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2020-1299

TYPE III VARIANCE APPLICATION
CITY OF COLUMBUS STORMWATER DRAINAGE MANUAL

The Ohio State University

Parcels 010-067007-00 and 010-203994-00

October 20, 2022

emht.com

TYPE III VARIANCE REQUEST
THE OHIO STATE UNIVERSITY
PARCELS 010-067007-00 and 010-203994-00
OCTOBER 2022

The Ohio State University (Ohio State) is requesting a variance from the City of Columbus Stormwater Drainage Manual (the Manual) for the parcels (PID 010-067007-00 and 010-203994-00) containing the planned Cannon Drive Phase 2 project (CC-18761). Specifically, Ohio State is requesting a Type III Variance for relief from requirements of "Section 1.3 – Stream Corridor Protection Zone (SCPZ)" of the Manual to modify the delineation of the SCPZ on the parcels.

1.0 Introduction

The Ohio State University (Ohio State) has been planning infrastructure improvements to the Cannon Drive corridor for over a decade. These improvements consist of substantial investments in the vehicular and pedestrian transportation networks, flood control system (including reconstruction of the existing earthen berm as a modern engineered levee), and utility mains. Ohio State has been diligent to coordinate these plans with the multiple stakeholders and regulatory agencies, including the City of Columbus, Ohio Environmental Protection Agency, and Ohio Department of Natural Resources. The following list contains information on prior activities performed during the planning of the Cannon Drive corridor improvements that are specifically relevant to this Variance Application.

1. Environmental Covenant: An Environmental Covenant was recorded along the Olentangy River at the project site related to the construction of the 5th Avenue Dam Removal and River Restoration project in 2012. The Environmental Covenant was established by the City and State of Ohio to protect the benefits resulting from completion of the dam removal project and restoration of the quality and functionality of the Olentangy River in this area.

2. Cannon Drive Preliminary Engineering Report (dated September 22, 2014): This report included, among other topics, a review of stormwater and floodplain management requirements for the project corridor from King Avenue to Lane Avenue. An SCPZ boundary for the corridor was established along the east bank of the Olentangy River representing a 50-foot offset from the proposed top of bank for the river (based on the planned 5th Avenue Dam Removal and River Restoration project). This information is shown on Exhibit 5-1 of the report (PDF page 49/176) – reference Attachment 1.

   The report was reviewed and comments were provided by City Department of Public Utilities (DPU) staff. Comments provided by DPU staff related to the SCPZ were in reference to permitted uses and potential need for mitigation depending on proposed activities within the SCPZ.

   EMH&T utilized the same methodology from the 2014 report to delineate the "Proposed SCPZ" linework, as shown on current Cannon Drive Phase 2 plan set. Where the floodway extends beyond the 50-foot offset, the SCPZ boundary was adjusted to match the

floodway. The SCPZ boundary follows near the east bank of the river adjacent to the Environmental Covenant limits previously established in 2012. The Environmental Covenant implements use restrictions on the river corridor promoting preservation as a Natural Area, similar to the intent of the SCPZ.

3. April 8, 2021: Project renderings were developed to identify and communicate the master planning concepts for the Cannon Drive Phase 2 project. The renderings include a robust landscaping master plan, which involves the installation of new trees along the project corridor between John Herrick Drive and Woody Hayes Drive. Reference Attachment 2.

4. May 21, 2021 Meeting: This meeting was held to provide a project status update to City staff. Renderings of the proposed project were presented from the prior month, including work along the Environmental Covenant boundary. Reference Attachment 3.

5. Initial CC plans for the Cannon Drive Phase 2 project were submitted on December 5, 2019 to the City of Columbus. Due to budget challenges and market conditions, the project was modified and subsequently re-submitted on July 9, 2021 per the revised concept to maintain the section of Cannon Drive between Lincoln Tower to the Stadium near existing grade to minimize project costs. April 29, 2022; August 12, 2022; October 10, 2022: EMH&T submitted updated Stormwater Management Reports to the City for the Cannon Drive Phase 2 Project. The reports include a discussion of the SCPZ impacts proposed by the project and a proposed mitigation strategy based on an increase in riparian "no mow" grasses located within the SCPZ as a result of the project.

   City plan review staff have provided the following comment on this material: "Impacts of disturbance within SCPZ being evaluated," from May 9, 2022.

6. October 10, 2022: The current Landscape Master Plan for the project corridor depicts 86 street trees to be installed with the Cannon Drive Phase 2 project. The master plan also depicts additional planned tree installation locations along the river corridor, including 46 future trees planned to be installed within the existing Environmental Covenant boundary between John Herrick Drive and Woody Hayes Drive. Reference Attachment 4.

2.0 Site Conditions

The SCPZ boundary line on the parcels is generally located between the 2012 Environmental Covenant boundary and the existing earthen berm previously built to provide flood protection for the Ohio State Campus. Land cover in the portion of the SCPZ proposed to be impacted by this Variance Application includes: turf grass, riparian grasses, two trees (measuring greater than 6" dbh) and an asphalt path (Olentangy River Trail).

3.0 Request for Relief / Hardship Statement

Ohio State is requesting approval to relocate the SCPZ boundary line along the east side of the Olentangy River to coincide with the previously established Environmental Covenant boundary from John Herrick Drive to Woody Hayes Drive. Given the SCPZ will coincide with the Environmental Covenant, and the Environmental Covenant provides the same protections as a

SCPZ easement, no separate SCPZ easement will be necessary or provided along the length of the river between John Herrick Drive and Woody Hayes Drive.

Ohio State deems Full Compliance with the provisions of the Manual is unnecessary based on the following hardships and other circumstances:

1. Duplicate Encumbrances: The parcels are unique in that an existing environmental encumbrance has been recorded on the property through prior negotiations with the City and State of Ohio. The 2012 Environmental Covenant was established by the Ohio EPA, City, and Ohio State to protect the restored Olentangy River corridor in a natural state. The Covenant has been legally recorded and is established with signage at the project site. Requiring a second protection area (the SCPZ) with boundary conflicting with the existing Environmental Covenant boundary will require a redundant recorded instrument (per the current Manual) and additional signage at the project site that will also conflict with the existing signage. The duplicate instruments and signage will undoubtedly lead to confusion and difficulty in administration of these protected areas.
2. Unacceptable Delays: The property in question is owned by the State of Ohio. Recording an easement on State land is an extensive process that typically requires at least 12 months to complete. This process will cause unacceptable delays to the advancement of planned improvements on the site, including those projects necessary to secure flood protection for the University campus.
3. Limited Existing Function: The area protected by the SCPZ and located outside of the Environmental Covenant is not in a natural, unmodified state. This area has been historically impacted and is located on an urban University Campus between an existing flood control berm and the river. Preserving this area as an undisturbed natural area is not reasonable. Ohio State proposes to maintain the area in a similar or higher quality land use with no net loss of function plus mitigation (see following sections).
4. Significance of the Environment Covenant: The 2012 Environmental Covenant boundary was established in cooperation between the OhioEPA, Ohio State, and the City to preserve and protect the Olentangy River waterway through the campus area. It was deemed adequate for this purpose in recognition of other existing and planned beneficial uses along the river. Enlarging this area is in conflict with the prior multi-agency agreement and provides little or no additional environmental benefit.

4.0 Proposed SCPZ Impacts

Relocating the SCPZ on the east side of the Olentangy River to coincide with the existing Environmental Covenant boundary from John Herrick Drive to Woody Hayes Drive will impact the following land and trees, as shown in Tables 1 and 2 and on Attachment 5.

Table 1: Summary of SCPZ Area Included in Variance Request

Existing Land Use	Acres
Impervious Surfaces	0.29
Area Within 15 Feet of Existing Berm or Dike	0.09
All Other Areas	1.04
TOTAL	**1.42**

Table 2: Summary of Trees Included in SCPZ Area

Quantity of Trees Impacted	2

5.0 Mitigation

Ohio State proposes the following as mitigation for relocating the SCPZ boundary to coincide with the established Environmental Covenant boundary:

1. **No loss of SCPZ function is proposed as part of this request.** Future work proposed on the site will result in an increase in riparian grasses and decrease in impervious surfaces located in the impacted SCPZ area, which will provide additional erosion control and water quality protection, as seen in Table 3 and on Attachment 6. No adverse flood hazard impacts will occur, as demonstrated by the slight decrease in 100-year flood elevations along this portion of the Olentangy River documented in the flood hazard study submitted by Ohio State in support of the plan. Ohio State will maintain these benefits in accordance with the master plan.

Table 3: Comparison of Land Coverage Within Affected SCPZ

Land Use	Existing Acreage	Proposed Acreage	Change	Benefit
Impervious Surfaces	0.29	0.03	-0.26	Positive
Turf Grasses	0.50	0.60	+0.10	Neutral
Riparian and No Mow Grasses	0.63	0.79	+0.16	Positive
TOTAL	**1.42**	**1.42**		

2. **Environmental Covenant Enhancement.** Ohio State proposes to install the 46 trees shown in the October 2022 Landscape Master Plan within the Environmental Covenant protected area. No additional recorded instruments will be required for this proposal. It should be noted that this proposed tree planting is voluntary and not currently mandated by any regulatory action.

6.0 Additional Considerations

Approval of this Variance Application will enable the following planned enhancements for both Ohio State and recreational users of the Olentangy River corridor as per the master plan:

- Improvements to ensure long-term flood protection for the Ohio State Medical Center Campus including important regional health care infrastructure.
- Enhanced active space for bicyclists, pedestrians, etc.
- Flexibility for a future amphitheater located outside of the Environmental Covenant.
- Upper and lower connections from Cannon Drive to the Olentangy River Trail.
- No adverse flood hazard impacts. No increases in 100-year flood elevation are proposed in this corridor.

It should be noted that there is NO loss of the function of the SCPZ proposed under this request. This request is primarily an administrative task to redesignate the SCPZ boundary with appropriate proposed mitigation.

7.0 Alternative Site Plans

Ohio State has prepared two alternative site plans in support of this Variance Application. Development of a third alternative site plan, as required by the Manual, is not feasible based on the proposed relief requested.

Full Compliance (Attachment 5) - This alternative is not desired / not feasible for the following reasons:

- Leaves the conflicting SCPZ and Environmental Covenant boundaries in place, creating unnecessary administrative requirements and conflicting project signage.
- Preserves an SCPZ that provides limited current function. The area was excluded from the Environmental Covenant agreement.
- Requires a new recorded instrument for the SCPZ, which will create unacceptable delays to the University.
- Creates potential conflicts with improvements contemplated in the master plan.

Preferred Alternative (Attachment 6) – This alternative proposes to relocate the SCPZ line to coincide with the established Environmental Covenant boundary without providing a separate SCPZ easement. This alternative includes the following features:

- Does not result in a loss of SCPZ function.
- Does not create an adverse flood hazard impact.
- Increases the trees within the SCPZ / Environmental Covenant by a net of +44 with the proposed mitigation.
- Eliminates the conflicting SCPZ and Environmental Covenant boundaries.
- Does not require a new recorded instrument for the SCPZ.
- Complies with the master plan for the corridor that was presented to stakeholders including City staff.

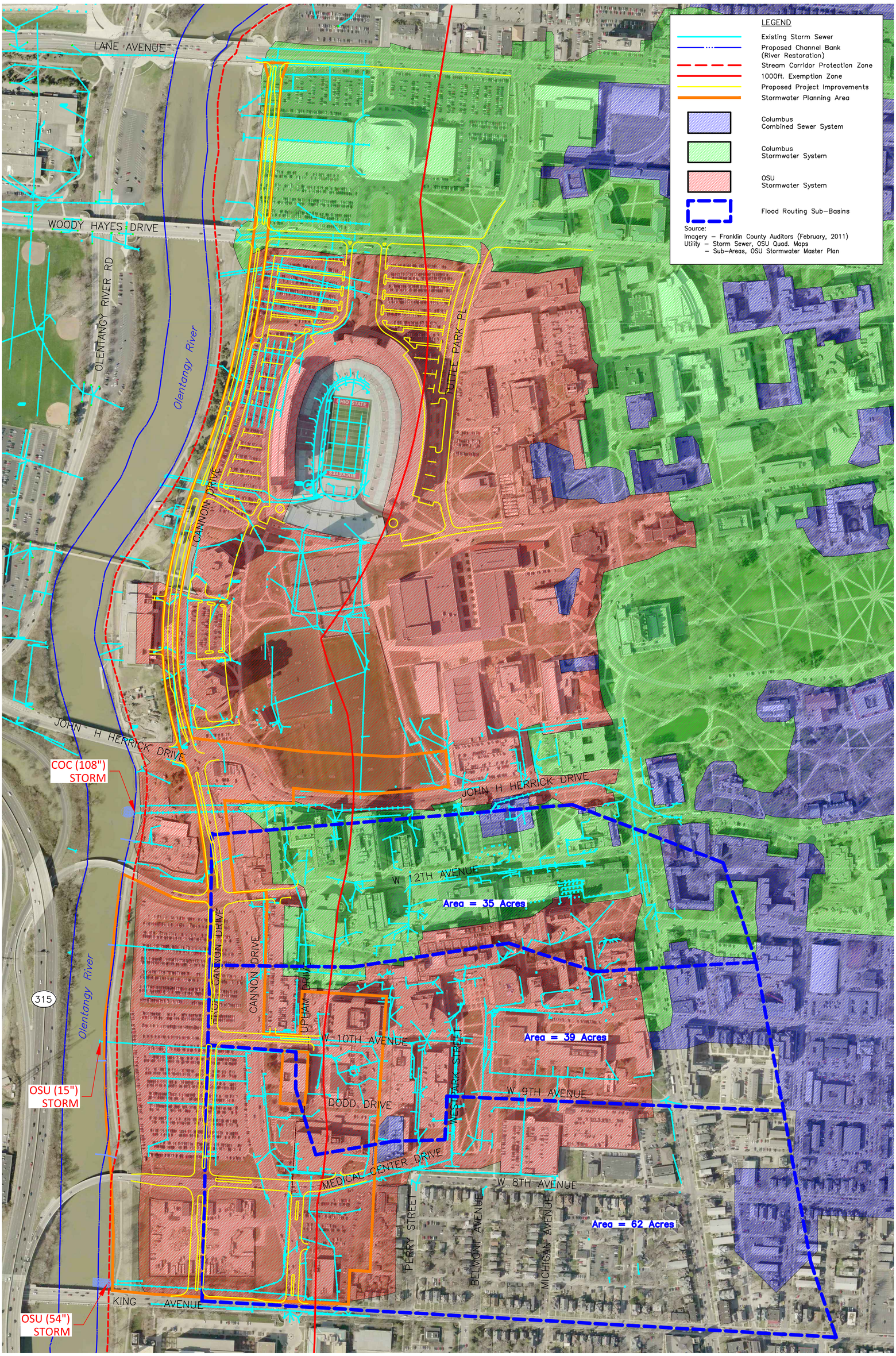
We are proposing the two alternatives as noted above for simplification and clarity.

