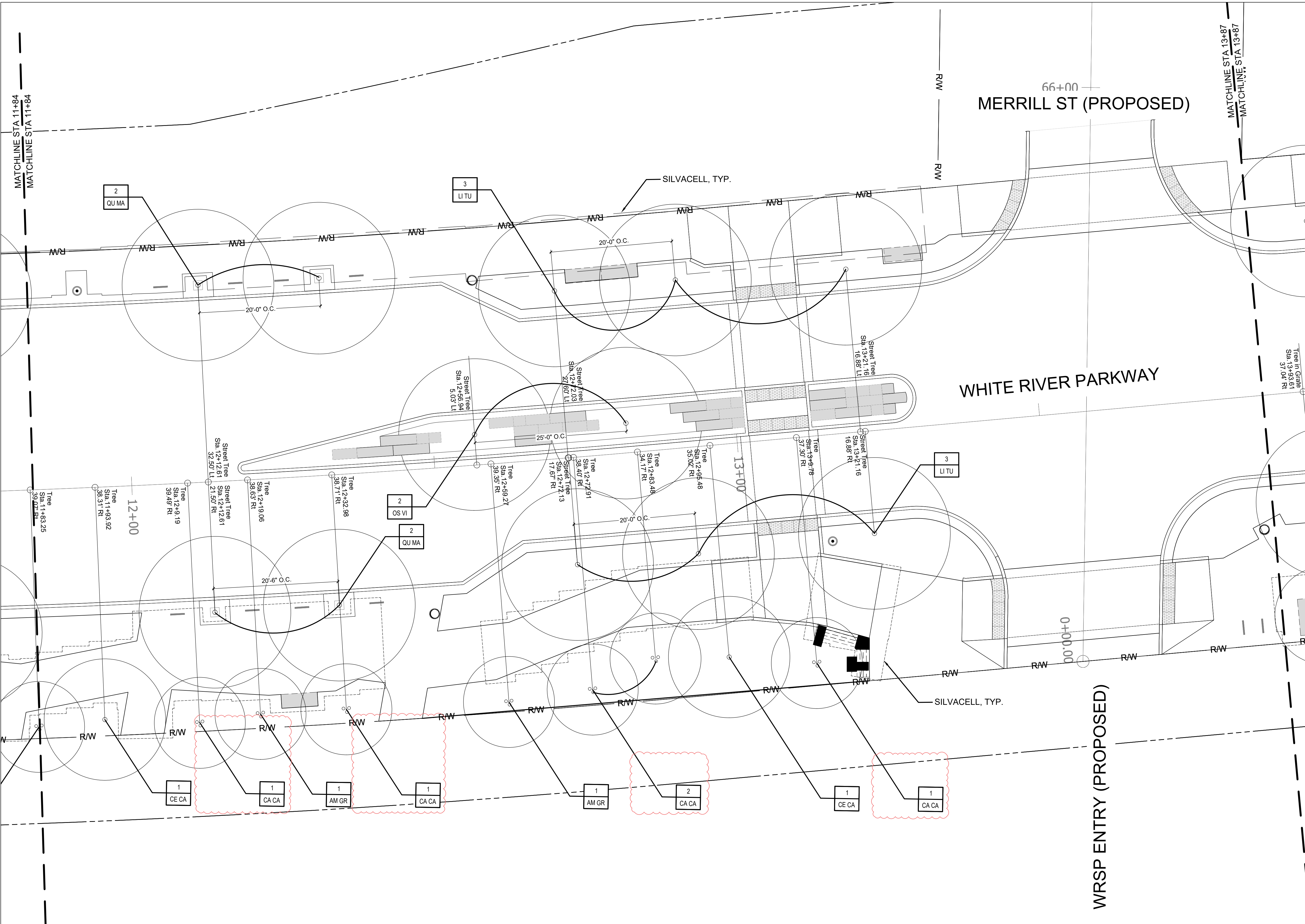


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**L5.19 TREE PLAN WHITE RIVER PARKWAY**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	294 OF 518

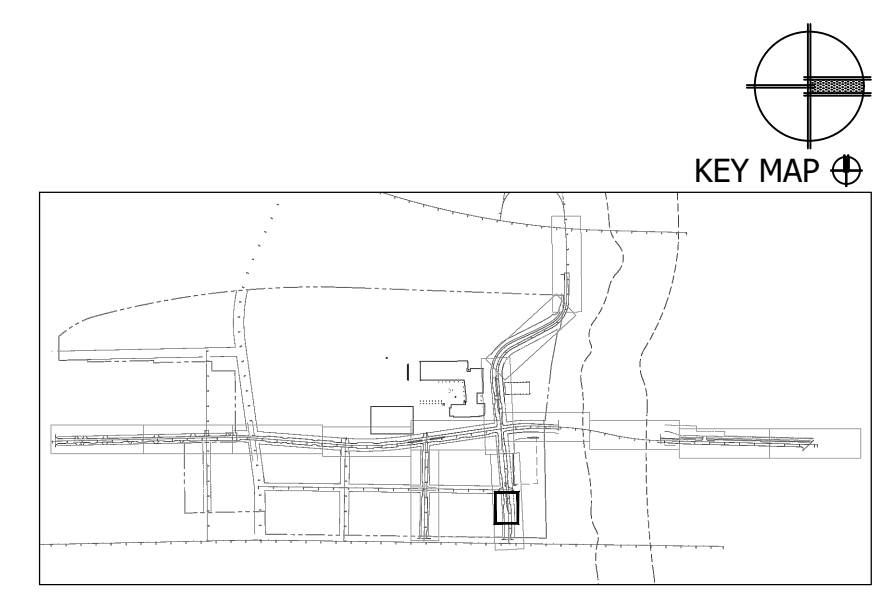
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Date: Nov 16, 2023, 12:39pm User Name: snusbaum  
 File: C:\Projects\2021\1224\white\_river\_parkway\bin\_cad\_gis\CAD\01\_01\_Sheets\12170-Planting Plan\_WRP.dwg



