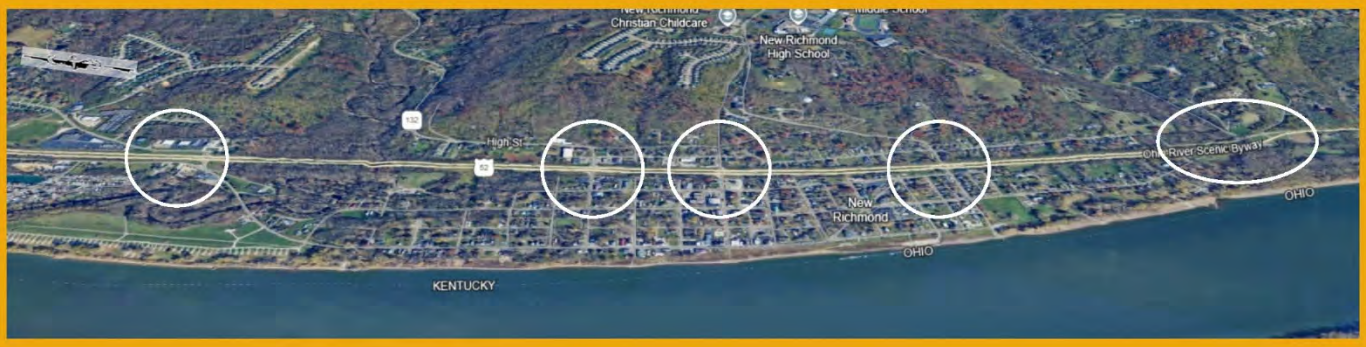
CLE-US 52-4.67 NEW RICHMOND

PID 114042

US 52 in the Village of New Richmond, OH
US 52 from Front Street to just beyond Adamson Street



DRAFT

Village of New Richmond, Ohio

May 20, 2026

143Engineers
3249 Plateau Place
Cincinnati, Ohio 45241

Village of NEW RICHMOND

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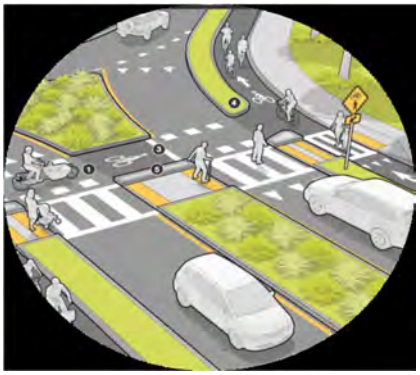
I. INTRODUCTION

US 52 began in 1926 as a two-lane, low-speed roadway with multiple driveways. In the 1960s, engineers converted it into a divided, high-speed, four-lane highway. This transformation split the Village of New Richmond, Ohio, in half and eliminated its original connectivity. Officials later abandoned plans to extend the highway to Portsmouth in the 1970s and rerouted the divided, high-speed, four-lane highway north to State Route 32 to get to Portsmouth via SR 23.

Today, the Village of New Richmond actively seeks to address the challenges created by US 52's high-speed design and operating conditions. The highway's high-speed design and lack of pedestrian crossing amenities at intersections have led to unsafe pedestrian crossings that separate parts of the New Richmond from parks, business districts, and residences. Seventy-four percent of drivers exceed the posted 50-mph speed limit. Many fail to stop at red lights, as testified by US 52 road users. Pedestrians do not have marked crosswalks, signal timing, or signal heads to aid them in crossing the long crossing lengths at the intersections. Bicyclists can use the travel lane; however, bicyclists unable to travel at highway speeds will ride on the adjacent marked shoulder while vehicles pass them at high operating speeds with no barriers. Pedestrians also use the shoulder to walk along the corridor, despite the absence of pedestrian facilities.

The Village's 2016 Comprehensive Plan identifies this project as a needed improvement. The project creates a shared-use path through a road diet, reducing 4 lanes to 2 lanes. The excess travel pavement and the existing buffered bike lane along US 52 will be converted into a shared-use path. This change improves safety for both bicyclists and pedestrians by increasing the distance between high-speed motorized traffic and low-speed travel modes. It also creates a new leg of a hike-and-bike trail through the Village proper.

The Village proposes a "road diet" to reduce US 52 from four to two lanes, calming traffic and reducing speeding. Roundabouts at the intersections of Front, Sycamore, Walnut, and Augusta Streets will further calm traffic at these intersections and improve safety.



The proposed shared-use path will create a low-stress bicycle facility that accommodates non-motorized travel along US 52. On June 15, 2020, the project team presented a conceptual layout to the Village Council, which voted to proceed with the initiative. Since then, the Village has secured grants covering 100% of the design and construction costs for Phase 1 improvements. Engineers have conducted numerous studies, including capacity analyses, crash reviews, and speed studies, to inform the selection of alternatives. They have also evaluated infrastructure conditions, utility locations, right-of-way needs, roadway and hydraulic concepts, environmental factors, maintenance of traffic, and costs. The project continues to advance under ODOT's Path 3 Project Development Process.

II. PURPOSE & NEED SUMMARY

Purpose

The Village of New Richmond seeks to enhance connectivity and safety for vulnerable roadway users (pedestrians, bicyclists, golf carts, etc.) traveling across and along US 52. The project also aims to reduce the Bicycle Level of Traffic Stress along US Bike Route 21 within the Village of New Richmond.

Need

The US 52 corridor currently functions as a high-speed roadway within a limited-access right-of-way. Bicycle traffic uses the buffered bike lane designated for US Bike Route 21, but this facility creates a physical barrier for vulnerable roadway users attempting to cross US 52 as the high-speed divided highway creates a significant physical and psychological barrier for vulnerable road users such as pedestrians, bicyclists, children, older adults, and people with disabilities. These roadways are typically very wide—often 70 to 100 feet or more—making crossings long and difficult, especially for those who move more slowly. High vehicle speeds reduce drivers' ability to stop and increase the severity of crashes, while also making people feel unsafe attempting to cross. In addition, users must navigate

multiple lanes of traffic in both directions with numerous potential conflict points, making crossings more complex and stressful. These factors discourage walking and biking and effectively divide communities, making it harder for people to safely access schools, businesses, parks, and other destinations on the opposite side of the road.

Secondary Goals

- Calm traffic and improve vehicle safety along US 52.
- Support economic development along the shared-use path within the Village.
- Improve safety at the four intersections in the study area on US 52.
- Maintain an acceptable Level of Service and minimize congestion for vehicles traveling along US 52.



Pedestrians, lacking physical accommodations, have resorted to walking in the buffered bike lane along US 52. The corridor does not provide a safe pedestrian route along US 52.

Engineers defined the project limits based on roadway transitions and key intersections. The northern limit ends at the intersection of US 52 and Front Street. The southern limit begins 1,550 feet south of the US 52/Adamson Road intersection, where the corridor transitions from a four-lane divided highway to a two-lane roadway with unrestricted access. See map.

Engineers defined the project limits based on roadway transitions and key intersections. The northern limit ends at the intersection of US 52 and Front Street. The southern limit begins 1,550 feet south of the US 52/Adamson Road intersection, where the corridor transitions from a four-lane divided highway to a two-lane roadway with unrestricted access. See map.

The proposed US 52 transportation improvement project provides independent utility by delivering benefits that stand alone from future regional connectivity projects. The Village will convert US 52 from a four-lane divided roadway to a two-lane facility, with intersections designed to lower vehicle speeds, and incorporate a separated shared-use path. The project will improve safety, accessibility, and multimodal connectivity within the Village. Additionally, it will support local economic development opportunities by providing access for pedestrians and bicyclists from the shared-use path to potential development sites. These potential sites adjacent to the shared-use path would have motorized vehicle access from existing parallel streets.

The project limits, from Front Street to 1,550 feet south of Adamson Road, align with logical transition points and Village connections. The proposed improvements, which include reducing travel speeds at the intersections, enhancing multimodal connectivity, and improving intersection safety, function effectively on their own. The project will deliver independent, self-sustaining benefits that address local safety and transportation needs while supporting the Village's long-term development goals.

III. ALTERNATIVES CONSIDERED

A. Alternative 1-No Build

The alternative to this project is the no-build option. Under this option, the facility will be maintained by officials at the existing signalized intersections at Front Street, Sycamore Street, and Augusta Street, and will exclude pedestrian crossing amenities. These

amenities, such as pedestrian signals or marked crosswalks, will not be added. Pedestrians will continue to cross at unmarked crosswalks measuring 90 feet, more than twice the distance required under the road diet alternatives.

The roadway will remain a four-lane, divided highway with buffered bike lanes, and no pedestrian amenities will be provided along the corridor. Officials will maintain the absence of marked pedestrian crosswalks at the intersections of US 52 & Front Street, US 52 & Sycamore Street, and US 52 & Augusta Street.

US 52's right shoulder, already converted to a six-foot buffered bike lane with a two-foot striped buffer as part of the buffered bike lane, US Bike Route 21, will continue to force bicyclists to travel adjacent to high-speed lanes. This design will keep the Bicycle Level of Traffic Stress at 4, the highest level, according to the Ohio, Kentucky, and Indiana Regional Council of Governments. Bicycle Level of Traffic Stress (BLOTS) is defined as these four levels:

Bicycle Level of Traffic Stress 1: Most children can feel safe riding on those streets/bicycle facilities.

Bicycle Level of Traffic Stress 2: The mainstream "interested by concerned" adult population will feel safe riding on these streets/bicycle facilities.

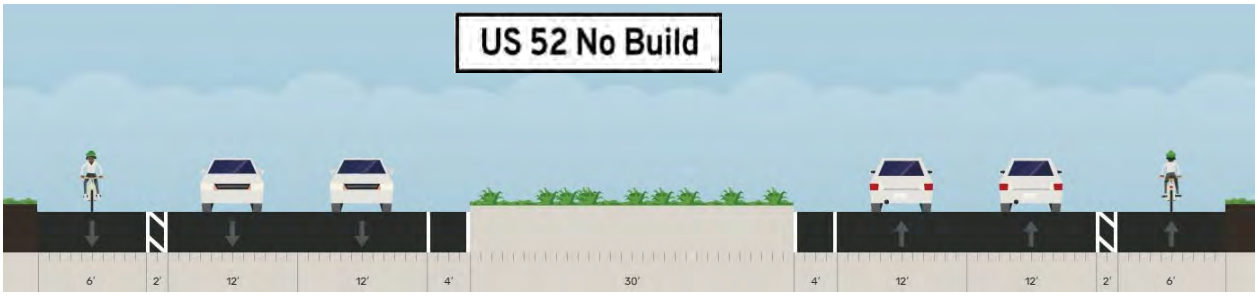
Bicycle Level of Traffic Stress 3: Streets that are acceptable to "enthused and confident" riders who still prefer having their own dedicated space.

Bicycle Level of Traffic Stress 4: High-stress streets with high-speed limits, multiple travel lanes, limited or non-existent bikeways, and long intersection crossing distances.



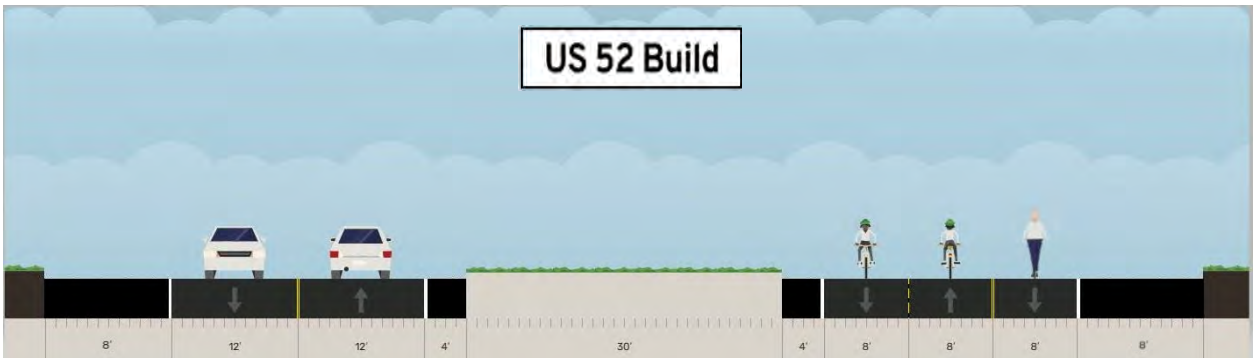
Historical data indicate that 74% of drivers exceed the posted 50-mph speed limit, and this trend is likely to persist without changes to the road geometry that influence driving behavior. Bicyclists and pedestrians who use the buffered bike lane remain dangerously close to high-speed traffic.

Officials will preserve the limited-access right-of-way in the project area, which restricts future development opportunities. Since the project does not address the purpose and need, the no-build is dismissed.



B. Build-Road Diet

The project will redesign the roadway with a road diet, reallocating the existing pavement to one lane in each direction to calm traffic. At the southern end of the project, the road will continue the road diet to meet the existing two-lane roadway.



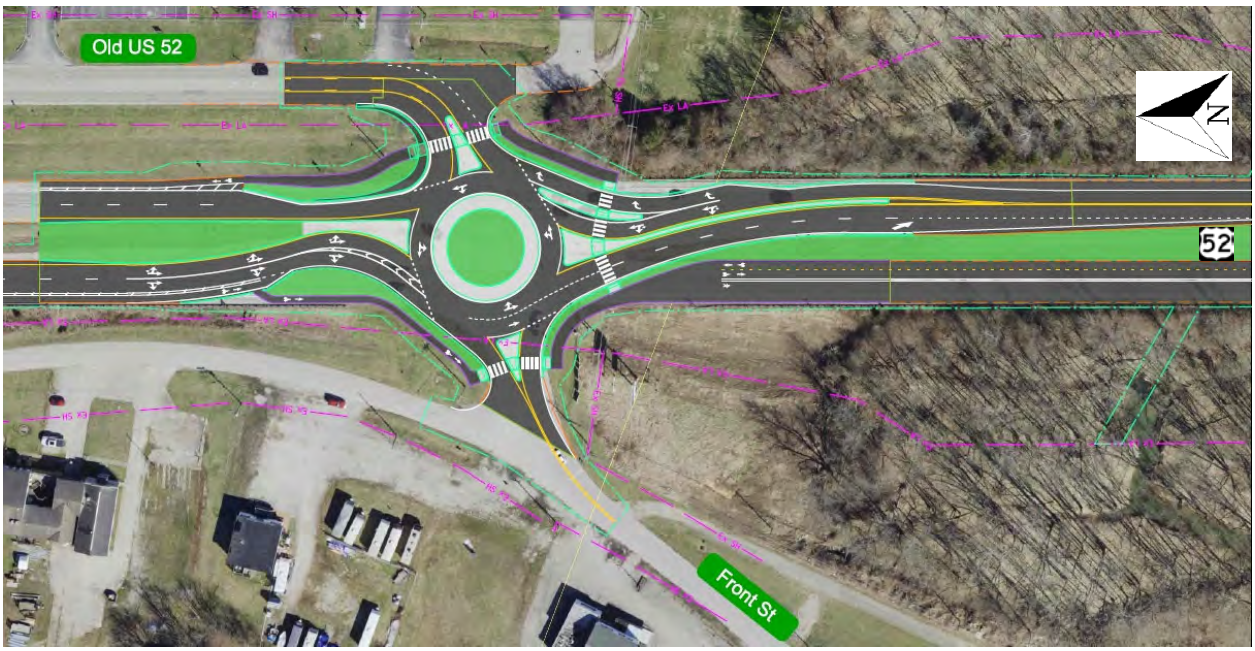
The project repurposes the two existing southbound lanes into a shared-use path and lowers the Bicycle Level of Traffic Stress from 4 to 1, as rated by the Regional Council of Governments. The design provides a 38-foot separation between bicyclist/pedestrian amenities and the motorized travel lanes. The bicyclist will have a 16-foot-wide bike path, and the pedestrians will have an 8-foot-wide walking path that allows pedestrians to walk comfortably and safely along US 52. Pedestrian crossing distances across US 52 are 32 feet at roundabout intersections and 36 feet at signalized intersections, with ADA-

compliant ramps at both ends of the crosswalk. The Build- Road Diet alternative creates new opportunities for future development along the shared-use path.

a. Alternative 2-Road Diet with Roundabout Intersections

In this Build option, the project will convert the intersections at Front Street, Sycamore Street, Walnut Street, and Augusta Street into roundabouts. Splitter islands-raised or painted areas-separate traffic flow on each approach. The tables shows the number of multimodal conflict points and the crossing distances for each roundabout.

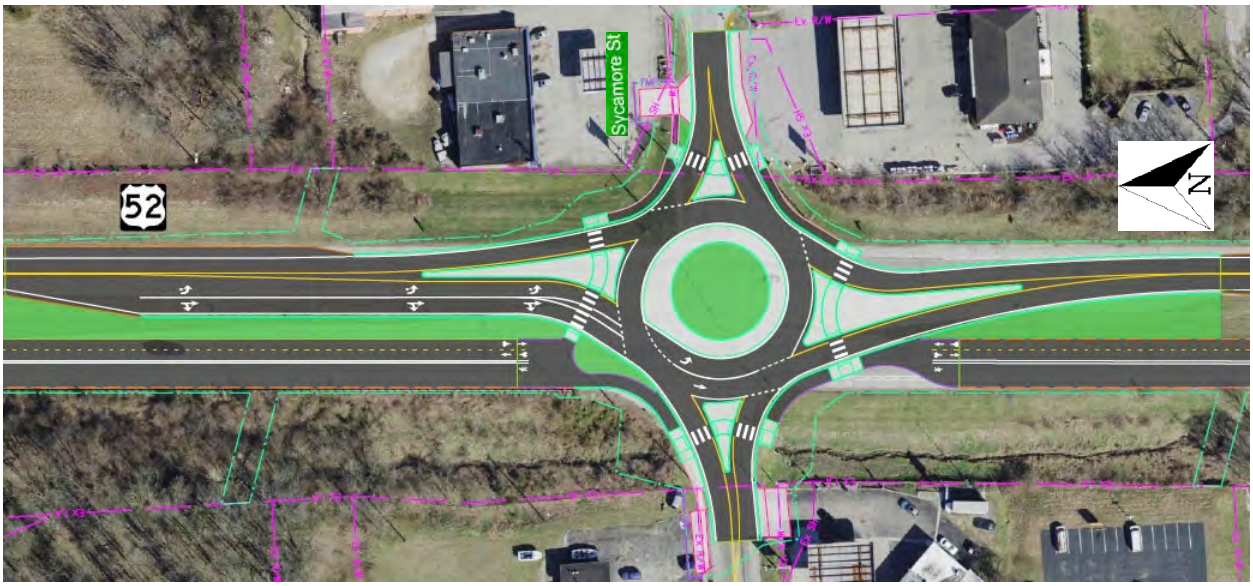
US 52 and Front Street Roundabout



Front Street				
# Multi Modal Conflict Points				Distance to Cross
US 52	South Side	NB	2*	17.5' and 15.2'
		SB	2	26.7'
Front St	West Side	EB	1	20.9'
		WB	1	23.1'
Old US 52	East Side	EB	1	19.7'
		WB	1	18.7'

* Separated by raised island

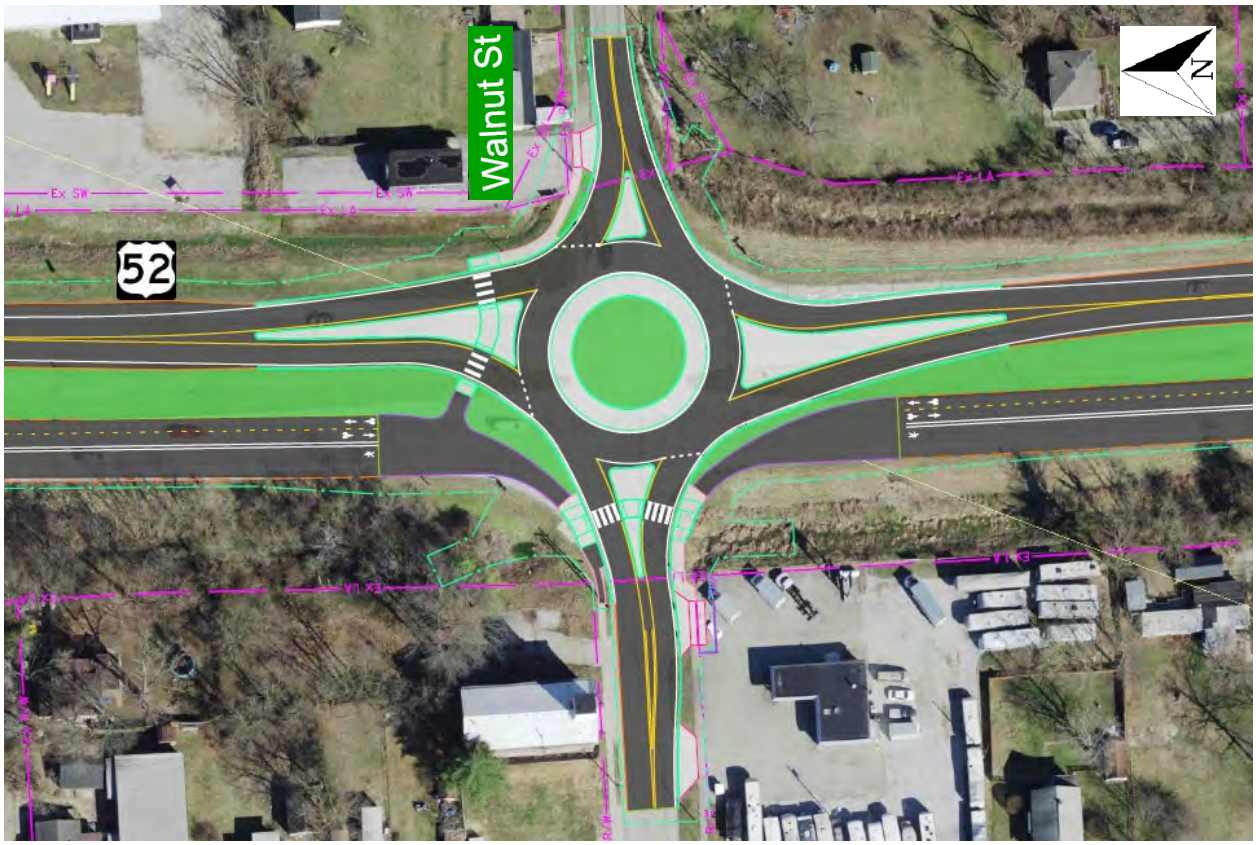
US 52 and Sycamore Street Roundabout



Sycamore Street				
# Multi Modal Conflict Points				Distance to Cross
US 52	South Side	NB	1	18.0'
		SB	2	27.5'
US 52	North Side	NB	1	19.6'
		SB	2*	30.2'
Sycamore St	West Side	EB	1	18.0'
		WB	1	17.0'
Sycamore St	East Side	EB	1	16.9'
		WB	1	19.5'

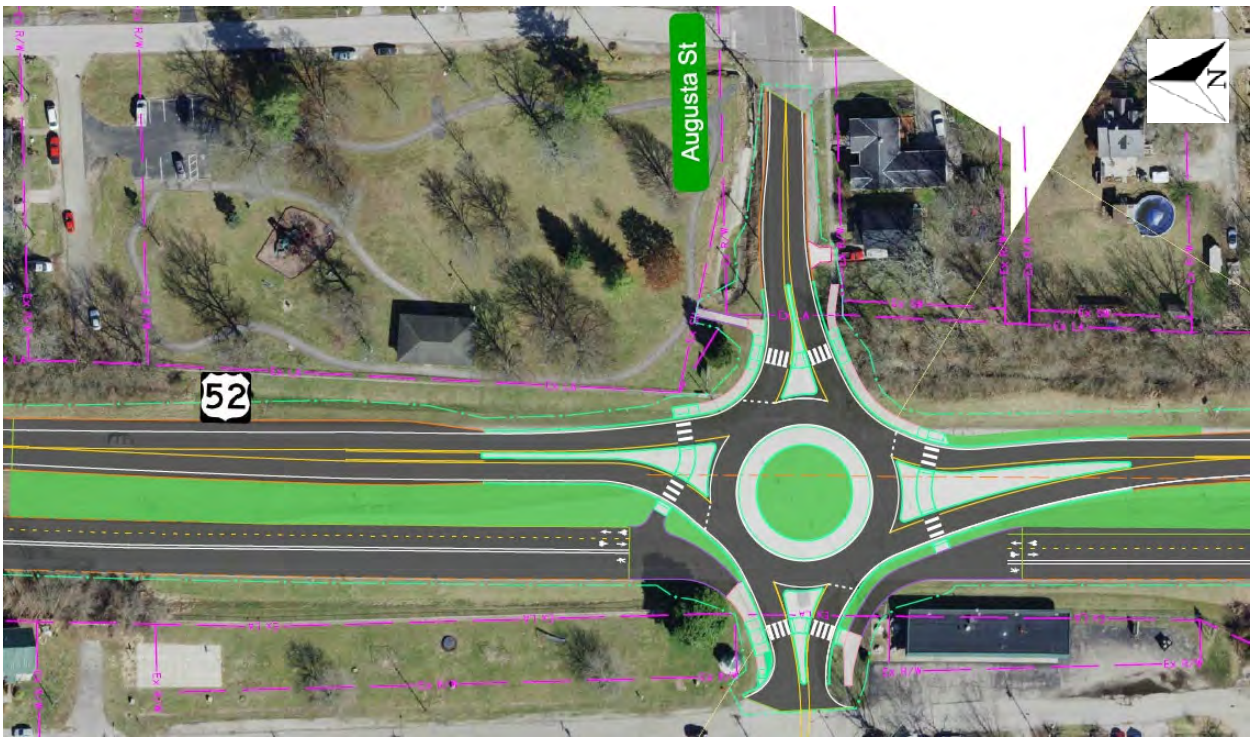
* Separated by raised island

US 52 and Walnut Street Roundabout



Walnut Street				
# Multi Modal Conflict Points				Distance to Cross
US 52	North Side	NB	1	17.7'
		SB	1	18.0'
Walnut St	West Side	EB	1	18.0'
		WB	1	16.7'

US 52 and Augusta Street Roundabout



Augusta Street				
# Multi Modal Conflict Points				Distance to Cross
US 52	South Side	NB	1	18.0'
		SB	1	17.3'
US 52	North Side	NB	1	12.0'
		SB	1	12.0'
Augusta St	West Side	EB	1	18.0'
		WB	1	16.4'
Augusta St	East Side	EB	1	16.8'
		WB	1	18.8'

US 52 serves as a major route that creates a barrier for local movement, especially for non-motorized users. Roundabouts provide controlled, low-stress crossing points at key intersections, reconnecting both sides of the corridor and encouraging multimodal travel for vulnerable users, such as pedestrians and bicyclists on the shared-use path. The roundabouts reduce vehicle–pedestrian conflict points compared to a traffic signal alternative.

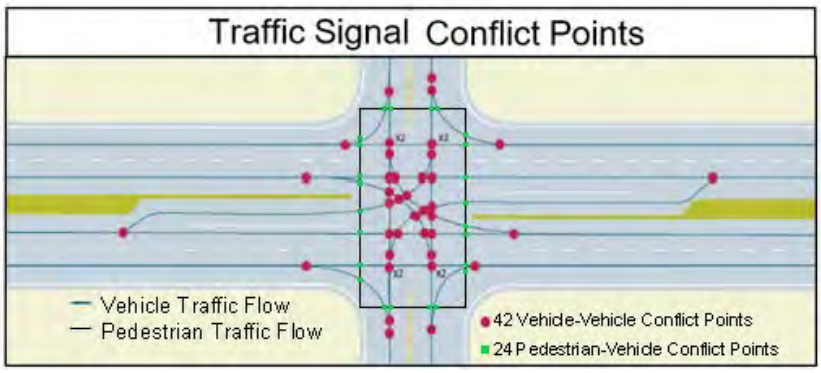
Splitter islands on the approaches separate traffic flow and reduce shared-use path crossings to one direction of traffic at a time. They also shorten shared-use path distances by dividing the crossing into two segments and providing a refuge in the middle of the crossing. The roundabout graphics on the previous pages show that pedestrians cross a maximum of two lanes without a break, with a maximum length of 27.5 feet, with only two vehicle–pedestrian conflict points.

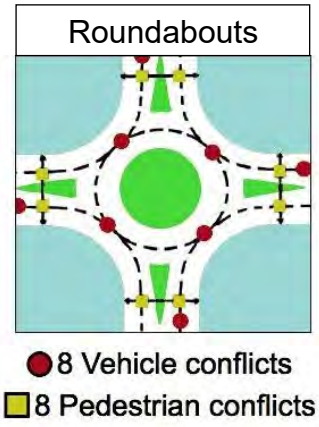
Roundabouts promote slower vehicle speeds, typically 20–25 mph, which dramatically reduce crash severity. Slower speeds give drivers more time to see and yield to pedestrians and bicyclists, lowering the risk of fatal or serious injuries. Roundabouts create safer conditions by slowing traffic and encouraging drivers to yield to vulnerable road users. Slower travel speeds and intersection lighting also increase driver awareness, improving the visibility of pedestrians and bicyclists in the crosswalk.

Pedestrians and bicyclist users experience shorter wait times because they can cross during gaps in slower-moving traffic. They also benefit from shorter, simpler crossings because roundabout crosswalks are located outside the circular traffic flow, where driver behavior is more predictable.

A roundabout eliminates left- and through-movements at an intersection, creating only eight vehicle-to-vehicle conflict points: four merging actions, where entering vehicles join the circulating traffic, and four diverging actions, where exiting vehicles leave the circulatory roadway. The design eliminates crossing perpendicular conflicts and reduces the likelihood of the most severe crash types.

At roundabouts, crashes typically involve low-speed sideswipes or rear-end collisions and rarely cause serious injury or fatalities. In contrast, a signalized intersection with four approaches and full turning movements creates 42 vehicle-to-vehicle and 24 pedestrian-vehicle conflict points, increasing the frequency of high-speed angle and turning crashes, often with injuries or fatalities. There are 8 vehicle–vehicle and 8 vehicle-pedestrian conflict points with a roundabout.





A roundabout reduces travel speeds to 20–25 mph, which lowers the severity of crashes at the intersection. Studies by the Federal Highway Administration and the Insurance Institute for Highway Safety show that roundabouts reduce fatal crashes by 90%, injury crashes by 75%, all crashes by 35–47%, and pedestrian crashes by 40% compared to traditional intersections.

People often use the terms "roundabout" and "traffic circle" interchangeably, but they describe different types of circular intersections with distinct design features and rules. A roundabout features a modern design that enhances traffic flow and safety. When entering a roundabout, drivers must yield to vehicles already circulating. Tighter curves and a smaller interior diameter in roundabout design lower vehicle speeds. The design minimizes stops and reduces the likelihood of T-bone collisions.

Traffic circles, by contrast, have very large interior diameters. In some traffic circles, vehicles entering the circle have the right-of-way, causing vehicles to stop in the center circle. They may include stop signs or traffic lights inside the circle or at entry points. Traffic circles generally operate less efficiently and create more confusion than

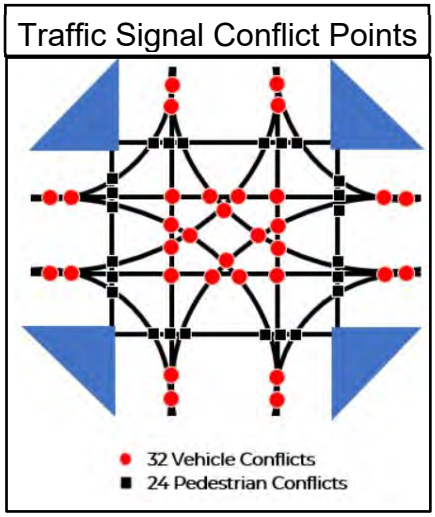
roundabouts. Drivers can tell them apart because roundabouts feel smoother and more intuitive, while traffic circles often seem chaotic with inconsistent right-of-way rules.

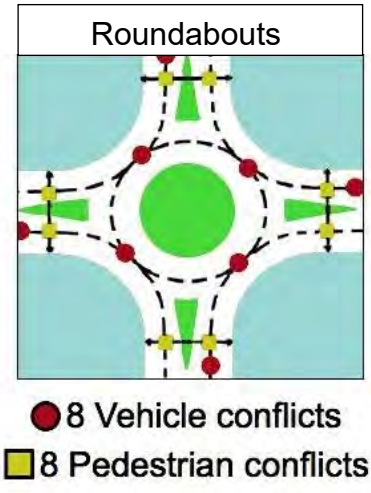
This project proposes four roundabouts, not traffic circles.

b. Alternative 3-Road Diet with Signalized Intersections

In this Build option, the project retains the signalized intersections at Front Street, Sycamore Street, Walnut Street, and Augusta Street. The travel pavement of US 52 carries vehicular traffic and includes right-turn and left-turn bays at the signalized intersections. The project converts the existing southbound US 52 pavement into a shared-use path. Although the road diet is expected to calm traffic and reduce speeding, intersection speeds remain higher than in Alternative 2-Road Diet with Roundabouts.

The Alternative 3-Road Diet with Signalized Intersections has 32 vehicle-to-vehicle and 24 pedestrian-vehicle conflict points, while the Alternative 2-Road Diet with Roundabouts has 8 vehicle-vehicle and 8 vehicle-pedestrian conflict points.





The road diet slows traffic along US 52. However, vehicles still move faster at signalized intersections than at roundabout intersections. These higher speeds give drivers less time to see people walking or biking. Signals provide pedestrian push-button crossing times, but these longer crossing times reduce the signals' effectiveness for traffic. Road diets with traffic signals reduce the crossing distance and time it takes for pedestrians to cross compared to Alternative 1: No-Build, but not as much of a reduction as with alternative 2: Road Diet with Roundabout Intersections.