If desirable by the City, Ohio State would also accept deletion of the SCPZ on the parcels in lieu of moving the SCPZ boundary to coincide with the Environmental Covenant boundary. This action would rely on the terms and conditions of the established Environmental Covenant to protect the riparian corridor and eliminate the need to administer two separate, but similar, regulating documents.

8.0 Additional Maintenance Work Proposed Within the Environmental Covenant

In addition to the proposed installation of 46 trees within the Environmental Covenant limits as mitigation, Ohio State also has plans to replace the portion of the existing Olentangy River Trail and four existing storm sewer outfalls that are located within the Environmental Covenant. The replacement of this infrastructure is deemed to be "maintenance" and has been discussed with OhioEPA and City staff in multiple meetings. Ohio State may abandon the existing storm sewer

outfalls in place rather than remove the materials, as requested by OhioEPA to minimize disruption. This work is considered to be a permissible activity within the SCPZ without additional mitigation, in line with the approvals previously granted to Ohio State by the City of Columbus for work on adjacent parcels (Cannon Drive Phase 1, CC-17287, 2017).



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M C M X X V I

GRAPHIC SCALE
0 100 200 400
1 inch = 200 feet

CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO
STORMWATER PLANNING EXHIBIT
EXISTING CONDITIONS
FOR
CANNON DRIVE
EXHIBIT 5-1

ATTACHMENT 1

Date	Job No.
December, 2012	2012-0219
Scale	Sheet
1" = 200'	1/1

J:\2012\2219\Dwg\04Sheets\Exhibits\Water Resources Dept\Exhibits\Exhibit - Existing Conditions.dwg Last Saved By: jeremer, 12/18/2012 2:24 PM Last Printed By: Cramer, James, 12/18/2012 3:03 PM (No Xrefs)

ATTACHMENT 2

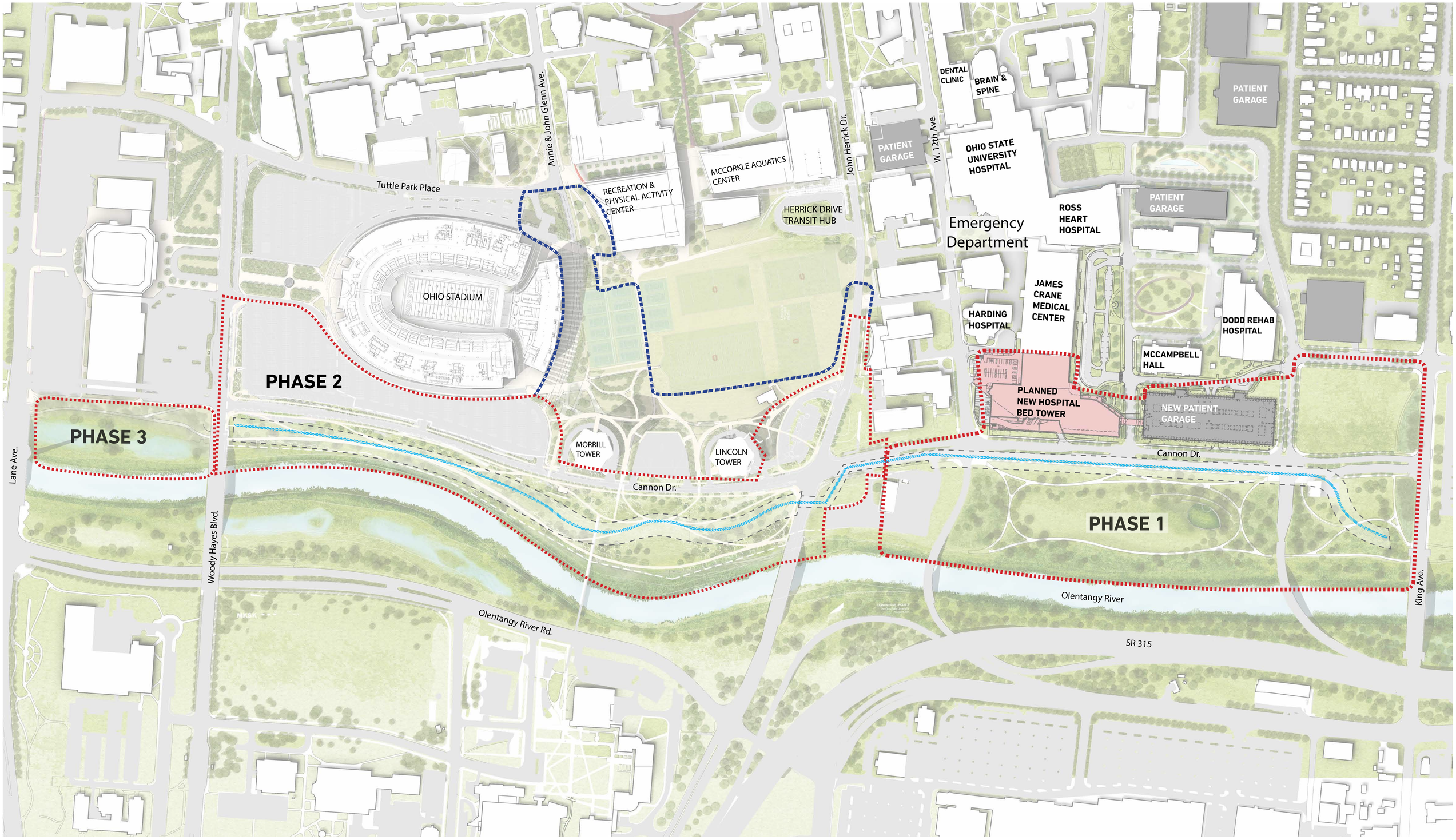
CANNON DRIVE - PHASE II

DRB PRESENTATION - REVISED SCOPE

APRIL 8TH, 2021

CANNON DRIVE CORRIDOR EXISTING CONDITIONS

CANNON DRIVE CORRIDOR MASTERPLAN



CANNON DRIVE: PHASE 2 - SUMMARY OF PROJECTS

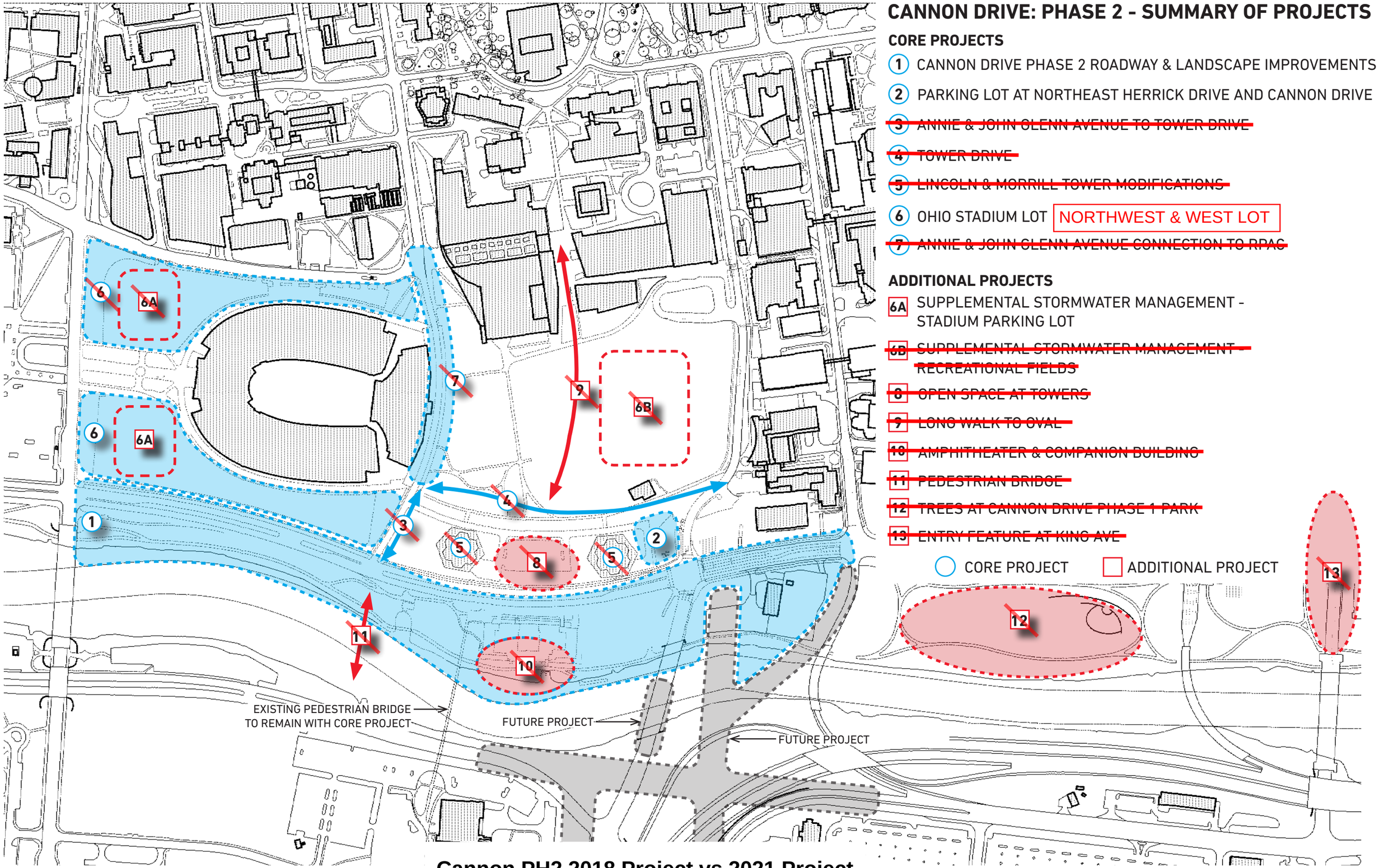
CORE PROJECTS

1. CANNON DRIVE PHASE 2 ROADWAY & LANDSCAPE IMPROVEMENTS
2. PARKING LOT AT NORTHEAST HERRICK DRIVE AND CANNON DRIVE
3. ~~ANNIE & JOHN GLENN AVENUE TO TOWER DRIVE~~
4. ~~TOWER DRIVE~~
5. ~~LINCOLN & MORRILL TOWER MODIFICATIONS~~
6. OHIO STADIUM LOT NORTHWEST & WEST LOT
7. ~~ANNIE & JOHN GLENN AVENUE CONNECTION TO RPAC~~

ADDITIONAL PROJECTS

- 6A SUPPLEMENTAL STORMWATER MANAGEMENT - STADIUM PARKING LOT
- ~~6B SUPPLEMENTAL STORMWATER MANAGEMENT - RECREATIONAL FIELDS~~
- ~~8 OPEN SPACE AT TOWERS~~
- ~~9 LONG WALK TO OVAL~~
- ~~10 AMPHITHEATER & COMPANION BUILDING~~
- ~~11 PEDESTRIAN BRIDGE~~
- ~~12 TREES AT CANNON DRIVE PHASE 1 PARK~~
- ~~13 ENTRY FEATURE AT KING AVE~~