**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
LUL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

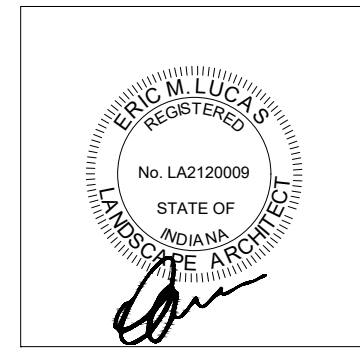


**REVISIONS**

DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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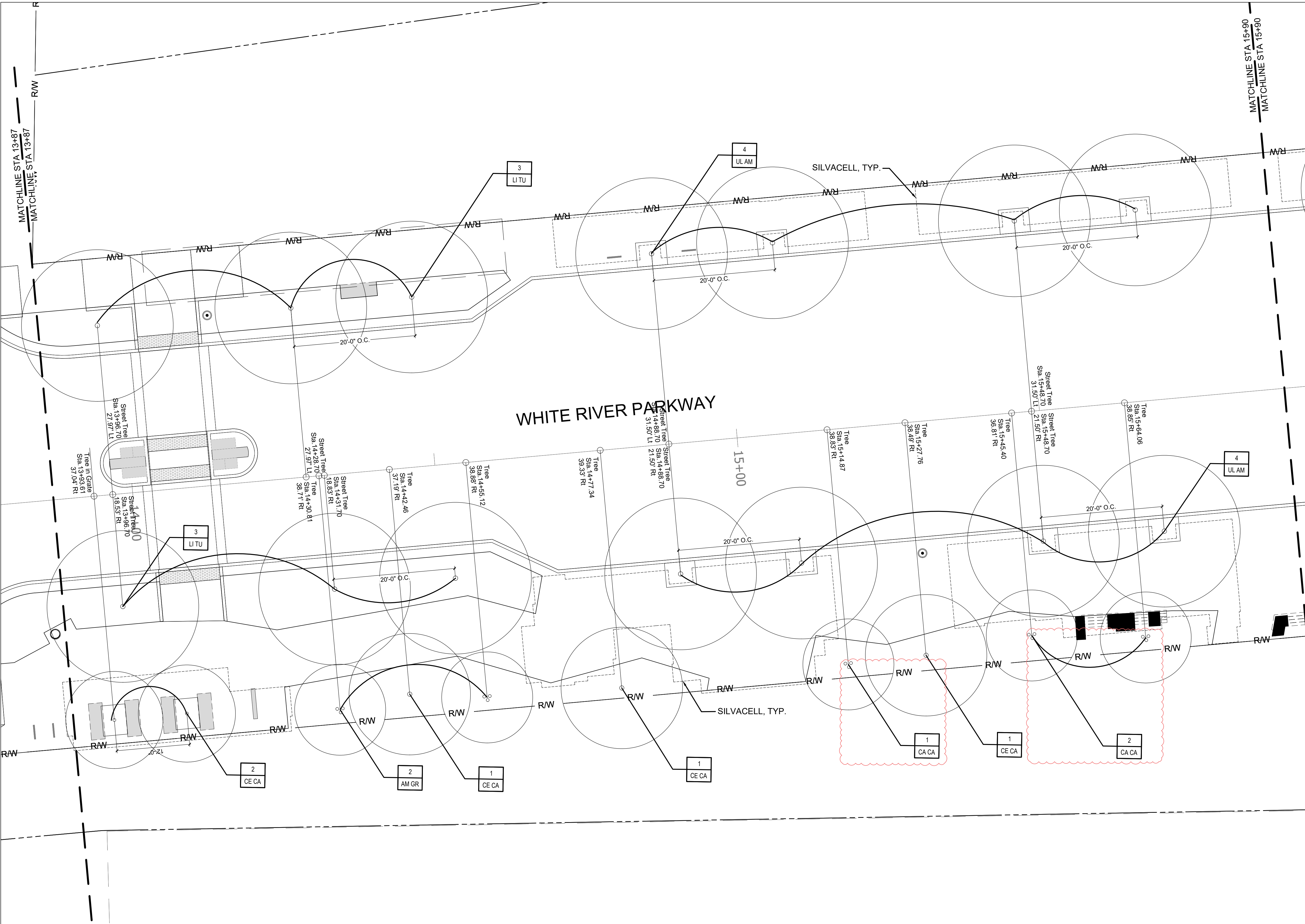
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**L5.20 TREE PLAN WHITE RIVER PARKWAY**