Drivers often accelerate to beat green or yellow lights at signalized intersections. This acceleration, combined with the higher number of conflict points, leads to severe crashes such as T-bone angle crashes, where a left-turning vehicle strikes the side of another, and head-on crashes, both of which raise the risk of injuries and fatalities.

When speeding vehicles hit pedestrians or bicyclists, the likelihood of serious injury increases significantly. Crash statistics from the Federal Highway Administration show the danger of high vehicle speeds: at 20 mph, 18% of pedestrians struck suffer serious injury or death; at 30 mph, the rate rises to 50%; and at 40 mph, it climbs to 77%.



Alternative 3 - Road Diet with Signals, does improve safety for vulnerable road users compared to the Alternative 1 - No-Build. Alternative 3 - Road Diet with Signals includes ADA curb ramps, push buttons, shortens pedestrian crossing distances, provides high-visibility crosswalks, and provides a shared-use path along US-52. Alt 3 is a viable alternative; however, it is not as safe as Alternative 2 - Road Diet with Roundabout. Therefore, engineers eliminated it from consideration.

IV. KEY ISSUES

A. Pedestrian and Bicyclist Connectivity and Safety



Currently, vulnerable road users, pedestrians and bicyclists, must cross wide signalized intersections without crossing amenities. Motor vehicles travel at high speeds (50 mph or more) on US 52, and the absence of pedestrian signal timing forces vulnerable users to cross with traffic that is stopped or slow-moving on a green light, which creates a high risk of severe crashes when these conditions are not present.

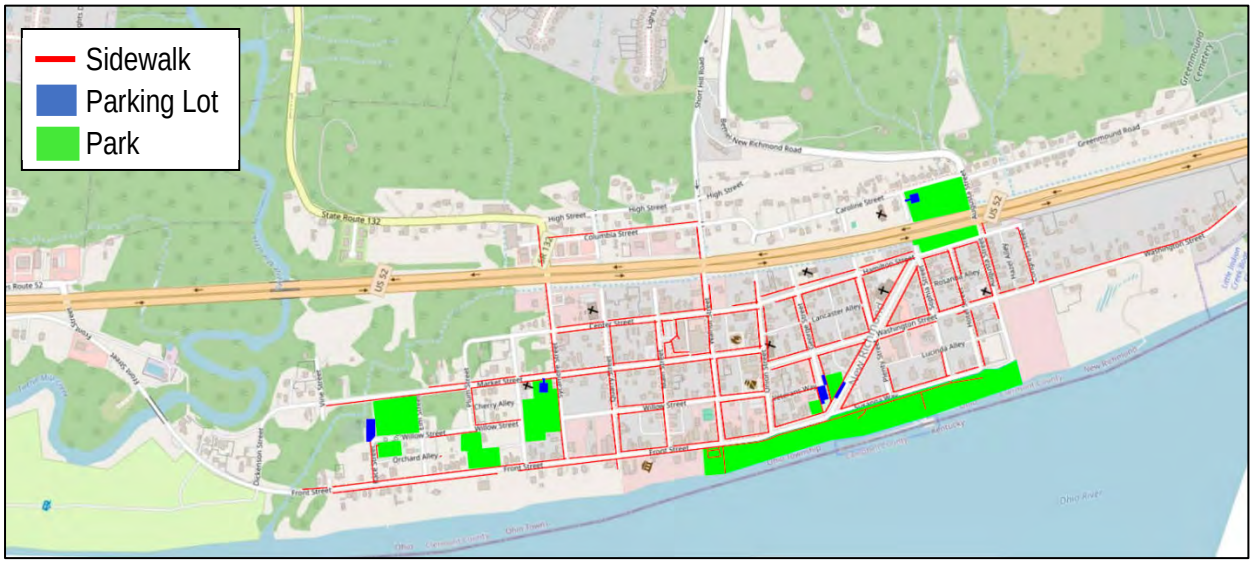
During peak events, such as school dismissals and festivals, New Richmond assigns police officers to assist pedestrians in crossing safely. Pedestrians daily walk on the buffered bike lane, since no separate pedestrian facility within the limited-access right-of-way of US 52 are provided.



As the Village pursues objectives outlined in its comprehensive plan, development is expanding on both sides of US 52, underscoring the critical need for pedestrian and bicycle safety. US 52 divides the Village into two halves. The next map identifies destinations in the Village and shows which side of US 52 they occupy. Despite this growth, the Village currently lacks essential pedestrian amenities. Intersections in the study area-Front Street, Sycamore Street, Walnut Street, and Bethel New Richmond Road-do not have marked crosswalks, pedestrian signal timing, pushbuttons, or pedestrian signal heads to help people cross US 52 safely. While these items could be installed as a short-term measure in the Alternative 1-No Build option, no funding is currently available for their implementation.



The next map shows the existing sidewalks, parking lots, and parks in the lower part of the Village. Parking is generally allowed on all local streets in the New Richmond basin.



The Village also hosts eight annual festivals (bolded), with some attracting 20,000- 40,000 attendees over two to four days. There are also other programmed events in the village, which are listed next, with one-time events:

1. Second Saturday-April to Oct
2. **Appalachian Festival-May 2nd Weekend**
3. Farmers Market Sundays-May to Oct
4. Music in the Park-Wed-May to Oct
5. Ralph Shepherd Concert Series every Friday-May to Oct
6. **Riverdays-May 22nd-24th (Fireworks 24th)**
7. **River Sweep-June**
8. **Freedomfest-July 3rd-5th**
9. **Moon Lilly Dance/Fall Bash-Oct 4th weekend**
10. **River Arts Festival-Oct 11th**
11. **Taste of New Richmond-Oct 11th**
12. **Christmas on the Ohio-Dec 6th**

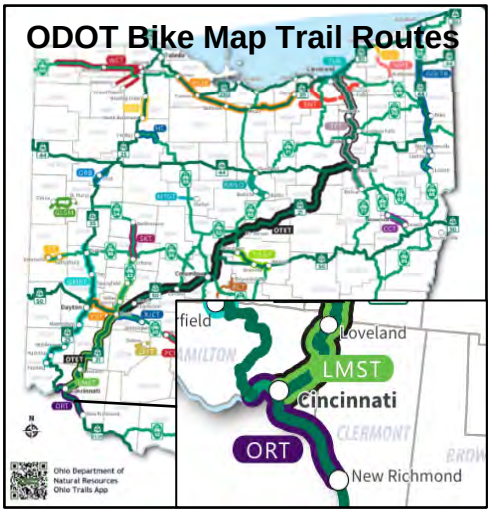
Event parking exists on both sides of US 52. Parks on both sides of the Village basin also generate more pedestrian and bicycle traffic along and across US 52.

In 2024, the Village passed a Golf Cart Ordinance allowing residents and RVers to drive golf carts within the Village core and to cross US 52 at the Front Street intersection to reach destinations such as the grocery store, library, and fast-food restaurants in the Old US 52 business corridor.

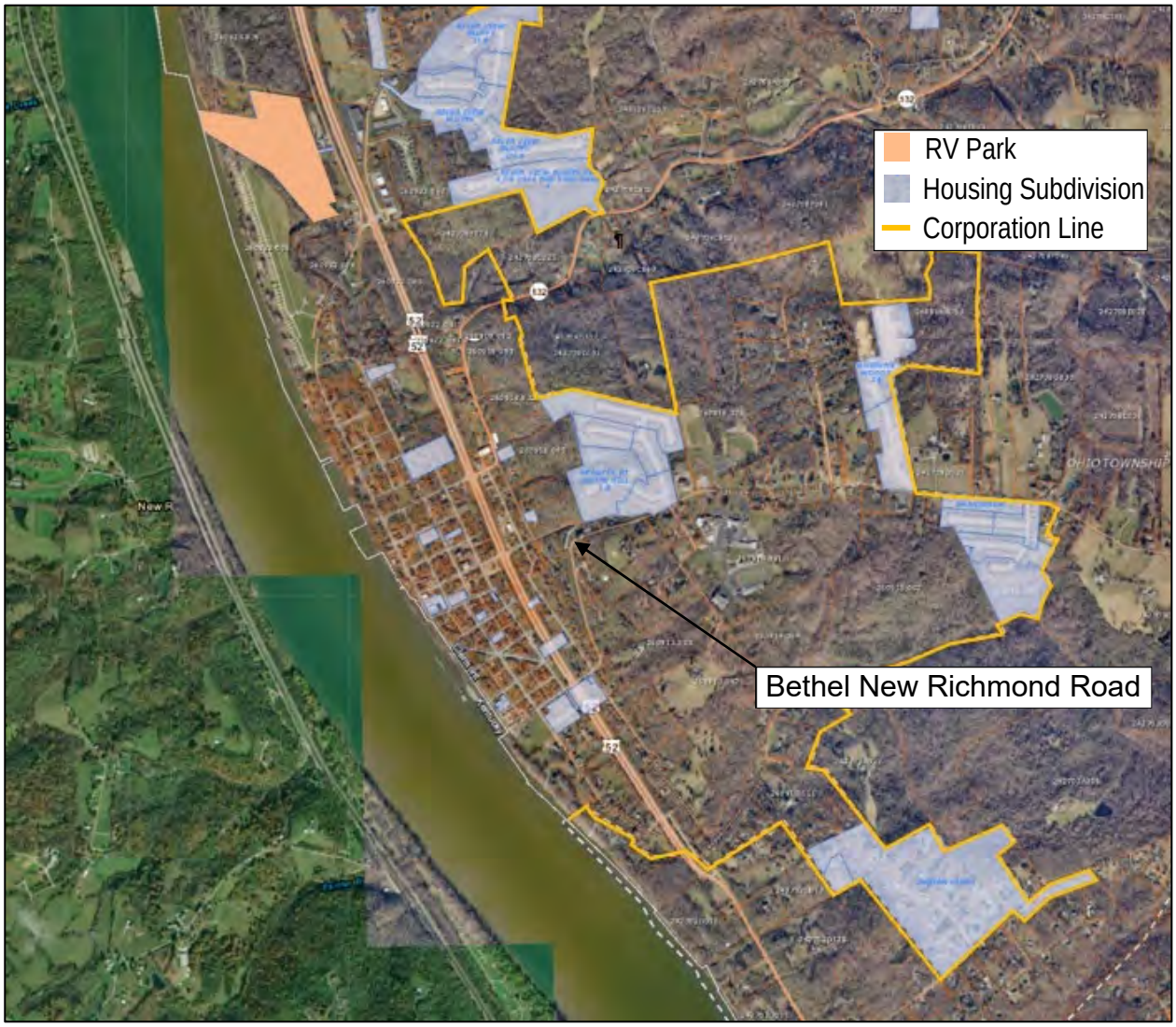


The New Richmond Comprehensive Plan calls for a bike loop trail through the Village to support economic growth. This 4-mile loop offers visitors the opportunity to ride, enjoy views of the Ohio River, and explore the Village's business corridors, thereby attracting more tourism and activity to the community.

The proposed Shared-Use Path along US 52 will serve as the eastern trailhead of the Ohio River Trail East, as shown on ODOT's Bike Map Trail Routes. This trail connects to the Little Miami Trail and, through the Ohio to Erie Trail, extends all the way to Lake Erie. The trailhead in New Richmond will become a key destination for long-distance bicyclists starting or ending their excursions.



In recent years, the Village has added 214 new homes on Bethel New Richmond Road, bringing in approximately 600 new residents, most of them families with children who often walk and drive across US 52 to reach the Village core. Expansions at the RV park near the river, along with year-round RV residents, have increased the potential RV population to over 2,000, based on an average occupancy of 2.2 per unit. See the next map.



One of the Village of New Richmond's primary goals is to reduce crashes involving pedestrians and cyclists while promoting walking and biking for safer and healthier travel. The buffered bike lane along US 52 is adjacent to the motorized travel lanes, where 74% of drivers exceed the posted 50 mph speed limit. Both bicyclists and pedestrians, travel along the buffered bike lane daily since pedestrian facilities do not exist along US 52.



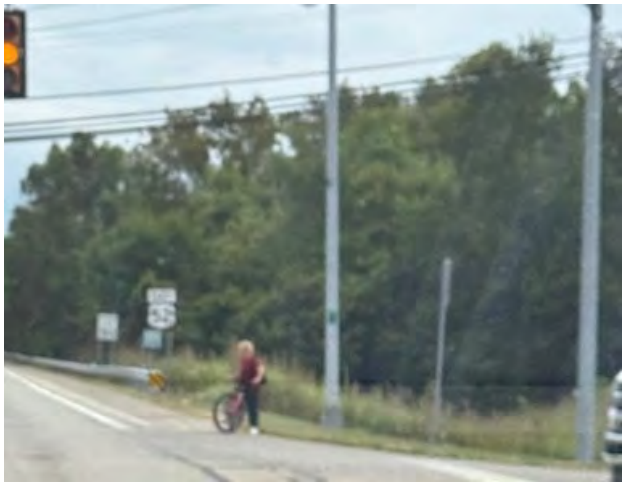
This situation creates a high risk of severe or fatal crashes. According to the Federal Highway Administration, when vehicles travel 50 mph or faster, 75% of pedestrian or bicyclist collisions result in death. Photos provided by Village officials show bicyclists riding and pedestrians walking along US 52 in New Richmond, Ohio.



US Bike Route 21, a buffered bike lane on the shoulder of US 52, creates additional risks because 74% of motor vehicles exceed the posted 50 mph speed limit next to the lane. The 85% speed is 58 mph. The Ohio, Kentucky, and Indiana Regional Council of Governments classifies this segment of US Bike Route 21 as a “Bicycle Level of Traffic Stress” facility with a stress level of 4, the highest rating. The Ohio, Kentucky, and Indiana Regional Council of Governments bike route guide shows this designation for US 52 as it enters and passes through New Richmond. See the next map.







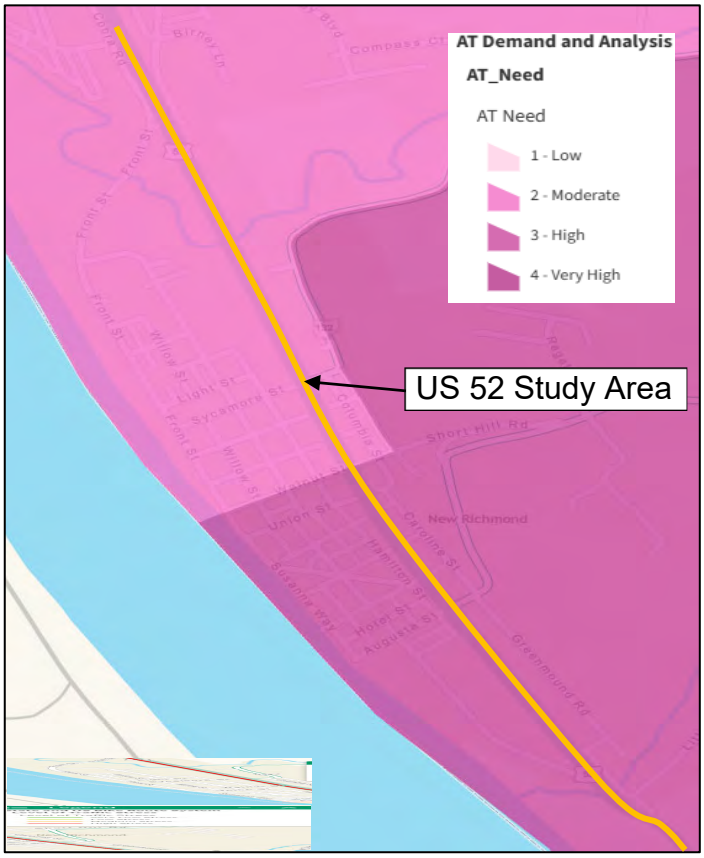


The Ohio Department of Transportation's Transportation Information Mapping System (TIMS) shows US Bike Route 21 on US 52 as a High Level of Traffic Stress. See the map at right.

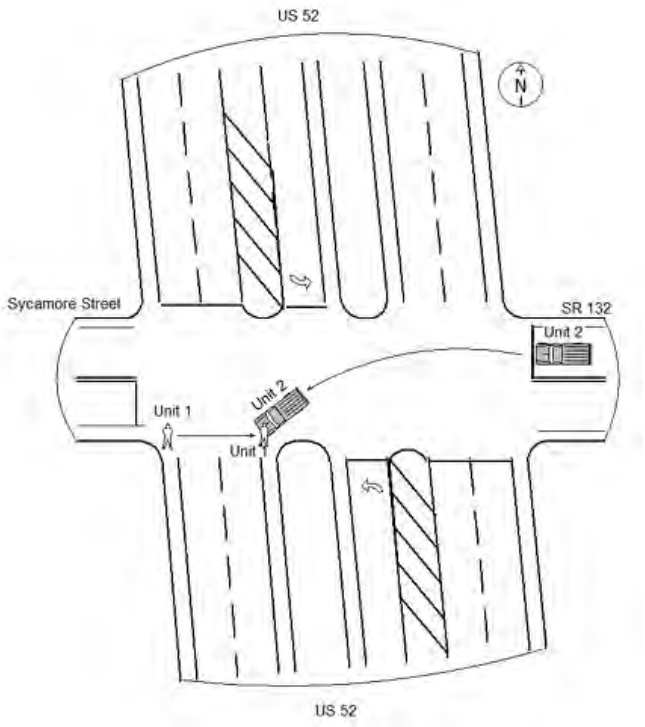


The project will reduce the Bicycle Level of Traffic Stress along US Bike Route 21 from 4 to 1 by converting the two existing southbound travel lanes of US 52. This new shared-use path will be 38 feet from the edge of the motorized travel lane of US 52, far exceeding the minimum required separation of 5 feet.

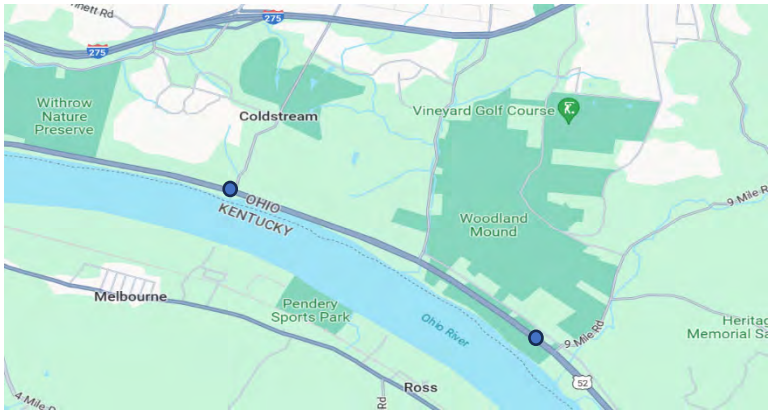
ODOT's Active Transportation Program supports people walking and biking while building local, regional, and state-level capacity to make these options safe, comfortable, and convenient. ODOT's TIMS database identifies an active transportation need along the study corridor. The map to the right highlights moderate and high needs along the US 52 corridor in New Richmond. This project directly addresses those active transportation needs.



A pedestrian crash occurred on US 52 at Sycamore Street on July 4, 2015, at 10 PM. The pedestrian was walking from the river side of New Richmond across US 52 when a vehicle turning from Sycamore Street (SR 132) onto US 52 struck them. The intersection lacked pedestrian signals, push buttons, signal timing, and crosswalks. The crash caused a possible injury.



Two bicycle fatalities also occurred just north of the study corridor on US 52. In both cases, a vehicle struck and killed a southbound bicyclist riding in the right lane. See Appendix A for the crash analysis.



B. Vehicular Safety

One of the Village of New Richmond's goals is to eliminate crashes that cause injuries and deaths. The American Association of State Highway and Transportation Officials (AASHTO) created the Highway Safety Manual (HSM) with support from the Federal Highway Administration (FHWA), the Transportation Research Board (TRB), various state Departments of Transportation (DOTs), and consultants and university researchers. AASHTO released the first edition in 2010, and the manual has since become a foundational reference for roadway safety analysis in the U.S. It provides tools and methodologies to quantify roadway safety performance, helping engineers and planners make data-driven decisions that improve safety.


Front Street Crash


Front Street Crash September 2025

ODOT developed the Economic Crash Analysis Tool (ECAT), a spreadsheet-based application that applies HSM methodologies for roadway safety. The ECAT analysis methodology weights the observed historical crash frequency with the predicted crash frequency of the proposed condition to determine the expected crash frequency. National analysts estimate the predicted crash frequency as the average number of crashes expected nationwide for a similar existing intersection. ECAT calculates the expected crash frequency using the long-term historical average crash frequency for an intersection in the study area. When the expected crash frequency exceeds the predicted crash frequency, the site shows potential for predicted crash reductions and safety improvements, as shown in red on the next charts for each crash type, per the KABCO Injury Classification Scale. For analysis, the crashes along the corridor were divided into those at intersections and those at segments.

Intersection Project Summary Results (Without Animal Crashes)

	FATAL OR INCAPACITATING INJURY	NON-INCAPACITATING INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	Total
$N_{predicted}$ - Existing Conditions	0.3069	0.7969	0.7999	11.6563	13.5600
$N_{expected}$ - Existing Conditions	0.3825	0.9874	0.9828	9.5828	11.9355
$N_{potential\ for\ improvement}$ - Existing Conditions	0.0756	0.1905	0.1829	-2.0735	-1.6245

Segment Project Summary Results (Without Animal Crashes)

	FATAL OR INCAPACITATING INJURY	NON-INCAPACITATING INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	Total
$N_{predicted}$ - Existing Conditions	0.3817	0.8665	0.4533	3.6582	5.3597
$N_{expected}$ - Existing Conditions	0.3489	0.9103	0.4464	2.7330	4.4386
$N_{potential\ for\ improvement}$ - Existing Conditions	-0.0328	0.0438	-0.0069	-0.9252	-0.9211

The KABCO Injury Classification Scale used in the Project Summary Results table is explained below:

- **K (Fatal Injury):** An injury that results in death within 30 days of the crash.
- **A (Suspected Serious/Incapacitating Injury):** An injury that prevents the person from walking, driving, or normally continuing their activities, such as severe lacerations, broken limbs, or unconsciousness at the scene.
- **B (Suspected Minor/Non-incapacitating Injury):** An injury, other than a fatal or incapacitating one, that is observable to others at the scene, such as a lump, bruise, or minor laceration.
- **C (Possible Injury):** An injury that is not a fatal, serious, or minor injury but is reported or indicated by the person's behavior, such as a momentary loss of consciousness or a complaint of pain.
- **O (No Injury):** No apparent injuries observed at the crash scene.

Improvement Potential values are reported by crash severity using the KABCO Injury Classification Scale, enabling identification of locations with disproportionate patterns of fatal or serious injury crashes. Locations with elevated K- and A-severity improvement potential warrant heightened consideration due to the associated societal and economic costs.

The meaning of the improvement potential values in the ECAT results can be interpreted as follows:

- **Positive Improvement Potential (Expected > Predicted)** Indicates the location is experiencing more crashes than would be anticipated for comparable facilities. These locations demonstrate potential for safety improvement through geometric, operational, access management, or traffic control modifications.
- **Low or Negative Improvement Potential (Expected ≤ Predicted)** Indicates the location's expected crashes are less than predicted crashes for similar facilities. This means there is no potential for safety improvement through geometric, operational, access management, or traffic control modifications.

The ECAT table showing Existing Conditions Project Element Potential for Safety Improvement Summary for each intersection and along each segment on US 52 in the study area is shown next. Values in red indicate where the proposed improvements can reduce crashes.

Segment Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		FATAL OR INCAPACITATING INJURY	NON-INCAPACITATING INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	Total
US52; 4-4.685	US 52 Start of Project to Front Street	-0.001	0.0383	0.0087	-0.0255	0.0205
US52; 4.686-5.389	US 52-Front St to Sycamore St	0.0061	0.0572	0.0191	-0.0129	0.0695
US52; 5.39-5.996	US 52-Sycamore St to Walnut St	0.0007	0.0302	0.0081	-0.0758	-0.0368
US52; 5.997-6.443	US 52-Walnut St to Augusta St	0.0019	0.0245	0.0073	-0.044	-0.0104
US52; 6.444-6.71	US 52-Augusta St to Little Indian Creek	0.0229	0.06	0.0286	0.0632	0.1747
US52; 6.72-7.21	US 52-Little Indian to End of Project	-0.0633	-0.1664	-0.0787	-0.8302	-1.1386

Intersection Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		FATAL OR INCAPACITATING INJURY	NON-INCAPACITATING INJURY	POSSIBLE INJURY	PROPERTY DAMAGE ONLY	Total
US52; 4.685	US 52-Front St	0.0115	0.0328	0.0371	-1.5508	-1.4694
US52; 5.389	US 52-Sycamore St	0.041	0.1149	0.1298	-0.0138	0.2719
US52; 5.996	US 52-Walnut St	0.0303	0.0617	0.0364	0.9443	1.0727
US52; 6.443	US 52-Augusta St	-0.0063	-0.0172	-0.0195	-1.4098	-1.4528
US52; 6.638	US 52-Adamson St	-0.0009	-0.0017	-0.0009	-0.0434	-0.0469

The next step in the ECAT analysis determines the benefit-cost ratio for each proposed improvement alternative. ECAT compares the present value of safety "benefits" vs. the total "project costs". ECAT calculates "benefits" by multiplying the predicted crash reductions by the associated crash costs. It determines crash costs based on crash severity (fatal, serious injury, minor injury, property-damage-only) and facility type (interstate, state highway, local road). Project costs include construction and maintenance expenses, default service life, and a 4% discount rate to convert future cost and benefit streams to present value.

Alternative 2 – Roundabout Intersections yields a benefit-cost ratio of 0.62. The project's benefits are less than the cost but there is a decrease in crashes.

Alternative 3 – Signalized Intersections yields a benefit-cost ratio of -1.66. ECAT predicts an increase in crashes; instead, the signalized alternative is expected to cost more than it saves in crash reduction value.

In addition to the ECAT analysis, engineers reviewed crash data along the US 52 corridor from 2011 to 2022 and compared crash percentages to statewide averages for similar roadways. This analysis was performed for the segments, signalized intersections, and unsignalized intersections, and is shown in the following tables, where yellow color means the site average exceeds the statewide average.

Select Site Type	Segment/Rural; Multilane Divided		
Crash Severity	Site Average (2011-2022)		Statewide Average
	Total	Total (%)	Total (%)
Fatal Crash	1	1.35%	0.49%
Serious Injury Suspected Crash	2	2.70%	3.13%
Minor Injury Suspected Crash	8	10.81%	10.34%
Injury Possible Crash	7	9.46%	6.10%
Property-Damage-Only	56	75.68%	79.94%
TOTAL	74	100%	100%

18 fatal and injury crashes along the segments.

Select Site Type	Intersection/Rural; 4-leg Signalized		
Crash Severity	Site Average (2011-2022)		Statewide Average
	Total	Total (%)	Total (%)
Fatal Crash	0	0.00%	0.33%
Serious Injury Suspected Crash	4	3.15%	2.84%
Minor Injury Suspected Crash	22	17.32%	11.13%
Injury Possible Crash	16	12.60%	11.29%
Property-Damage-Only	85	66.93%	74.42%
TOTAL	127	100%	100%

42 injury crashes at signalized intersections.

Select Site Type	Intersection/Rural; 4-leg minor-rd. Stop Sign Controlled		
Crash Severity	Site Average (2011-2022)		Statewide Average
	Total	Total (%)	Total (%)
Fatal Crash	0	0.00%	1.19%
Serious Injury Suspected Crash	2	8.33%	6.35%
Minor Injury Suspected Crash	2	8.33%	17.57%
Injury Possible Crash	1	4.17%	11.14%
Property-Damage-Only	19	79.17%	63.74%
TOTAL	24	100%	100%

5 injury crashes at unsignalized intersections

C. Roadway Design Issues

Due to US 52 being a controlled, limited-access highway, the Village, as stated in the Ohio Revised Code, is required to maintain a posted speed limit of 50 mph. Data from an ODOT traffic count station on US 52 north of SR 132 (Sycamore Street) recorded speeds on September 7, 2023. The data showed that over 74% of the 14,583 vehicles exceeded the posted speed limit, with the highest recorded speed exceeding 85 mph. The 85% speed is

US52 N OF SR132 SYCAMORE ST, IN NEW RICHMOND

SPEED

	Date	Int	Pace	85th	Total
	Thu 9/7/2023	15	50 - 60	58	14,583



58 mph. See Appendix B for the speed data. Since 2000, the Village has issued 2594 speeding citations. The Village also lowered the posted speed limit to 25 mph on several streets that intersect US 52 to accommodate increased bicycle and pedestrian use. These roads include Front Street, on both sides of US 52 (from the 12 Mile Bridge to Riverview Bluffs), and Bethel-New Richmond Road, from US 52 to 1253 Bethel-New Richmond Road.

The Village installed red-light cameras in 2019 to enforce obeying the traffic signals. After a lawsuit, the Village discontinued the red-light camera program. Since 2000, the Village has had only 169 red-light violations, even though several people have seen red-light running daily at the US 52 traffic signals in the corridor. More recently, the Village wants to hire an additional police officer dedicated to speed enforcement and traffic signal enforcement along US 52, however they do not currently have the funding for this expenditure.

The proposed project resizes the corridor to accommodate 2046 traffic volumes by providing one vehicle lane in each direction and creating safe connections across US 52 at intersections for bicycles and pedestrians. According to Ohio Revised Code Section 4511.21(B), the speed limit on controlled limited-access highways within municipal corporations outside urban districts is 50 mph, unless a lower prima facie speed is established.



Six at-grade intersections cross US 52 within the Village corporation limits. Golf carts may cross US 52 at the Front Street intersection and travel on Village streets. Bicyclists are encouraged to use the adjacent buffered bike lane for travel along US 52, but pedestrians also use the buffered bike lane because no pedestrian facilities exist along the corridor. Excessive speeding along US 52 has turned these conflict points into crash locations that exceed predicted crash rates. Roundabouts will reduce travel speeds at the intersections, helping pedestrians, bicyclists, and golf cart users cross safely, which is the primary need addressed by this study.



Alternative 2-Road Diet with Roundabout Intersections recommends changes to the roadway geometry by converting the intersections at US 52 and Front Street, Sycamore Street, Walnut Street, and Augusta Street into roundabouts. This will calm traffic by reducing the entry speed and improve intersection safety by designing vehicles to navigate the roundabouts at 20-25 mph. The use of the roundabout alternative on high-speed roadways, particularly for managing speed and transitioning traffic to lower-speed environments at rural intersections, is supported by the Federal Highway Administration (FHWA). Designed to reduce speed at the intersections and eliminate high-angle collisions, roundabouts can significantly decrease both the number and severity of crashes, even on high-speed, two-lane rural highways. The design encourages slower speeds and eliminates the need to cross opposing traffic, a common cause of severe crashes at traditional signalized intersections.

Both the Alternative 2-Road Diet with Roundabout Intersections and Alternative 3-Road Diet with Signalized Intersections will carry the road diet south along the existing

alignment to meet the existing two-lane section south of the Village limits.



The road diet will allow a separated shared-use path set 38 feet from motorized traffic, lowering the Bicycle Level of Traffic Stress from 4 to 1 along the path. This improvement creates a safe space for pedestrians and bicyclists of all experience levels and encourages walking and biking, promoting health and safety.

The project also introduces raised, marked crosswalks with high-visibility paint, lighting, and signage at pedestrian crossings where none exist today. Fastest-path calculations at the roundabouts show that vehicles would travel at 20-25 mph at the raised crosswalks. Appendix C will provide the preliminary alignment and profiles for the project.

D. Utility Issues

The US 52 corridor contains a limited number of existing utilities. Overhead electric and telecom lines, along with sanitary sewer and water lines, run perpendicular to US 52 at project intersections. The project will require minor sanitary and water line adjustments, including grade modifications for manholes and valves, and spot lowering to resolve storm sewer conflicts. The construction plans will address and resolve these impacts.

Crews will need to relocate utility poles for private overhead utilities to accommodate the roundabouts. In most cases, they can move the impacted poles to new locations within the existing right-of-way. If relocations extend beyond the right-of-way, project coordinators will work with affected property owners to secure utility easements.

E. Traffic Analysis 2046 Traffic

The traffic analysis evaluated capacity and delay by comparing the No Build at Front Street, Sycamore Street, Walnut Street, and Augusta Street, with a proposed roundabout and signalized intersection alternatives. The traffic analysis also evaluated the capacity and delay of the No Build to the Road Diet alternatives at Adamson Street. The Highway Capacity Manual defines LOS as a function of the average delay motorists encounter.

Engineers express LOS in terms of average delay per vehicle for unsignalized, signalized, and roundabout intersections. According to the ODOT Analysis & Traffic Simulation Manual (OATS), engineers consider Intersection Levels of Service “C” and “D” as reasonable design criteria, while they view “E” and “F” as unacceptable. Engineers require Approach and Control Levels of Service to meet LOS E or better. They prefer all Volume/Capacity ratios to exceed 0.93, though they accept 1.00. They also require the Queue Storage Ratio value to remain below 1.0.

Result	Inside an MPO	Outside of an MPO
Intersection LOS	D or better[1]	C or better[1]
Approach LOS	E or better[1]	
Control LOS	E or better[1]	
v/c[2]	All movements < 1.0 with ≤ 0.93 preferred.	

Intersection LOS is acceptable at D or better. Approach LOS is acceptable at E or better. Control LOS is acceptable at E or better. A volume-to-capacity (V/C) ratio below 0.93 is preferred, but a value of 1.0 is acceptable.

The American Association of State Highway and Transportation Officials (AASHTO), ODOT, and Municipal Engineering Departments accept these criteria. The following tables present LOS and delay values for the roundabout and signalized intersections.

Level of Service for Signalized Intersections	Avg. Delay/Vehicle (Sec)	Description
A	< 10	Most Vehicles do not stop at all.
B	> 10 to 20	More vehicles stop than at LOS A.
C	>20 to 35	The number of vehicles stopping is significant, although many pass through without stopping.
D	>35 to 55	Many vehicles stop. Individual cycle failures are noticeable.
E	>55 to 80	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	>80	Unacceptable delay.