CORE PROJECT ADDITIONAL PROJECT

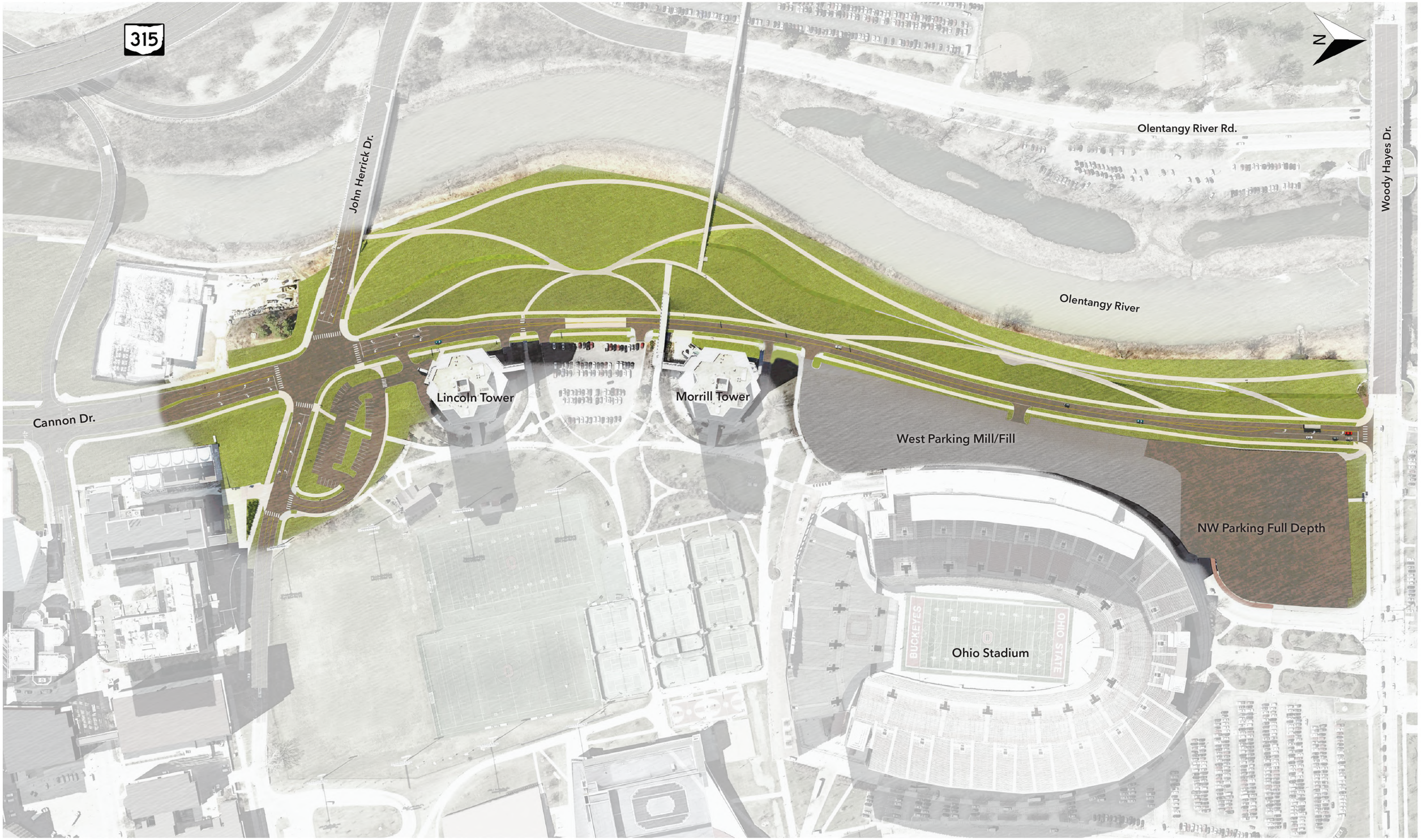


Cannon PH2 2018 Project vs 2021 Project

EMHT MKSK Trans ASSOCIATES

THE OHIO STATE UNIVERSITY CANNON DRIVE PHASE II

APRIL 08, 2021



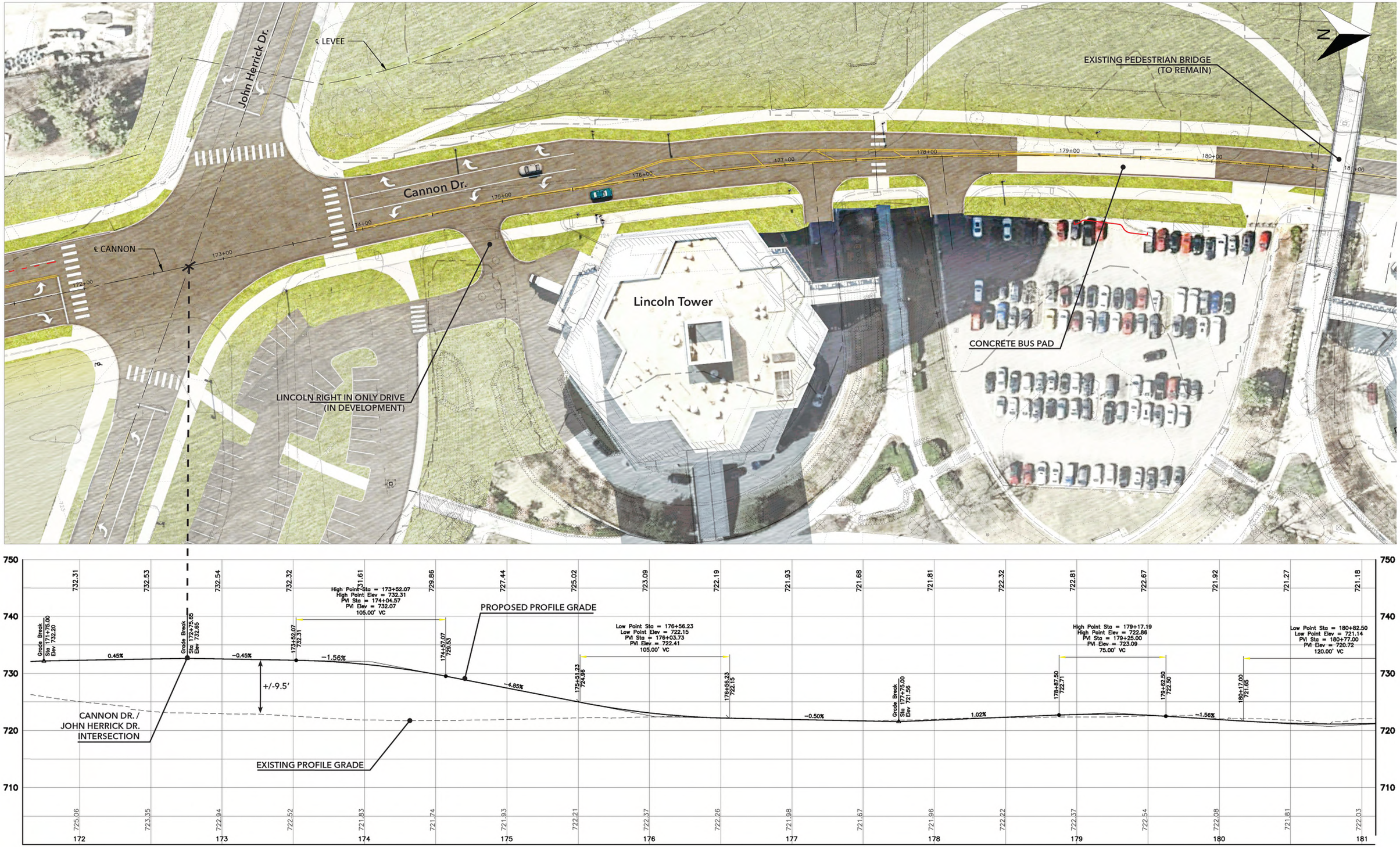
THE OHIO STATE UNIVERSITY

Cannon Drive Phase 2 - DRB Presentation

Plan and Profile

APRIL 8, 2021

MKSK | Trans ASSOCIATES | EMH&T



THE OHIO STATE UNIVERSITY

Cannon Drive Phase 2 - DRB Presentation

Proposed Design - Cannon Dr. Profile at John Herrick Dr.

APRIL 8, 2021

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Cannon Drive Phase 2 - DRB Presentation

Proposed Design - Cannon Dr. at John Herrick Dr.

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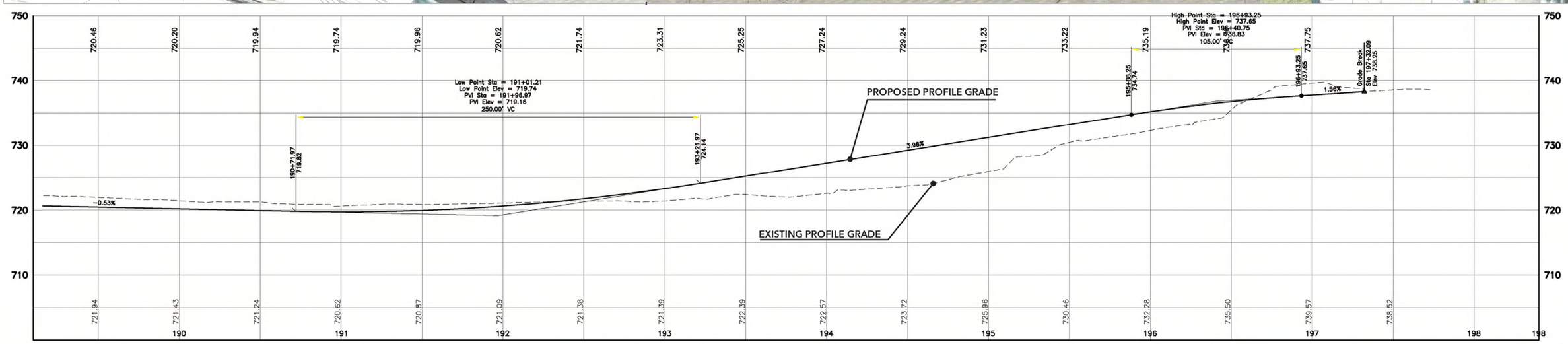

APRIL 8, 2021

THE OHIO STATE UNIVERSITY

Cannon Drive Phase 2 - DRB Presentation

Proposed Design - Cannon Dr. Profile at Woody Hayes Dr.

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Cannon Drive Phase 2 - DRB Presentation

Proposed Design - Cannon Dr. at Woody Hayes Dr.

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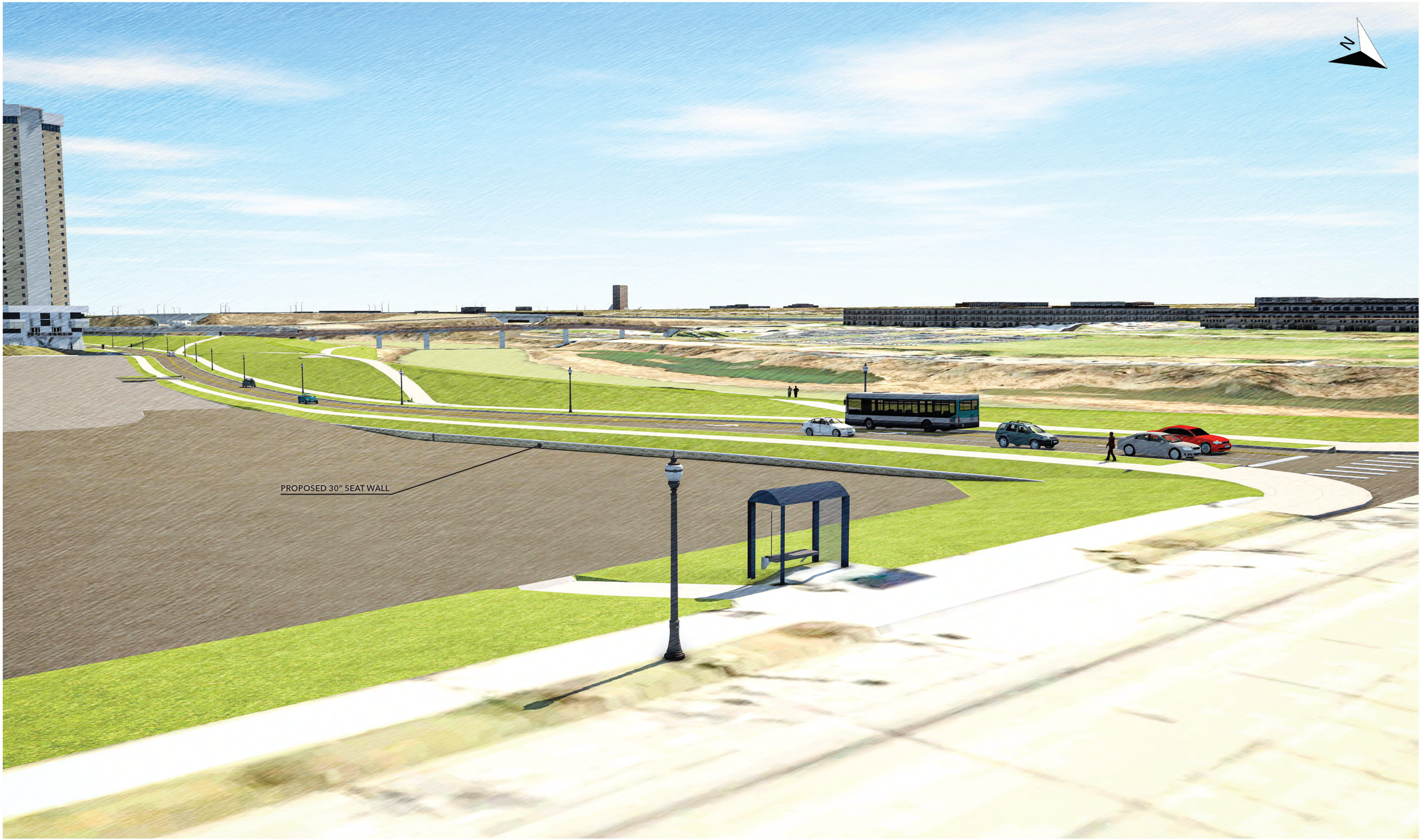

THE OHIO STATE UNIVERSITY

Cannon Drive Phase 2 - DRB Presentation

Proposed Design - Cannon Dr. at Woody Hayes Dr.