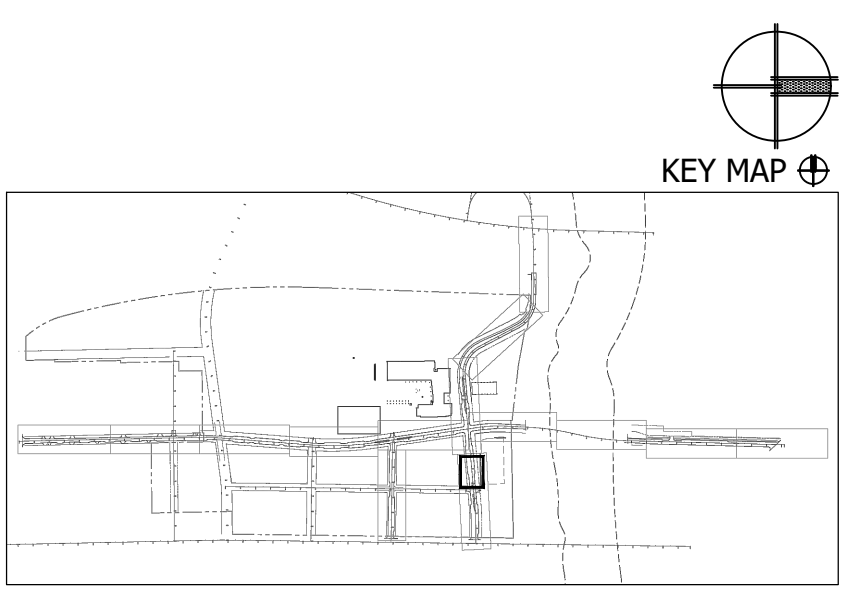
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VERTICAL SCALE N / A
PROJECT NUMBER ST-31-059
SHEETS NUMBER 295 OF 518

Date: Nov 16, 2023, 11:53am User Name: snusbaum  
 File: C:\Projects\2021\21224-white\_river\_parkway\bin\_cad\_gis\CAD\01\_01\_Sheets\21210-Planting\_Plan\_MRP.dwg



**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerfolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

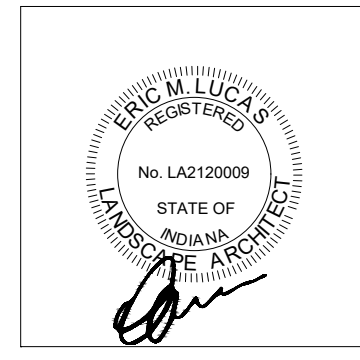


**REVISIONS**

DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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 INDIANAPOLIS, IN 46204  
 317 423 9600 MKSKSTUDIOS.COM



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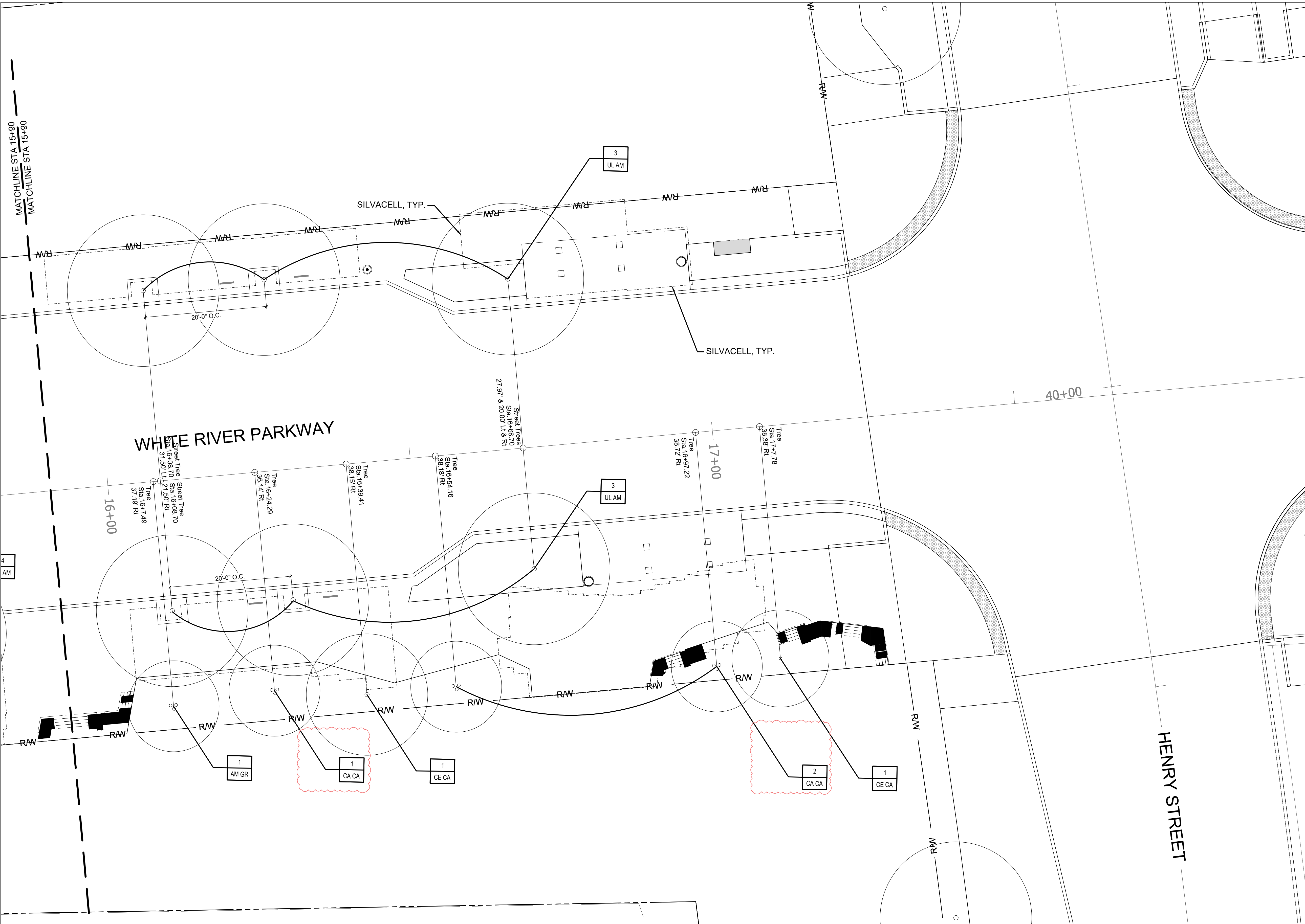
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**INDIANAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**L5.21 TREE PLAN WHITE RIVER PARKWAY**