The capacity analysis confirmed that US 52 can maintain an acceptable LOS in 2046 without a four-lane high-speed roadway. Engineers analyzed Alternative 1-No Build, Alternative 2-Road Diet with Roundabout Intersections, and Alternative 3-Road Diet with Signalized Intersections to determine if these alternatives resulted in acceptable capacity and delay levels.

Level of Service for Roundabout and Unsignalized Intersections	Avg. Delay/Vehicle (Sec)	Description
A	< 10	Most Vehicles do not stop at all.
B	> 10 to 15	More vehicles stop than at LOS A.
C	>15 to 25	The number of vehicles stopping is significant, although many pass through without stopping.
D	>25 to 35	Many vehicles stop. Individual cycle failures are noticeable.
E	>35 to 50	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	>50	Unacceptable delay.

The following comparison tables demonstrate that the proposed project meets the criteria set forth in Section 5.9 of the ODOT OATS Manual. No colors in the following tables show an acceptable LOS. LOS D, which is an acceptable LOS, is highlighted in yellow per the ODOT OATS manual. No E of F LOS was produced for any of the scenarios.

At the US 52 and Front Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 7.1 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 2.3 seconds, compared to the Alternative 1-No Build Alternative.

At the US 52 and Front Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 1.7 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 3.4 seconds, compared to the Alternative 1-No Build Alternative.

U.S. 52 AND FRONT STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO
EB THRU	B	12.7	0.066	8.8	0.00						C	21.2	0.091	16	0.08
EB RIGHT	B	12.6	0.031	2.9	0.00	A	4.1	0.05	2.5		C	21.0	0.041	5	0.03
EB APPROACH	B	12.7				A	4.1				C	28.3			
WB THRU	B	13.4	0.199	27.7	0.00						C	22.4	0.275	51.0	0.28
WB RIGHT	B	13.1	0.184	18.1	0.00	C	16.6	0.40	47.5		C	21.9	0.249	33	0.19
WB APPROACH	B	13.3				C	16.6				C	22.2			
NB LEFT	A	6.5	0.017	1.7	0.01	C	20.8	0.86	305.0		A	5.7	0.015	2	0.04
NB THRU	A	8.8	0.693	126.5	0.00						B	11.4	0.937	338	0.17
NB RIGHT	A	8.8	0.695	122.7	0.00	A	3.5	0.10	7.5		A	4.3	0.128	19	0.38
NB APPROACH	A	8.8				C	19				B	10.7			
SB LEFT	B	13.0	0.079	6.1	0.02	A	3.0	0.00	0.0		C	25.3	0.127	12	0.25
SB THRU	A	5.9	0.177	22.5	0.00						A	4.8	0.261	50.0	0.02
SB RIGHT	A	5.9	0.178	22.3	0.00	A	5.6	0.29	30.0		A	4.0	0.011	1	0.03
SB APPROACH	A	6.4				A	5.6				A	6.0			
TOTAL INTERSECTION	A	8.8				C	15.9				B	11.1			

U.S. 52 AND FRONT STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB THRU	B	12.6	0.102	14.8	0.00						B	19.4	0.120	26	0.12
EB RIGHT	B	12.3	0.028	2.9	0.00	B	10.2	0.15	12.5		B	18.9	0.031	5	0.02
EB APPROACH	B	12.5				B	10.2				B	19.3			
WB THRU	B	15.3	0.536	89.7	0.00						C	23.7	0.637	157	0.87
WB RIGHT	B	12.5	0.084	8.9	0.00	A	8.5	0.36	42.5		B	19.2	0.093	16	0.08
WB APPROACH	B	15.0				A	8.5				C	23.2			
NB LEFT	B	12.2	0.037	2.9	0.01	A	4.0	0.36	40.0		C	25.8	0.064	6	0.13
NB THRU	A	7.0	0.331	49.6	0.00						A	6.8	0.380	99	0.05
NB RIGHT	A	7.0	0.336	45.9	0.00	A	6.4	0.12	10.0		A	5.8	0.161	30	0.6
NB APPROACH	A	7.1				A	5.8				A	6.9			
SB LEFT	A	9.0	0.154	16.0	0.05	C	17.3	0.77	197.5		A	9.4	0.132	22	0.45
SB THRU	A	8.5	0.628	113.7	0.00						B	13.1	0.927	363	0.18
SB RIGHT	A	8.6	0.628	110.7	0.00	A	6.8	0.35	40.0		A	5.6	0.092	17	0.33
SB APPROACH	A	8.6				B	14.1				B	12.3			
TOTAL INTERSECTION	A	9.2				B	10.9				B	12.6			

At the US 52 and Sycamore Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 13.7 seconds, and the Alternative 3- Road Diet with Signalized Intersections increases delay by 3.7 seconds, compared to the Alternative 1-No Build Alternative.

At the US 52 and Sycamore Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 9.3 seconds, and the Alternative 3- Road Diet with Signalized Intersections increases delay by 2.9 seconds, compared to the Alternative 1-No Build Alternative.

U.S. 52 AND SR 132/SYCAMORE STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	12.5	0.112	14.8	0.00	A	4.4	0.06	5.0		B	19.2	0.147	26	0.06
EB APPROACH	B	12.5				A	4.4				B	19.2			
WB RIGHT	B	15.5	0.635	104.4	0.00	D	30.5	0.72	149.2		C	23.8	0.711	187	0.94
WB APPROACH	B	15.5				D	30.5				C	23.8			
NB LEFT	A	7.3	0.018	1.9	0.01						A	8.5	0.018	3	0.06
NB THRU	A	9.8	0.649	131.8	0.00						B	13.7	0.924	376	0.19
NB RIGHT	A	9.9	0.650	127.3	0.00	D	29.8	0.93	404.8		A	6.2	0.141	28	0.56
NB APPROACH	A	9.8				D	29.8				B	12.8			
SB LEFT	A	13.6	0.150	12.9	0.13	A	3.2	0.04	2.6		C	28.5	0.261	28	0.43
SB THRU	A	6.6	0.207	29.2	0.00						A	7.1	0.328	87	0.04
SB RIGHT	A	6.6	0.208	29.0	0.00	A	5.7	0.30	34.0		A	5.7	0.012	2	0.04
SB APPROACH	A	7.3				A	5.5				A	9.3			
TOTAL INTERSECTION	B	10.3				C	24.0				B	14.0			

U.S. 52 AND SR 132/SYCAMORE STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.3	0.256	37.3	0.00	B	12.4	0.29	30.0		B	19.0	0.300	59	0.14
EB APPROACH	B	13.3				B	12.4				B	19.0			
WB RIGHT	B	15.2	0.573	91.1	0.00	A	8.4	0.35	37.7		C	24.4	0.674	159	0.79
WB APPROACH	B	15.2				A	8.4				C	24.4			
NB LEFT	B	11.5	0.035	2.8	0.01						C	22.9	0.058	6	0.11
NB THRU	A	6.7	0.281	40.1	0.00						A	6.6	0.397	90	0.04
NB RIGHT	A	6.7	0.284	38.8	0.00	B	10.3	0.52	80.2		A	5.3	0.07	11	0.22
NB APPROACH	A	6.8				B	10.3				A	6.8			
SB LEFT	A	9.9	0.368	45.1	0.45	A	4.5	0.17	15.2		B	10.7	0.346	61	0.94
SB THRU	A	8.8	0.601	111.8	0.00						B	12.0	0.914	310	0.15
SB RIGHT	A	8.8	0.601	109.3	0.00	D	28.6	0.91	372.8		A	5.3	0.082	13	0.25
SB APPROACH	A	9.0				C	24.9				B	11.4			
TOTAL INTERSECTION	A	9.5				C	18.6				B	12.4			

At the US 52 and Walnut Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 0.8 seconds, and the Alternative 3-Road Diet with Signalized Intersections, increases delay by 7.0 seconds compared to the Alternative 1-No Build Alternative.

At the US 52 and Walnut Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 8.8 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 2.9 seconds compared to the Alternative 1-No Build Alternative.

U.S. 52 AND WALNUT STREET/SHORT HILL	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	11.6	0.058	8.8	0.00	A	4.6	0.04	0.1		B	12.5	0.059	10	0.03
EB APPROACH	B	11.6				A	4.6				B	12.5			
WB RIGHT	B	15.6	0.706	138.8	0.00	C	19.8	0.65	4.8		B	16.7	0.701	157	0.63
WB APPROACH	B	15.6				C	19.8				B	16.7			
NB LEFT	A	9.1	0.021	2.4	0.05						B	11.6	0.024	3	0.06
NB THRU	A	9.0	0.467	88.4	0.00						C	22.5	0.884	321	0.16
NB RIGHT	A	9.0	0.467	87.9	0.00	B	10.1	0.61	4.4		A	7.3	0.015	2	0.00
NB APPROACH	A	9.0				B	10.1				C	22.2			
NB LEFT	B	11.4	0.030	2.9	0.04						C	20.8	0.052	5	0.10
NB THRU	A	8.0	0.259	44.0	0.00						A	9.5	0.485	109	0.05
SB RIGHT	A	8.0	0.260	43.7	0.00	A	6.1	0.35	1.6		A	7.3	0.015	2	0.00
SB APPROACH	A	8.1				A	6.1				A	9.7			
TOTAL INTERSECTION	B	10.4				B	11.2				B	17.4			

U.S. 52 AND WALNUT STREET/SHORT HILL	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	12.9	0.116	14.8	0.00	B	10.5	0.13	0.4		C	20.9	0.157	26	0.08
EB APPROACH	B	12.9				B	10.5				C	20.9			
WB RIGHT	B	13.9	0.335	44.7	0.00	A	5.6	0.17	0.6		C	22.6	0.451	80	0.32
WB APPROACH	B	13.9				A	5.6				C	22.6			
NB LEFT	B	11.3	0.035	2.7	0.05						C	24.5	0.063	6	0.12
NB THRU	A	6.0	0.194	25.0	0.00						A	5.0	0.292	56	0.03
NB RIGHT	A	6.0	0.195	24.8	0.00	A	5.6	0.30	1.2		A	4.1	0.011	1	0.03
NB APPROACH	A	6.2				A	5.6				A	5.5			
SB LEFT	A	6.7	0.017	1.7	0.02						A	6.1	0.016	2	0.04
SB THRU	A	8.3	0.619	108	0.00						B	11.6	0.939	332	0.17
SB RIGHT	A	8.3	0.619	107.3	0.00	C	22.9	0.88	13.2		A	4.1	0.022	3	0.06
SB APPROACH	A	8.3				C	22.9				B	11.4			
TOTAL INTERSECTION	A	8.5				C	17.3				B	11.4			

At the US 52 and Augusta Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 8.0 seconds, and the Alternative 3- Road Diet with Signalized Intersections increases delay by 2.2 seconds compared to the Alternative 1-No Build Alternative.

At the US 52 and Augusta Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 11.7 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 2.1 seconds compared to the Alternative 1-No Build Alternative.

U.S. 52 AND AUGUSTA/BETHEL N. RICHMOND STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.3	0.119	14.8	0.00	A	5.1	0.07	0.2		B	16.3	0.133	19	0.10
EB APPROACH	B	13.3				A	5.1				B	16.3			
WB RIGHT	B	13.6	0.195	24.1	0.00	A	7.7	0.14	0.5		B	16.7	0.219	32	0.14
WB APPROACH	B	13.6				A	7.7				B	16.7			
NB LEFT	A	5.6	0.014	1.4	0.00						A	5.4	0.014	2	0.03
NB THRU	A	6.4	0.429	58.6	0.00						A	8.7	0.681	156	0.08
NB RIGHT	A	6.4	0.430	56.7	0.00	C	23.7	0.84	10.2		A	4.7	0.084	9	0.19
NB APPROACH	A	6.4				C	23.7				A	8.3			
SB LEFT	B	14.7	0.606	83.7	0.30						B	19.0	0.715	117	0.97
SB THRU	A	5.2	0.097	10.9	0.00						A	4.9	0.162	22	0.01
SB RIGHT	A	5.2	0.099	10.8	0.00	A	6.4	0.36	1.7		A	4.5	0.012	1	0.03
SB APPROACH	B	10.8				A	6.4				B	13.1			
TOTAL INTERSECTION	A	8.5				C	16.5				B	10.7			

U.S. 52 AND AUGUSTA/BETHEL N. RICHMOND STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.4	0.164	20.9	0.00	B	11.1	0.18	0.6		B	13.6	0.165	21	0.11
EB APPROACH	B	13.4				B	11.1				B	13.6			
WB RIGHT	B	13.4	0.148	17.9	0.00	A	4.6	0.07	0.2		B	13.6	0.149	18	0.08
WB APPROACH	B	13.4				A	4.6				B	13.6			
NB LEFT	A	8.4	0.026	2.0	0.01	A	8.2	0.38	1.8		B	15.4	0.040	3	0.07
NB THRU	A	5.5	0.178	20.7	0.00						A	6.0	0.328	42	0.02
NB RIGHT	A	5.5	0.180	20.5	0.00						A	5.0	0.027	2	0.05
NB APPROACH	A	5.6				A	8.2				A	6.2			
SB LEFT	A	8.5	0.445	55.4	0.20	C	23.6	0.89	13.4		A	9.9	0.474	66	0.55
SB THRU	A	6.5	0.448	61.8	0.00						A	9.9	0.849	172	0.09
SB RIGHT	A	6.5	0.448	60.9	0.00						A	5.0	0.040	4	0.07
SB APPROACH	A	7.0				C	23.6				A	9.8			
TOTAL INTERSECTION	A	7.3				C	19.0				A	9.4			

At the US 52 and Adamson Street intersection, the Alternative 3A-Road Diet with Unsignalized Intersections shows minimal delay difference compared to the Alternative 1-No Build Alternative.

U.S. 52 AND ADAMSON STREET	AM									
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 3A - ROAD DIET UNSIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO
EB RIGHT	C	16.0	0.09	25.0		C	15.9	0.02	2.6	
EB APPROACH	C	16.0				C	15.9			
WB THRU	C	17.6	0.10	25.0		B	15.0	0.03	2.6	
WB APPROACH	C	17.6				B	15.0			
NB LEFT	A	7.7	0.02	0.0		A	0.1	0.00	0.0	
NB APPROACH						A	0.1			
SB LEFT	A	9.5	0.01	0.0		A	0.1	0.00	0.0	
SB APPROACH						A	0.1			

U.S. 52 AND ADAMSON STREET	PM									
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 3A - ROAD DIET UNSIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO
EB RIGHT	C	18.1	0.14	25		C	18.2	0.14	12.8	
EB APPROACH	C	18.1				C	18.2			
EB RIGHT	C	17.1	0.10	25		C	17.2	0.10	7.7	
WB APPROACH	C	17.1				C	17.2			
NB RIGHT	A	9.5	0.01	0.0		A	9.6	0.01	0.0	
NB APPROACH						A	0.4			
SB RIGHT	A	8	0.01	0.0		A	8.0	0.01	0.0	
SB APPROACH						A	0.2			

Refer to Appendix D for the traffic analysis report.

F. Environmental Analysis

F.1 Ecological

The team completed a Preliminary Water Resources Site Walk in 2025. The team also finished the Environmental Screening Report in 2021 and reviewed the results to ensure this discussion reflects 2025 regulatory information.

As of July 2025, the US Fish and Wildlife Service (USFWS) identified the following federally listed potential habitats for threatened and endangered species within Clermont County, Ohio.

Species	Listing Status	Habitat	Will Project Affect Habitat
Indiana bat *(Myotis sodalis)*	Endangered	Winter habitat = Caves and mines Summer habitat = roost under trees with loose bark, etc.; forage in forested stream corridors and upland forests.	Yes; Seasonal Tree Clearing Restrictions
Northern long-eared bat (*Myotis septentrionalis)*	Endangered	Winter habitat = Caves and mines Summer habitat = roost under trees with loose bark, etc., in caves/mines, and in structures; forage in woods.	Yes; Seasonal Tree Clearing Restrictions
Tricolored bat (*Perimyotis subflavus)*	Proposed Endangered	Winter habitat = Caves and mines Summer habitat = Forested habitats (roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in pine trees and occasionally human structures)	Yes; Seasonal Tree Clearing Restrictions
Fanshell (*Cyprogenia stegaria)*	Endangered	Medium to large rivers with gravel in relatively deep water with moderate current.	No
Pink mucket pearly mussel (*Lampsilis abrupta)*	Endangered	Large rivers in shallow riffles to deep water with boulders, gravel, sand, or silt substrates.	No
Sheepnose (*Plethobasus cyphyus)*	Endangered	Primarily a larger-stream species. It occurs primarily in shallow shoal habitats with moderate to swift currents over coarse sand and gravel. Habitats with sheepnose may also have mud, cobble, and boulders.	No
Snuffbox (*Epioblasma triquetra)*	Endangered	It is found in small to medium-sized creeks to larger rivers. Typically occurs in swift currents with gravel and sand with occasional cobble and boulders.	No
Salamander mussel (*Simpsonaias ambigua)*	Proposed Endangered	In rivers and streams with natural flow regimes where the species' host, the mudpuppy (*Necturus maculosus*), also occurs.	No

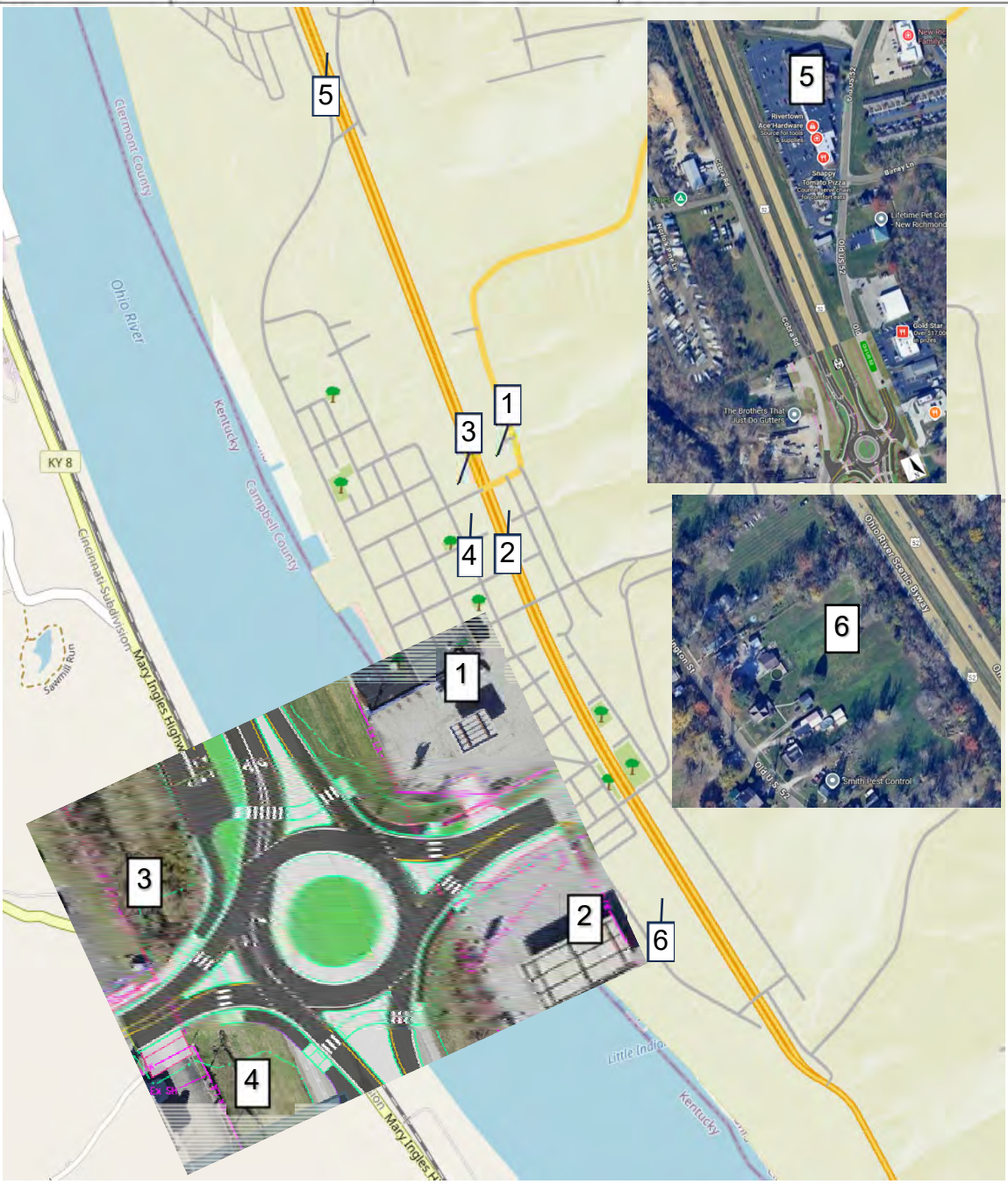
F.2 Regulated Material Review

Analysts used nationwide and local database sources to identify recognizable environmental conditions within the study area, such as potential sites for hazardous materials storage or use. There were two properties that had hazardous material records. These records are not of significant concern, as only temporary right-of-way easements are expected to provide driveway tie-ins, and there is no anticipated excavation six feet or deeper within these easements near the gas pumps. The locations for the temporary easements are: one easement at 527 Sycamore (1) and a second easement at 415 Sycamore (3).

Analysts also identified a historical landfill (6) within 300 feet of the project corridor southwest of the study area. All build alternatives may require a Rule 513 permit from the Ohio Environmental Protection Agency, depending on construction activities and coordination with ODOT-OES. The team will conduct further research on the historical landfill during the RMR Screening. RMR will not have a significant impact on the project design, but there is potential for plan notes, further studies, and a 513 permit to be triggered by this project.

The three properties within the study area, as described above, and three properties that are adjacent to the study area are shown in the next table and map.

	PROPERTY ADDRESS	ADJACENT/WITHIN STUDY AREA	STATE AND FEDERAL ENIRONMENTAL RECORDS	DETAILS
1	527 Sycamore	Within Study Area	UST	No Reported Releases
2	520 Sycamore	Within Study Area	UST, LUST, & RCRA	RCRA-Conditionally Exempt. UST/LUST – No further Action
3	415 Sycamore	Within Study Area	LUST	No further action status
4	410 Sycamore	Adjacent Study Area	UST, LUST, & RCRA	RCRA-Unspecified Universe. UST/LUST – No further Action
5	1041 US 2 Suite D	Adjacent Study Area	RCRA	RCRA-CESQG
6	Southernmost Study Area	Adjacent Study Area	State Abandoned Dump & Landfill	Abandoned dump location within IRPS 300-foot buffer. Closed in 1980



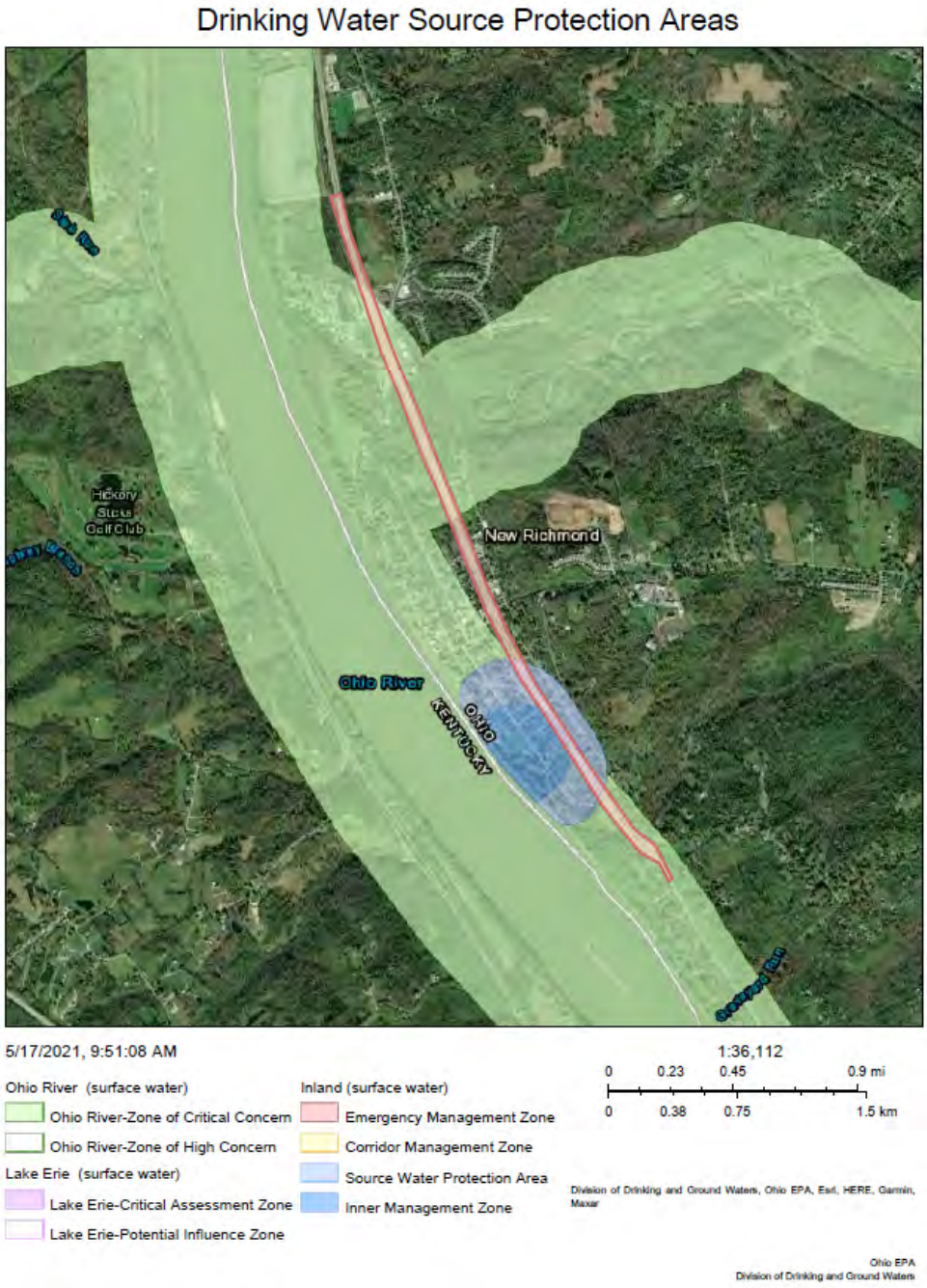
F.3 Cultural Resources

A search of the Ohio Historic Preservation Office database revealed three historic structures near the project site. These sites are 1) United Church of Christ at 411 Walnut Street; 2) Nichols Moore & Gyl Building at 233 Augusta Street; and 3) Goebel House at 1059 SR 52. The construction limits (green dashed line) are near these historic properties, but they do not encroach on or affect any of these properties. See the following map.



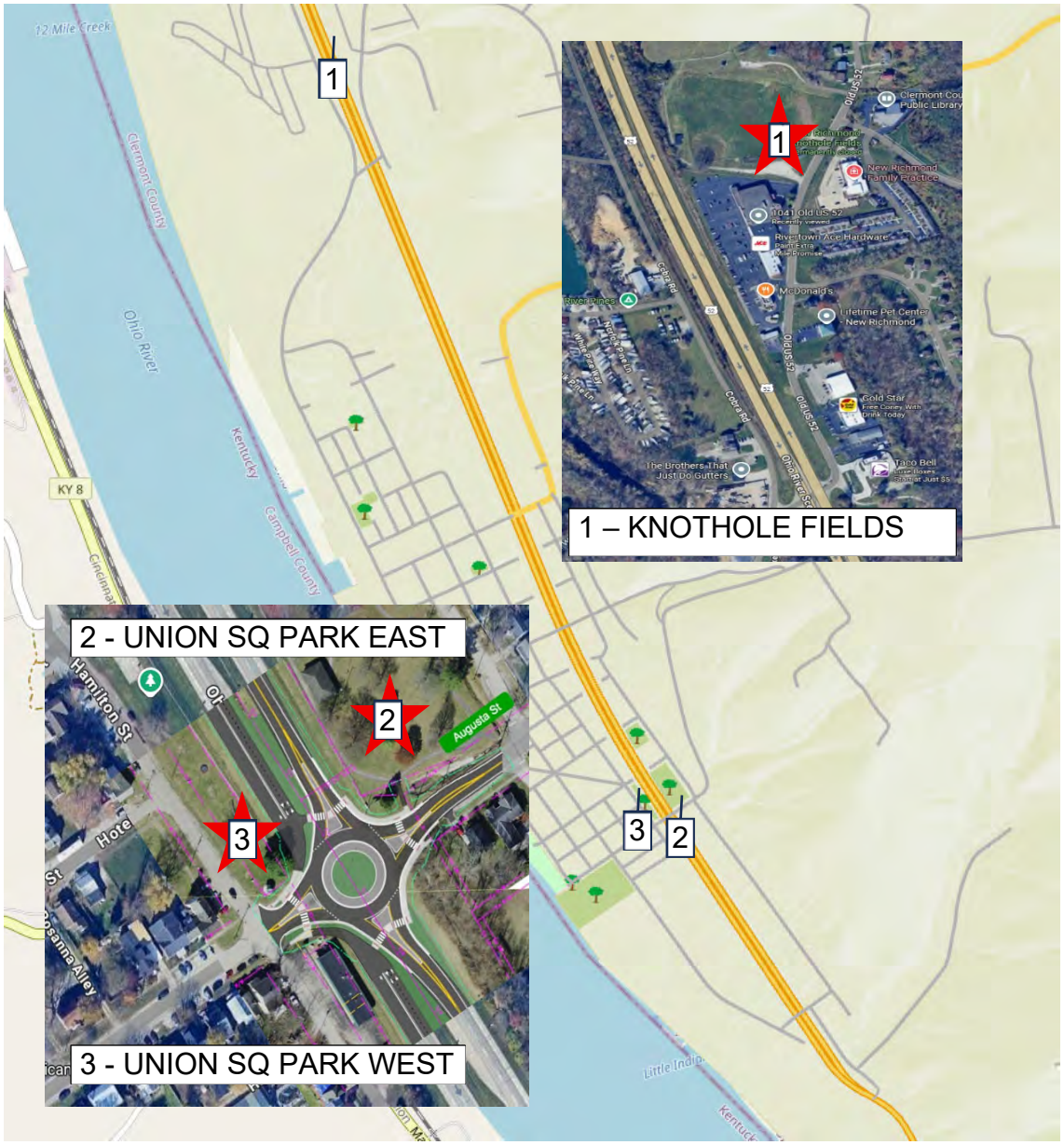
F.4 Drinking Water

The Ohio Environmental Protection Agency (OEPA) identified an Ohio River Zone of Critical Concern, a Source Water Protection Area, and an Inner Management Zone within the study area, as shown on the following map. The project team will add appropriate plan notes to the construction documents to avoid impacts on drinking water resources.



F.5 4(f)/6(f) Recreational Resources

The study noted three recreational resources adjacent to the project site. New Richmond Knothold Fields (1), at 1009 Old US 52 #985, Union Square Park East (2), northeast of the US 52 and Augusta Street intersection, and Union Square Park West (3), northwest of the US 52 and Augusta Street intersection. All three recreational resources are open to the public. Right-of-way is not anticipated to be needed from these parks, and the project is not likely to have any impact on these recreational resources. See the following map for the locations of recreational resources.



F.6 Jurisdictional Water Resources

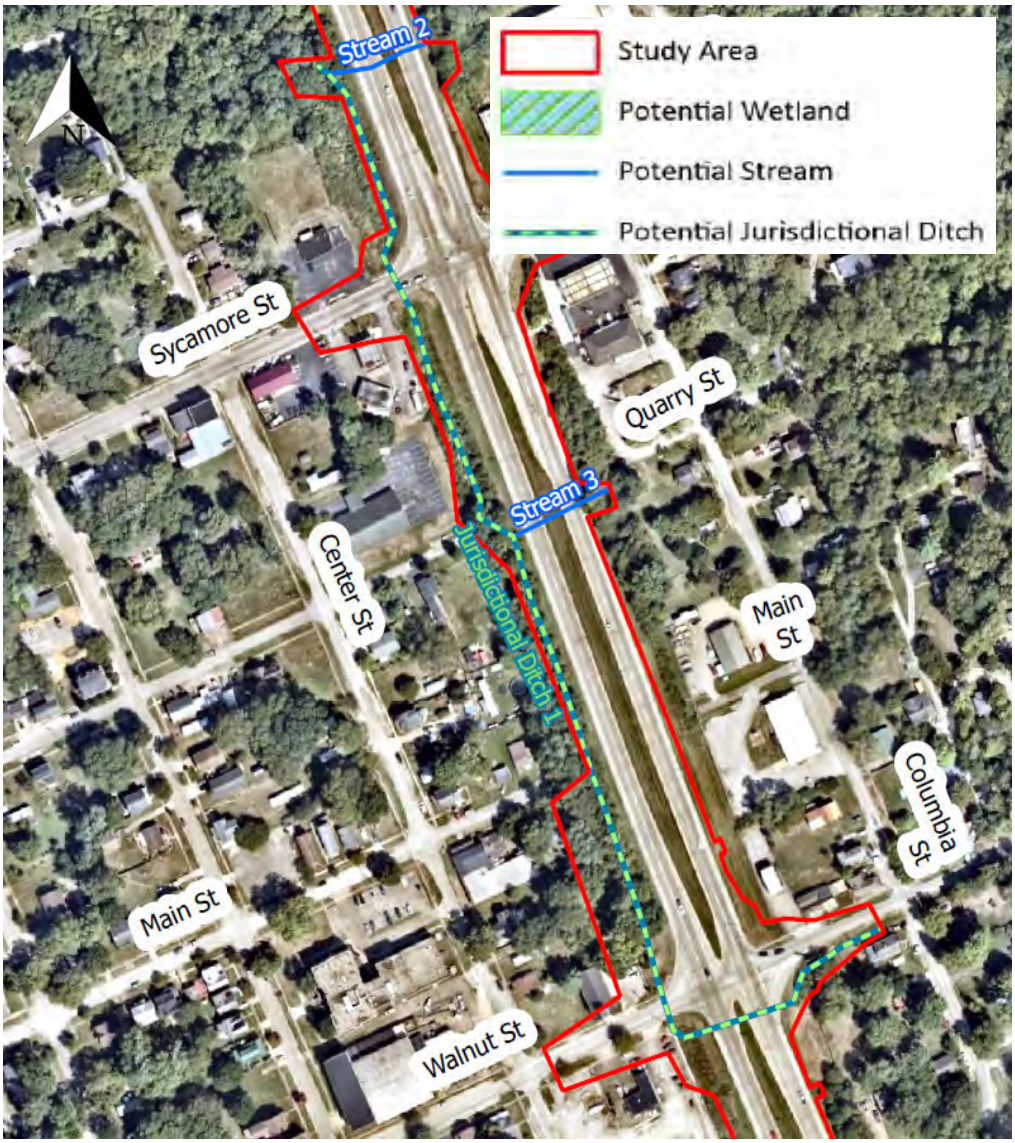
A field walk identified potential water resources within the study area limits, as shown in the table. Potential Wetland 1 and 2 showed signs of wetland hydrology and hydrophytic vegetation. Potential Stream 1 displayed an ordinary high-water mark and algal crusts, indicating that the stream contains water for extended periods of the year. Twelvemile Creek carried flowing water, confirming it as a perennial stream. The project does not anticipate impacts to these water resources. See the following map for their locations.