APRIL 8, 2021

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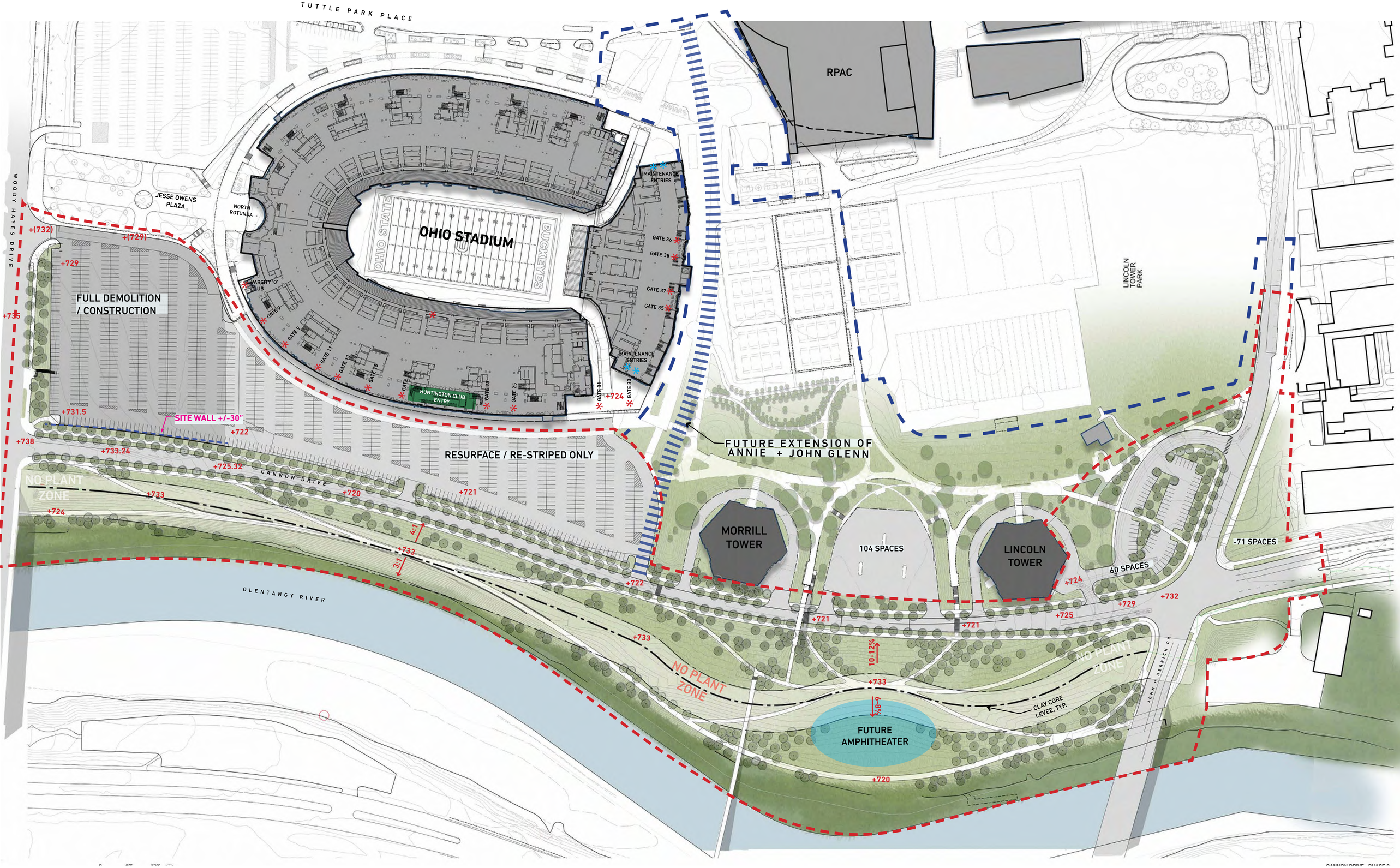
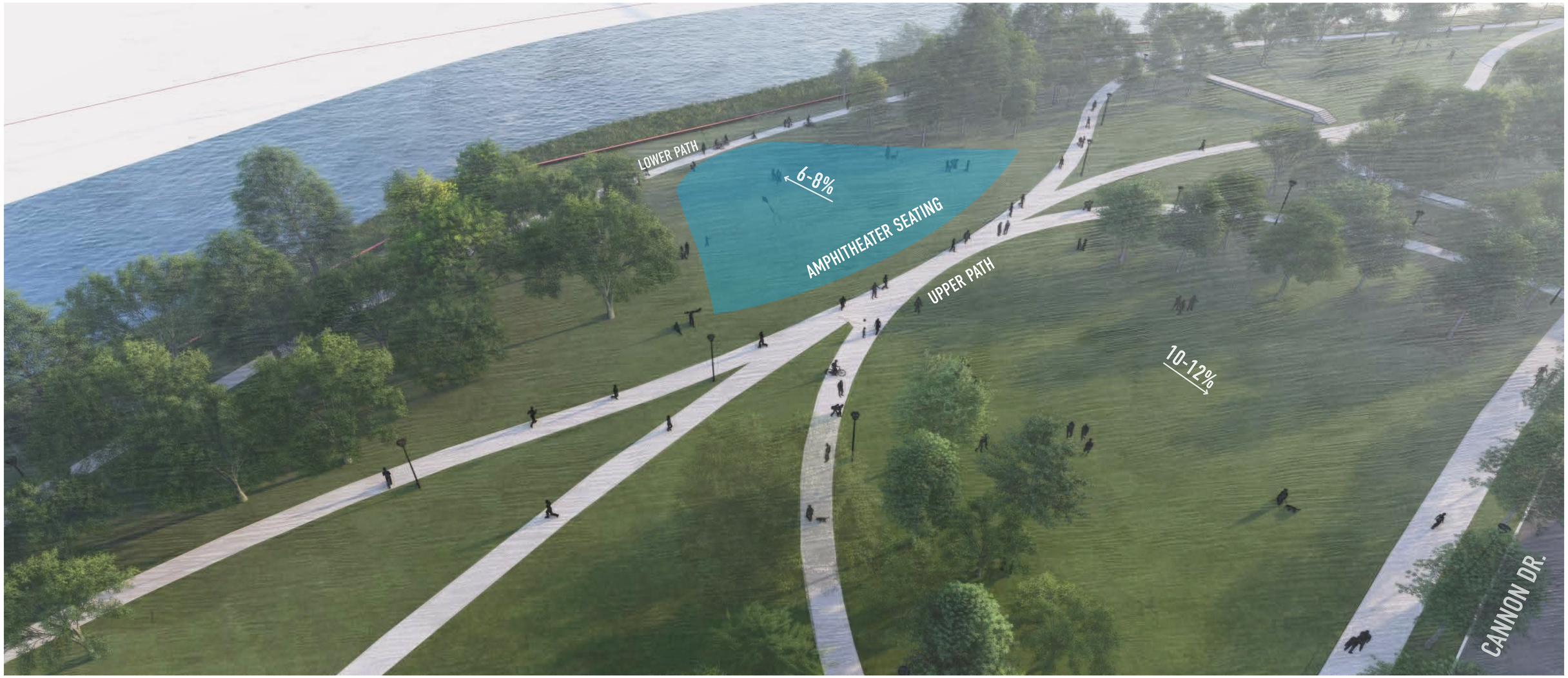
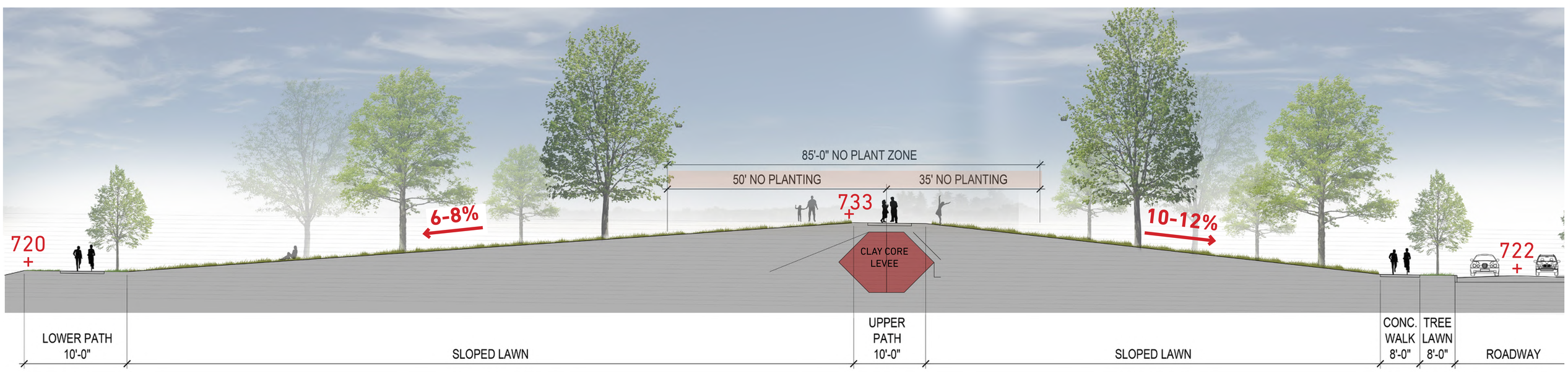
CANNON DRIVE CORRIDOR SITE PLAN UPDATE