HORIZONTAL SCALE 1/8" = 1'-0"
VERTICAL SCALE N / A
PROJECT NUMBER ST-31-059
SHEETS NUMBER 296 OF 518

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

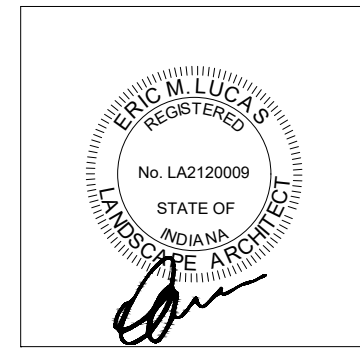


Date: Nov 16, 2023, 12:32pm User Name: snusbaum  
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REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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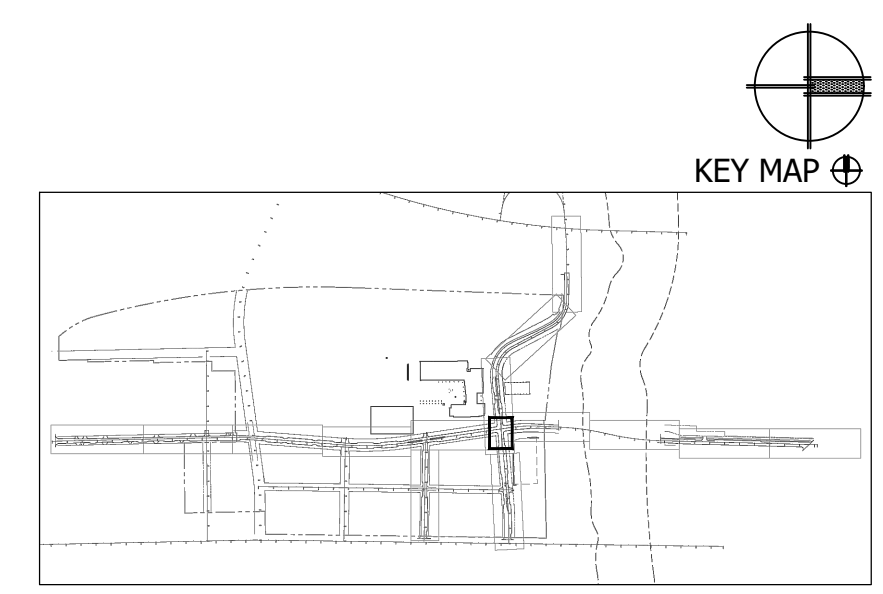


RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE
DESIGNED:	CM	DRAWN: DA, SN
CHECKED:	DJ	CHECKED: DJ

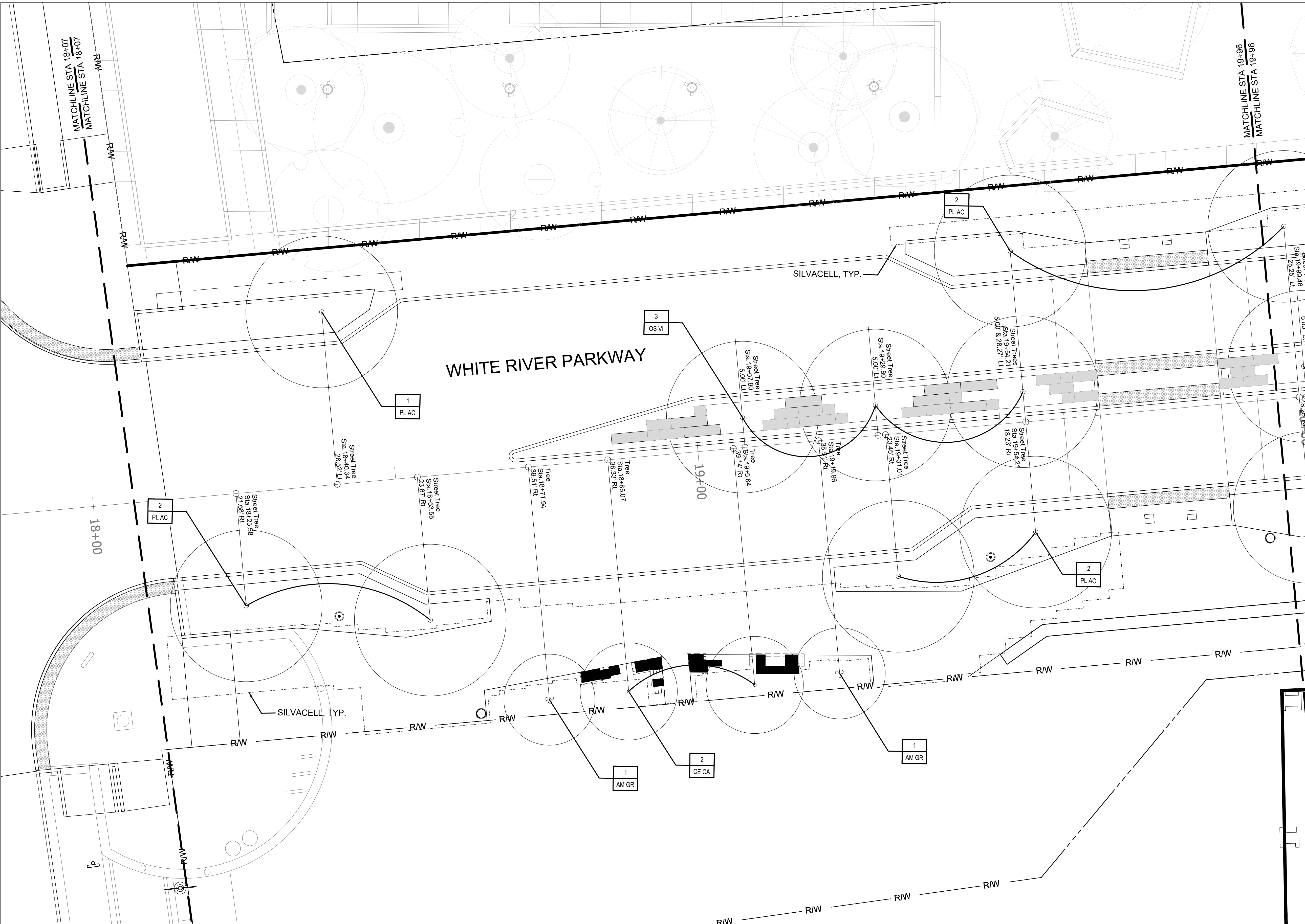


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 DEPARTMENT OF PUBLIC WORKS  
**L5.22 TREE PLAN WHITE RIVER PARKWAY**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	297 OF 518

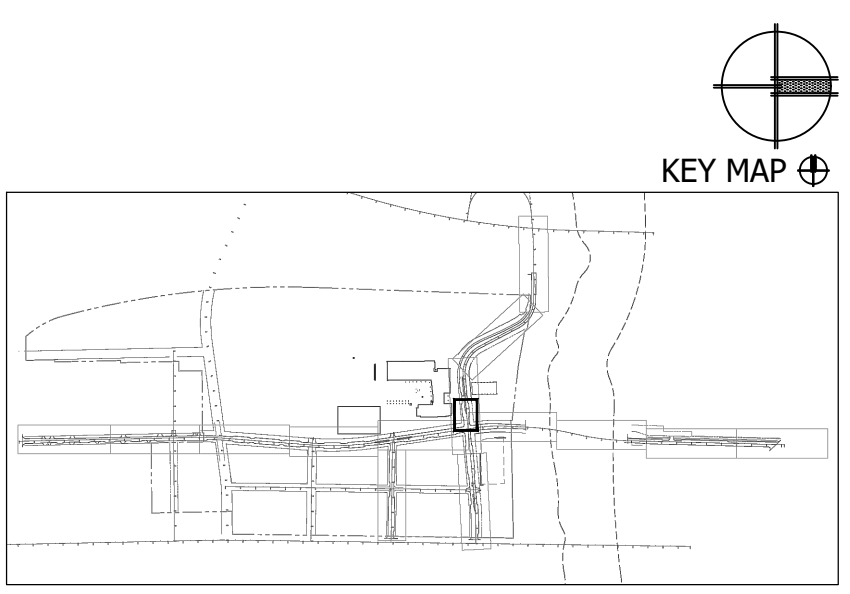


Date: Nov 16, 2023, 12:02pm User Name: snusbaum  
 File: C:\Projects\2021\121224-white\_river\_parkway\bin\_cad\_gis\CAD\01\_01\_Sheets\121210-Planting\_Plan\_WRP.dwg



**PLANT LEGEND**

KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam

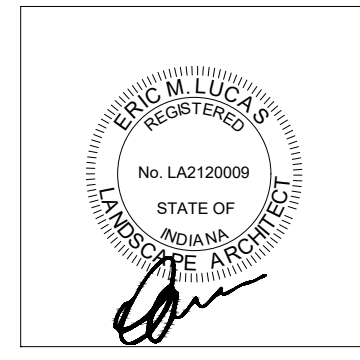


**REVISIONS**

DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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RECOMMENDED FOR APPROVAL: DESIGN ENGINEER DATE