Wetland Name	Potential Type	Stream Name	Potential Type
Wetland 1	Emergent Wetland	Stream 1	Intermittent
Wetland 2	Emergent Wetland	Twelvemile Creek	Perennial

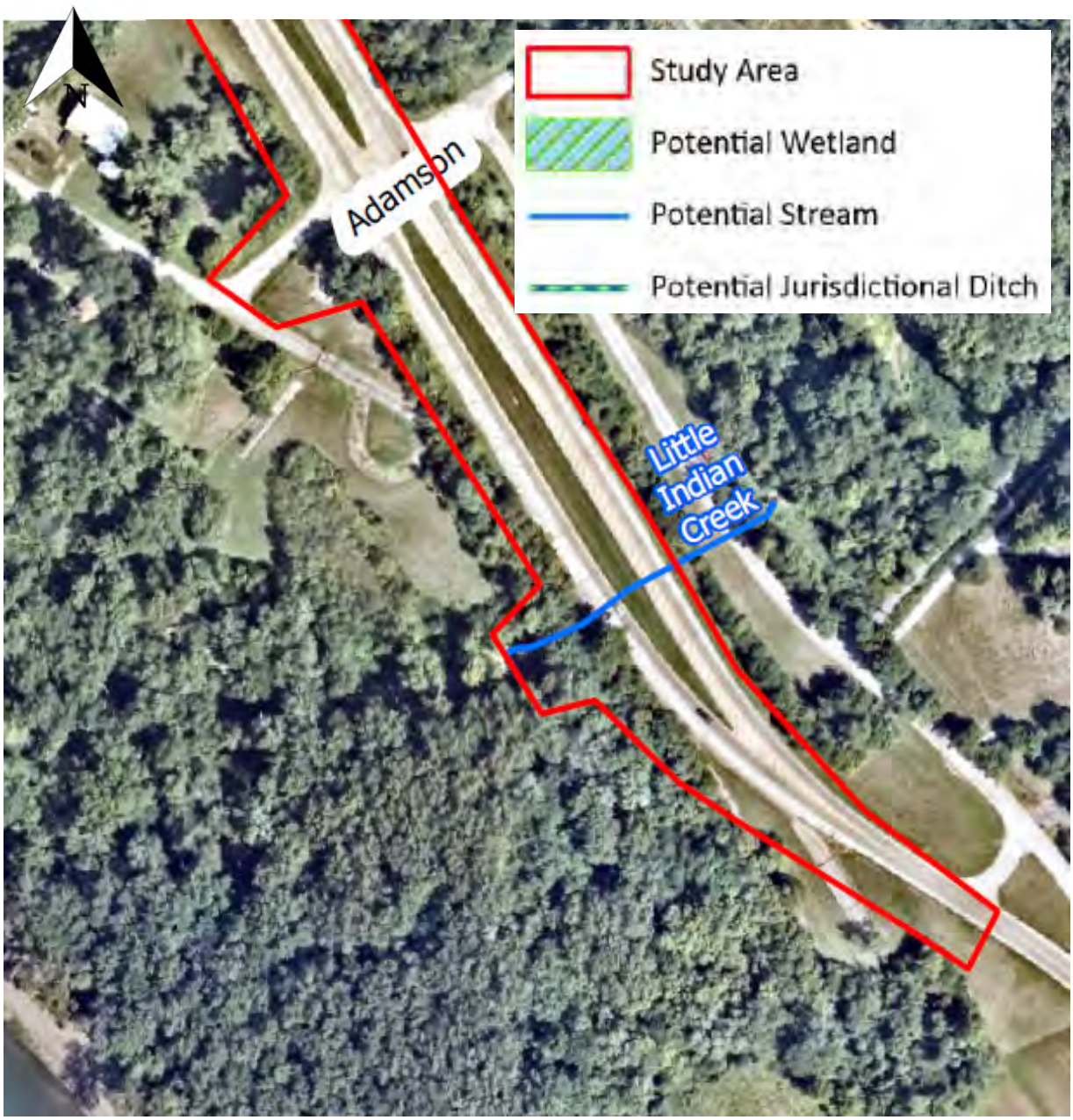


Stream Name	Potential Type	Stream Name	Potential Type
Stream 2	Intermittent	Stream 3	Intermittent
Ditch 1	Ditch	Little Indian Creek	Perennial

Stream 2 displayed ordinary high-water marks (OHWM) and algal crusts, suggesting it contains water for extended periods of the year. Stream 3 contained isolated pools of water, indicating an intermittent stream. Ditch 1 alternated between showing an OHWM and being fully vegetated, suggesting it may qualify as a jurisdictional ditch. The project does not anticipate impacts to these water resources. See the following map for their locations.

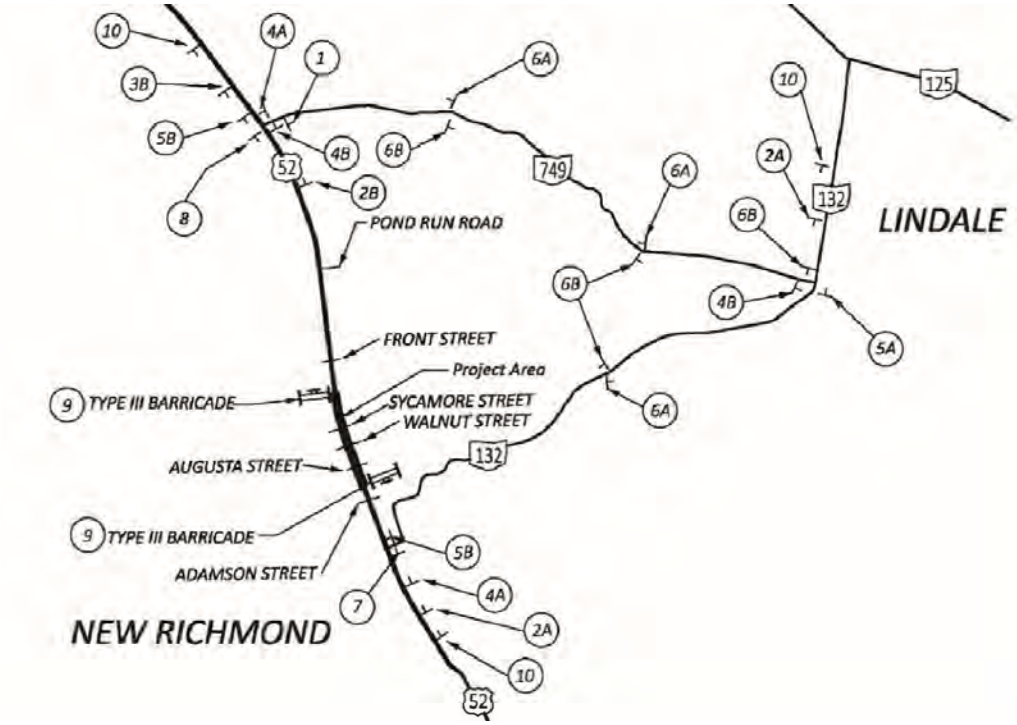


Observers recorded flowing water in Twelvemile Creek and Little Indian Creek, confirming that both are perennial streams. The project does not anticipate impacts to these water resources. See the following map for their locations.



G. Conceptual Maintenance of Traffic

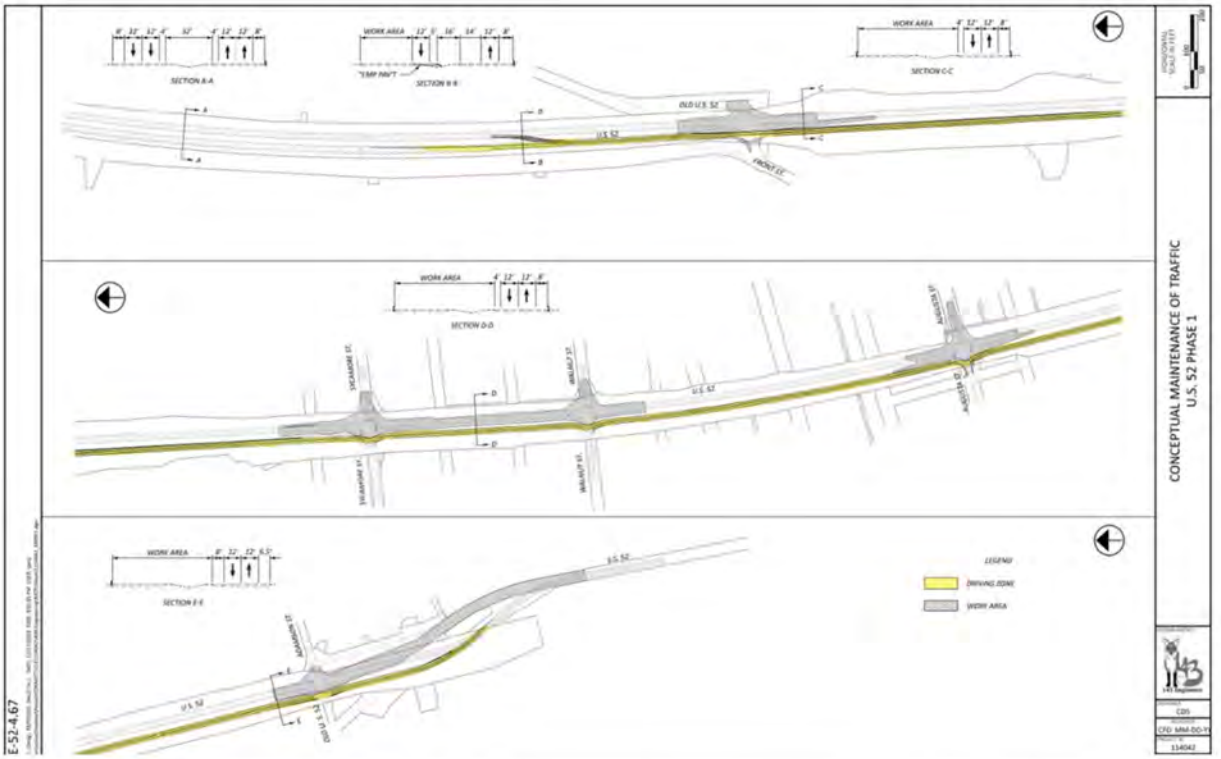
For this project, the team developed a plan to maintain local traffic and a detour plan for traffic traveling through the Village. A detour will use SR 729 and SR 132 to detour through traffic. US 52 will remain open throughout construction for local access only.

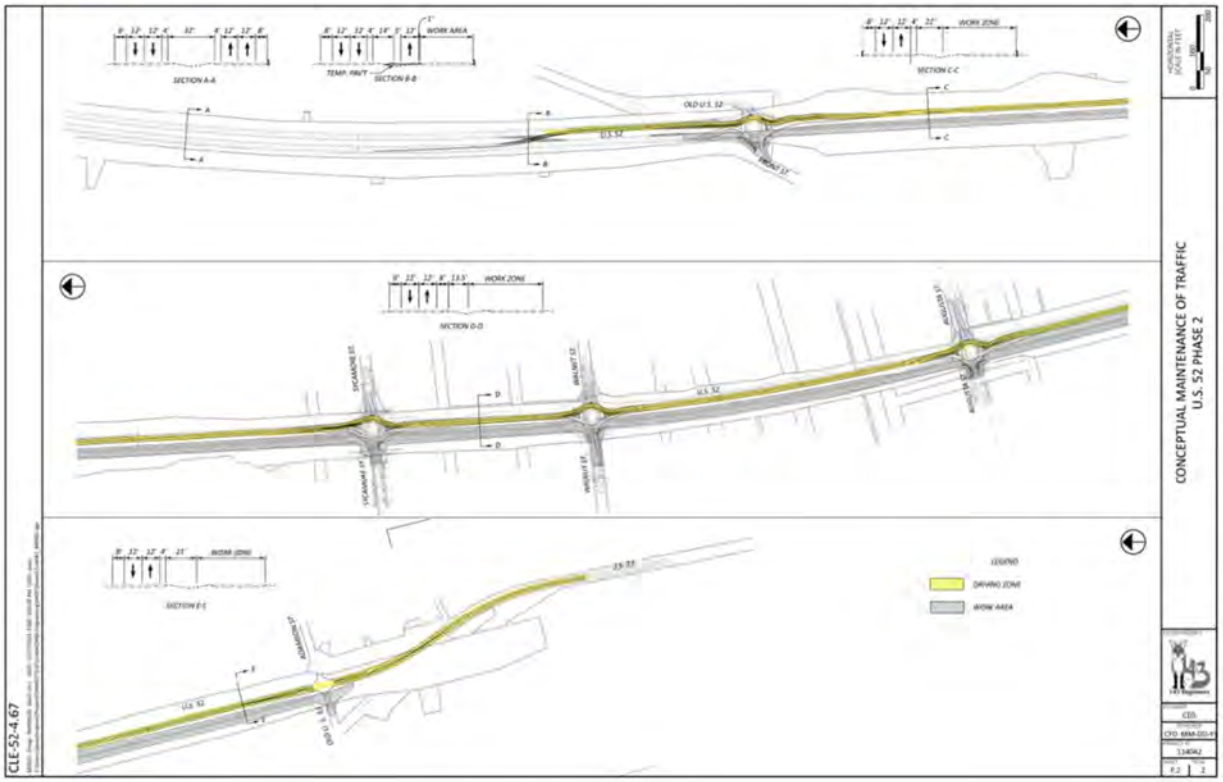


The project will be built under two separate phases due to funding constraints. Phase 1 will include the construction of the Sycamore Street, Walnut Street, and Augusta Street intersections. Phase 2 will include construction of the Front Street intersection and the connection to the existing 2-lane roadway at the Village's south corporation limit. In both phases, crossovers will be constructed to maintain traffic. In each phase, each intersection will be built independently of the other intersections. When each intersection is constructed, one side will be built while maintaining local traffic. Then the opposite side will be built, maintaining local traffic. See the Phase 1 and Phase 2 concept maintenance of traffic plans next.

The plan detours US Bike Route 21 in both directions through New Richmond and around the project site via Front Street, Augusta Street, Washington Street, and Adamson Street.

The two phases of the maintenance of traffic plans for the construction of the roundabouts are shown on the following maps.





H. Construction Costs and Funding

The team based the construction costs on the pre-Stage 1 construction plans for each phase. These costs include inflation, contingency, and design fees. See Appendix F for detailed cost estimates for each phase. The Village of New Richmond has secured various funding sources to design and construct the project, as outlined next.

CLE-US 52-4.67 Estimated Costs	Total	Congressional Earmark Grant	Toll Revenue Credit Grant	Ohio Public Works Grant	Congestion Mitigation Air Quality Grant
Phase 1					
Engineering	$ 632,206	$ 449,405	$ 112,351	$ 70,450	
Right of Way	$ 46,890	$ 8,720	$ 2,180		$ 35,990
Construction+ Construction Engineering	$ 4,675,285			$ 953,270	$ 3,722,015
TOTAL	$ 5,354,381				
Phase 2					
Engineering	$ 521,096	$ 364,657	$ 91,164	$ 65,275	
Right of Way	$ 25,000				$ 25,000
Construction+ Construction Engineering	$ 2,406,200			$ 512,052	$ 1,894,148
TOTAL	$ 2,952,296				

I. Timeline and Project Phasing

On June 15, 2020, the Village Council voted to move forward with the US 52 Roundabout Project. Since then, the team has developed documents to advance the design and secure construction and design grant funding. To obtain the necessary funds, the team divided the project into three construction phases.

- **Phase 1** will build the roundabouts at Sycamore Street, Walnut Street, and Augusta Street. The team is finalizing the design now.
- **Phase 2** will build the roundabout at Front Street and a road diet on the south side of the project, with construction
- **Future ODOT Improvements** The ODOT PID 114541 project is the primary mill-and-fill, resurfacing, with pavement repairs, through the Village of New Richmond between the roundabouts. The construction of this ODOT projects will be coordinated with the Phase 1 and Phase 2 projects.

Phase 1
Sycamore St. Roundabout
Walnut St. Roundabout
Augusta St. Roundabout
Phase 2
Front St. Roundabout
Road Diet
Future (By ODOT)
US 52 Resurfacing

J. Summary of Public Involvement Activity and Comments

The project has been discussed at Village Council meetings. Comment letters have been received from several sources. They are in Appendix H.

Officials are scheduling a public involvement meeting, both online and in person, to present project details and gather input on speeding, pedestrian and bicyclist activity, crashes, and participants' likes and dislikes about the project. After receiving comments, the team will evaluate the project scope to address those concerns. Access the public input website here: https://publicinput.com/New Richmond US52 Roundabout Project.

The team will summarize the feedback from the public involvement meetings and document all comments received in the appendix of this feasibility study after the public involvement comment period ends.

V. COMPARISON OF ALTERNATIVES

The next table compares how the three alternatives address the project's purpose. The three alternatives are: Alternative 1: No Build; Alternative 2: Road Diet with Roundabout Intersections; and Alternative 3: Road Diet with Signalized Intersections. The table on the next page is color-coded: red indicates the least desirable outcome, yellow the middle desirable outcome, and green the most desirable outcome.

VI. CONCLUSION

From the Purpose Statement summary chart, Alternative 2: Roundabout with Road Diet Intersections has the best statistics when compared with Alternative 1: No Build and Alternative 3: Signals with Road Diet Intersections.

The team will complete this section after receiving the Public Involvement comments.

VII. NEXT STEPS

The team will complete this section after receiving the Public Involvement comments.

Topics of Consideration	Project Characteristic	Alternative 1 - No Build	Alternative 2 - Road Diet with Roundabout Intersections	Alternative 3 - Road Diet with Signalized Intersections
				
Primary Need				
Improve connectivity across US 52 for vulnerable road users	Pedestrian Crossings	Non-ADA compliant with no ped amenities	High-Visibility ADA Compliant Crossings	High-Visibility ADA Compliant Crossings
	Refuge Island	None	Provided on Each Approach	None
	Pedestrian Crossing Distance	140'	16'	36'
	Pedestrian-Vehicle Conflict Points	28	8	24
Improve connectivity along US 52 for vulnerable road users	Bike Distance from Motorized Vehicles	2' buffered bike lane	30' Grass Median and 4' Shoulder	30' Grass Median and 4' Shoulder
	Pedestrian Facilities along US 52	None	8' wide section of the Shared Use Path	8' wide section of the Shared Use Path
	Bicycle Facilities along US 52	2' buffered bike lane	16' wide section of the Shared Use Path	16' wide section of the Shared Use Path
	Bike Level of Traffic Stress Level	4	1	1
Secondary Need				
Calm Traffic Along US 52	Traffic Calming Features	No	Yes: Road Diet and Roundabouts	Yes: Road Diet
Economic Development	Non-motorized Accessible Business District	Fencing remain in place eliminating Shared Use Path Development	Fencing moved to median for Shared Use Path Development	Fencing moved to median for Shared Use Path Development
Maintain acceptable level of service along US 52 for 2046 Traffic Numbers	**Intersections**	**LOS/Delay**	**LOS/Delay**	**LOS/Delay**
	Front Street	AM:A/8.8 seconds	AM:C/15.9 seconds	AM:B/16.3 seconds
		PM:A/9.2 seconds	PM:B/10.9 seconds	PM:B/15.5 seconds
	Sycamore Street	AM:B/10.3 seconds	AM:C/23.8 seconds	AM:B/19.1 seconds
		PM:A/9.5 seconds	PM:B/13.5 seconds	PM:B/14.0 seconds
	Walnut/Short Hill Street	AM:B/10.4 seconds	AM:B/11.2 seconds	AM:B/17.8 seconds
		PM:A/8.5 seconds	PM:C/17.3 seconds	PM:B/12.0 seconds
	Augusta/Bethel New Richmond Road	AM:A/8.5 seconds	AM:C/16.5 seconds	AM:B/12.3 seconds
		PM:A/7.3 seconds	PM:C/19.0 seconds	PM:B/10.2 seconds
Other Issues to Consider				
	Construction Cost	none	$7,081,485	$4,059,390
	Right of Way Impact	none	5 temporary easements	5 temporary easements
	Environmental Impact	none	minimal impacts	minimal impacts
	Utility Impact	none	minimal impacts	minimal impacts

EXHIBITS

Exhibit A-Study Area Map



Five intersections along the US 52 corridor in New Richmond, Ohio, are included in this project, along with the road diet from Front Street to the Village south corporation limits.

1) Front Street;
2) SR 132/Sycamore Street;
3) Walnut Street/Short Hill Street;
4) Augusta Street; and
5) Adamson Street.

Exhibit B-Existing Aerial of US 52 Intersections

US 52 AND FRONT STREET



US 52 AND SR 132/SYCAMORE STREET



US 52 AND WALNUT STREET



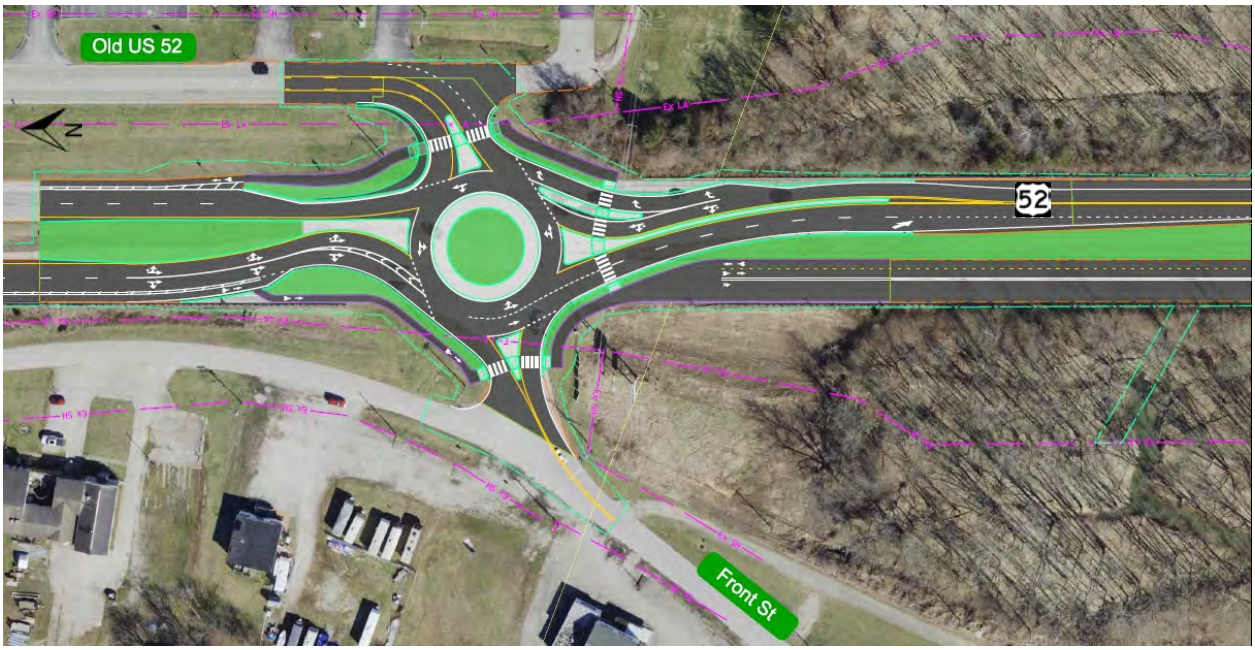
US 52 AND AUGUSTA STREET

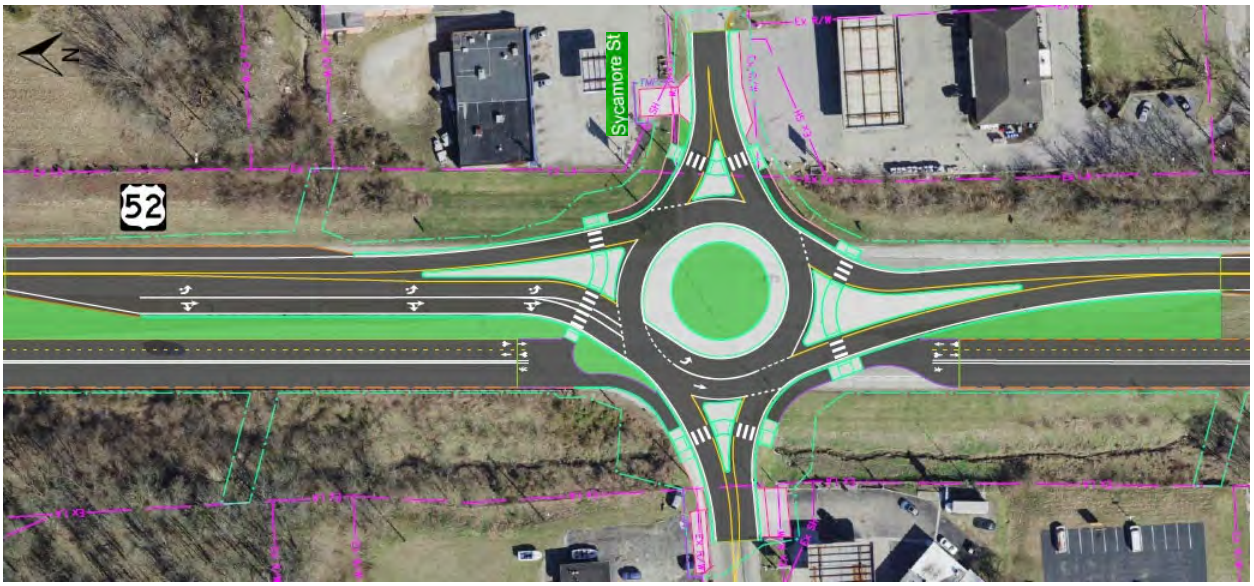


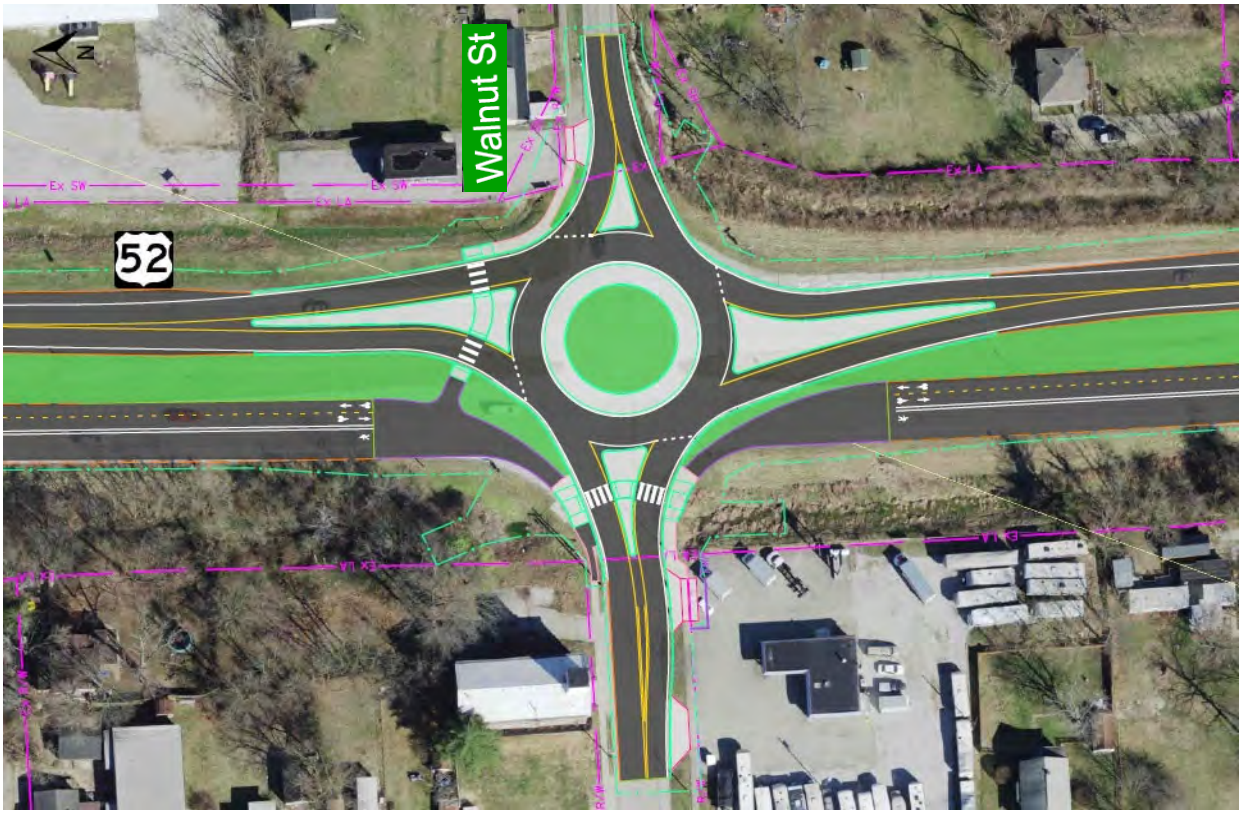
Exhibit C-Schedule

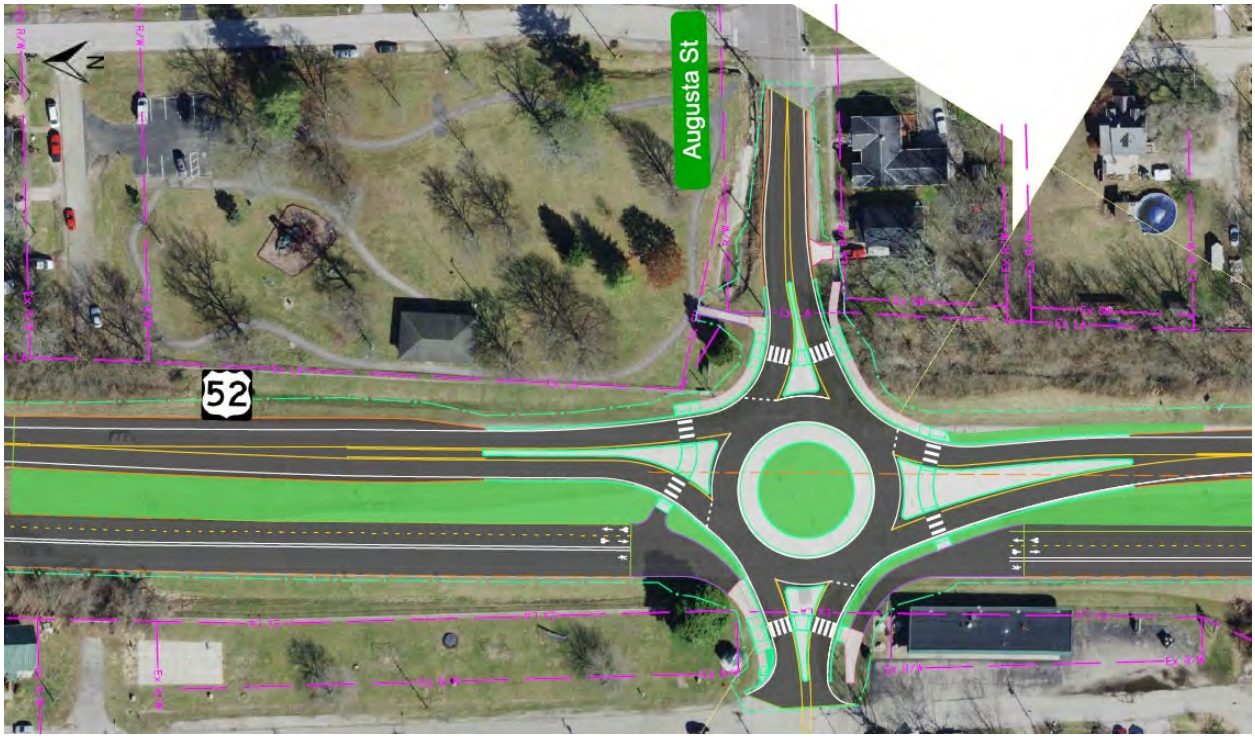
CLE-US 52-4.67 New Richmond Phase Schedule	PHASE 1	PHASE 2
Feasilibility Study Submitted	12/30/2024	
NEPA Start Data	1/28/2022	
Feasilibility Study Approved	5/28/2026	
Stage 1 Plans - Submitted		6/1/2026
Preliminary R/W Review Submission - Submitted	11/3/2025	6/1/2026
Stage 1 Plans - Complete		6/2/2026
Preliminary R/W Review Submission - Approved	1/28/2026	6/2/2026
Stage 2 Plans - Submitted	3/6/2026	8/1/2026
Compliance R/W Review Submission - Submission	3/6/2026	8/1/2026
Compliance R/W Review Submission - Approved	3/20/2026	8/31/2026
Stage 1 & 2 Plans - Complete	3/20/2026	9/1/2026
Final R/W Plan Submission - Submittal	4/15/2026	4/1/2027
Environmental Document Approved	9/2/2026	
Final R/W Plan Submission - Approved	4/30/2026	4/1/2027
R/W Authorized	9/16/2026	5/1/2027
Stage 3 Plans - Submitted	4/19/2026	10/1/2026
Stage 3 Plans - Complete	5/19/2026	10/31/2026
Final Tracings - Submitted	6/18/2026	11/30/2026
Final Tracings - Complete	7/18/2026	12/30/2026
R/W Acquisition Complete	3/15/2027	10/28/2027
District R/W Certification	3/22/2027	11/4/2027
Plan Package Submitted to C.O.	4/14/2027	11/27/2027
Plan Package Received in C.O.	4/17/2027	11/30/2027
Contractor Award - Sale	7/16/2027	2/28/2028
Award	7/27/2027	3/10/2028
Begin Construction	9/25/2027	5/9/2028
End Construction	9/24/2028	5/9/2029

Exhibit D-Public Involvement Exhibits






Walnut St
52
N


Augusta St
52
N


Adamson St
52
52

Topics of Consideration	Project Characteristic	Alternative 1 - No Build	Alternative 2 - Road Diet with Roundabout Intersections	Alternative 3 - Road Diet with Signalized Intersections
				
Primary Need				
Improve connectivity across US 52 for vulnerable road users	Pedestrian Crossings	Non-ADA compliant with no ped amenities	High-Visibility ADA Compliant Crossings	High-Visibility ADA Compliant Crossings
	Refuge Island	None	Provided on Each Approach	None
	Pedestrian Crossing Distance	140'	16'	36'
	Pedestrian-Vehicle Conflict Points	28	8	24
Improve connectivity along US 52 for vulnerable road users	Bike Distance from Motorized Vehicles	2' buffered bike lane	30' Grass Median and 4' Shoulder	30' Grass Median and 4' Shoulder
	Pedestrian Facilities along US 52	None	8' wide section of the Shared Use Path	8' wide section of the Shared Use Path
	Bicycle Facilities along US 52	2' buffered bike lane	16' wide section of the Shared Use Path	16' wide section of the Shared Use Path
	Bike Level of Traffic Stress Level	4	1	1
Secondary Need				
Calm Traffic Along US 52	Traffic Calming Features	No	Yes: Road Diet and Roundabouts	Yes: Road Diet
Economic Development	Non-motorized Accessible Business District	Fencing remain in place eliminating Shared Use Path Development	Fencing moved to median for Shared Use Path Development	Fencing moved to median for Shared Use Path Development
Maintain acceptable level of service along US 52 for 2046 Traffic Numbers	**Intersections**	**LOS/Delay**	**LOS/Delay**	**LOS/Delay**
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		PM:A/9.5 seconds	PM:B/13.5 seconds	PM:B/14.0 seconds
	Walnut/Short Hill Street	AM:B/10.4 seconds	AM:B/11.2 seconds	AM:B/17.8 seconds
		PM:A/8.5 seconds	PM:C/17.3 seconds	PM:B/12.0 seconds
	Augusta/Bethel New Richmond Road	AM:A/8.5 seconds	AM:C/16.5 seconds	AM:B/12.3 seconds
		PM:A/7.3 seconds	PM:C/19.0 seconds	PM:B/10.2 seconds
Other Issues to Consider				
	Construction Cost	none	$7,081,485	$4,059,390
	Right of Way Impact	none	5 temporary easements	5 temporary easements
	Environmental Impact	none	minimal impacts	minimal impacts
	Utility Impact	none	minimal impacts	minimal impacts

Appendix A – Crash Analysis

Crash Data on US 52 from Front Street to pass the southern curve pass was analyzed from 2011 to 2022.