CANNON DRIVE CORRIDOR TOWER GREEN CONNECTION

CANNON DRIVE CORRIDOR TOWER GREEN CONNECTION

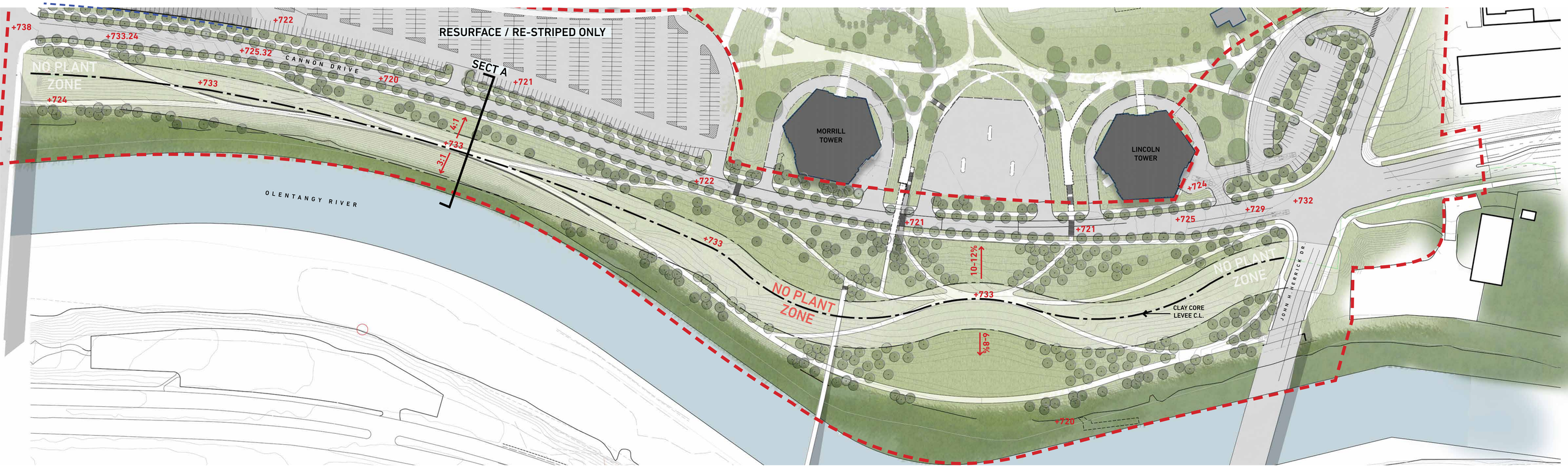


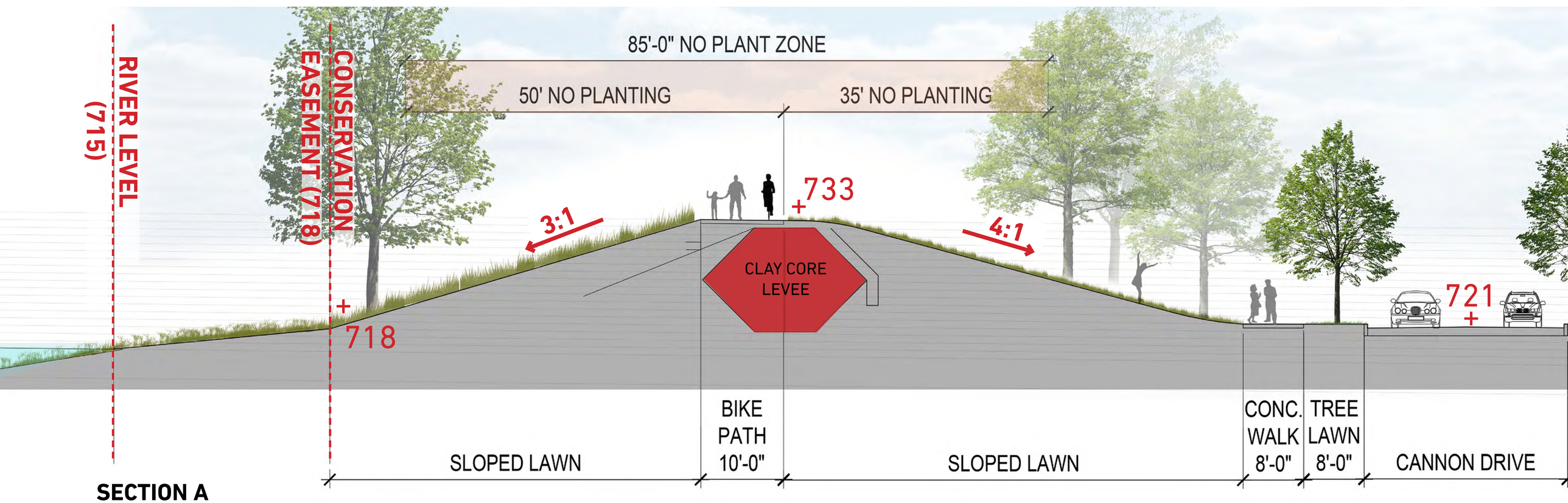


CANNON DRIVE CORRIDOR TOWER GREEN CONNECTION

CANNON DRIVE CORRIDOR TOWER GREEN CONNECTION

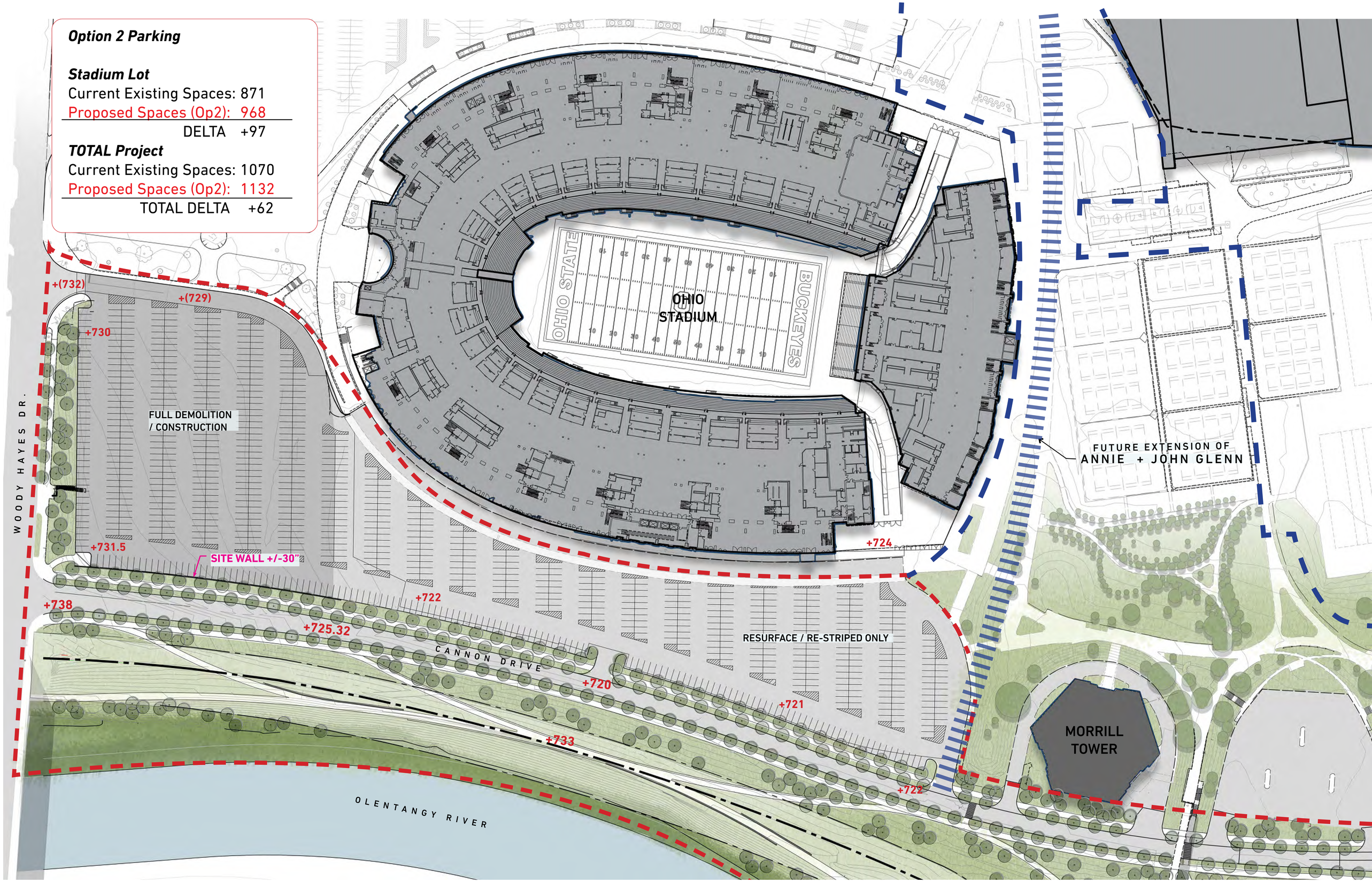
CANNON DRIVE CORRIDOR NORTHERN LEVEE SECTION





SECTION A
CLAY CORE LEVEE

CANNON DRIVE CORRIDOR STADIUM LOT ENLARGEMENT



END

12.7 Clinton Sewer District #3 Trunk Sewer Siphon

The West Campus Infrastructure Study (dated January 22, 2021) presented to The Ohio State University (OSU) and the City of Columbus (City), identified alternatives for providing sanitary sewer capacity to the West Campus Development Program Boundary. Figure 12.7A illustrates the tributary boundary for the proposed redevelopment that would necessitate the additional sanitary sewer capacity. The City of Columbus has selected the Woody Hayes Sewer Extension as the preferred alternative for serving this area. This alternative requires an increase in capacity of the existing siphon under the Olentangy River by constructing an additional 24-inch barrel.

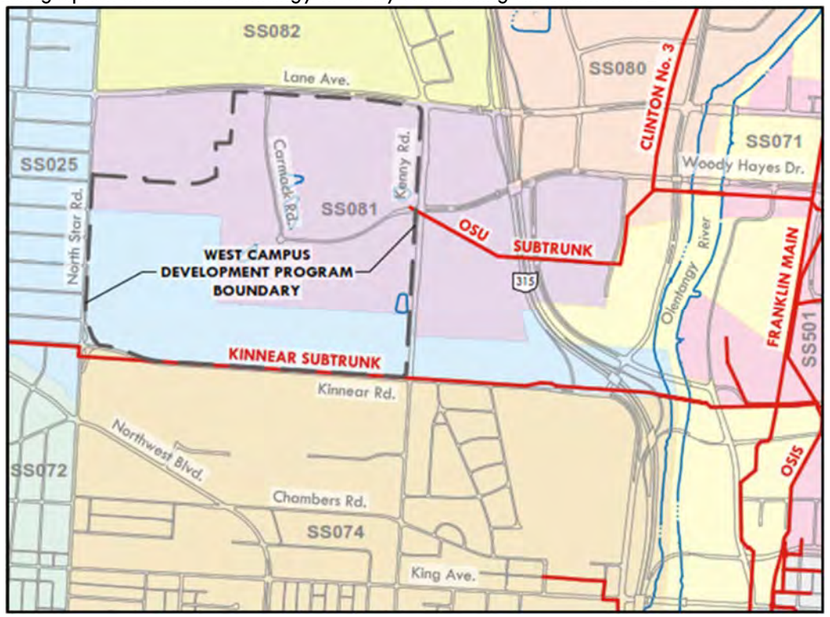


Figure 12.7A Sanitary Sewer Tributary Boundaries

OSU is in the process of the preliminary design on Cannon Drive Phase 2. This project includes the relocation of Cannon Drive and construction of a levee along the Olentangy River's east bank. The existing Clinton Sewer District #3Trunk Sewer Siphon is located within the proposed construction footprint of this project. To avoid future disruption to the proposed OSU facilities and the certified levee, improvements to the siphon is recommended to be designed and constructed as part of the Cannon Drive Phase 2 project. Figure 12.7B shows the location of the existing siphon with respect to the OSU improvements.

Figure 12.7B Clinton Sewer District #3 Trunk Sewer Siphon Location

12.7.1 Alignment Options for the Siphon Modification

As stated previously, the capacity improvements to the Clinton Sewer District #3 Trunk Sewer Siphon will require an additional 24-inch barrel added to the existing siphon. The existing siphon constructed in 1947 includes three existing barrels including a 10-inch, 18-inch and a 30-inch. There are two options to available for modifying the siphon – modifying the existing siphon and construction of a separate siphon. A schematic layout for the two options are shown.

Option A – Modify Existing Siphon: This option would include constructing the new 24-inch barrel by modifying the existing siphon. This would be an open cut construction method and would require modifications to the existing structures on either side of the river to allow flow to enter the 24-inch barrel.

Option B – Construct Separate Siphon: This option would include construction of an equalization pipe and separate 24-inch siphon. This option has two construction options - open cut construction or trenchless construction.

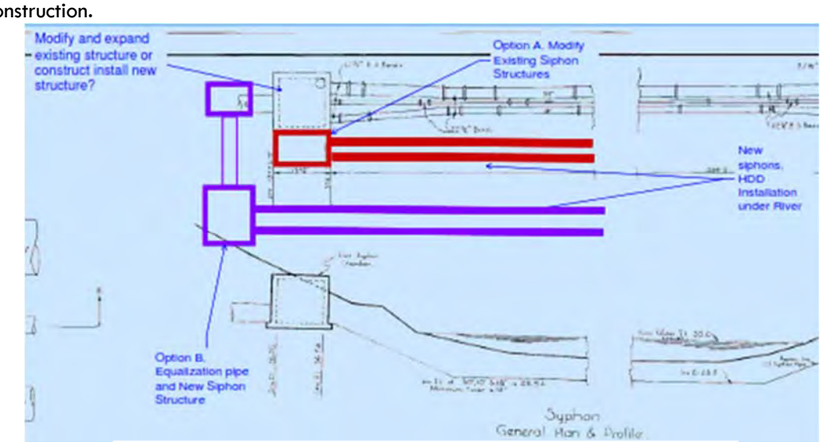


Figure 12.7.1 Option Concepts

12.7.2 Construction Methods

The alignment and method of construction will be evaluated during the design of the sewer improvement. The feasibility of each construction method will be dependent on the results of the geotechnical investigation, survey, modeling results, permitting issues, land acquisition, stakeholders (Ohio EPA, U.S. Army Corps of Engineers, etc.) and coordination with the City of Columbus.

1. Open Cut Construction – This method would require excavating across the Olentangy River corridor and Environmental Covenant Area. If this method is selected for construction an environmental evaluation will be required prior to construction. A mitigation plan would be developed considering specific site features, flows, plants and wildlife found within the construction area to ensure potential impacts to these features are minimized. **Figure 12.7.2A** illustrates two conceptual open cut alignments for the project.
2. Jack and Bore Construction – This method would include trenchless installation of a 48-inch steel casing pipe as a carrier pipe for the 24-inch siphon pipe under the Olentangy River. This method of construction would avoid surface impacts within the River corridor and Environmental Covenant area; however, placement of jacking and receiving pits could be challenging near the river banks. Jack and Boring is dependent on proper soil condition. **Figure 12.7.2B** illustrates a conceptual jack and bore alignment.

3. Horizontal Directional Drilling (HDD) – This method would include trenchless installation of a 24-inch siphon pipe. This installation method would allow surface impacts within the Olentangy River corridor and Environmental Covenant Area to be minimized. The construction footprint of directional boring is dependent on several factors including pipe size, soil conditions, pipe lay down area, and available space on each side of the crossing. **Figure 12.7.2C** illustrates a conceptual HDD alignment.

   Based on preliminary discussion with the CMR, Igel/Ruhlin, in March 2021, this open cut method is the recommended alternative at this time for a construction risk perspective. OSU noted that on a prior river jack and bore for their electrical upgrades the contractor had major difficulties with underground river crossings due to large boulders encountered under the bottom of the river, which resulted in major delays and claims.