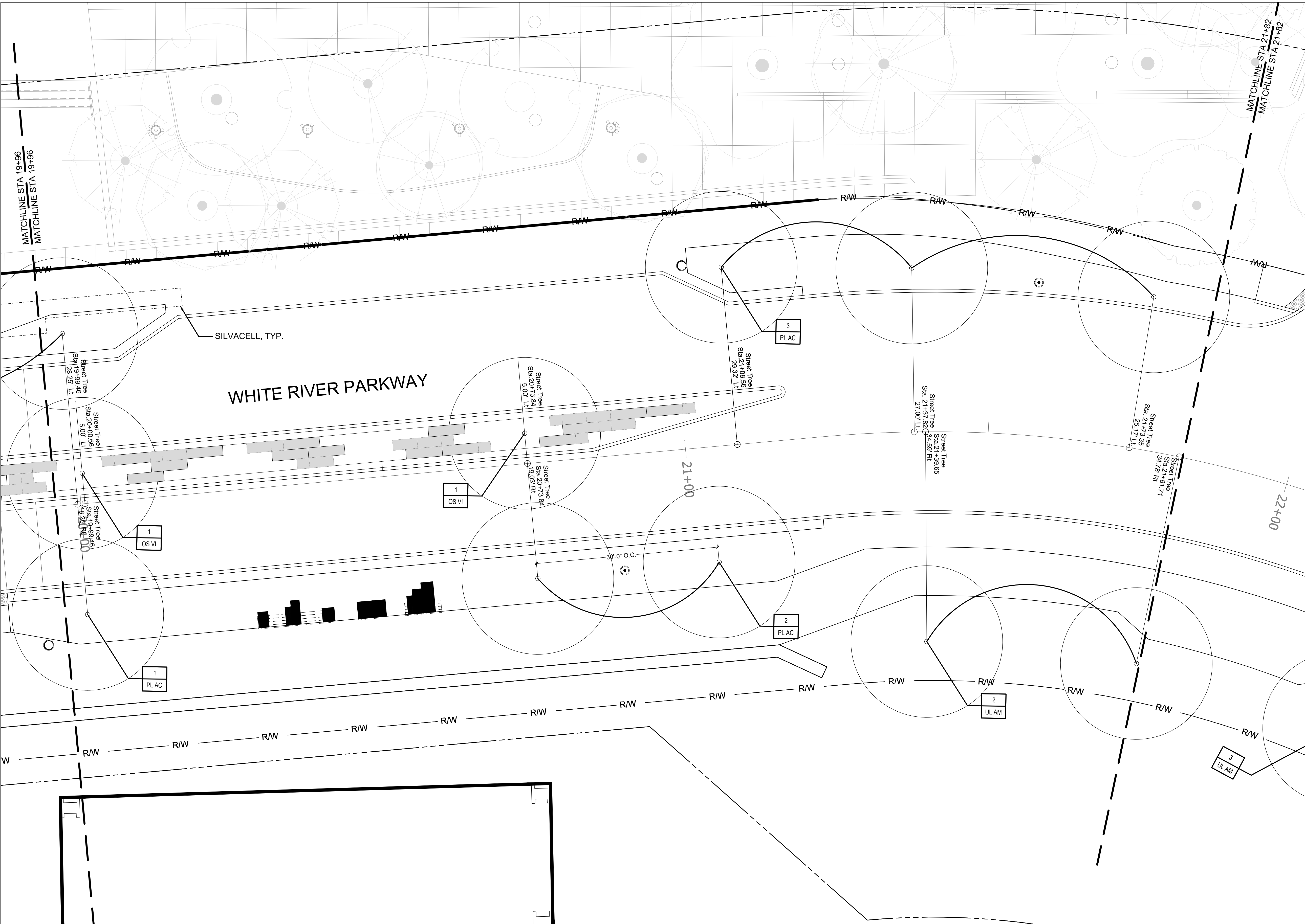
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**L5.23 TREE PLAN WHITE RIVER PARKWAY**

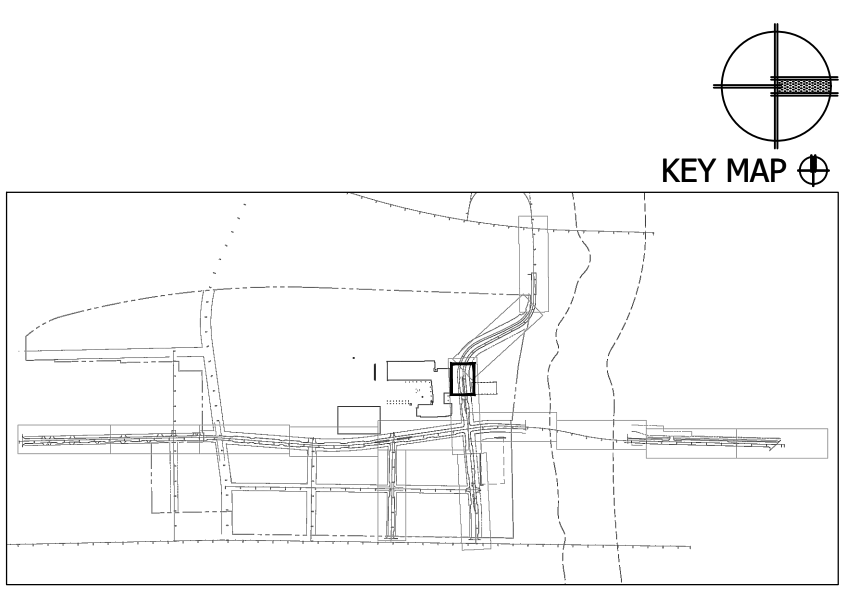
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VERTICAL SCALE N / A
PROJECT NUMBER ST-31-059
SHEETS NUMBER 298 OF 518

Date: Nov 16, 2023, 12:29pm User Name: snusbaum  
 File: C:\Projects\2021\1224\white\_river\_parkway\bin\_cad\_gis\CAD\01\_01\_Sheets\121710-Planting Plan MRP.dwg