Map of crashes along US 52 from 2011-2022

There are a total of 225 crashes. These crashes were separated into three files to compare to Segment Rural Multilane Divided site selection, Intersection Rural 4-leg Signalized, and Intersection Rural 4-leg minor road stop to the statewide statistics. See next page.

SEGMENT ANALYSIS

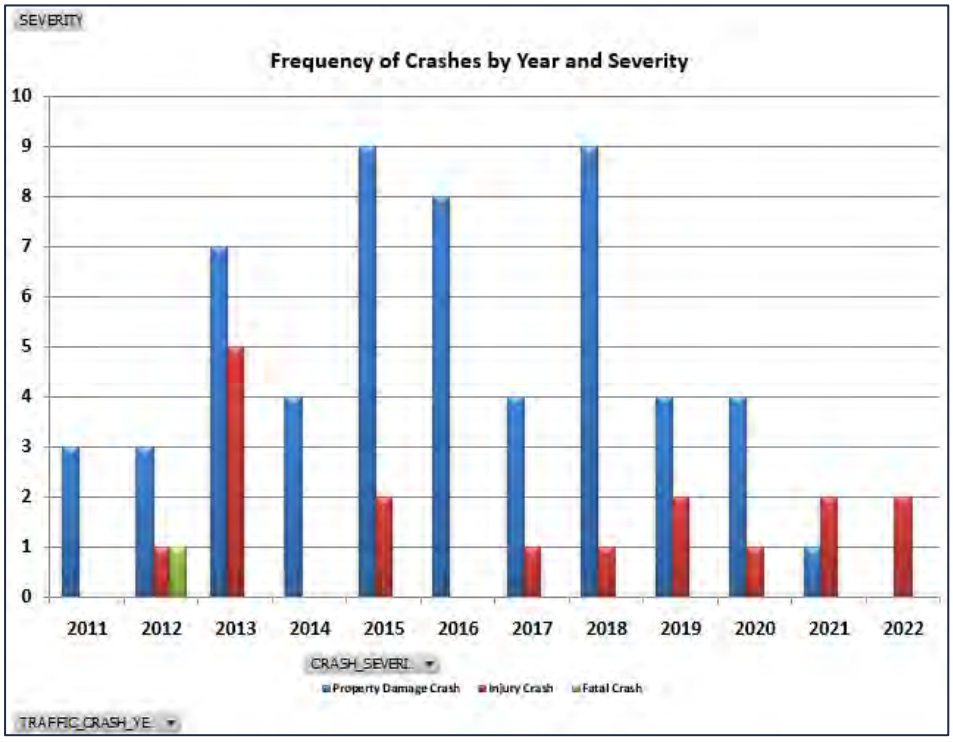
Site crash percentages were compared to the statewide average percentages for similar roadways for fatal and injury crashes. It was found that the total of the site crash percentages exceeded the statewide averages in the fatal and injury categories, which had a total of 19 crashes, or 25.68%, of the crashes in the corridor. These categories are shown in green and yellow in the first chart.

Select Site Type	Seg/Rur; Multilane divided

Crash Severity	Site Average		Statewide Average
	Total (2011-2022)	Total (%)	Total (%)
Fatal Crash	1	1.35%	0.49%
Serious Injury Suspected Crash	2	2.70%	3.13%
Minor Injury Suspected Crash	8	10.81%	10.34%
Injury Possible Crash	7	9.46%	6.10%
Property-Damage-Only	56	75.68%	79.94%
Total	**74**		

Crash Summary Sheet — Crashes Per Year: 6.17 — Percent Injury

Total Crashes / Crash Type	Injury Level (1) Fatal	(2) Serious Inju	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inj	Grand Total
Animal	0	0	0	1	23	24
Rear End	0	1	0	3	8	12
Fixed Object	0	0	2	1	8	11
Other Non-Collision	0	0	1	0	5	6
Angle	0	0	2	0	4	6
Left Turn	0	0	1	1	3	5
Sideswipe - Passing	1	1	0	0	1	3
Right Turn	0	0	0	1	1	2
Head On	0	0	2	0	0	2
Backing	0	0	0	0	2	2
Overturning	0	0	0	0	1	1
Grand Total	1	2	8	7	56	74



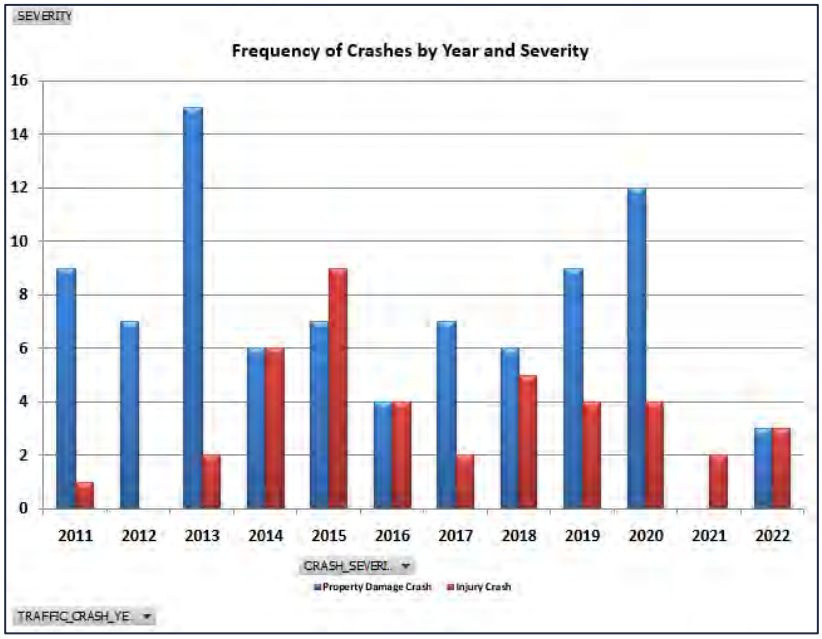
INTERSECTION SIGNALIZED ANALYSIS

Site crash percentages were compared to the statewide average percentages for similar roadways for fatal and injury crashes. It was found that the total of the site crash percentages exceeded the statewide averages in the fatal and injury categories.

Select Site Type	Int/Rur; 4-leg signalized

Crash Severity	Site Average		Statewide Average
	Total (2011-2022)	Total (%)	Total (%)
Fatal Crash	0	0.00%	0.33%
Serious Injury Suspected Crash	4	3.15%	2.84%
Minor Injury Suspected Crash	22	17.32%	11.13%
Injury Possible Crash	16	12.60%	11.29%
Property-Damage-Only	85	66.93%	74.42%
Total	**127**		

Total Crashes	Injury Level				
Crash Type	(2) Serious Inju	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inju	Grand Total
Rear End	1	6	4	22	33
Left Turn	0	5	5	12	22
Angle	0	7	5	10	22
Animal	1	1	0	9	11
Sideswipe - Passing	0	1	0	9	10
Fixed Object	0	1	0	9	10
Head On	1	1	0	3	5
Right Turn	0	0	0	4	4
Backing	1	0	0	3	4
Parked Vehicle	0	0	0	2	2
Other Non-Collision	0	0	1	1	2
Unknown	0	0	0	1	1
Pedestrian	0	0	1	0	1
Grand Total	4	22	16	85	127



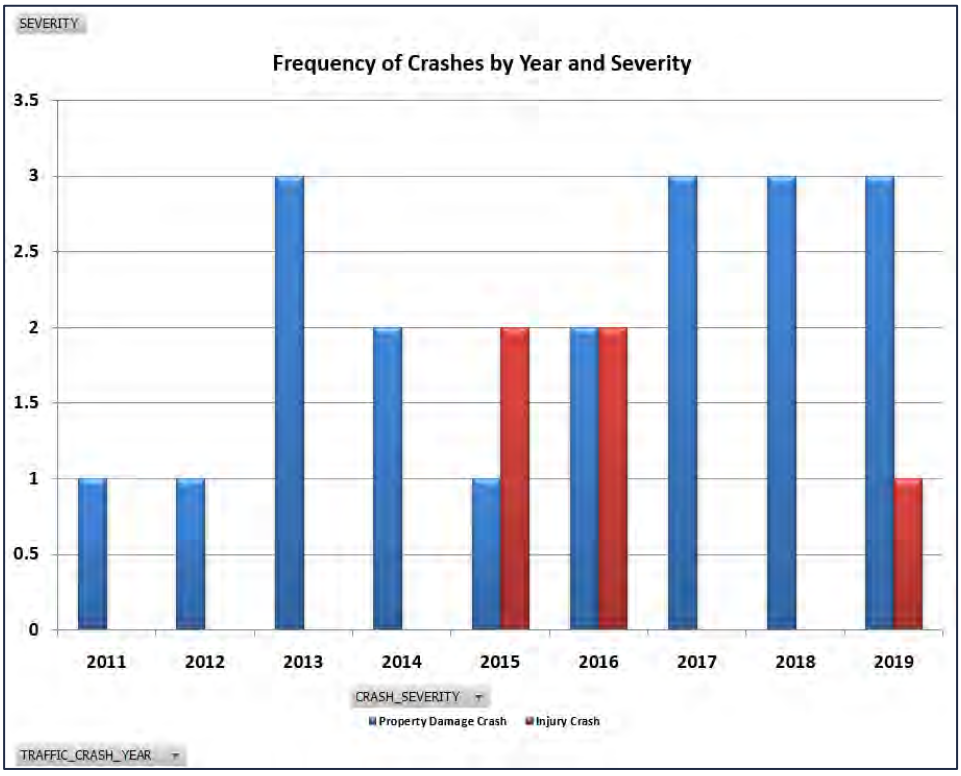
INTERSECTION UNSIGNALIZED ANALYSIS

Site crash percentages were compared to the statewide average percentages for similar roadways for fatal and injury crashes. It was found that the total of the site crash percentages does not exceed the statewide averages in the fatal and injury categories.

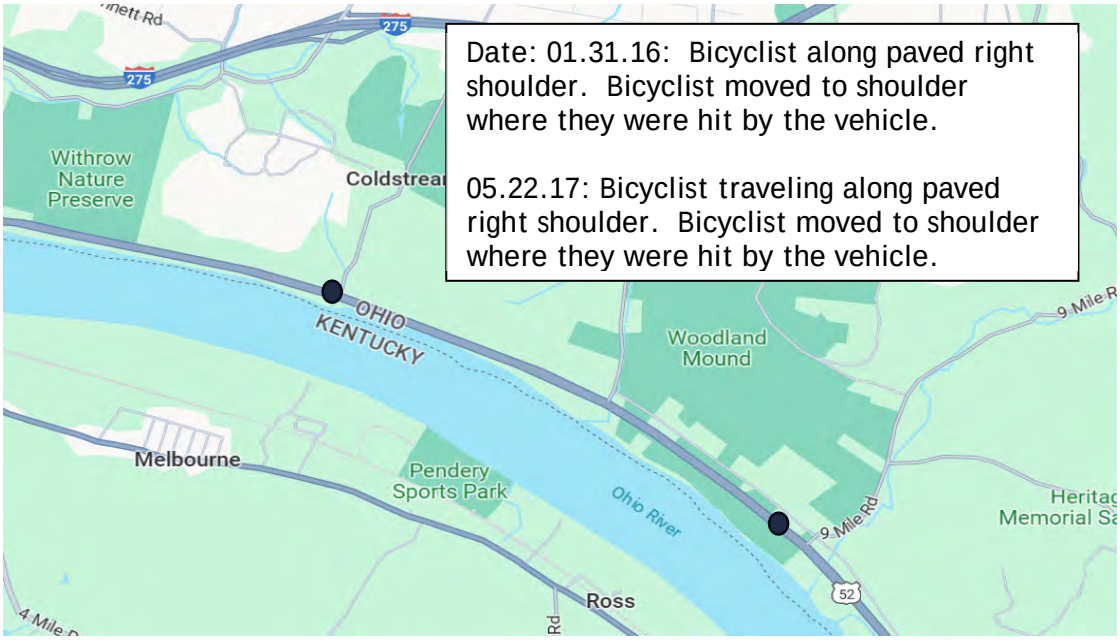
Select Site Type	Int/Rur; 4-leg minor-rd STOP

Crash Severity	Site Average		Statewide Average
	Total (2011-2019)	Total (%)	Total (%)
Fatal Crash	0	0.00%	1.19%
Serious Injury Suspected Crash	2	8.33%	6.35%
Minor Injury Suspected Crash	2	8.33%	17.57%
Injury Possible Crash	1	4.17%	11.14%
Property-Damage-Only	19	79.17%	63.74%
Total	**24**		

Total Crashes	Injury Level				
Crash Type	(2) Serious Inju	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inj	Grand Total
Angle	1	2	0	4	7
Animal	0	0	0	5	5
Rear End	0	0	0	4	4
Sideswipe - Passing	0	0	0	4	4
Fixed Object	0	0	1	1	2
Right Turn	0	0	0	1	1
Left Turn	1	0	0	0	1
Grand Total	2	2	1	19	24



Two other bicycle fatalities have occurred just north of the study corridor. Both of these crashes occurred when the bicyclist in the right lane was hit and killed by vehicles.



Appendix B – Speed Analyses

US52 N OF SR132 SYCAMORE ST, IN NEW RICHMOND					
SPEED					
	Date	**Int**	**Pace**	**85th**	**Total**
	Thu 9/7/2023	15	50 - 60	58	14,583



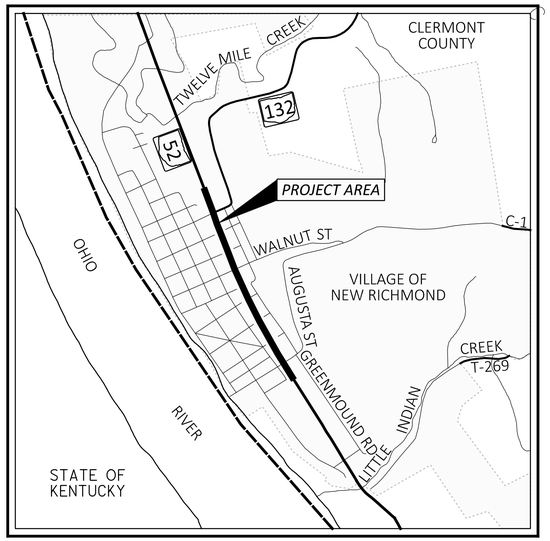
Speed Range (mph)																
Start Time	**0-20**	**20-25**	**25-30**	**30-35**	**35-40**	**40-45**	**45-50**	**50-55**	**55-60**	**60-65**	**65-70**	**70-75**	**75-80**	**80-85**	**85+**	**TOTAL**
12:00 AM	0	0	0	0	0	3	18	28	17	1	0	0	0	0	0	67
1:00 AM	0	0	0	0	0	3	9	13	8	2	0	0	0	0	0	35
2:00 AM	0	0	0	0	1	5	11	11	4	2	0	0	0	0	0	34
3:00 AM	0	0	0	0	0	8	17	37	8	2	2	0	0	0	0	74
4:00 AM	1	0	0	0	1	4	41	68	28	5	0	0	0	0	0	148
5:00 AM	0	0	0	0	0	5	84	260	139	31	1	1	0	0	0	521
6:00 AM	0	0	0	0	3	25	150	440	260	43	7	1	0	0	0	929
7:00 AM	0	0	0	3	1	21	213	522	255	58	8	2	1	1	0	1085
8:00 AM	0	0	0	0	1	27	168	368	180	35	4	0	0	0	0	783
9:00 AM	0	0	0	3	5	32	171	260	120	28	6	1	0	0	0	626
10:00 AM	0	0	0	0	4	30	160	279	117	24	8	0	0	0	0	622
11:00 AM	0	0	0	0	3	22	178	253	120	16	3	0	0	0	0	595
12:00 PM	0	0	0	0	1	36	196	260	116	28	1	1	0	0	0	639
1:00 PM	0	0	0	0	4	26	184	286	154	25	2	0	0	0	0	681
2:00 PM	0	0	0	0	4	17	194	419	236	35	7	1	1	0	0	914
3:00 PM	0	0	0	0	0	31	228	496	288	52	9	1	0	0	0	1105
4:00 PM	0	0	0	1	5	34	205	649	402	82	11	0	1	0	0	1390
5:00 PM	0	0	0	1	3	26	239	677	361	70	12	1	0	0	0	1390
6:00 PM	0	0	0	0	2	33	221	431	213	45	4	0	0	0	0	949
7:00 PM	0	0	0	1	6	31	248	356	154	24	1	1	1	0	1	824
8:00 PM	0	0	0	0	5	27	152	253	73	9	1	1	0	0	0	521
9:00 PM	0	0	0	0	5	15	112	163	49	9	1	0	0	0	0	354
10:00 PM	0	0	0	0	1	8	63	87	30	5	0	0	0	0	0	194
11:00 PM	0	0	0	0	1	10	25	46	17	3	0	0	0	0	1	103
TOTAL	1	0	0	9	56	479	3287	6662	3349	634	88	11	4	1	2	14583

10,751 vehicles (74%) are traveling over the posted speed limit

Appendix C – Stage 2 Construction Plans

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CLE-52-4.67 PHASE 1

VILLAGE OF NEW RICHMOND
OHIO TOWNSHIP
CLERMONT COUNTY



LOCATION MAP

LATITUDE: 38°57'08" N LONGITUDE: 84°16'40" W

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

	US 52	SYCAMORE ST	WALNUT ST	AUGUSTA ST
CURRENT ADT (2026)	12,340	3,590	2,210	1,430
DESIGN YEAR ADT (2046)	13,633			
DESIGN HOURLY VOLUME (2046)	1825			
DIRECTIONAL DISTRIBUTION	55%	51%	70%	45%
TRUCKS (24 HOUR B&C)	3.9%	2.5%	1.8%	2.1%
DESIGN SPEED	55 MPH	30 MPH	30 MPH	30 MPH
LEGAL SPEED	50 MPH	25 MPH	25 MPH	25 MPH
DESIGN FUNCTIONAL CLASSIFICATION: 03 PRINCIPAL ARTERIAL (RURAL)		LOCAL	LOCAL	LOCAL
	03	05	07	05
NHS PROJECT	YES			

DESIGN EXCEPTIONS

ADA DESIGN WAIVERS

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

ENGINEER'S SEAL:

SIGNED:
DATE:

ENGINEER'S SEAL:

SIGNED:
DATE:

INDEX OF SHEETS:

TITLE SHEET	*P.1*
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CROSS SECTIONS - SYCAMORE ST	*P.93 - P.95*
CROSS SECTIONS - WALNUT ST	*P.96 - P.98*
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SPLITTER ISLAND DETAILS	*P.106 - P.111*
CURB RAMP DETAILS	*P.112 - P.116*
DRIVE DETAILS	*P.117 - P.119*
STORM SEWER PROFILES	*P.120 - P.125*
SIGNING AND PAVEMENT MARKING PLANS	*P.126 - P.156*
LIGHTING PLANS	*P.157 - P.163*
RIGHT-OF-WAY PLANS	*RW.1 - RW.6*
GEOTECHNICAL PROFILES	

STAGE 2 COMPLIANCE PLANS
03/10/2026

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	*1/19/24*	*F-1.1*	*7/18/25*	*MT-95.30*	*7/18/25*	*TC-41.20*	*10/18/13*	*HL-10.11*	*7/21/23*	*800*	*1/16/26*
BP-4.1	*7/19/13*	*F-3.3*	*7/19/13*	*MT-95.31*	*7/18/25*	*TC-41.30*	*4/21/23*	*HL-10.12*	*7/21/23*	*813*	*7/21/23*
BP-5.1	*7/18/25*			*MT-95.32*	*7/18/25*	*TC-42.20*	*10/18/13*	*HL-10.13*	*1/20/23*	*825*	*7/19/24*
BP-6.1	*7/19/13*	*MGS-2.1*	*7/18/25*	*MT-95.45*	*7/21/23*	*TC-52.10*	*10/18/13*	*HL-20.11*	*7/18/25*	*832*	*7/21/23*
BP-7.1	*7/18/25*	*MGS-4.2*	*7/18/25*	*MT-95.50*	*7/21/17*	*TC-52.20*	*1/15/21*	*HL-30.11*	*7/21/23*	*878*	*1/16/26*
		MGS-5.3	*7/15/16*	*MT-95.70*	*7/21/23*	*TC-65.10*	*1/17/14*	*HL-30.21*	*4/17/20*	*913*	*4/16/21*
CB-3	*7/19/24*			*MT-97.10*	*7/18/25*	*TC-65.11*	*1/17/25*	*HL-30.22*	*1/17/25*		
CB-3A	*7/19/24*	*MH-3*	*7/19/24*	*MT-101.60*	*1/17/25*	*TC-71.10*	*7/18/25*	*HL-40.20*	*7/18/25*		
CB-6	*7/19/24*			*MT-101.90*	*7/17/20*	*TC-74.10*	*7/21/23*	*HL-60.11*	*7/21/17*		
CB-7	*7/19/24*	*RM-3.1*	*7/20/18*	*MT-102.20*	*4/19/19*	*TC-83.20*	*1/16/26*	*HL-60.31*	*7/19/24*		
CB-8	*7/19/24*	*RM-5.2*	*7/19/24*	*MT-105.10*	*1/17/20*	*TC-87.10*	*7/18/25*				
DM-1.1	*1/17/25*	*HW-2.1*	*7/15/22*								
DM-1.2	*1/17/25*	*HW-2.2*	*7/20/18*								
DM-4.3	*1/15/16*										
DM-4.4	*1/15/16*										

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

FEDERAL PROJECT NUMBER

E210515

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

CONVERT THE EXISTING FOUR LANE DIVIDED SECTION OF US 52 TO ONE LANE OF TRAFFIC IN EACH DIRECTION USING EXISTING NORTHBOUND LANES OF US 52, AND CONVERT THE EXISTING SOUTHBOUND LANES TO A SHARED USE PATH. CONVERT THREE EXISTING INTERSECTIONS (SYCAMORE, WALNUT, AUGUSTA) TO ROUNDABOUTS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	*6.97 ACRES*
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	*2.00 ACRES*
NOTICE OF INTENT EARTH DISTURBED AREA:	*8.97 ACRES*

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE _____ *DISTRICT DEPUTY DIRECTOR*

APPROVED _____
DATE _____ *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

TITLE SHEET

DESIGN AGENCY

DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.1 TOTAL 163

CLE-US52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:29:40 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245\9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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MODEL: CLD_U052_SYC - Plan 1 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:30:09 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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C1
CURVE DATA
P.I. = STA. 281+95.47
Δ = 04°23'29" LT
Dc = 06°21'58"
R = 900.00'
T = 34.51'
L = 68.98'
E = 0.66'
eMAX = 0.060

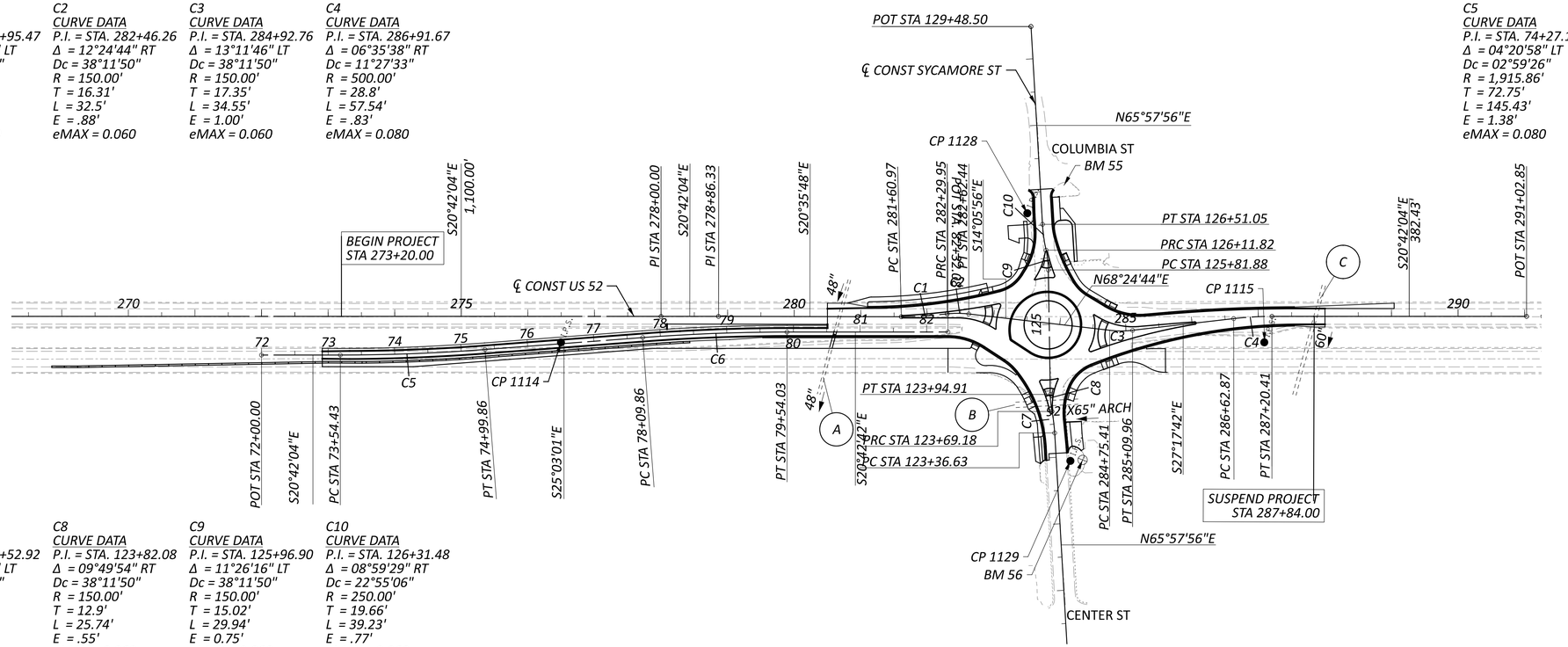
C2
CURVE DATA
P.I. = STA. 282+46.26
Δ = 12°24'44" RT
Dc = 38°11'50"
R = 150.00'
T = 16.31'
L = 32.5'
E = .88'
eMAX = 0.060

C3
CURVE DATA
P.I. = STA. 284+92.76
Δ = 13°11'46" LT
Dc = 38°11'50"
R = 150.00'
T = 17.35'
L = 34.55'
E = 1.00'
eMAX = 0.060

C4
CURVE DATA
P.I. = STA. 286+91.67
Δ = 06°35'38" RT
Dc = 11°27'33"
R = 500.00'
T = 28.8'
L = 57.54'
E = .83'
eMAX = 0.080

C5
CURVE DATA
P.I. = STA. 74+27.18
Δ = 04°20'58" LT
Dc = 02°59'26"
R = 1,915.86'
T = 72.75'
L = 145.43'
E = 1.38'
eMAX = 0.080

C6
CURVE DATA
P.I. = STA. 78+81.98
Δ = 04°20'19" RT
Dc = 03°00'34"
R = 1,903.86'
T = 72.12'
L = 144.17'
E = 1.37'
eMAX = 0.080

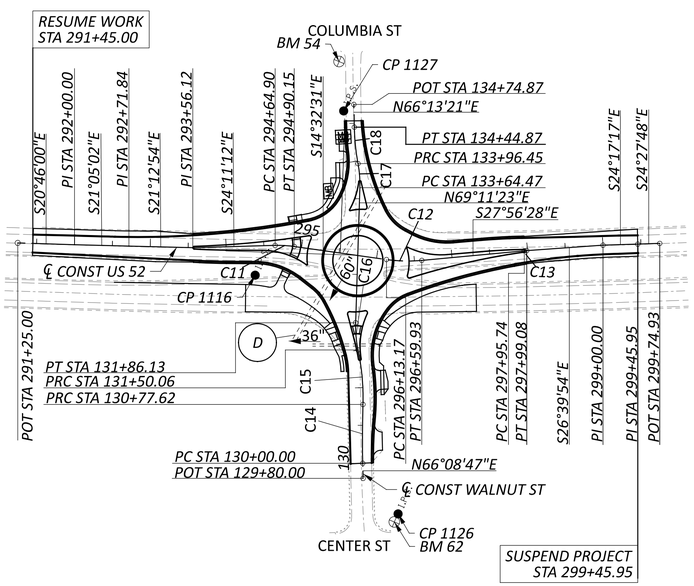


C7
CURVE DATA
P.I. = STA. 123+52.92
Δ = 07°23'06" LT
Dc = 22°41'29"
R = 252.50'
T = 16.30'
L = 32.55'
E = 0.53'
eMAX = 0.060

C8
CURVE DATA
P.I. = STA. 123+82.08
Δ = 09°49'54" RT
Dc = 38°11'50"
R = 150.00'
T = 12.9'
L = 25.74'
E = .55'
eMAX = 0.060

C9
CURVE DATA
P.I. = STA. 125+96.90
Δ = 11°26'16" LT
Dc = 38°11'50"
R = 150.00'
T = 15.02'
L = 29.94'
E = 0.75'
eMAX = 0.060

C10
CURVE DATA
P.I. = STA. 126+31.48
Δ = 08°59'29" RT
Dc = 22°55'06"
R = 250.00'
T = 19.66'
L = 39.23'
E = .77'
eMAX = 0.060



C11
CURVE DATA
P.I. = STA. 294+77.55
Δ = 09°38'41" RT
Dc = 38°11'50"
R = 150.00'
T = 12.65'
L = 25.25'
E = .53'
eMAX = 0.060

C12
CURVE DATA
P.I. = STA. 296+36.66
Δ = 13°23'43" LT
Dc = 28°38'52"
R = 200.00'
T = 23.49'
L = 46.76'
E = 1.37'
eMAX = 0.060

C13
CURVE DATA
P.I. = STA. 297+97.41
Δ = 01°16'34" RT
Dc = 38°11'50"
R = 150.00'
T = 1.67'
L = 3.34'
E = .01'
eMAX = 0.080