12.7.3 Design Constraints

A preliminary review of potential design/constructability issues and project risks was conducted for the Woody Hayes alignment. The key issues explored were:

- ***Land Acquisition*** –The City of Columbus will require additional permanent easement for the proposed siphon improvements. The temporary construction easements should not be necessary since the surrounding area is owned by OSU.
- ***Temporary Construction Easement/Work Zone*** – During the evaluation of alignment alternatives coordination with OSU with regard to event planning, parking impacts, traffic impacts is critical.
- **USACE** – Project construction coordination with the USACE, Huntington District will be required to understand upstream water release rates and water levels.
- ***Environmental Covenant Area Encroachment –*** The construction of the siphon will require an encroachment on the Environmental Covenant Area.
- ***Ohio Department of Natural Resources*** – There is a restriction of In-stream work between March 15 and March 30th of every year. Construction during this time fame will require a special permit.
- ***Development of the Upstream Tributary Area*** – Continued coordination with Columbus on development upstream of the siphon improvement will be require. Total tributary build out will require the completion of the Lower Olentangy Tunnel (LOT) to ensure adequate capacity and operation within the downstream sewers.

12.7.4 Geotechnical

A geotechnical investigation is critical to the design of the siphon. This investigation will need to be completed as soon as possible to assist the design team on the alignment evaluation and construction alternatives. The number of borings and the required depths will be provided to the Geotechnical Consultant for preparation of a scope and fee.

12.7.5 Permitting

The proposed siphon modification project will have the following permitting requirements:

- ***Special Flood Hazard Area Development and Use (Floodplain) Permit,***
  Permitting Agency: City of Columbus
- ***Section 404 Nationwide Permit,***
  Permitting Agency: USACE, Huntington District
- ***Notice of Intent (NOI)***
- Permitting Agency: Ohio EPA
- ***Permit to Install (PTI)***
  Permitting Agency: Ohio EPA
- ***Ohio EPA Environmental Covenant Encroachment***
- Permitting Agency: Ohio EPA
- ***CC Sanitary Plan Approval***
- Permitting Agency: City of Columbus
- ***Open Cut Construction Only – In Stream Waiver If Construction is between March 15-June 30)***
  Permitting Agency: ODNR

A permit table summarizing permit overlaps with Cannon Drive Phase 2 and other potential considerations as performed by our office is include in Figure 12.7.5.

12.7.6 Siphon Concept Plans – Other Considerations

Siphon concept plans have been included in figure 12.7.2A – 12.7.2C. Considerations to interim phasing will be reviewed with the University and an advanced GMP may be required for the sale of this project per the schedule in Section 16.

12.7.7 Schedule

For consistency in the report, a separate schedule has been included in Section 16 that requires follow-up revised with the OEPA, City of Columbus, OSU and other associated stakeholders.

Regulatory permitting and environmental summary

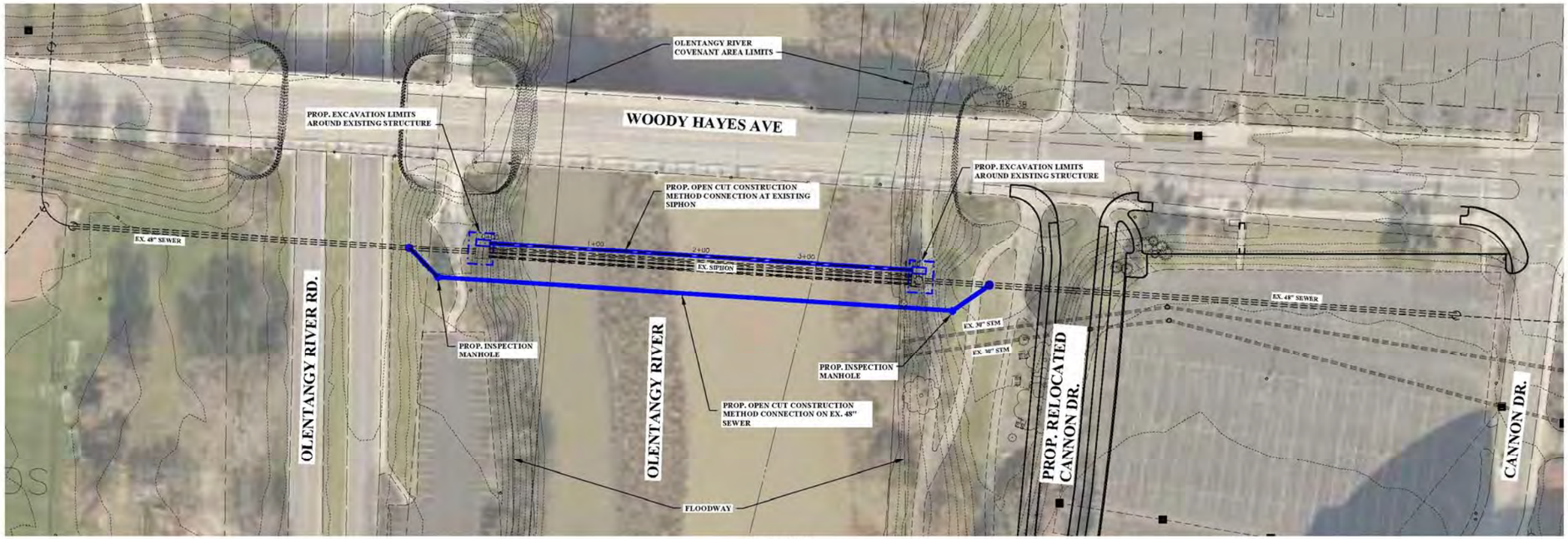
A summary of permits known to date are defined in the table below. Critical items relevant to the siphon construction near the Woody Hayes bridge are shown in RED

Permit	Special Flood Hazard Area Development and Use (Floodplain) Permit	Section 404 Nationwide Permit	Notice of Intent (NOI)	Permit-to-Install (PTI)	CC Plan Storm/Sanitary Sewer	OhioEPA Environmental Covenant Encroachment
Regulatory Agency:	City of Columbus	The U.S. Army Corps of Engineers (USACE), Huntington District	Ohio EPA	Ohio EPA	City of Columbus	OhioEPA
Contact:	Ann Aubry, P.E. – Deputy Public Utilities Director [redacted] Rob Herr, P.E. (DPU) [redacted]	Teresa Spagna, Chief North Regulatory Branch [redacted]	Mike Joseph, Central Office Division of Surface Water [redacted]	John R. Owen, P.E., BCEE [redacted]	Andy Beard [redacted]	
Requirement for Permit:	The City regulates all floodplain and floodway filling activities.	The federal government regulates construction activities within jurisdictional waters of the U.S. (streams and wetlands); The 404 NWP will cover minor impacts to the Olentangy River.	The State of Ohio regulates all earth disturbing activities in excess of 1 acre.	The State of Ohio regulates the installation of all sanitary facilities	For grading and sanitary or storm sewer installation	Encroachment within existing Environmental Covenant
Regulatory Authority:	Chapter 1150 of the City's Codified Ordinances.	Section 404 of the Clean Water Act	ORC 6111.04	ORC 6111.44 and 6111.45 and OAC 3745-42	See City Code	Refer to Environmental Covenant agreement
Preceding Activities:	Olentangy River floodplain model is available for use from Cannon Drive project.	Coordination with the Ohio EPA will need to be completed to discuss impacts within the existing Environmental Covenant area prior to any work completion. A mussel survey/relocation investigation will need to be completed prior to any work being completed in the Olentangy River. A meeting with OEPA representatives is needed for confirmation of an understanding of previously established overlapping permits.	A new NOI will be required for this work.	Obtain Plan approval from Columbus Public Utilities or a letter from DOSD Administrator supporting the project.		City/OSU have rights to maintain the existing siphon in the Environmental Covenant agreement. Coordination with OhioEPA required.

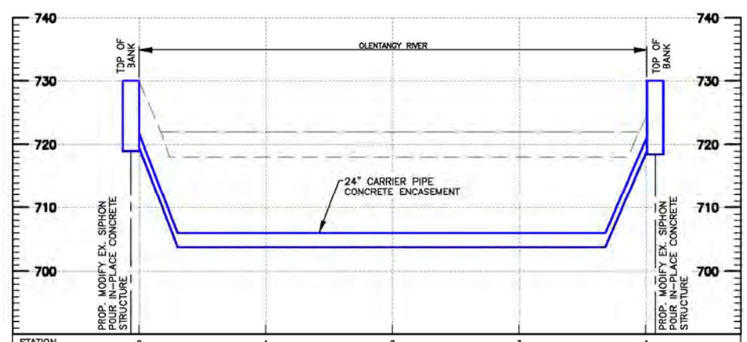
Table (Continued)

Permit	Special Flood Hazard Area Development and Use (Floodplain) Permit	Section 404 Nationwide Permit	Notice of Intent (NOI)	Permit-to-Install (PTI)	CC Plan Storm/Sanitary Sewer	OhioEPA Environmental Covenant Encroachment
Pending Activities:	A flood hazard impact study will be required for the temporary causeway. City may require a CLOMR for the causeway for temporary increases to the 100-year flood elevations. With the changes to the pending SWDM, EMH&T cannot predict a response from Cols and FEMA. Discussions with Ann Aubry are needed to confirm if the City will require a "No-Rise" certification for the temporary causeway and how this overlaps with the Engie bridge construction. The City will approve a floodplain permit by signing the final engineering plans; they will not approve the floodplain permit until the CLOMR is issued (if a CLOMR is required).	Prepare and submit a Section 404 NWP for the proposed temporary causeway and open-cut siphon trench associated with the project. We anticipate no permit action will be required with the State of Ohio (OEPA) at this time. A restoration plan may be required by the OEPA for any temporary impacts associated with the temporary causeway, open-cut trench and site access required within the Environmental Covenant area. Stream/Wetland impact mitigation may be required for stream/wetland impacts associated with the project depending on the amount of impacts.	Prepare SWPPP document and NOI application form. Under the new statewide permit, the SWPPP must now be submitted to the OEPA with the NOI application. The SWPPP must document compliance with post-construction water quality requirements, which may also be changing from the current requirements.	It is undetermined at this time if a PTI is needed. If needed, we will accelerate plan approval for the sanitary sewer improvements. In the past, we have requested the City allow submittal of an original "blue signature" plan set to OEPA with the City initial DPU Director signature and EMH&T stamp to allow the PTI process to start.	Prepare plans for sanitary siphon expansion. Coordinate siphon plans with future Cannon Drive Phase 2 levee. Review compliance with upcoming SWDM requirements, as applicable. Details as of 3/1/2021 are pending final release from City of Cols. Updates will include - Easements needed for BMPs - Easements required for stream corridor protection zone prior to signatory of the construction plans - As-built certification for BMPs - Construction bond for BMPs - Variance for detention volume below floodplain elevation.	A restoration plan may be required by the OEPA for any temporary impacts associated with the temporary causeway, open-cut trench and site access required within the Environmental Covenant area.

Notes:
1. Conversations with Engie and OSU are required by no later than April 16, 2021 to establish a schedule for overlapping of permits to further evaluate and then present to other stakeholders.
2. Conversations with OEPA and Columbus must begin by no later than May 3, 2021 to ensure that current permitting is clearly understood and a pathway is established moving forward for potential overlaps with permits.
3. In order to start construction by June 2022, EMH&T will need to be released for permitting and design by June 1, 2021 to ensure permits can be processed in time.