**PLANT LEGEND**

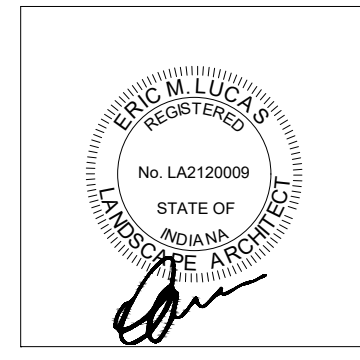
KEY	SCIENTIFIC NAME	COMMON NAME
<b>DECIDUOUS SHADE TREES</b>		
AC RU	Acer rubrum 'Red Sunset'	Red Sunset Red Maple
CL KE	Cladrastis kentuckea	Yellowwood
GY ES	Gymnocladus 'Espresso'	Kentucky Coffeetree
LI TU	Liriodendron tulipifera	Tuliptree
NY SY	Nyssa sylvatica	Sourgum / Blackgum
OS VI	Ostrya virginiana	Ironwood
PL AC	Platanus x acerifolia 'Bloodgood'	'Bloodgood' London Plane Tree
QU MA	Quercus macrocarpa	Bur Oak
UL AM	Ulmus americana 'Princeton'	Princeton American Elm
<b>DECIDUOUS ORNAMENTAL TREES</b>		
AM GR	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
CE CA	Cercis canadensis	Redbud
CA CA	Carpinus caroliniana	American Hornbeam



REVISIONS		
DATE	DESCRIPTION	BY
11/20/23	TREE SPECIES UPDATED	SN



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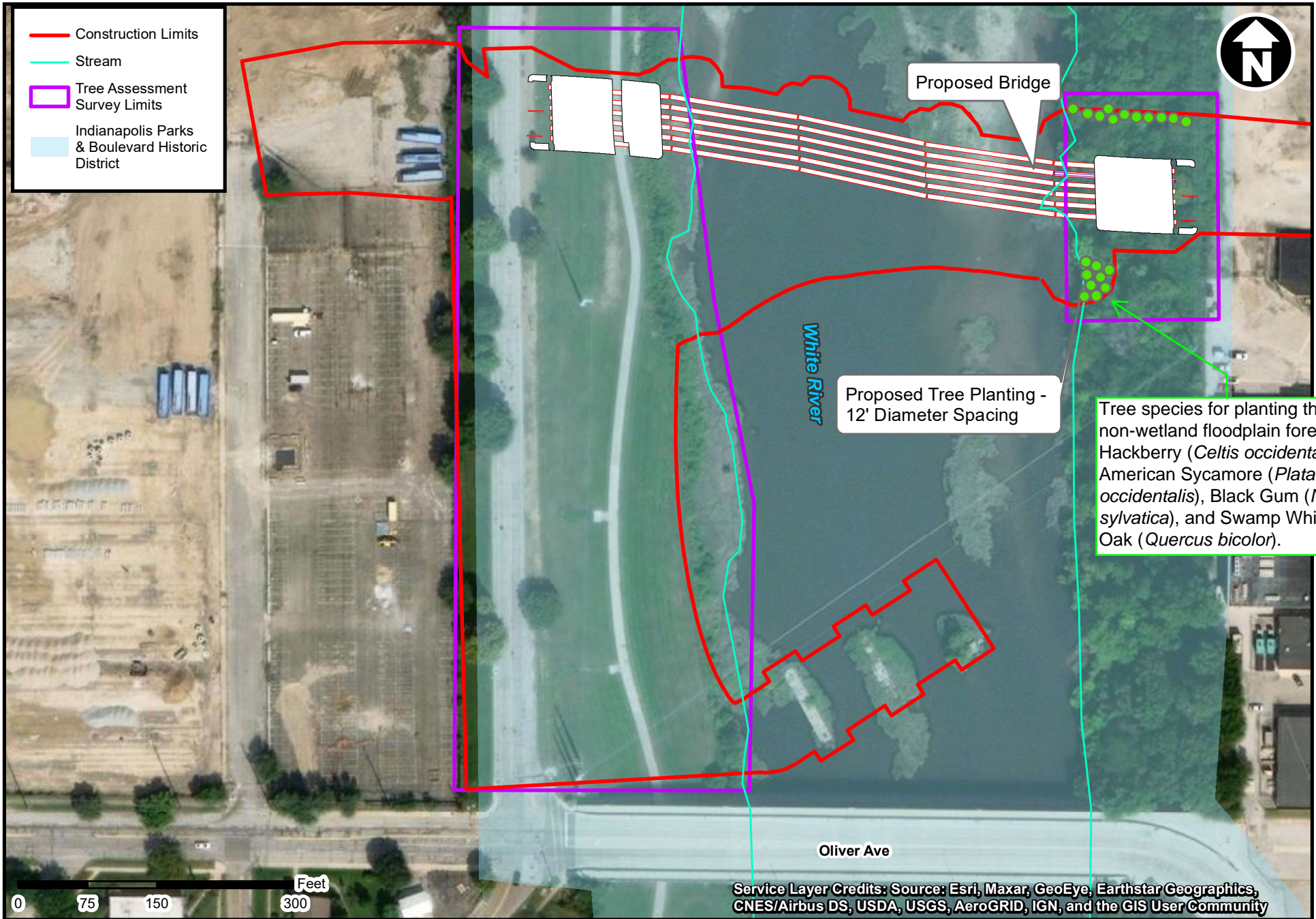


RECOMMENDED FOR APPROVAL:	DESIGN ENGINEER	DATE
DESIGNED:	CM	DRAWN: DA, SN
CHECKED:	DJ	CHECKED: DJ



**INDIANAPOLIS**  
 DEPARTMENT OF PUBLIC WORKS  
**L5.24 TREE PLAN WHITE RIVER PARKWAY**

HORIZONTAL SCALE	1/8" = 1'-0"
VERTICAL SCALE	N / A
PROJECT NUMBER	ST-31-059
SHEETS NUMBER	299 OF 518



## Henry Street Bridge - Indianapolis, Marion County, IN

# Preliminary Tree Mitigation in Historic District

Applicant: Indianapolis Department of Public Works; Agent: Crawford, Murphy & Tilly; Claudia McAllister-Peterson; 1/16/2023