C14
CURVE DATA
P.I. = STA. 130+38.82
Δ = 02°57'54" RT
Dc = 03°49'11"
R = 1,500.00'
T = 38.82'
L = 77.62'
E = 0.50'
eMAX = 0.028

C15
CURVE DATA
P.I. = STA. 131+14.02
Δ = 13°41'55" LT
Dc = 18°54'34"
R = 303.00'
T = 36.39'
L = 72.44'
E = 2.18'
eMAX = 0.060

C16
CURVE DATA
P.I. = STA. 131+68.19
Δ = 13°46'37" RT
Dc = 38°11'50"
R = 150.00'
T = 18.12'
L = 36.07'
E = 1.09'
eMAX = 0.060

C17
CURVE DATA
P.I. = STA. 133+80.52
Δ = 12°12'53" LT
Dc = 38°11'50"
R = 150.00'
T = 16.05'
L = 31.98'
E = 0.86'
eMAX = 0.060

C18
CURVE DATA
P.I. = STA. 134+20.71
Δ = 09°14'51" RT
Dc = 19°05'55"
R = 300.00'
T = 24.26'
L = 48.42'
E = 0.98'
eMAX = 0.060

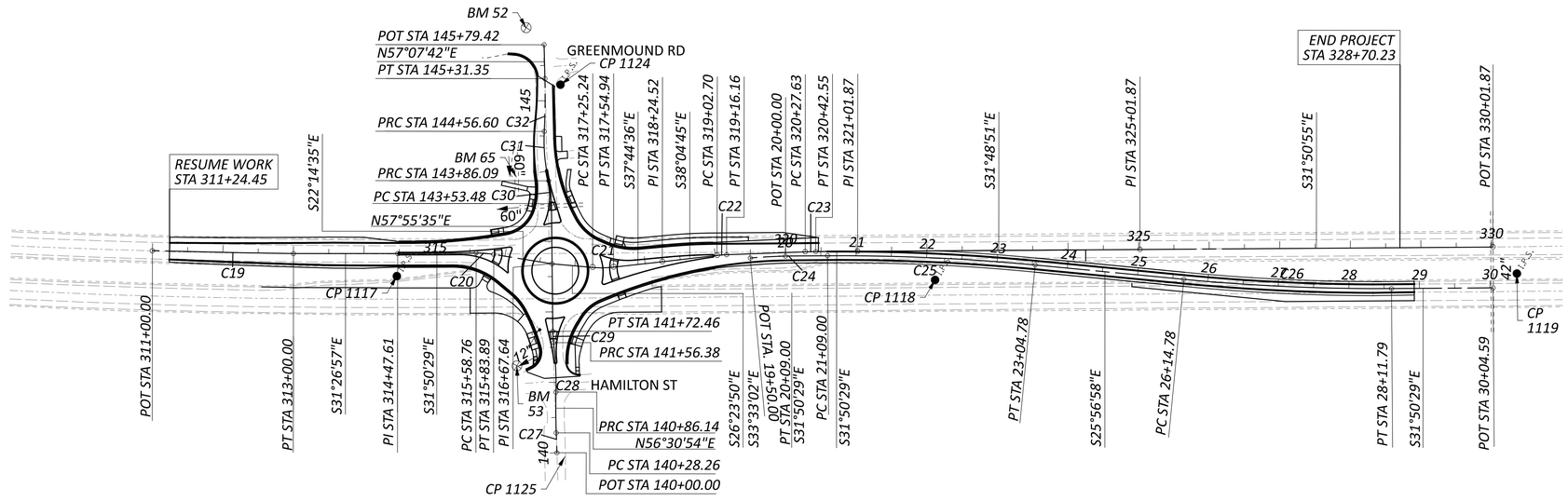
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(B) CONDUIT FILE NUMBER 1861590
(C) CONDUIT FILE NUMBER 1816315
(D) CONDUIT FILE NUMBER 1816316

HORIZONTAL SCALE IN FEET
0 50 100 200

ROUNDABOUT SCHEMATIC

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER JPK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.2 TOTAL P.163



C19
CURVE DATA
P.I. = STA. 312+00.00
Δ = 00°56'09" LT
Dc = 00°28'04"
R = 12,245.67'
T = 100.00'
L = 200.00'
E = 0.41'
eMAX = NC

C20
CURVE DATA
P.I. = STA. 315+71.36
Δ = 09°35'53" RT
Dc = 38°11'50"
R = 150.00'
T = 12.59'
L = 25.13'
E = .53'
eMAX = 0.080

C21
CURVE DATA
P.I. = STA. 317+40.14
Δ = 11°20'47" LT
Dc = 38°11'50"
R = 150.00'
T = 14.90'
L = 29.70'
E = 0.74'
eMAX = 0.080

C22
CURVE DATA
P.I. = STA. 319+09.43
Δ = 05°08'36" RT
Dc = 38°11'50"
R = 150.00'
T = 6.74'
L = 13.47'
E = .15'
eMAX = 0.080

C23
CURVE DATA
P.I. = STA. 320+35.09
Δ = 01°42'34" RT
Dc = 11°27'33"
R = 500.00'
T = 7.46'
L = 14.92'
E = .06'
eMAX = 0.080

C24
CURVE DATA
P.I. = STA. 20+04.50
Δ = 00°43'49" RT
Dc = 08°06'56"
R = 706.00'
T = 4.5'
L = 9'
E = .01'
eMAX = 0.080

C25
CURVE DATA
P.I. = STA. 22+06.97
Δ = 05°53'31" RT
Dc = 03°00'34"
R = 1,903.86'
T = 97.98'
L = 195.78'
E = 2.52'
eMAX = 0.060

C26
CURVE DATA
P.I. = STA. 27+13.37
Δ = 05°53'31" LT
Dc = 02°59'26"
R = 1,915.86'
T = 98.59'
L = 197.01'
E = 2.54'
eMAX = 0.060

C27
CURVE DATA
P.I. = STA. 140+57.20
Δ = 03°18'58" RT
Dc = 05°43'46"
R = 1,000.00'
T = 28.95'
L = 57.88'
E = .42'
eMAX = 0.040

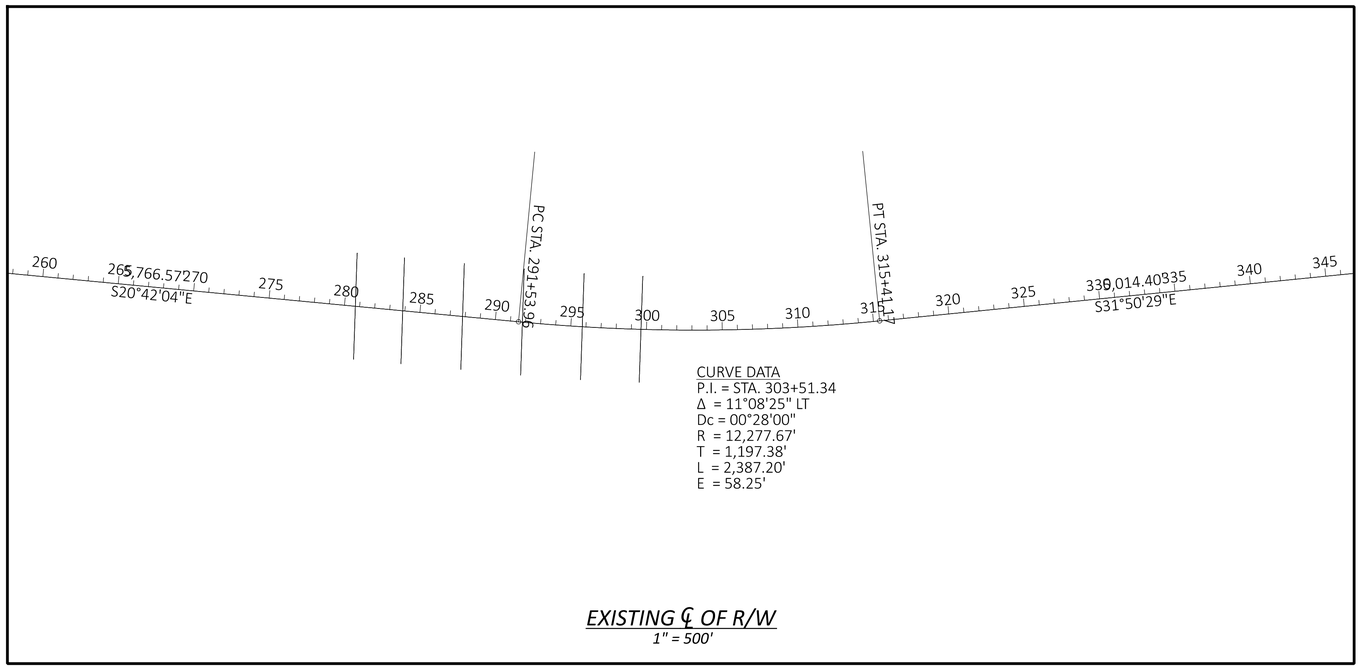
C28
CURVE DATA
P.I. = STA. 141+21.31
Δ = 08°02'56" LT
Dc = 11°27'33"
R = 500.00'
T = 35.18'
L = 70.24'
E = 1.24'
eMAX = 0.059

C29
CURVE DATA
P.I. = STA. 141+64.43
Δ = 06°08'39" RT
Dc = 38°11'50"
R = 150.00'
T = 8.05'
L = 16.09'
E = .22'
eMAX = 0.080

C30
CURVE DATA
P.I. = STA. 143+69.85
Δ = 12°27'15" LT
Dc = 38°11'50"
R = 150.00'
T = 16.37'
L = 32.60'
E = 0.89'
eMAX = 0.080

C31
CURVE DATA
P.I. = STA. 144+21.57
Δ = 15°56'19" RT
Dc = 22°36'07"
R = 253.50'
T = 35.49'
L = 70.52'
E = 2.47'
eMAX = 0.078

C32
CURVE DATA
P.I. = STA. 144+94.00
Δ = 04°16'57" LT
Dc = 05°43'46"
R = 1,000.00'
T = 37.39'
L = 74.75'
E = 0.70'
eMAX = 0.040



CURVE DATA
P.I. = STA. 303+51.34
Δ = 11°08'25" LT
Dc = 00°28'00"
R = 12,277.67'
T = 1,197.38'
L = 2,387.20'
E = 58.25'

EXISTING ℄ OF R/W
1" = 500'

HORIZONTAL
SCALE IN FEET
0 50 100 200

ROUNDABOUT SCHEMATIC

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER JPK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.3 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_AUG - Plan 3 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:30:24 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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PROJECT NAME:	PROJECT NUMBER:	REPORT PREPARED BY:	REPORT CHECKED BY:
CLE-US 52-4.67 New Richmond RABs	2019.02459	C.HENNINGS	J. YOUMANS
CLIENT NAME:	**CREW CHIEF:**	**DATE:**	**DATE:**
143 ENGINEERING LLC	B.KNIFLEY	10/20/2025	10/22/2025
PROJECT LOCATION:	**SURVEY DATE:**		
VILLAGE OF NEW RICHMOND, OHIO	6/13/2021		

HORIZONTAL CONTROL

COORDINATES ARE BASED ON OHIO STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), AS ESTABLISHED UTILIZING A GNSS SURVEY TIED TO THE ODOT RTN NETWORK. A PROJECT ADJUSTMENT FACTOR OF 1.000054573 WAS APPLIED ABOUT (0,0) TO OBTAIN GROUND COORDINATES.

C.P.	DESCRIPTION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION
1100	3/4" IRON PIN W/ALUMINUM CAP SET	347172.615	1465613.107	498.44
1101	3/4" IRON PIN W/ALUMINUM CAP SET	346461.540	1466036.737	503.40
1102	3/4" IRON PIN W/ALUMINUM CAP SET	350878.677	1463047.647	496.74
1103	3/4" IRON PIN W/ALUMINUM CAP SET	351474.531	1462748.555	496.88
1104	3/4" IRON PIN W/ALUMINUM CAP SET	355629.828	1461146.325	494.96
1105	3/4" IRON PIN W/ALUMINUM CAP SET	354997.502	1461396.772	497.19
1106	3/4" IRON PIN W/ALUMINUM CAP SET	359456.847	1459849.362	497.16
1107	3/4" IRON PIN W/ALUMINUM CAP SET	360254.774	1459707.077	496.00
1108	5/8" IRON PIN W/CAP SET	358732.766	1460028.789	495.81
1109	5/8" IRON PIN W/CAP SET	357924.373	1460283.771	497.18
1110	5/8" IRON PIN W/CAP SET	357149.851	1460578.172	495.01
1111	5/8" IRON PIN W/RED CAP SET	356601.575	1460911.160	497.06
1112	5/8" IRON PIN W/CAP SET	356089.393	1460971.234	497.14
1113	5/8" IRON PIN W/CAP SET	354342.306	1461634.854	496.24
1114	5/8" IRON PIN W/CAP SET	353694.297	1461881.644	496.78
1115	5/8" IRON PIN W/CAP SET	352706.230	1462255.189	495.77
1116	5/8" IRON PIN W/CAP SET	352022.493	1462520.736	497.78
1117	5/8" IRON PIN W/CAP SET	350233.298	1463426.419	497.24
1118	5/8" IRON PIN W/CAP SET	349579.859	1463819.636	496.72
1119	5/8" IRON PIN W/CAP SET	348881.272	1464257.429	497.32
1120	5/8" IRON PIN W/CAP SET	348244.750	1464656.574	496.03
1121	5/8" IRON PIN W/CAP SET	347565.911	1465094.323	498.32
1122	5/8" IRON PIN W/CAP SET	347933.305	1464587.146	496.09
1123	5/8" IRON PIN W/CAP SET	348348.763	1465068.979	501.55
1124	5/8" IRON PIN W/CAP SET	350177.047	1463778.867	501.81
1125	5/8" IRON PIN W/CAP SET	349896.723	1463332.450	496.76
1126	5/8" IRON PIN W/CAP SET	351727.267	1462302.327	495.11
1127	5/8" IRON PIN W/CAP SET	351997.928	1462765.812	497.98
1128	5/8" IRON PIN W/CAP SET	353107.666	1462310.703	494.22
1129	5/8" IRON PIN W/CAP SET	352915.715	1461985.732	494.99
1130	5/8" IRON PIN W/CAP SET	356327.592	1460754.700	493.25
1131	5/8" IRON PIN W/CAP SET	347547.331	1465269.317	493.59
1132	5/8" IRON PIN W/CAP SET	347818.613	1465067.331	494.54

VERTICAL CONTROL

ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, AS DERIVED FROM GNSS OBSERVATIONS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) AND GEOID 18, UTILIZING THE ODOT RTN NETWORK FOR CONTROL POINT 1105. THE ELEVATIONS FOR ALL OTHER CONTROL POINTS AND BENCHMARKS LISTED HEREON WERE ESTABLISHED UTILIZING A DIFFERENTIAL LEVEL CIRCUIT ORIGINATING FROM CONTROL POINT 1105.

B.M.	DESCRIPTION	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION
CP 1105	3/4" IRON PIN W/ALUMINUM CAP SET	N/A	N/A	497.190
BM 50	CHISLED SQUARE ON NORTHEAST CORNER OF L SHAPED DRAINAGE HEADWALL (NO VISIBLE PIPE) LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION FOR WASHINGTON STREET AND ADAMSON ROAD ± 3.6 FEET SOUTH OF POWER/LIGHT POLE#1C56E AND ± 5 FEET NORTH OF EDGE OF PAVEMENT ON THE NORTH SIDE OF ADAMSON ROAD	N/A	N/A	496.21
BM 51	2 INCH MAG NAIL 7 INCHES UP IN NORTHEAST SIDE OF POWER POLE #C15846RE LOCATED ON	N/A	N/A	501.00
BM 52	CHISLED "X" ON ARROW (EAST) BOLT OF FIRE HYDRANT LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION FOR CAROLINE	N/A	N/A	508.81
BM 53	CHISLED "X" ON ARROW (SOUTHEAST) BOLT OF FIRE HYDRANT LOCATED ON THE NORTHEAST CORNER OF THE INTERSECTION FOR HAMILTON STREET AND AUGUSTA STREET ± 13 FEET EAST OF THE EDGE OF PAVEMENT AND ± 11 WEST OF GAZEBO	N/A	N/A	498.76
BM 54	CHISLED "X" ON WEST BOLT STUD (1 OF 2) OF FIRE HYDRANT LOCATED ON THE NORTHWEST CORNER OF THE INTERSECTION FOR WALNUT STREET AND COLUMBIA STREET ± 8.4 FEET NORTH OF THE EDGE OF PAVEMENT ON WALNUT STREET AND ± 9.5 FEET WEST OF POWER POLE #C72847RE	N/A	N/A	503.25
BM 55	CHISLED "X" ON ARROW (NORTHWEST) BOLT OF FIRE HYDRANT LOCATED ON THE SOUTHWEST CORNER OF THE INTERSECTION FOR SYCAMORE	N/A	N/A	495.51
BM 56	CHISLED "X" ON NORTHEAST BOLT STUD OF SOUTH SIGN POST (6INCH SQUARE METAL) BASE (SUNOCO GAS STATION) LOCATED ON THE SOUTH SIDE OF SYCAMORE STREET OUT FRONT OF #410 SYCAMORE STREET, ± 2.9 NORTH OF BACK OF PARKING LOT CURB	N/A	N/A	495.54
BM 57	CHISLED "X" ON NORTH BOLT STUD (1 OF 2) OF FIRE HYDRANT LOCATED ± 60 FEET EAST OF US HWY 52 AND ± 55 FEET SOUTH OF OLD US HWY 52 WHERE IT TURNS WEST TO INTERSECT US HWY 52 AND IN FRONT OF #1052 US HWY 52 (OLD FRISCH'S LOCATION)	N/A	N/A	498.16
BM 58	MAG SPIKE 8 INCHES ABOVE GRADE IN SOUTHEAST SIDE OF POWER POLE #C54107RE, LOCATED JUST SOUTH OF THE INTERSECTION FOR	N/A	N/A	492.70
BM 59	CHISLED "X" ON BOLT STUD ON NORTHEAST CORNER OF LIGHT POLE BASE ON WEST SIDE OF US HWY 52, ± 5.3 FEET BEHIND EDGE OF PAVEMENT AND ± 12.8 FEET SOUTH OF GUARDRAIL NEAR WHERE GRASS MEDIAN ENDS DUE TO ROAD CONVERGENCE	N/A	N/A	499.20
BM 60	CHISLED "X" ON NORTHEAST BOLT STUD OF LIGHT POLE BASE LOCATED ON THE WEST SIDE OF US HWY 52, ± 2.66 FEET WEST BEHIND EDGE OF PAVEMENT AND ± 12.58 EAST OF POWER POLE (NO #)	N/A	N/A	501.21
BM 61	2 INCH MAG NAIL 12 INCHES UP IN NORTHEAST SIDE OF POWER POLE #C15846RE LOCATED ON	N/A	N/A	503.00
BM 62	CHISLED "X" ON NORTH BOLT STUD(1 OF 2) OF FIRE HYDRANT LOCATED ON SOUTHEAST CORNER OF OF THE INTERSECTION FOR CENTER STREET AND WALNUT STREET, ± 11.35 FEET EAST OF BACK OF CURB EAST SIDE OF CENTER STREET AND ± 24' SOUTH OF BACK OF CURB ON WALNUT STREET.	N/A	N/A	496.83
BM 63	CHISLED "X" ON NORTH NOLT STUD (1 OF 2) ON FIRE HYDRANT ± 6 FEET WEST OF WEST EDGE OF PAVEMENT OF OLD US HWY 52 ACROSS FROM #1046 OLD US HWY 52 (GOLD STAR CHILI)	N/A	N/A	501.48
BM 64	CHISLED SQUARE FOUND ON THE SOUTHWEST WING WALL 0.1 FEET WEST OF THE BRIDGE DECK	N/A	N/A	498.02
BM 65	2 INCH BRASS DISC STAMPED "N.R. 1993" EPOXIED IN THE TOP OF A 60 INCH CONCRETE DRAIN PIPE LOCATED ± 40 FEET SOUTH OF BETHEL NEW RICHMONDE ROAD AND ± 110 EAST OF US HWY 52 EAST	N/A	N/A	496.38

ROUNDABOUT SCHEMATIC

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER JPK

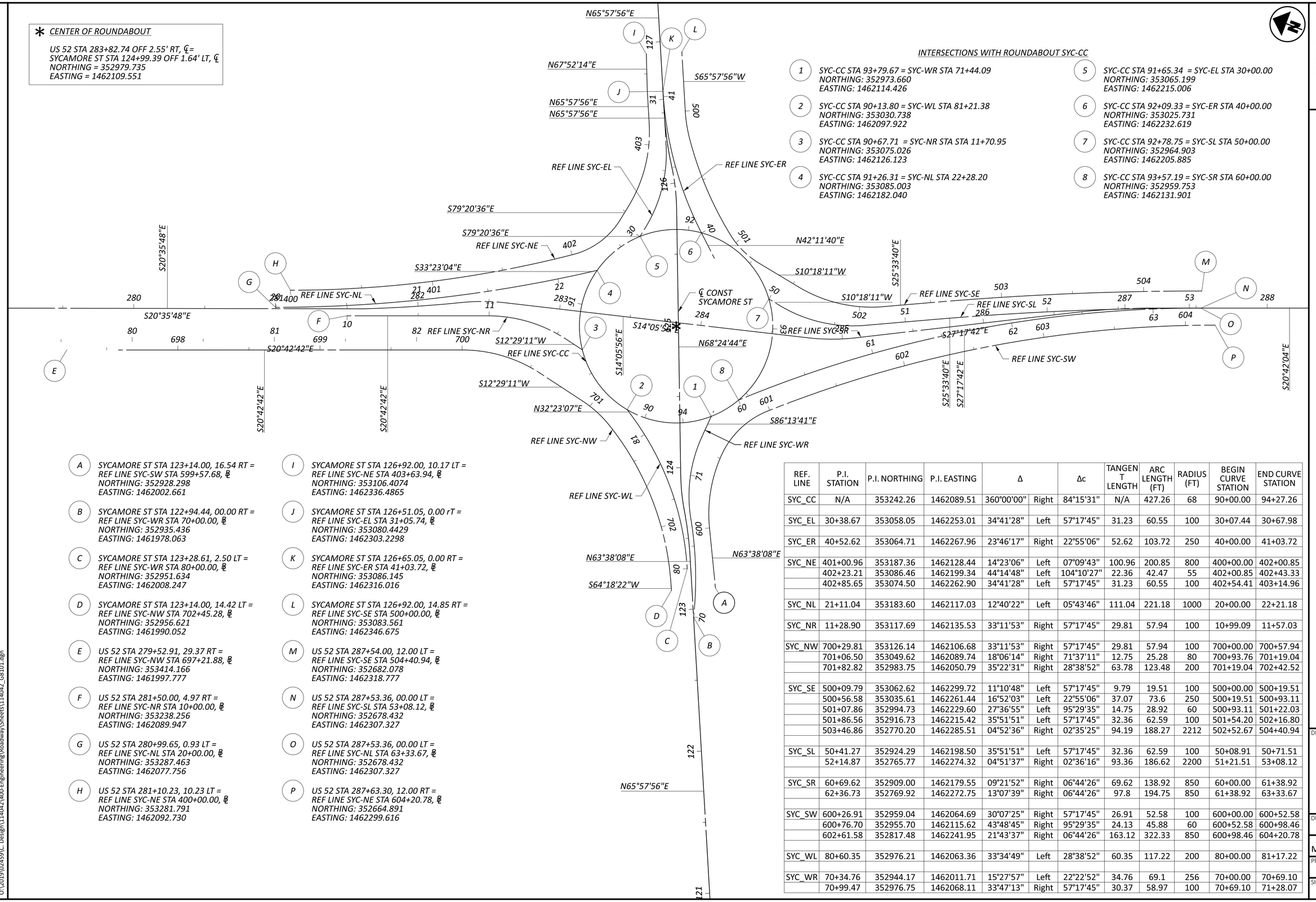
REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.4 TOTAL P.163

CLE-US52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:30:28 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GB003.dgn



REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Δ		Δc	TANGENT LENGTH	ARC LENGTH (FT)	RADIUS (FT)	BEGIN CURVE STATION	END CURVE STATION
SYC_CC	N/A	353242.26	1462089.51	360°00'00"	Right	84°15'31"	N/A	427.26	68	90+00.00	94+27.26
SYC_EL	30+38.67	353058.05	1462253.01	34°41'28"	Left	57°17'45"	31.23	60.55	100	30+07.44	30+67.98
SYC_ER	40+52.62	353064.71	1462267.96	23°46'17"	Right	22°55'06"	52.62	103.72	250	40+00.00	41+03.72
SYC_NE	401+00.96	353187.36	1462128.44	14°23'06"	Left	07°09'43"	100.96	200.85	800	400+00.00	402+00.85
	402+23.21	353086.46	1462199.34	44°14'48"	Left	104°10'27"	22.36	42.47	55	402+00.85	402+43.33
	402+85.65	353074.50	1462262.90	34°41'28"	Left	57°17'45"	31.23	60.55	100	402+54.41	403+14.96
SYC_NL	21+11.04	353183.60	1462117.03	12°40'22"	Left	05°43'46"	111.04	221.18	1000	20+00.00	22+21.18
SYC_NR	11+28.90	353117.69	1462135.53	33°11'53"	Right	57°17'45"	29.81	57.94	100	10+99.09	11+57.03
SYC_NW	700+29.81	353126.14	1462106.68	33°11'53"	Right	57°17'45"	29.81	57.94	100	700+00.00	700+57.94
	701+06.50	353049.62	1462089.74	18°06'14"	Right	71°37'11"	12.75	25.28	80	700+93.76	701+19.04
	701+82.82	352983.75	1462050.79	35°22'31"	Right	28°38'52"	63.78	123.48	200	701+19.04	702+42.52
SYC_SE	500+09.79	353062.62	1462299.72	11°10'48"	Left	57°17'45"	9.79	19.51	100	500+00.00	500+19.51
	500+56.58	353035.61	1462261.44	16°52'03"	Left	22°55'06"	37.07	73.6	250	500+19.51	500+93.11
	501+07.86	352994.73	1462229.60	27°36'55"	Left	95°29'35"	14.75	28.92	60	500+93.11	501+22.03
	501+86.56	352916.73	1462215.42	35°51'51"	Left	57°17'45"	32.36	62.59	100	501+54.20	502+16.80
	503+46.86	352770.20	1462285.51	04°52'36"	Right	02°35'25"	94.19	188.27	2212	502+52.67	504+40.94
SYC_SL	50+41.27	352924.29	1462198.50	35°51'51"	Left	57°17'45"	32.36	62.59	100	50+08.91	50+71.51
	52+14.87	352765.77	1462274.32	04°51'37"	Right	02°36'16"	93.36	186.62	2200	51+21.51	53+08.12
SYC_SR	60+69.62	352909.00	1462179.55	09°21'52"	Right	06°44'26"	69.62	138.92	850	60+00.00	61+38.92
	62+36.73	352769.92	1462272.75	13°07'39"	Right	06°44'26"	97.8	194.75	850	61+38.92	63+33.67
SYC_SW	600+26.91	352959.04	1462064.69	30°07'25"	Right	57°17'45"	26.91	52.58	100	600+00.00	600+52.58
	600+76.70	352955.70	1462115.62	43°48'45"	Right	95°29'35"	24.13	45.88	60	600+52.58	600+98.46
	602+61.58	352817.48	1462241.95	21°43'37"	Right	06°44'26"	163.12	322.33	850	600+98.46	604+20.78
SYC_WL	80+60.35	352976.21	1462063.36	33°34'49"	Left	28°38'52"	60.35	117.22	200	80+00.00	81+17.22
SYC_WR	70+34.76	352944.17	1462011.71	15°27'57"	Left	22°22'52"	34.76	69.1	256	70+00.00	70+69.10
	70+99.47	352976.75	1462068.11	33°47'13"	Right	57°17'45"	30.37	58.97	100	70+69.10	71+28.07

HORIZONTAL SCALE IN FEET
0 15 30 60

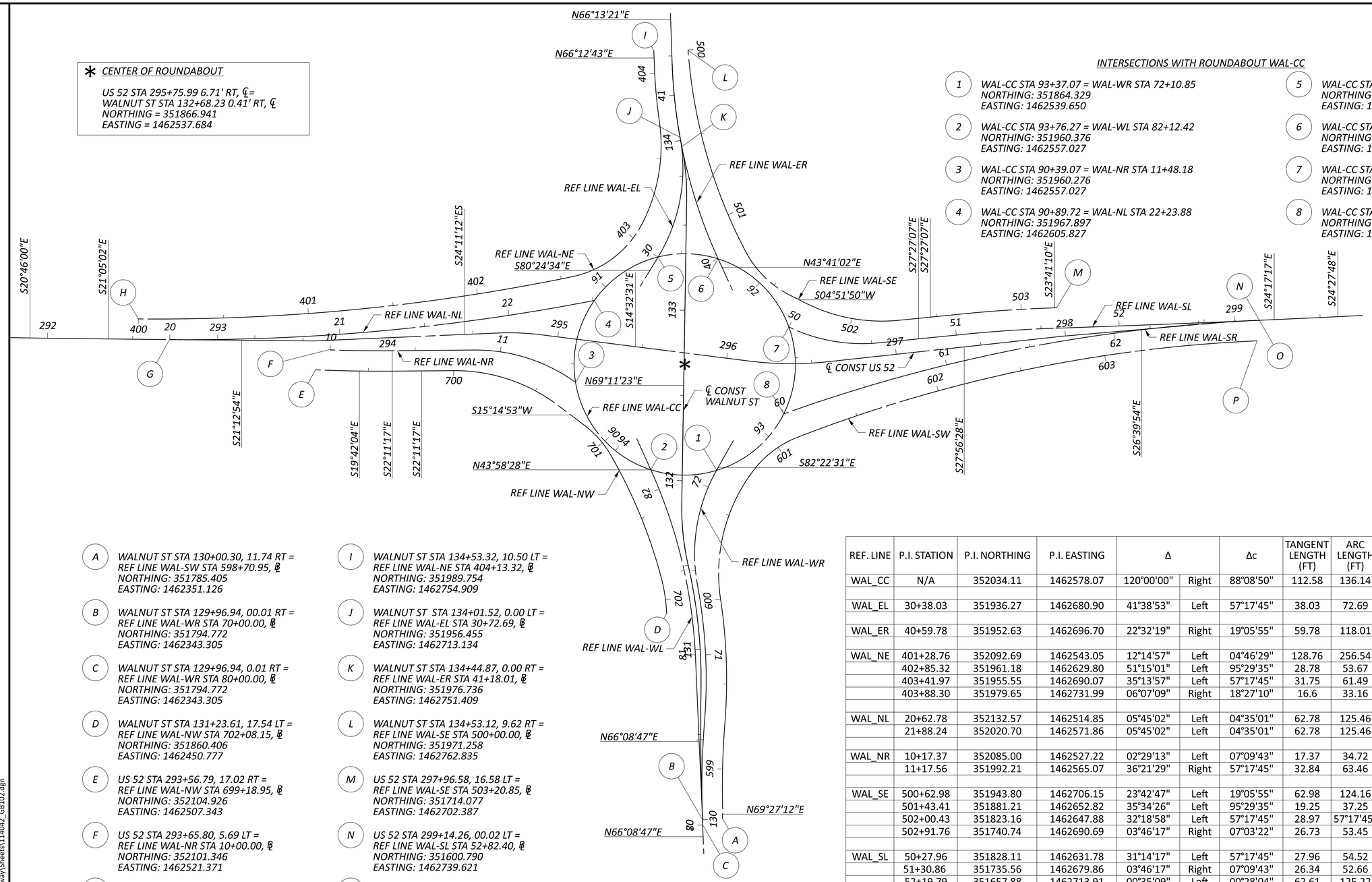
ROUNDABOUT GEOMETRIC LAYOUT

DESIGN AGENCY
STRUCTUREPOINT LLC
MEMBER OF THE PORTLAND CEMENT ASSOCIATION

DESIGNER JPK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.5 TOTAL P.163

CLE-US52-4.67

MODEL: GB002_SycamoreSt PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:31:22 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GB101.dgn



✻ *CENTER OF ROUNDABOUT*

US 52 STA 295+75.99 6.71' RT, ℄=
WALNUT ST STA 132+68.23 0.41' RT, ℄
NORTHING = 351866.941
EASTING = 1462537.684

INTERSECTIONS WITH ROUNDABOUT WAL-CC

1. *WAL-CC STA 93+37.07 = WAL-WR STA 72+10.85*
   NORTHING: 351864.329
   EASTING: 1462539.650
2. *WAL-CC STA 93+76.27 = WAL-WL STA 82+12.42*
   NORTHING: 351960.376
   EASTING: 1462557.027
3. *WAL-CC STA 90+39.07 = WAL-NR STA 11+48.18*
   NORTHING: 351960.276
   EASTING: 1462557.027
4. *WAL-CC STA 90+89.72 = WAL-NL STA 22+23.88*
   NORTHING: 351967.897
   EASTING: 1462605.827
5. *WAL-CC STA 91+35.98 = WAL-EL STA 30+00.00*
   NORTHING: 351942.605
   EASTING: 1462643.396
6. *WAL-CC STA 91+71.74 = WAL-ER STA 40+00.00*
   NORTHING: 351909.404
   EASTING: 1462655.416
7. *WAL-CC STA 92+31.49 = WAL-SL STA 50+00.00*
   NORTHING: 351856.003
   EASTING: 1462632.629
8. *WAL-CC STA 92+84.02 = WAL-SR STA 60+00.00*
   NORTHING: 351839.940
   EASTING: 1462585.112

A. *WALNUT ST STA 130+00.30, 11.74 RT = REF LINE WAL-SW STA 598+70.95, ℄*
   NORTHING: 351785.405
   EASTING: 1462351.126