PLAN VIEW



STATION	0	1	2	3	4
EX GROUND	729.95	718.00	718.00	718.00	724.21
INVERT	719.00	703.83	703.83	703.83	718.10
CUT	10.95	14.17	14.17	14.17	6.11

PROFILE VIEW
CONNECTION AT
EXISTING SIPHON

HORIZ 0 25 50 100
1 Inch = 50 Feet
VERT 0 5 10 20
1 Inch = 10 Feet

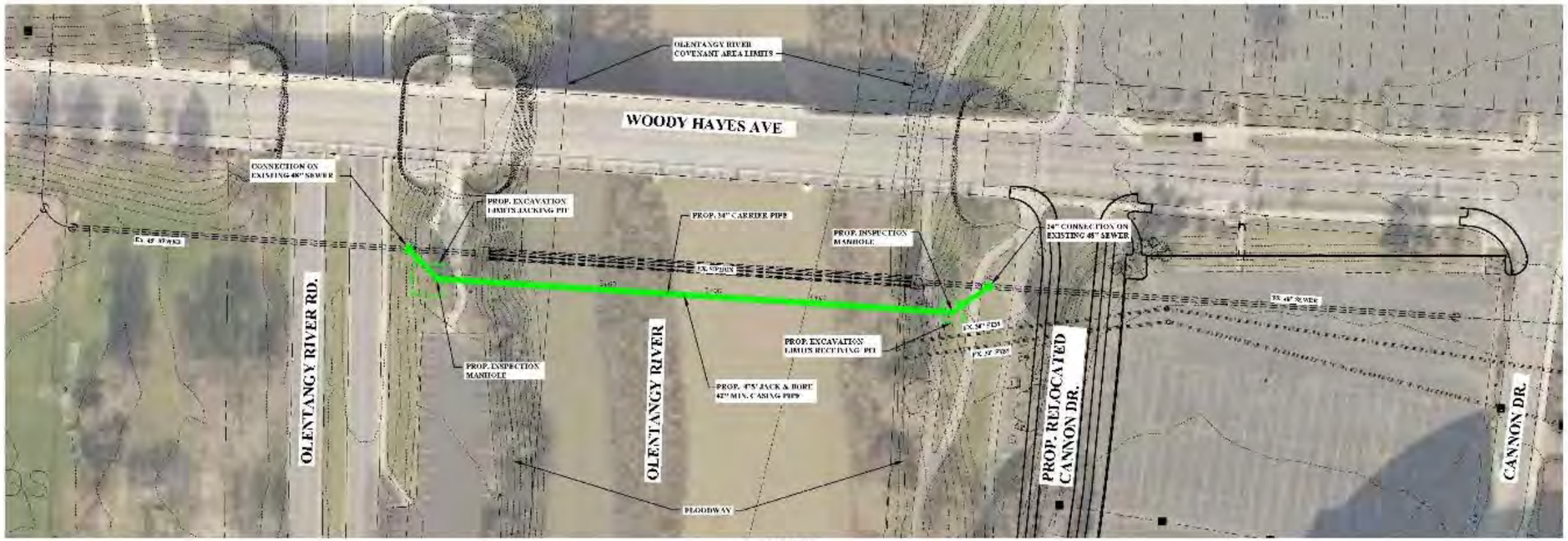
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

THE OHIO STATE UNIVERSITY
WEST CAMPUS INFRASTRUCTURE STUDY
SANITARY SEWER IMPROVEMENTS
48" TRUNK SEWER SIPHON CROSSING
OLENTANGY RIVER NEAR WOODY HAYES AVE.
OPTION 1 OPEN CUT

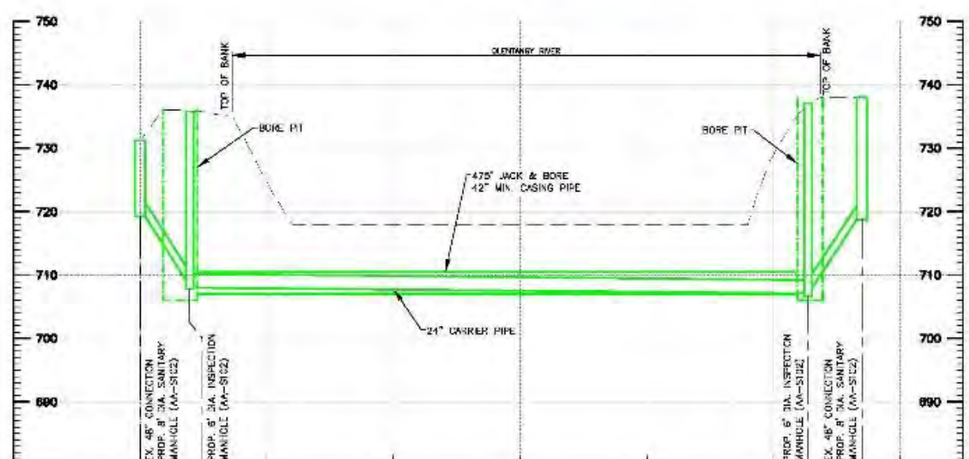
EMH&T
Evans, Mechwart, Hambleton & Tilton, Inc.
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

Date: APRIL, 27 2021
Scale: H: 1" = 50' V: 1" = 10'
Job No: 2020-1299
Sheet 1 of 1

Figure 12.7.2A



PLAN VIEW



PROFILE VIEW

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

THE OHIO STATE UNIVERSITY
WEST CAMPUS
INFRASTRUCTURE STUDY
SANITARY SEWER IMPROVEMENTS
48" TRUNK SEWER SIPHON CROSSING
OLENTANGY RIVER NEAR WOODY HAYES AVE.
OPTION 1: JACK AND BORE

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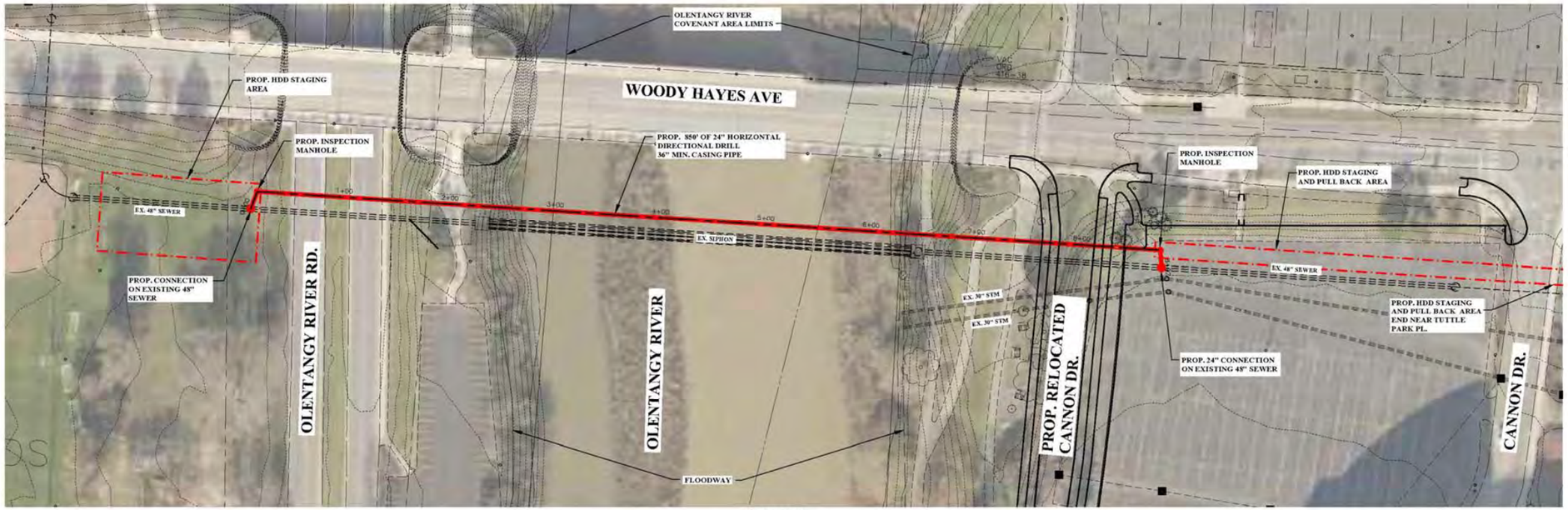
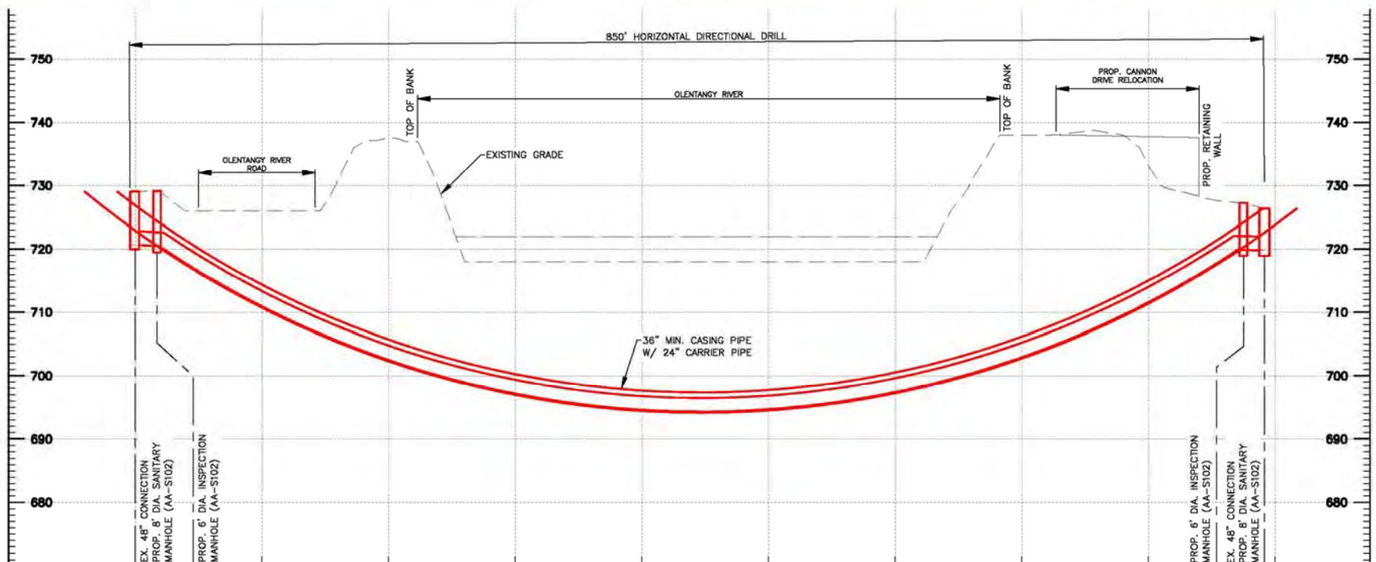
4670 New Albany Road Columbus, OH 43054
Phone: 614-775-4500 Toll Free: 866-775-3648
emht.com

Date: APRIL 27 2021
Scale: H: 1" = 20' V: 1" = 10'
Job No. 2014 1299
Sheet 1 of 1

Figure 12.7.2B



PLAN VIEW



STATION	0	1	2	3	4	5	6	7	8	9
EX GROUND	729.05	726.00	737.57	718.00	718.00	718.00	718.00	738.01	733.22	
INVERT	720.66	710.74	702.32	696.98	694.42	694.50	697.22	702.74	711.38	
CUT	8.38	15.26	35.25	21.02	23.58	23.50	20.78	35.27	21.84	

PROFILE VIEW

HORIZ 0 25 50 100
1 inch = 50 feet
VERT 0 5 10 20
1 inch = 10 feet

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

THE OHIO STATE UNIVERSITY
WEST CAMPUS INFRASTRUCTURE STUDY
SANITARY SEWER IMPROVEMENTS
48" TRUNK SEWER SIPHON CROSSING
OLENTANGY RIVER NEAR WOODY HAYES AVE.
Horizontal Directional Drilling

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Phone: 614.775.4500 Toll Free: 888.775.3648
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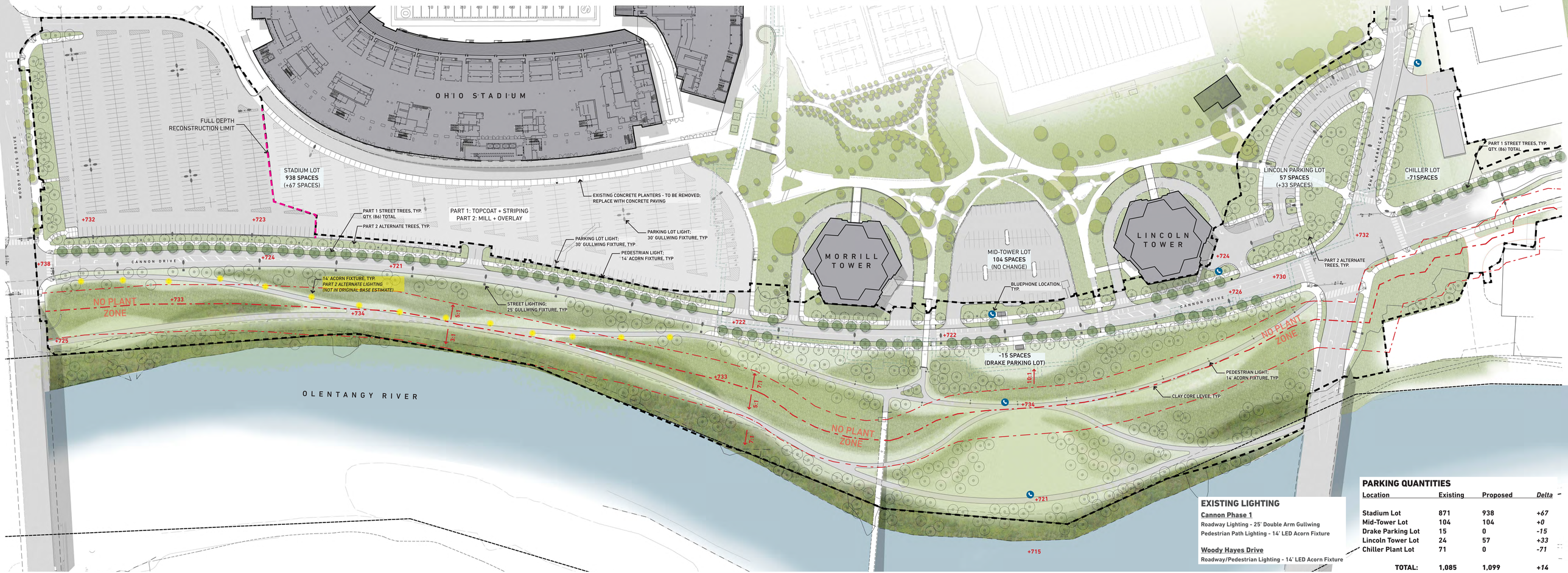
Date: APRIL, 27 2021
Scale: H: 1" = 50' V: 1" = 10'
Job No: 2020-1299
Sheet 1 of 1