# Fall Creek Trail - Barton & George Kessler Park (City) - 62 Trees



**Type**

- Plantable site – Large (47)
- Plantable site – Medium (12)







Botanical name	Common name	Best cultivars	Native*	Average Mature		Tolerance to:		
				Height	Spread	Salt	Drought	Wet
Liriodendron tulipifera Preference for Tulip Tree	Tulip Tree, Tulip Poplar	Note: Indiana State Tree	IN	80	50	N		
Nyssa sylvatica	Black Gum		IN	40	30	Y	Y	Y
Ostrya virginiana	Hophornbeam, Ironwood		IN	35	25		Y	Y
Platanus x acerifolia	London Planetree		CV	85	70		Y	
Quercus alba	White Oak		IN	80	60	Y	Y	N
Quercus bicolor	Swamp White Oak		IN	55	45			Y
Quercus imbricaria	Shingle Oak		IN	55	45		Y	Y
Quercus macrocarpa	Bur Oak		IN	70	75	Y	Y	Y
Quercus muehlenbergii	Chinkapin Oak		IN	50	45		Y	N
Quercus robur	English Oak			60	60		N	
Quercus rubra	Red Oak		IN	65	45	Y	Y	
Quercus shumarii	Shumard Oak		IN	50	40		Y	
Tilia americana	American Linden	Redmond	CV	45	25	N	N	N
Tilia cordata	Littleleaf Linden	Chancellor		35	20	N		N
		Glenleven		45	30	N		
		Greenspire		40	30	N		
Tilia x euchlora	Crimean Linden			45	35	N		
Tilia tomentosa	Silver Linden	Sterling		60	40			
Ulmus americana	American Elm	Independence	CV	70	60	Y		
		New Harmony	CV	70	60	Y	Y	
		Valley Forge	CV	70	60	Y	Y	
Ulmus glabra x carpinifolia	Pioneer Elm	Pioneer		60	55			
Ulmus wilsoniana	Prospector Elm	Prospector		40	30	Y		N
Zelkova serrata	Japanese Zelkova	Green Vase		50	40			Y
		Halka		40	30			Y
		Village Green		45	40			Y

\*Native IN = native to Indiana AM=native to North America, but not Indiana CV=descendent or improved cultivar or variety of a native plant  
updated: 11/13/2018

## RECOMMENDED UNDERSTORY TREES FOR CITY OF INDIANAPOLIS ROW AND PARK PROJECTS

Recommended size at time of planting: 2 1/2" caliper

This list is provided for your convenience, but it is not a complete list of the many species and cultivars that may be approved for planting in Indianapolis/Marion County. Choosing the appropriate tree is essential to a successful, sustainable landscape. Factors to consider when selecting the plants for your site are height and spread, shape, soil conditions, light requirements, fruiting, and hardiness. Be particularly mindful of both overhead and underground utilities.

Botanical name	Common name	Best cultivars	Native*	Average Mature		Tolerance to:		
				Height	Spread	Salt	Drought	Wet
Amelanchier canadensis (arborea)	Serviceberry, Juneberry		AM	25	15	N	N	
Amelanchier x grandiflora	Apple Serviceberry	Autumn Brilliance	CV	20	20	N	N	
		Cole's Select	CV	20	15	N	N	
		Princess Diana	CV	25	15	N	N	
Amelanchier laevis	Allegheny Serviceberry	Snowcloud	CV	20	20	N	N	
Carpinus caroliniana	American Hornbeam		IN	25	20	N	N	Y
Cercis canadensis	Redbud		IN	25	25	N	Y	N
Cornus alternifolia	Pagoda Dogwood		IN	20	20	Y	Y	Y
Crataegus crus-galli inermis	Thornless Cockspur Hawthorn	Crusader	CV	15	15	N	Y	N
Crataegus phaenopyrum	Washington Hawthorn		IN	30	25	N	Y	
Crataegus viridis	Green Hawthorn	Winter King	AM	30	30	N	Y	
Maackia amurensis	Amur Maackia			25	25	N	Y	N
Magnolia kobus var. stellata	Royal Star Magnolia	Royal Star		15	15	N		
Magnolia loebneri	Ballerina Magnolia	Ballerina		20	20	N		
Malus species	Flowering Crabapple	**		12 - 25	12 - 25			N
Botanical name	Common name	Best cultivars	Native*	Average Mature		Tolerance to:		

				Height	Spread	Salt	Drought	Wet
Oxydendron arboreum	Sourwood		IN	30	25			
Prunus sargentii	Sargent Cherry			30	30	N	N	N
Prunus x yeodoensis	Yoshino Cherry	Akebono		25	25		N	N
Syringa reticulata	Tree Lilac	Ivory Silk		25	15			N
		Summer Snow		20	15			N
Viburnum prunifolium (tree form)	Blackhaw		IN	15	12		Y	Y
Zelkova serrata 'Schmidtlow'	Wireless Zelkova			25	35			N

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\*\* Use a disease-resistant crabapple variety. Check with the Purdue University Cooperative Extension Service for a current list. Their Master Gardener Answerline is 275-9292. Or go online to <http://extension.entm.purdue.edu/publications/ID-217.pdf>

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