Figure 12.7.2C



EXISTING LIGHTING

Cannon Phase 1

Roadway Lighting - 25' Double Arm Gullwing

Pedestrian Path Lighting - 14' LED Acorn Fixture

Woody Hayes Drive

Roadway/Pedestrian Lighting - 14' LED Acorn Fixture

PARKING QUANTITIES

Location	Existing	Proposed	*Delta*
Stadium Lot	871	938	*+67*
Mid-Tower Lot	104	104	*+0*
Drake Parking Lot	15	0	*-15*
Lincoln Tower Lot	24	57	*+33*
Chiller Plant Lot	71	0	*-71*
TOTAL:	**1,085**	**1,099**	**+14**

0 40' 80'

CANNON DRIVE - PHASE 2

THE OHIO STATE UNIVERSITY

OCTOBER 2022

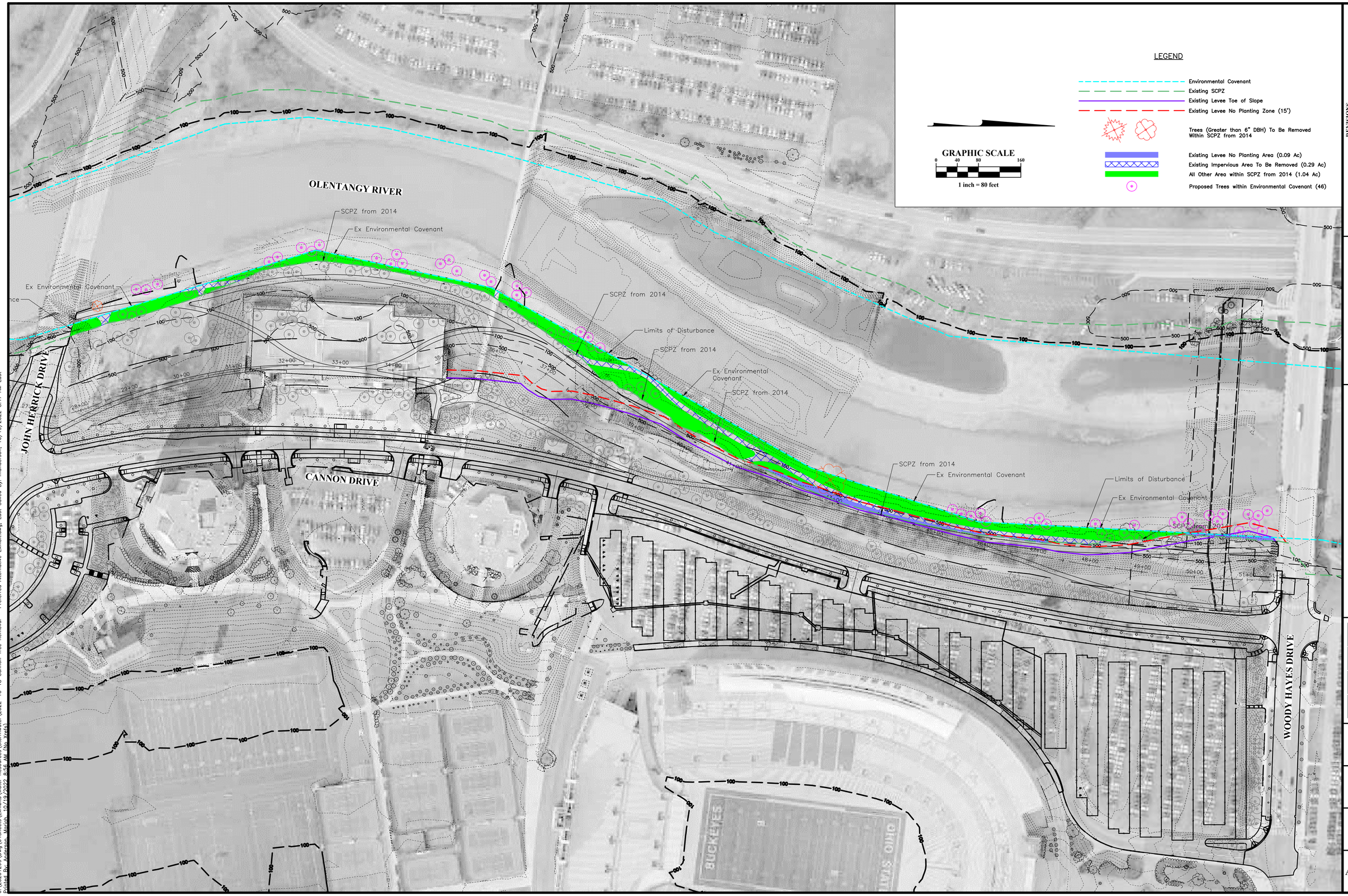
ATTACHMENT 4

LANDSCAPE SCROLL PLOT

85% GMP4 10-10-2022

EMH&T Engineers, Surveyors, Planners, Scientists

MKSK



REVISIONS

MARK	DATE	DESCRIPTION

THE OHIO STATE UNIVERSITY

CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO
STORMWATER MANAGEMENT
FOR

PARCEL 010-067007-00

SCPZ FROM 2014 (PER ATTACHMENT 1) AREA INCLUDED IN VARIANCE

EMH&T
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Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

DATE
October 19, 2022

SCALE
1" = 80'

JOB NO.
2020-1299

SHEET
Attachment 5

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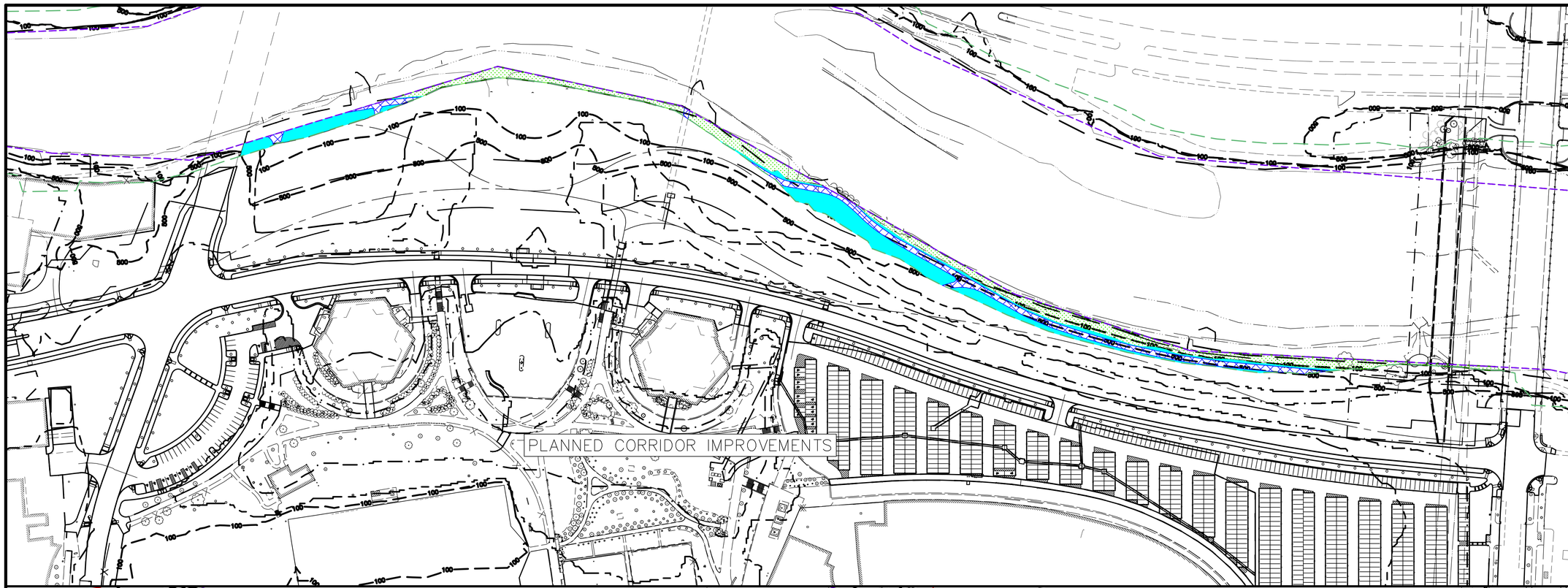

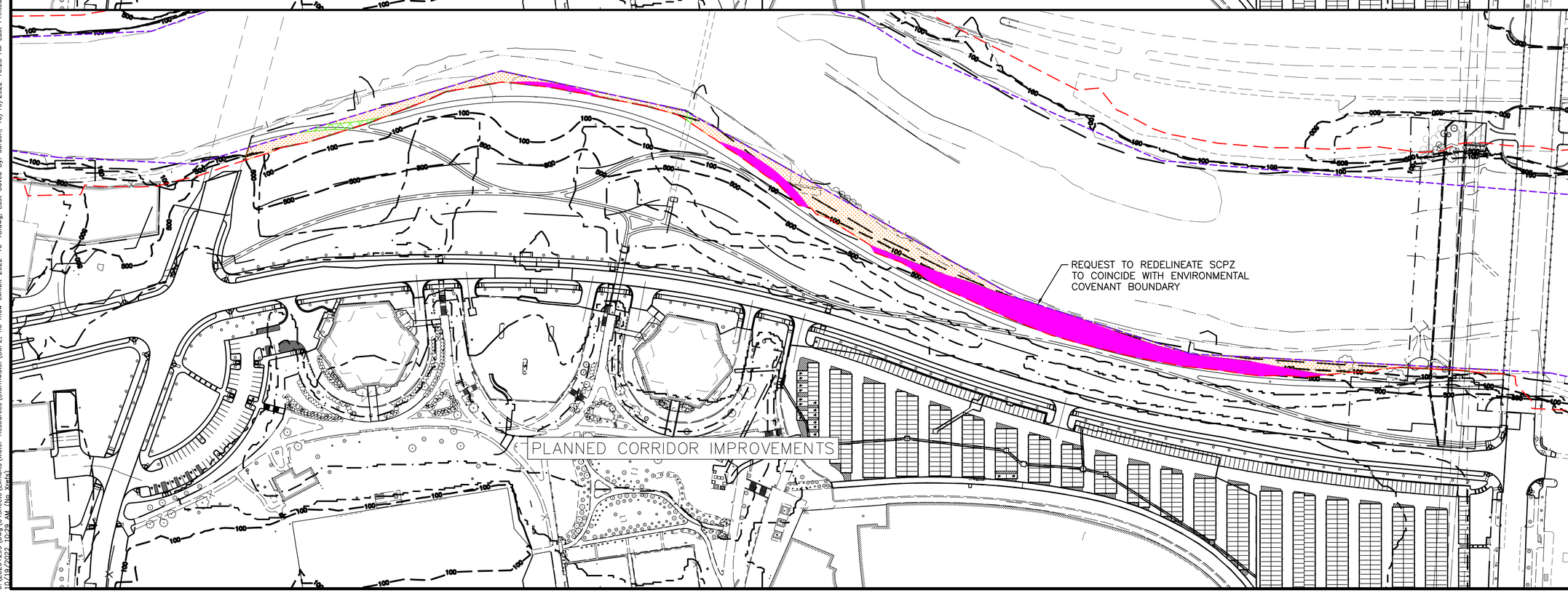

ENVIRONMENTAL COVENANT

EXISTING STREAM CORRIDOR PROTECTION ZONE

EXISTING NO MOW AREA WITHIN SCPZ

EXISTING MOWED AREA WITHIN SCPZ

EXISTING IMPERVIOUS AREA WITHIN SCPZ

EXISTING SCPZ LANDUSE		
NO MOW AREA	MOWED AREA	IMPERVIOUS AREA
0.63 Ac	0.50 Ac	0.29 Ac
Total SCPZ = 1.42 Ac		

EXISTING SCPZ/NO IMPACT

GRAPHIC SCALE

0 50 100 200

1 inch = 100 feet

ENVIRONMENTAL COVENANT/ PROPOSED STREAM CORRIDOR PROTECTION ZONE

EXISTING STREAM CORRIDOR PROTECTION ZONE

PLANNED NO MOW AREA WITHIN EXISTING SCPZ

PLANNED MOWED AREA WITHIN EXISTING SCPZ

PLANNED IMPERVIOUS AREA WITHIN EXISTING SCPZ

PLANNED LANDUSE		
NO MOW AREA	MOWED AREA	IMPERVIOUS AREA
0.79 Ac	0.60 Ac	0.03 Ac
Total SCPZ = 1.42 Ac		

PREFERRED ALTERNATIVE

REVISIONS

MARK	DATE	DESCRIPTION

THE OHIO STATE UNIVERSITY

CITY OF COLUMBUS, FRANKLIN COUNTY, OHIO
STORMWATER MANAGEMENT
FOR

PARCEL 010-067007-00

STREAM CORRIDOR PROTECTION ZONE LAND COVERAGE EXHIBIT

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DATE
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SCALE
1" = 100'

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2020-1299

SHEET
Attachment 6

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