B. *WALNUT ST STA 129+96.94, 00.01 RT = REF LINE WAL-WR STA 70+00.00, ℄*
   NORTHING: 351794.772
   EASTING: 1462343.305

C. *WALNUT ST STA 129+96.94, 0.01 RT = REF LINE WAL-WR STA 80+00.00, ℄*
   NORTHING: 351794.772
   EASTING: 1462343.305

D. *WALNUT ST STA 131+23.61, 17.54 LT = REF LINE WAL-NW STA 702+08.15, ℄*
   NORTHING: 351860.406
   EASTING: 1462450.777

E. *US 52 STA 293+56.79, 17.02 RT = REF LINE WAL-NW STA 699+18.95, ℄*
   NORTHING: 352104.926
   EASTING: 1462507.343

F. *US 52 STA 293+65.80, 5.69 LT = REF LINE WAL-NR STA 10+00.00, ℄*
   NORTHING: 352101.346
   EASTING: 1462521.371

G. *US 52 STA 292+71.87, 0.00 RT = REF LINE WAL-NL STA 20+00.00, ℄*
   NORTHING: 352191.082
   EASTING: 1462492.097

H. *US 52 STA 292+53.21, 11.96 LT = REF LINE WAL-NE STA 400+00.00, ℄*
   NORTHING: 352212.763
   EASTING: 1462496.555

I. *WALNUT ST STA 134+53.32, 10.50 LT = REF LINE WAL-NE STA 404+13.32, ℄*
   NORTHING: 351989.754
   EASTING: 1462754.909

J. *WALNUT ST STA 134+01.52, 0.00 LT = REF LINE WAL-EL STA 30+72.69, ℄*
   NORTHING: 351956.455
   EASTING: 1462713.134

K. *WALNUT ST STA 134+44.87, 0.00 RT = REF LINE WAL-ER STA 41+18.01, ℄*
   NORTHING: 351976.736
   EASTING: 1462751.409

L. *WALNUT ST STA 134+53.12, 9.62 RT = REF LINE WAL-SE STA 500+00.00, ℄*
   NORTHING: 351971.258
   EASTING: 1462762.835

M. *US 52 STA 297+96.58, 16.58 LT = REF LINE WAL-SE STA 503+20.85, ℄*
   NORTHING: 351714.077
   EASTING: 1462702.387

N. *US 52 STA 299+14.26, 00.02 LT = REF LINE WAL-SL STA 52+82.40, ℄*
   NORTHING: 351600.790
   EASTING: 1462739.621

O. *US 52 STA 299+14.26, 00.02 LT = REF LINE WAL-NL STA 62+85.80, ℄*
   NORTHING: 351600.790
   EASTING: 1462739.621

P. *US 52 STA 299+12.44, 12.00 RT = REF LINE WAL-NE STA 597+69.99, ℄*
   NORTHING: 351597.507
   EASTING: 1462727.939

REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Δ		Δc	TANGENT LENGTH (FT)	ARC LENGTH (FT)	RADIUS (FT)	BEGIN CURVE STATION	END CURVE STATION
WAL_CC	N/A	352034.11	1462578.07	120°00'00"	Right	88°08'50"	112.58	136.14	65	90+00.00	91+36.14
WAL_EL	30+38.03	351936.27	1462680.90	41°38'53"	Left	57°17'45"	38.03	72.69	100	30+00.00	30+72.69
WAL_ER	40+59.78	351952.63	1462696.70	22°32'19"	Right	19°05'55"	59.78	118.01	300	40+00.00	41+18.01
WAL_NE	401+28.76	352092.69	1462543.05	12°14'57"	Left	04°46'29"	128.76	256.54	1200	400+00.00	402+56.54
	402+85.32	351961.18	1462629.80	51°15'01"	Left	95°29'35"	28.78	53.67	60	402+56.54	403+10.21
	403+41.97	351955.55	1462690.07	35°13'57"	Left	57°17'45"	31.75	61.49	100	403+10.21	403+71.71
	403+88.30	351979.65	1462731.99	06°07'09"	Right	18°27'10"	16.6	33.16	310.5	403+71.71	404+04.87
WAL_NL	20+62.78	352132.57	1462514.85	05°45'02"	Left	04°35'01"	62.78	125.46	1250	20+00.00	21+25.46
	21+88.24	352020.70	1462571.86	05°45'02"	Left	04°35'01"	62.78	125.46	1250	21+25.46	22+50.91
WAL_NR	10+17.37	352085.00	1462527.22	02°29'13"	Left	07°09'43"	17.37	34.72	800	10+00.00	10+34.72
	11+17.56	351992.21	1462565.07	36°21'29"	Right	57°17'45"	32.84	63.46	100	10+84.72	11+48.18
WAL_SE	500+62.98	351943.80	1462706.15	23°42'47"	Left	19°05'55"	62.98	124.16	300	500+00.00	501+24.16
	501+43.41	351881.21	1462652.82	35°34'26"	Left	95°29'35"	19.25	37.25	60	501+24.16	501+61.41
	502+00.43	351823.16	1462647.88	32°18'58"	Left	57°17'45"	28.97	57°17'45"	100	501+71.46	502+27.86
	502+91.76	351740.74	1462690.69	03°46'17"	Right	07°03'22"	26.73	53.45	812	502+65.03	503+18.48
WAL_SL	50+27.96	351828.11	1462631.78	31°14'17"	Left	57°17'45"	27.96	54.52	100	50+00.00	50+54.52
	51+30.86	351735.56	1462679.86	03°46'17"	Right	07°09'43"	26.34	52.66	800	51+04.52	51+57.18
	52+19.79	351657.88	1462713.91	00°35'09"	Left	00°28'04"	62.61	125.22	12245.67	51+57.18	52+82.40
WAL_SR	60+71.58	351786.31	1462632.53	08°37'06"	Right	06°01'52"	71.58	142.9	950	60+00.00	61+42.90
	62+14.48	351666.06	1462710.22	08°37'06"	Right	06°01'52"	71.58	142.9	950	61+42.90	62+85.80
WAL_SW	599+01.63	351797.29	1462379.41	06°01'15"	Right	11°44'27"	25.66	51.28	488	598+75.97	599+27.25
	599+63.78	351815.69	1462438.82	13°06'30"	Left	18°01'03"	36.54	72.75	318	599+27.25	600+00.00
	600+42.29	351855.48	1462506.87	45°50'57"	Right	57°17'45"	42.29	80.02	100	600+00.00	600+80.02
	600+96.98	351839.62	1462563.96	31°33'55"	Right	95°29'35"	16.96	33.06	60	600+80.02	601+13.08
	602+52.76	351724.88	1462670.59	18°39'52"	Right	06°44'26"	139.68	276.89	850	601+13.08	603+89.97
WAL_WL	81+55.99	351858.73	1462485.58	21°49'14"	Left	19°05'55"	57.83	114.25	300	80+98.16	82+12.42
WAL_WR	70+30.56	351807.30	1462371.18	06°59'44"	Right	11°27'33"	30.56	61.05	500	70+00.00	70+61.05
	71+01.40	351828.28	1462438.91	15°01'24"	Left	18°43'27"	40.35	80.24	306	70+61.05	71+41.28
	71+77.54	351869.14	1462503.71	39°51'26"	Right	57°17'45"	36.26	69.56	100	71+41.28	72+10.85

HORIZONTAL SCALE IN FEET
0 15 30 60

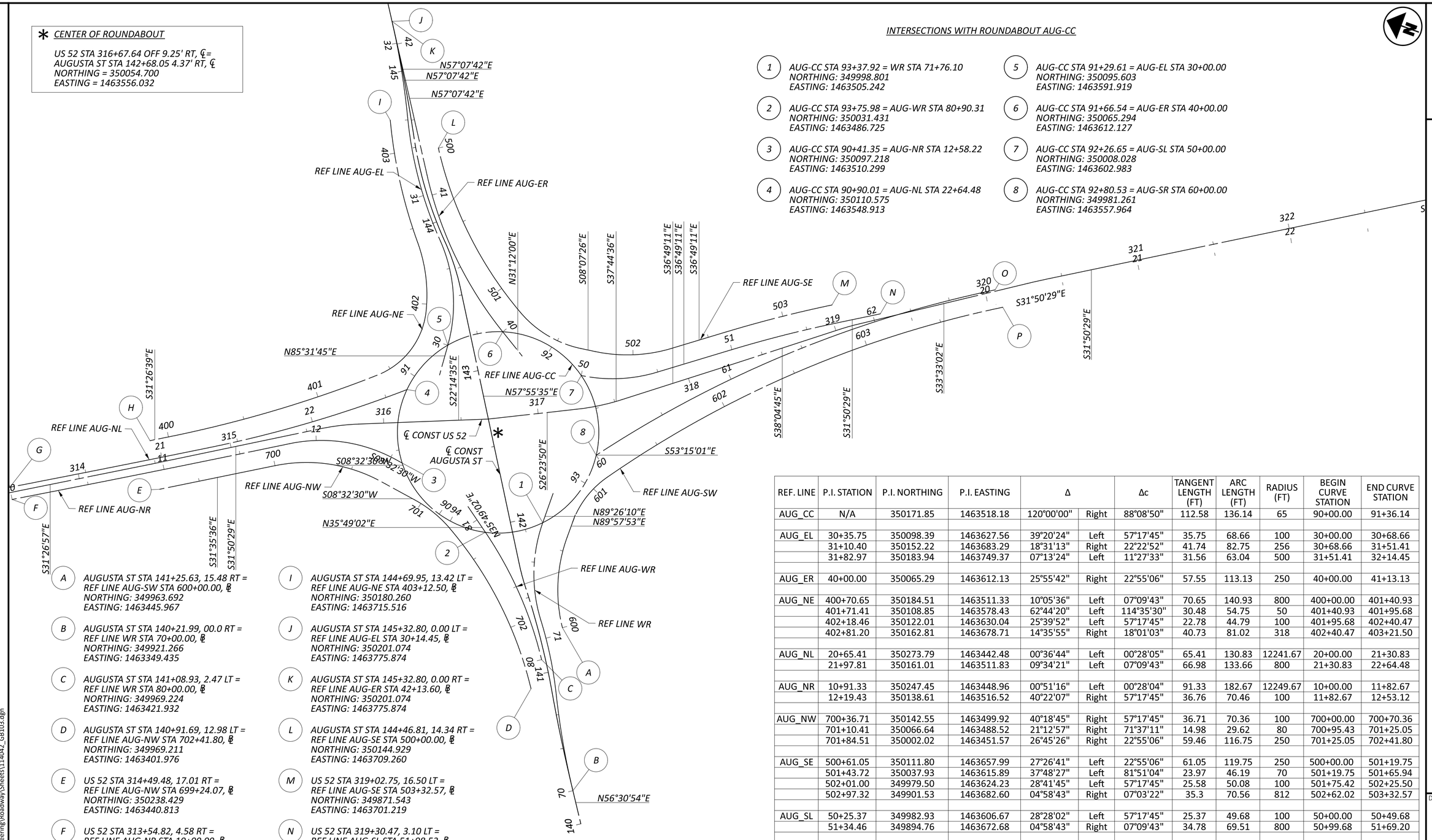
ROUNDABOUT GEOMETRIC LAYOUT

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER JPK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.6 TOTAL P.163

CLE-US52-4.67

MODEL: GB003_WalnutSt PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:31:36 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GB102.dgn OHDOTCEv2 WORKSET: 2019024S9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4



REF. LINE	P.I. STATION	P.I. NORTHING	P.I. EASTING	Δ		Δc	TANGENT LENGTH (FT)	ARC LENGTH (FT)	RADIUS (FT)	BEGIN CURVE STATION	END CURVE STATION
AUG_CC	N/A	350171.85	1463518.18	120°00'00"	Right	88°08'50"	112.58	136.14	65	90+00.00	91+36.14
AUG_EL	30+35.75	350098.39	1463627.56	39°20'24"	Left	57°17'45"	35.75	68.66	100	30+00.00	30+68.66
	31+10.40	350152.22	1463683.29	18°31'13"	Right	22°22'52"	41.74	82.75	256	30+68.66	31+51.41
	31+82.97	350183.94	1463749.37	07°13'24"	Left	11°27'33"	31.56	63.04	500	31+51.41	32+14.45
AUG_ER	40+00.00	350065.29	1463612.13	25°55'42"	Right	22°55'06"	57.55	113.13	250	40+00.00	41+13.13
AUG_NE	400+70.65	350184.51	1463511.33	10°05'36"	Left	07°09'43"	70.65	140.93	800	400+00.00	401+40.93
	401+71.41	350108.85	1463578.43	62°44'20"	Left	114°35'30"	30.48	54.75	50	401+40.93	401+95.68
	402+18.46	350122.01	1463630.04	25°39'52"	Left	57°17'45"	22.78	44.79	100	401+95.68	402+40.47
	402+81.20	350162.81	1463678.71	14°35'55"	Right	18°01'03"	40.73	81.02	318	402+40.47	403+21.50
AUG_NL	20+65.41	350273.79	1463442.48	00°36'44"	Left	00°28'05"	65.41	130.83	12241.67	20+00.00	21+30.83
	21+97.81	350161.01	1463511.83	09°34'21"	Left	07°09'43"	66.98	133.66	800	21+30.83	22+64.48
AUG_NR	10+91.33	350247.45	1463448.96	00°51'16"	Left	00°28'04"	91.33	182.67	12249.67	10+00.00	11+82.67
	12+19.43	350138.61	1463516.52	40°22'07"	Right	57°17'45"	36.76	70.46	100	11+82.67	12+53.12
AUG_NW	700+36.71	350142.55	1463499.92	40°18'45"	Right	57°17'45"	36.71	70.36	100	700+00.00	700+70.36
	701+10.41	350066.64	1463488.52	21°12'57"	Right	71°37'11"	14.98	29.62	80	700+95.43	701+25.05
	701+84.51	350002.02	1463451.57	26°45'26"	Right	22°55'06"	59.46	116.75	250	701+25.05	702+41.80
AUG_SE	500+61.05	350111.80	1463657.99	27°26'41"	Left	22°55'06"	61.05	119.75	250	500+00.00	501+19.75
	501+43.72	350037.93	1463615.89	37°48'27"	Left	81°51'04"	23.97	46.19	70	501+19.75	501+65.94
	502+01.00	349979.50	1463624.23	28°41'45"	Left	57°17'45"	25.58	50.08	100	501+75.42	502+25.50
	502+97.32	349901.53	1463682.60	04°58'43"	Right	07°03'22"	35.3	70.56	812	502+62.02	503+32.57
AUG_SL	50+25.37	349982.93	1463606.67	28°28'02"	Left	57°17'45"	25.37	49.68	100	50+00.00	50+49.68
	51+34.46	349894.76	1463672.68	04°58'43"	Right	07°09'43"	34.78	69.51	800	50+99.68	51+69.20
AUG_SR	60+70.37	349939.21	1463614.34	10°42'16"	Right	07°38'22"	70.27	140.12	750	60+00.10	61+40.22
	62+10.49	349835.68	1463709.37	10°42'16"	Right	07°38'22"	70.27	140.12	750	61+40.22	62+80.34
AUG_SW	600+30.56	349980.79	1463471.29	33°58'56"	Right	57°17'45"	30.56	59.31	100	600+00.00	600+59.31
	600+93.64	349980.82	1463531.41	35°17'32"	Right	95°29'35"	19.09	36.96	60	600+69.78	601+11.51
	602+53.30	349887.96	1463662.77	22°54'06"	Right	08°11'06"	141.79	279.8	700	601+11.51	603+91.30
AUG_WL	80+45.65	349994.41	1463460.01	20°41'52"	Left	22°55'06"	45.65	90.31	250	80+00.00	80+90.31
AUG_WR	70+31.56	349938.68	1463375.76	07°13'24"	Right	11°27'33"	31.56	63.04	500	70+00.00	70+63.04
	70+87.64	349963.53	1463426.12	10°58'45"	Left	22°22'52"	24.6	49.06	256	70+63.04	71+12.09
	71+45.24	349998.48	1463472.10	36°40'37"	Right	57°17'45"	33.15	64.01	100	71+12.09	71+76.10

A AUGUSTA ST STA 141+25.63, 15.48 RT =
REF LINE AUG-SW STA 600+00.00, ℄
NORTHING: 349963.692
EASTING: 1463445.967

B AUGUSTA ST STA 140+21.99, 00.0 RT =
REF LINE WR STA 70+00.00, ℄
NORTHING: 349921.266
EASTING: 1463349.435

C AUGUSTA ST STA 141+08.93, 2.47 LT =
REF LINE WR STA 80+00.00, ℄
NORTHING: 349969.224
EASTING: 1463421.932

D AUGUSTA ST STA 140+91.69, 12.98 LT =
REF LINE AUG-NW STA 702+41.80, ℄
NORTHING: 349969.211
EASTING: 1463401.976

E US 52 STA 314+49.48, 17.01 RT =
REF LINE AUG-NW STA 699+24.07, ℄
NORTHING: 350238.429
EASTING: 1463440.813

F US 52 STA 313+54.82, 4.58 RT =
REF LINE AUG-NR STA 10+00.00, ℄
NORTHING: 350325.763
EASTING: 1463401.961

G US 52 STA 313+54.89, 3.42 LT =
REF LINE AUG-NL STA 20+00.00, ℄
NORTHING: 350329.880
EASTING: 1463408.821

H US 52 STA 314+49.72, 14.98 LT =
REF LINE AUG-NE STA 399+87.88, ℄
NORTHING: 350255.109
EASTING: 1463468.122

I AUGUSTA ST STA 144+69.95, 13.42 LT =
REF LINE AUG-NE STA 403+12.50, ℄
NORTHING: 350180.260
EASTING: 1463715.516

J AUGUSTA ST STA 145+32.80, 0.00 LT =
REF LINE AUG-EL STA 30+14.45, ℄
NORTHING: 350201.074
EASTING: 1463775.874

K AUGUSTA ST STA 145+32.80, 0.00 RT =
REF LINE AUG-ER STA 42+13.60, ℄
NORTHING: 350201.074
EASTING: 1463775.874

L AUGUSTA ST STA 144+46.81, 14.34 RT =
REF LINE AUG-SE STA 500+00.00, ℄
NORTHING: 350144.929
EASTING: 1463709.260

M US 52 STA 319+02.75, 16.50 LT =
REF LINE AUG-SE STA 503+32.57, ℄
NORTHING: 349871.543
EASTING: 1463701.219

N US 52 STA 319+30.47, 3.10 LT =
REF LINE AUG-SL STA 51+98.53, ℄
NORTHING: 349840.296
EASTING: 1463706.499

O US 52 STA 320+06.10, 0.87 RT =
REF LINE AUG-NL STA 62+80.43, ℄
NORTHING: 349775.985
EASTING: 1463746.438

P US 52 STA 320+08.27, 11.20 RT =
REF LINE AUG-NE STA 603+91.30, ℄
NORTHING: 349772.148
EASTING: 1463737.739

HORIZONTAL SCALE IN FEET
0 15 30 60

ROUNDABOUT GEOMETRIC LAYOUT

DESIGN AGENCY
WSP/EAC STRUCTUREPOINT INC.

DESIGNER JPK

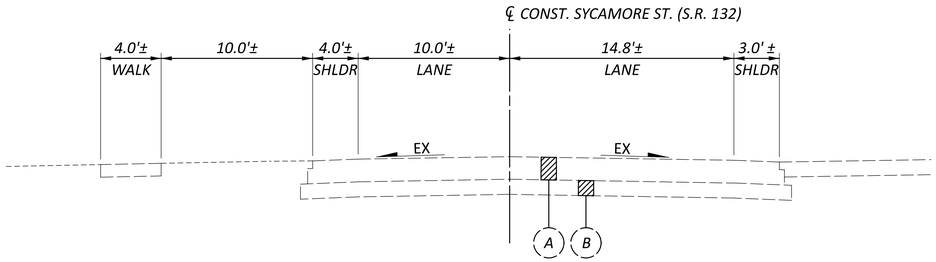
REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.7 TOTAL P.163

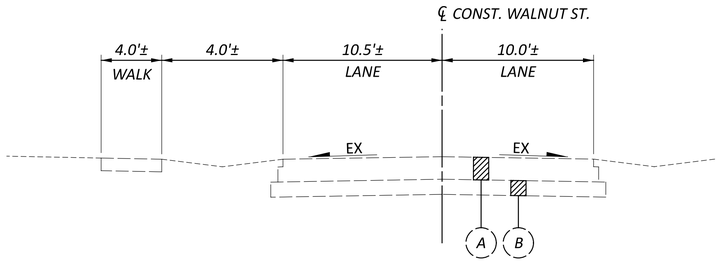
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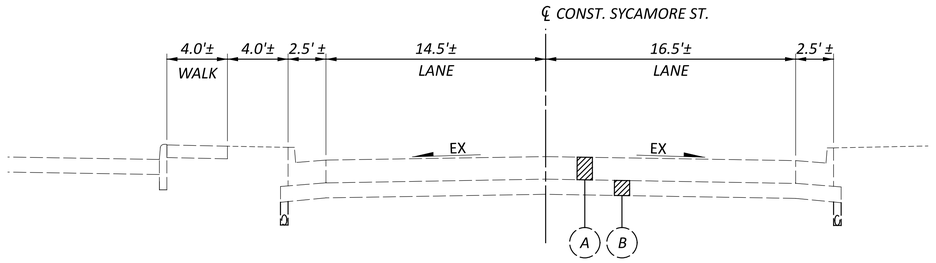
NORMAL SECTION - ADJOINING PAVEMENT SYCAMORE ST. (S.R. 132)

STA. 127+04



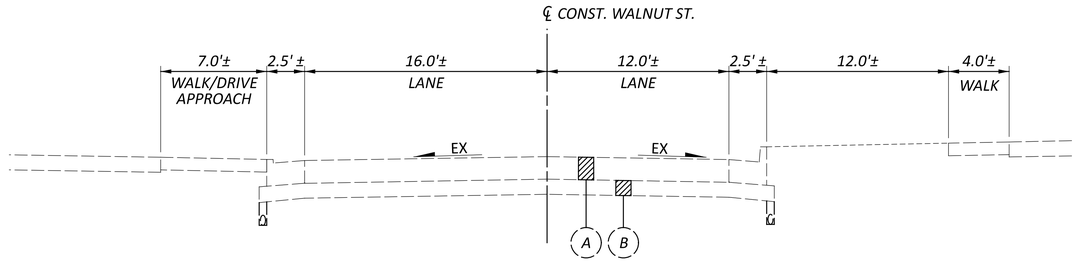
NORMAL SECTION - ADJOINING PAVEMENT WALNUT ST.

STA. 134+53



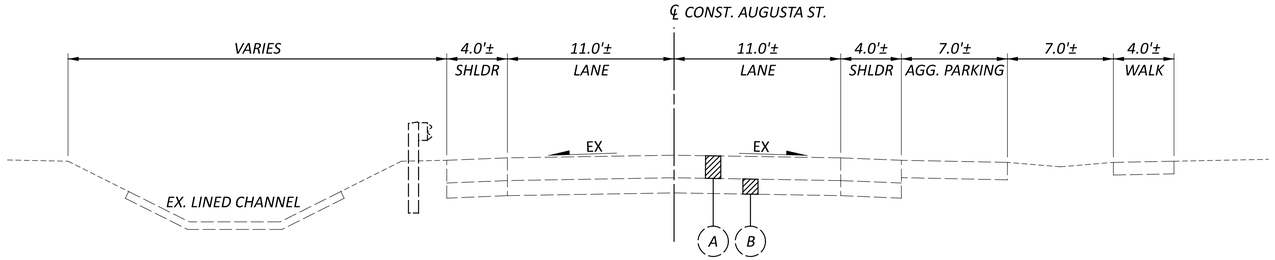
NORMAL SECTION - ADJOINING PAVEMENT SYCAMORE ST.

STA. 123+06



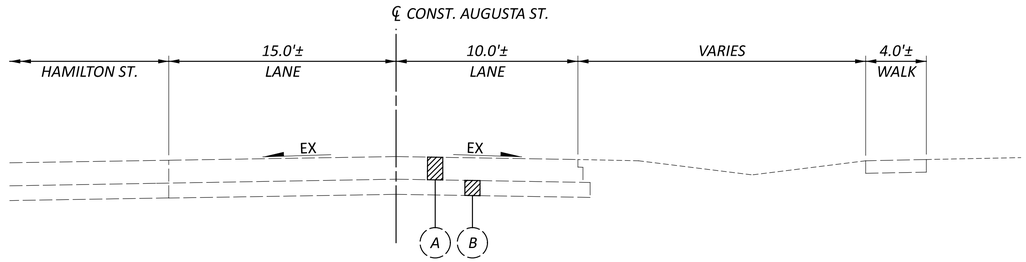
NORMAL SECTION - ADJOINING PAVEMENT WALNUT ST.

STA. 130+00



NORMAL SECTION - ADJOINING PAVEMENT AUGUSTA ST.

STA. 145+29



NORMAL SECTION - ADJOINING PAVEMENT AUGUSTA ST.

STA. 141+06

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
2. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 407 - TACK COAT (0.06 GAL/SY)
4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A. 4"± EX ASPHALT CONCRETE

B. 9"± EX CONCRETE BASE

TYPICAL SECTIONS

CLE-US52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:31:52 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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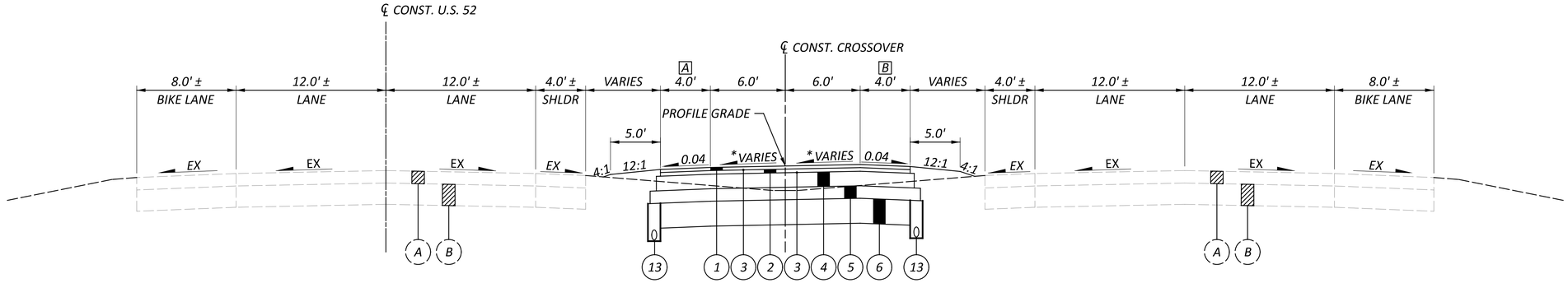
DESIGN AGENCY
STRUCTUREPOINT INC.

DESIGNER FGW

REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.8 TOTAL P.163



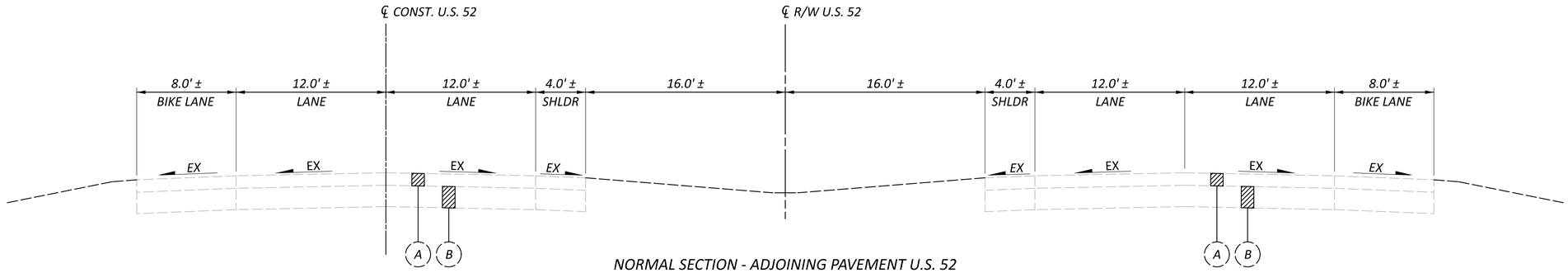
NORMAL SECTION - CROSSOVER U.S. 52

STA. 73+20.00 TO STA. 80+51.17 (CROSSOVER SOUTH)
STA. 20+46.81 TO STA. 28+46.00 (CROSSOVER NORTH)

A WIDTH TAPERS FROM 0.0' AT STA. 21+19.54 TO 4.0' AT STA. 22+34.89

B WIDTH TAPERS FROM 4.0' AT STA. 78+43.68 TO 2.0' AT STA. 79+54.03

* *SEE SUPERELEVATION TABLE ON SHEET 102*



NORMAL SECTION - ADJOINING PAVEMENT U.S. 52

STA. 273+20.00
STA. 287+54.00
STA. 291+45.00
STA. 299+46.00
STA. 311+24.45
STA. 320+46.43

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
2. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 407 - TACK COAT (0.06 GAL/SY)
4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A. 4"± EX ASPHALT CONCRETE
B. 9"± EX CONCRETE BASE

TYPICAL SECTIONS

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
FGW

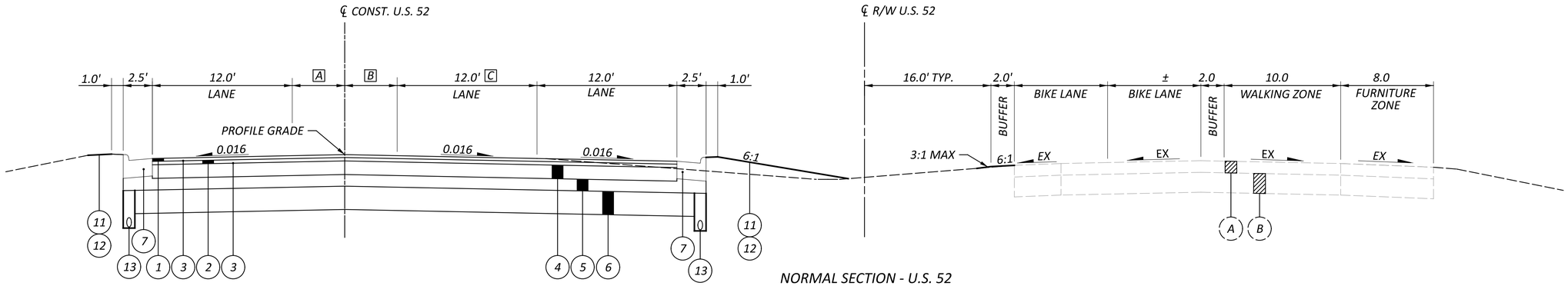
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.9 TOTAL P.163

CLE-US52-4.67

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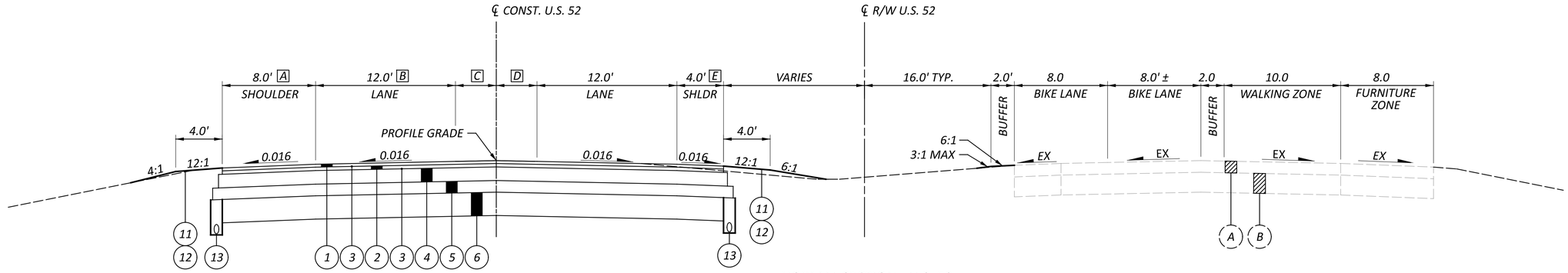
NORMAL SECTION - U.S. 52

STA. 280+50.00 TO STA. 281+60.97
STA. 286+06.36 TO STA. 287+54.00

A WIDTH VARIES FROM 0.0' AT STA. 285+50.00 TO 2.6' AT STA. 281+60.97
WIDTH VARIES FROM 4.9'' FROM STA. 286+06.36 TO 0.0' AT STA. 287+54.00

B WIDTH IS 5.0' FROM STA. 285+50.00 TO STA. 281+60.97
WIDTH VARIES FROM 2.9'' FROM STA. 286+06.36 TO 0.0' AT STA. 287+54.00

C WIDTH IS 0.0' FROM STA. 286+06.36 TO 0.0' AT STA. 287+54.00



NORMAL SECTION - U.S. 52

STA. 291+45.00 TO STA. 293+56.12
STA. 297+97.41 TO STA. 299+45.95
STA. 311+24.33 TO STA. 314+47.61
STA. 318+98.41 TO STA. 320+46.43

A WIDTH IS 8.0' AT STA. 291+45.00 TO STA. 293+04.45
WIDTH VARIES FROM 8.0' AT STA. 293+04.45 TO 2.0' AT STA. 293+56.12
WIDTH VARIES FROM 2.0' AT STA. 297+97.41 TO 8.0' AT STA. 299+45.95
WIDTH IS 8.0' AT STA. 311+24.33 TO STA. 313+99.65
WIDTH VARIES FROM 8.0' AT STA. 313+99.65 TO 2.3' AT STA. 314+47.61
WIDTH VARIES FROM 2.0' AT STA. 318+98.41 TO 8.0' AT STA. 320+46.43

B WIDTH VARIES FROM 12.0' AT STA. 291+45.00 TO 13.4' AT STA. 293+56.12

C WIDTH VARIES FROM 0.0' AT STA. 291+45.00 TO 2.9' AT STA. 293+56.12
WIDTH VARIES FROM 4.9' AT STA. 297+97.41 TO 0.0' AT STA. 299+45.95
WIDTH VARIES FROM 0.0' AT STA. 311+24.33 TO 4.9' AT STA. 314+47.61
WIDTH VARIES FROM 4.9' AT STA. 318+98.41 TO 0.0' AT STA. 320+46.43

D WIDTH VARIES FROM 0.0' AT STA. 291+45.00 TO 4.9' AT STA. 293+56.12
WIDTH VARIES FROM 2.9' AT STA. 297+97.41 TO 0.0' AT STA. 299+45.95
WIDTH VARIES FROM 0.0' AT STA. 311+24.33 TO 5.0' AT STA. 314+47.61
WIDTH VARIES FROM 2.9' AT STA. 318+98.41 TO 0.0' AT STA. 320+46.43

E WIDTH IS 4.0' AT STA. 291+45.00 TO STA. 293+07.58
WIDTH VARIES FROM 4.0' AT STA. 293+07.58 TO 2.0' AT STA. 293+56.12
WIDTH VARIES FROM 2.0' AT STA. 297+97.41 TO 4.0' AT STA. 299+45.95
WIDTH IS 4.0' AT STA. 311+24.33 TO STA. 313+99.58
WIDTH VARIES FROM 4.0' AT STA. 313+99.58 TO 2.0' AT STA. 314+47.61
WIDTH VARIES FROM 2.0' AT STA. 318+98.41 TO 4.0' AT STA. 320+46.43

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
2. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 407 - TACK COAT (0.06 GAL/SY)
4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A 4"± EX ASPHALT CONCRETE
B 9"± EX CONCRETE BASE

TYPICAL SECTIONS

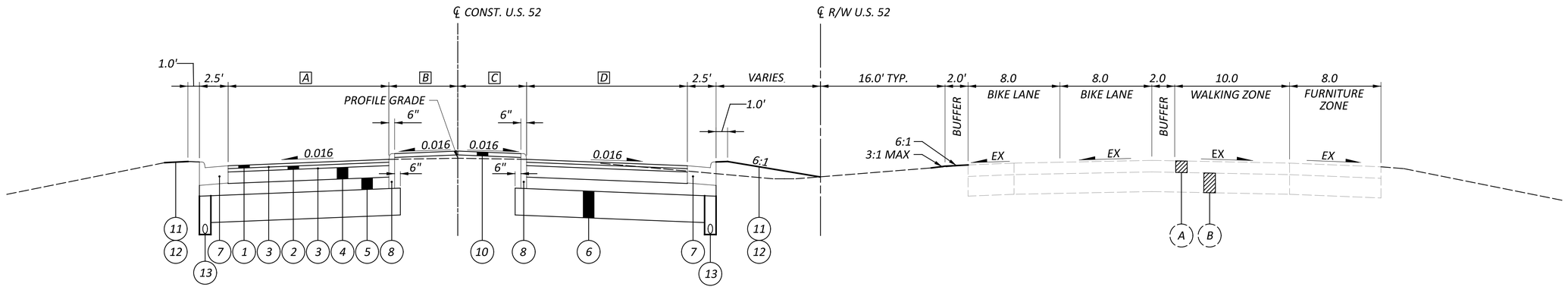
CLE-US52-4.67

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DESIGN AGENCY
STRUCTUREPOINT INC.

DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.10 TOTAL P.163

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NORMAL SECTION - U.S. 52

STA. 281+60.97 TO STA. 283+05.45
STA. 284+58.48 TO STA. 286+06.36
STA. 293+56.12 TO STA. 295+08.84
STA. 296+42.82 TO STA. 297+97.41
STA. 314+47.61 TO STA. 316+06.61
STA. 317+39.53 TO STA. 318+98.41

A *WIDTH VARIES FROM 12.7' AT STA. 281+60.97 TO 17.4' AT STA. 283+05.45*
WIDTH VARIES FROM 19.0' AT STA. 284+58.48 TO 15.0' AT STA. 286+06.36
WIDTH VARIES FROM 14.4' AT STA. 293+56.12 TO 19.1' AT STA. 295+08.84
WIDTH VARIES FROM 17.8' AT STA. 296+42.82 TO 15.0' AT STA. 297+97.41
WIDTH VARIES FROM 13.0' AT STA. 314+47.61 TO 18.6' AT STA. 316+06.61
WIDTH VARIES FROM 17.8' AT STA. 317+39.53 TO 15.0' AT STA. 318+98.41

B *WIDTH VARIES FROM 2.0' AT STA. 281+60.97 TO 20.7' AT STA. 283+05.45*
WIDTH VARIES FROM 20.7' AT STA. 284+58.48 TO 2.0'' AT STA. 286+06.36
WIDTH VARIES FROM 1.93' AT STA. 293+56.12 TO 17.1' AT STA. 295+08.84
WIDTH VARIES FROM 18.5' AT STA. 296+42.82 TO 2.0' AT STA. 297+97.41
WIDTH VARIES FROM 2.0' AT STA. 314+47.61 TO 14.1' AT STA. 316+06.61
WIDTH VARIES FROM 18.5' AT STA. 317+39.53 TO 2.0' AT STA. 318+98.41

C *WIDTH VARIES FROM 2.0' AT STA. 281+60.97 TO 18.2' AT STA. 283+05.45*
WIDTH VARIES FROM 35.0' AT STA. 284+58.48 TO 2.0' AT STA. 286+06.36
WIDTH VARIES FROM 2.1' AT STA. 293+56.12 TO 22.0' AT STA. 295+08.84
WIDTH VARIES FROM 22.5' AT STA. 296+42.82 TO 2.0' AT STA. 297+97.41
WIDTH VARIES FROM 2.0' AT STA. 314+47.61 TO 22.6' AT STA. 316+06.61
WIDTH VARIES FROM 23.6' AT STA. 317+39.53 TO 1.9' AT STA. 318+98.41

D *WIDTH VARIES FROM 27.00' AT STA. 281+60.97 TO 31.0' AT STA. 283+05.45*
WIDTH VARIES FROM 17.8' AT STA. 284+58.48 TO 14.6' AT STA. 286+06.36
WIDTH VARIES FROM 15.0' AT STA. 293+56.12 TO 17.8' AT STA. 295+08.84
WIDTH VARIES FROM 18.4' AT STA. 296+42.82 TO 13.5' AT STA. 297+97.41
WIDTH VARIES FROM 15.0' AT STA. 314+47.61 TO 18.0' AT STA. 316+06.61
WIDTH VARIES FROM 18.4' AT STA. 317+39.53 TO 13.8' AT STA. 318+98.41

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. *ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22*
2. *ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)*
3. *ITEM 407 - TACK COAT (0.06 GAL/SY)*
4. *ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)*
5. *ITEM 304 - 6" AGGREGATE BASE*
6. *ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP*
7. *ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2*
8. *ITEM 609 - CURB, TYPE 6*
9. *ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9*
10. *ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT*
11. *ITEM 659 - SEEDING AND MULCHING*
12. *ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED*
13. *ITEM 605 - 4" BASE PIPE UNDERDRAINS*
14. *ITEM 608 - 4" CONCRETE WALK*
15. *ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22*

A *4"± EX ASPHALT CONCRETE*
B *9"± EX CONCRETE BASE*

TYPICAL SECTIONS

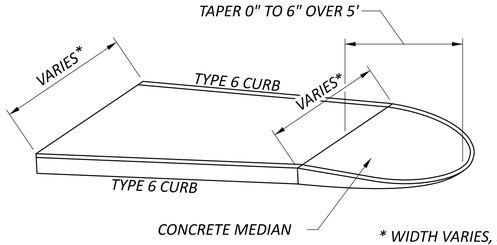
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
FGW

REVIEWER
MTL 03/10/26

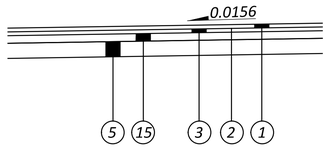
PROJECT ID
114042

SHEET P.11 TOTAL P.163

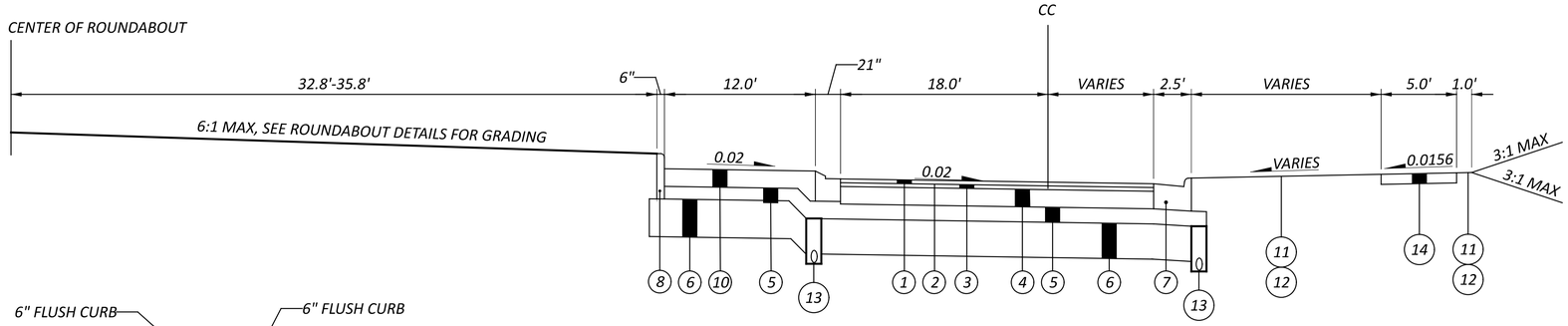


* WIDTH VARIES, SEE SPLITTER ISLAND DETAILS

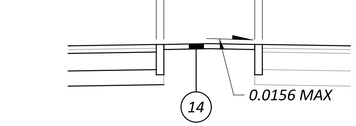
SPLITTER ISLAND



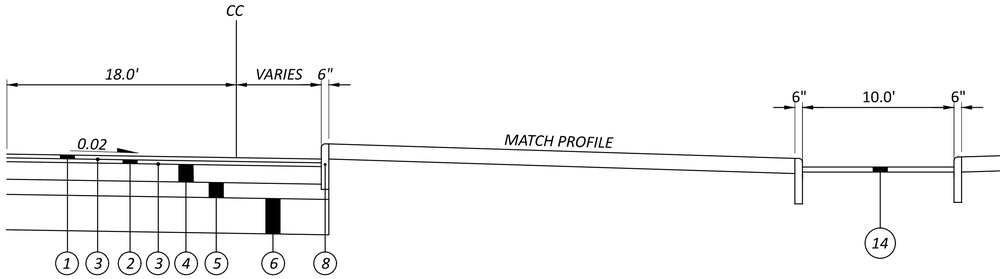
RECONSTRUCTED SHARED USE PATH



TYPICAL SECTION - ROUNDABOUT SECTION A-A

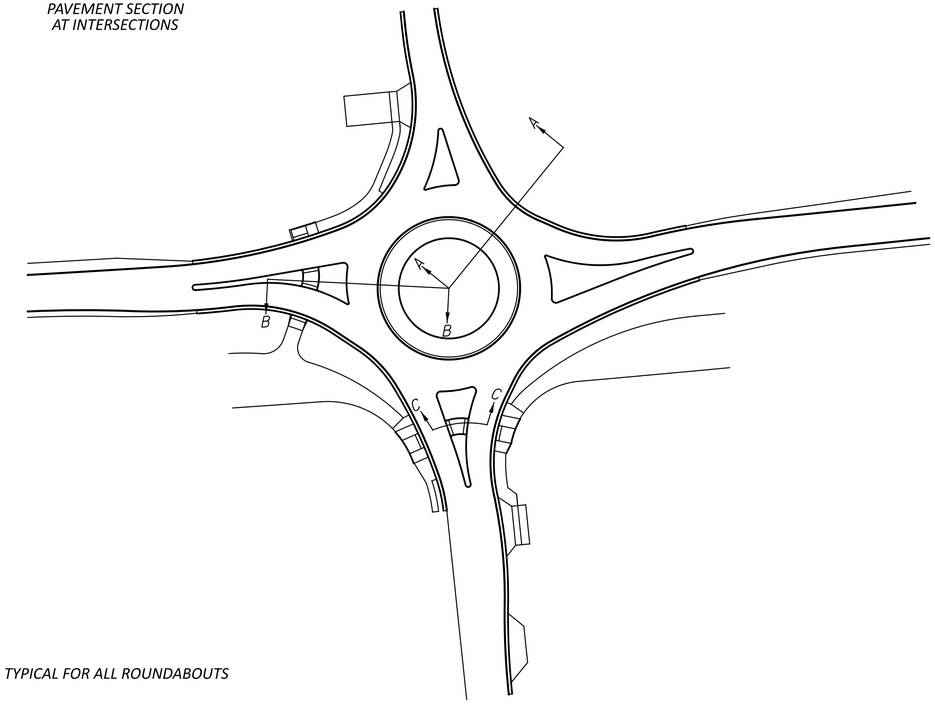


SECTION C-C

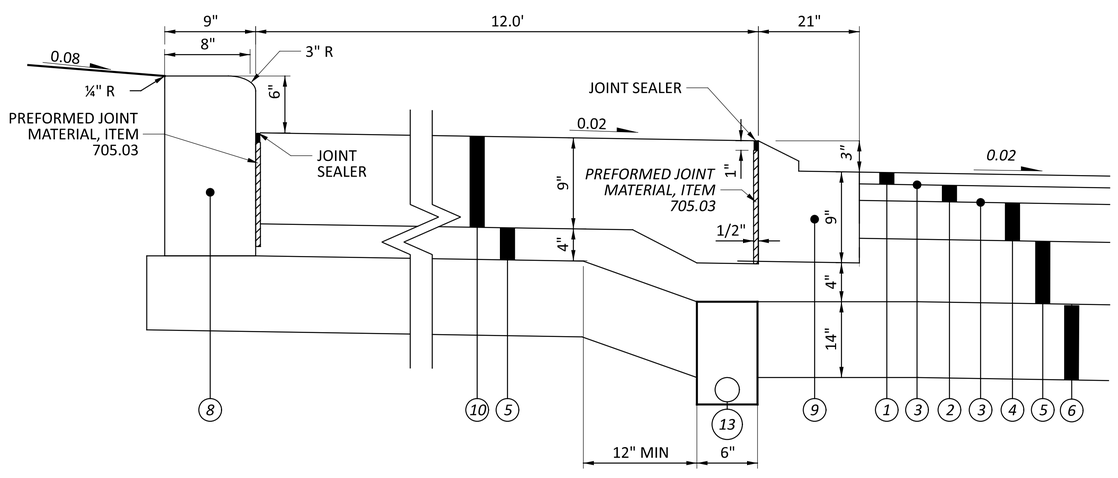


SECTION B-B

PAVEMENT SECTION AT INTERSECTIONS



TYPICAL FOR ALL ROUNDABOUTS



CONCRETE, STAMPED AND STAINED

TRUCK APRON
NOT TO SCALE

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
2. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 407 - TACK COAT (0.06 GAL/SY)
4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

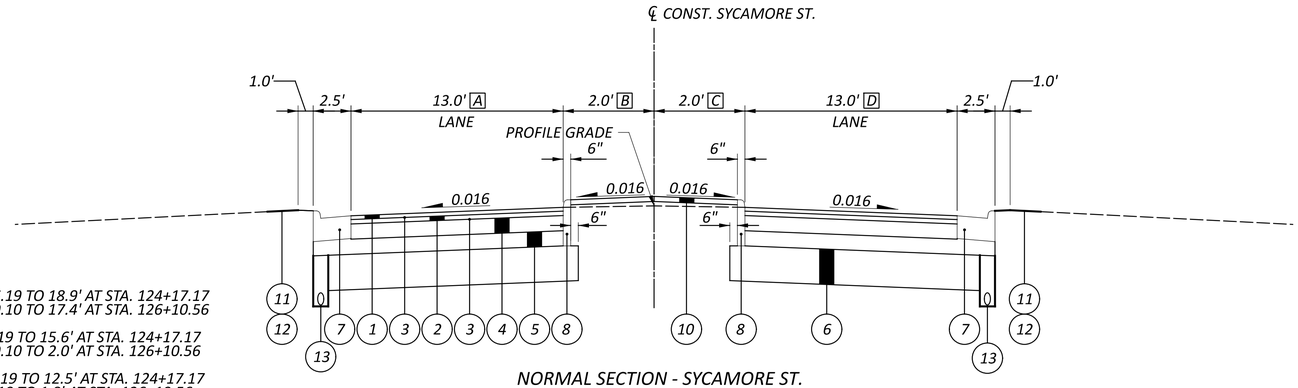
A. 4"± EX ASPHALT CONCRETE
B. 9"± EX CONCRETE BASE

TYPICAL SECTIONS

CLE-US52-4.67

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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.
DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.12 TOTAL P.163



NORMAL SECTION - SYCAMORE ST.

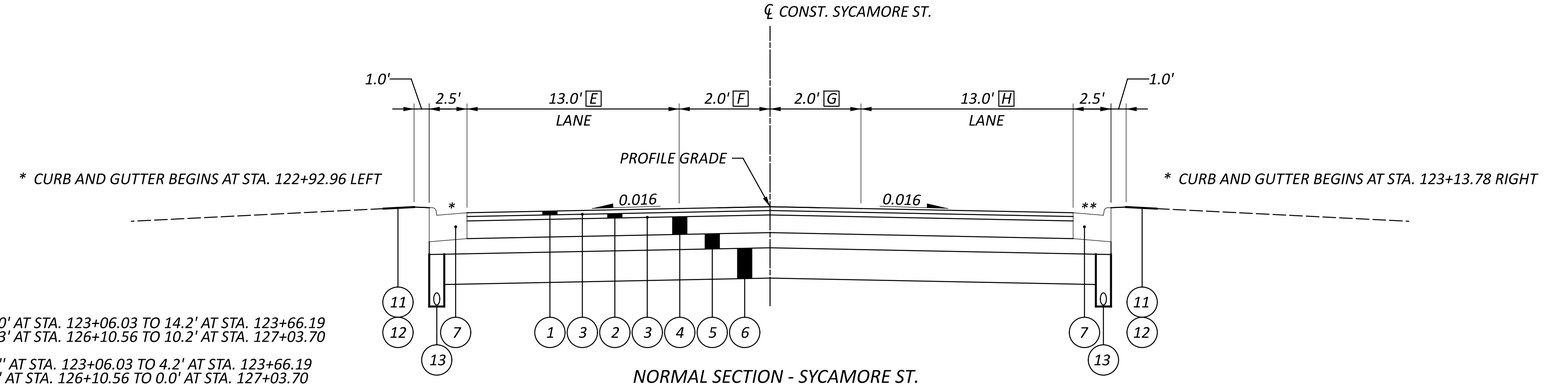
STA. 123+66.19 TO STA. 124+17.17
STA. 125+70.10 TO STA. 126+10.56

A WIDTH VARIES FROM 15.3' AT STA. 123+66.19 TO 18.9' AT STA. 124+17.17
WIDTH VARIES FROM 19.5' AT STA. 125+70.10 TO 17.4' AT STA. 126+10.56

B WIDTH VARIES FROM 3.4' AT STA. 123+66.19 TO 15.6' AT STA. 124+17.17
WIDTH VARIES FROM 21.3' AT STA. 125+70.10 TO 2.0' AT STA. 126+10.56

C WIDTH VARIES FROM 0.6' AT STA. 123+66.19 TO 12.5' AT STA. 124+17.17
WIDTH VARIES FROM 9.7' AT STA. 125+70.10 TO 1.8' AT STA. 126+10.56

D WIDTH VARIES FROM 16.2' AT STA. 123+66.19 TO 18.8' AT STA. 124+17.17
WIDTH VARIES FROM 9.6' AT STA. 125+70.10 TO 1.8' AT STA. 126+10.56



NORMAL SECTION - SYCAMORE ST.

STA. 123+06.03 TO STA. 123+66.19
STA. 126+10.56 TO STA. 127+03.70

E WIDTH VARIES FROM 14.0' AT STA. 123+06.03 TO 14.2' AT STA. 123+66.19
WIDTH VARIES FROM 14.3' AT STA. 126+10.56 TO 10.2' AT STA. 127+03.70

F WIDTH VARIES FROM 2.5" AT STA. 123+06.03 TO 4.2' AT STA. 123+66.19
WIDTH VARIES FROM 4.5' AT STA. 126+10.56 TO 0.0' AT STA. 127+03.70

G WIDTH VARIES FROM 1.6' AT STA. 123+06.03 TO 3.6' AT STA. 123+66.19
WIDTH VARIES FROM 2.6' AT STA. 126+10.56 TO 0.0' AT STA. 127+03.70

H WIDTH VARIES FROM 14.8' AT STA. 123+06.03 TO 13.1' AT STA. 123+66.19
WIDTH VARIES FROM 15.0' AT STA. 126+10.56 TO 14.8' AT STA. 127+03.70

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

1. ITEM 442 - 1 ½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
2. ITEM 442 - 1 ¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
3. ITEM 407 - TACK COAT (0.06 GAL/SY)
4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
5. ITEM 304 - 6" AGGREGATE BASE
6. ITEM 206 - CEMENT SUBGRADE STABILIZATION, 14" DEEP
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A 4"± EX ASPHALT CONCRETE

B 9"± EX CONCRETE BASE

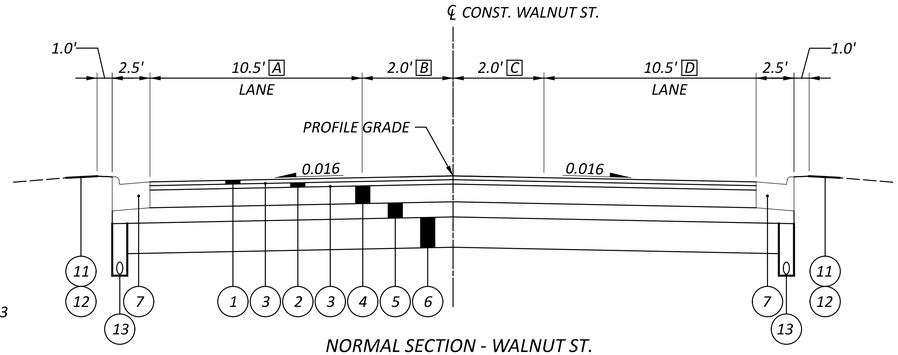
TYPICAL SECTIONS

CLE-US52-4.67

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DESIGN AGENCY
STRUCTUREPOINT INC.

DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.13 TOTAL P.163



NORMAL SECTION - WALNUT ST.

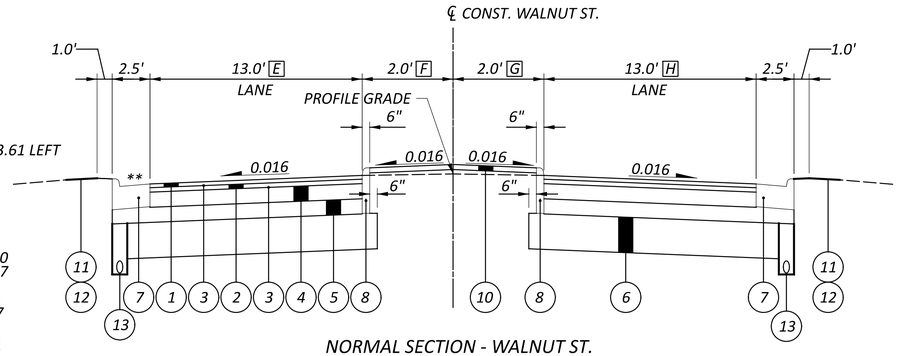
STA. 133+74.07 TO STA. 134+53.22

A WIDTH VARIES FROM 15.8' AT STA. 133+74.07 TO 10.5' AT STA. 134+12.83
WIDTH IS 10.5' FROM STA. 134+12.83 TO STA. 134+53.22

B WIDTH VARIES FROM 1.7' AT STA. 133+74.07 TO 0.0' AT STA. 134+00.22
WIDTH IS 0.0' FROM STA. 134+00.22 TO STA. 134+53.22

C WIDTH VARIES FROM 1.7' AT STA. 133+74.07 TO 0.0' AT STA. 133+96.45
WIDTH IS 0.0' FROM STA. 133+96.45 TO STA. 134+53.22

D WIDTH VARIES FROM 15.3' AT STA. 133+74.07 TO 9.6' AT STA. 134+53.22



** CURB AND GUTTER BEGINS AT STA. 131+23.61 LEFT

NORMAL SECTION - WALNUT ST.

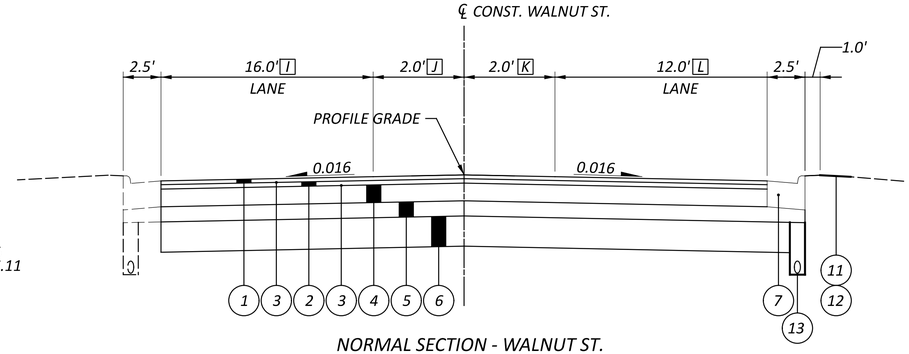
STA. 131+35.76 TO STA. 132+00.81
STA. 133+35.68 TO STA. 133+74.07

E WIDTH VARIES FROM 14.9' AT STA. 131+36.11 TO 19.3' AT STA. 132+00.30
WIDTH VARIES FROM 18.8' AT STA. 133+35.68 TO 15.8' AT STA. 133+74.07

F WIDTH VARIES FROM 2.0' AT STA. 131+36.11 TO 11.2' AT STA. 132+00.30
WIDTH VARIES FROM 12.9' AT STA. 133+35.68 TO 1.7' AT STA. 133+74.07

G WIDTH VARIES FROM 2.0' AT STA. 131+36.11 TO 15.2' AT STA. 132+00.30
WIDTH VARIES FROM 10.5' AT STA. 133+35.68 TO 1.7' AT STA. 133+74.07

H WIDTH VARIES FROM 13.6' AT STA. 131+36.11 TO 18.7' AT STA. 132+00.30
WIDTH VARIES FROM 19.8' AT STA. 133+35.68 TO 15.3' AT STA. 133+74.07



NORMAL SECTION - WALNUT ST.

STA. 130+00.00 TO STA. 131+35.76

I WIDTH TAPERS FROM 16.0' AT STA. 130+00 TO 17.0' AT STA. 131+35.76
WIDTH TAPERS FROM 17.0' AT STA. 130+95.15 TO 14.9' AT STA. 131+36.11

J WIDTH TAPERS FROM 0.0' AT STA. 130+00 TO 2.0' AT STA. 131+35.76
WIDTH IS 2.0' FROM STA. 130+95.15 TO STA. 131+36.11

K WIDTH TAPERS FROM 0.0' AT STA. 130+00 TO 2.0' AT STA. 131+35.76
WIDTH IS 2.0' FROM STA. 130+77.62 TO STA. 131+36.11

L WIDTH TAPERS FROM 12.0' AT STA. 130+00 TO 13.0' AT STA. 131+35.76
WIDTH IS 13.0' FROM STA. 130+38.75 TO STA. 131+27.48
WIDTH TAPERS FROM 13.0' AT STA. 131+27.48 TO 13.6' AT STA. 131+36.11

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

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4. ITEM 301 - 7" ASPHALT CONCRETE BASE, PG64-22 (2 LIFTS, 3.5" THICK)
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8. ITEM 609 - CURB, TYPE 6
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 9
10. ITEM 452 - NON-REINFORCED CONCRETE PAVEMENT
11. ITEM 659 - SEEDING AND MULCHING
12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A 4"± EX ASPHALT CONCRETE

B 9"± EX CONCRETE BASE

TYPICAL SECTIONS

CLE-US52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:32:12 PM PLTDRV: OHIO_PDF.plcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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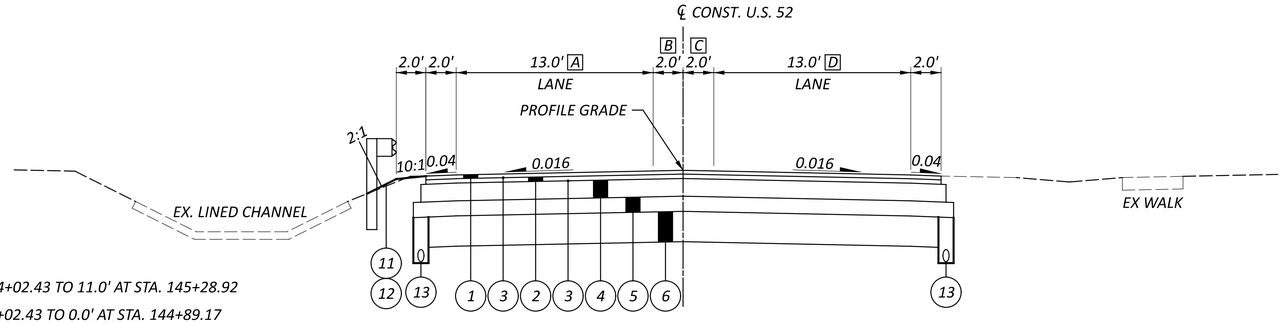
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER FGW

REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.14 TOTAL P.163



NORMAL SECTION - AUGUSTA ST.

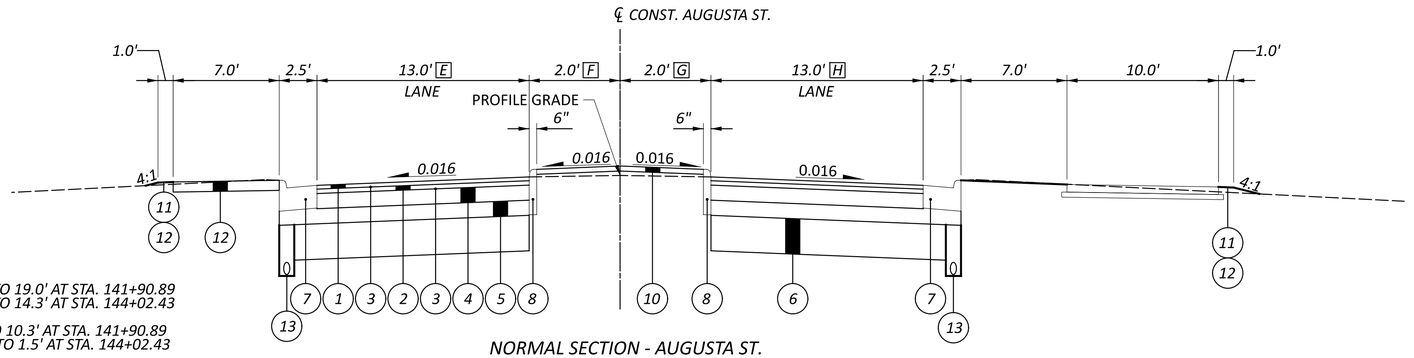
STA. 144+02.43 TO STA. 145+28.92

A WIDTH VARIES FROM 14.3' AT STA. 144+02.43 TO 11.0' AT STA. 145+28.92

B WIDTH VARIES FROM 1.5' AT STA. 144+02.43 TO 0.0' AT STA. 144+89.17
WIDTH IS 0.0' FROM STA. 144+89.17 TO STA. 145+28.92

C WIDTH VARIES FROM 1.6' AT STA. 144+02.43 TO 0.0' AT STA. 144+86.11
WIDTH IS 0.0' FROM STA. 144+86.11 TO STA. 145+28.92

D WIDTH VARIES FROM 14.1' AT STA. 144+02.43 TO 11.0' AT 144+29.98
WIDTH IS 11.0' FROM 144+29.98 TO STA. 145+28.92



NORMAL SECTION - AUGUSTA ST.

STA. 141+06.49 TO STA. 141+90.89
STA. 143+25.46 TO STA. 144+02.43

E WIDTH VARIES FROM 15.6' AT STA. 141+26.33 TO 19.0' AT STA. 141+90.89
WIDTH VARIES FROM 20.3' AT STA. 143+25.46 TO 14.3' AT STA. 144+02.43

F WIDTH VARIES FROM 2.1' AT STA. 141+26.33 TO 10.3' AT STA. 141+90.89
WIDTH VARIES FROM 11.2' AT STA. 143+25.46 TO 1.5' AT STA. 144+02.43

G WIDTH VARIES FROM 2.4' AT STA. 141+26.33 TO 16.9' AT STA. 141+90.89
WIDTH VARIES FROM 13.3' AT STA. 143+25.46 TO 1.6' AT STA. 144+02.43

H WIDTH VARIES FROM 13.1' AT STA. 141+26.33 TO 18.8' AT STA. 141+90.89
WIDTH VARIES FROM 19.5' AT STA. 143+25.46 TO 14.1' AT STA. 144+02.43

LEGEND

FOR REFERENCE ONLY, PAVEMENT DESIGN PENDING GEOTECHNICAL SERVICES AND PENDING TRAFFIC DATA

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12. ITEM 659 - 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 605 - 4" BASE PIPE UNDERDRAINS
14. ITEM 608 - 4" CONCRETE WALK
15. ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

A 4"± EX ASPHALT CONCRETE

B 9"± EX CONCRETE BASE

TYPICAL SECTIONS

CLE-US52-4.67

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DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
FGW

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.15 TOTAL P.163

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CHARTER COMMUNICATIONS
10920 KENWOOD ROAD
BLUE ASH, OH 45242
ATTN: KENT RIEGER
kent.rieger@charter.com
PHONE: 513-386-5499

ODOT DISTRICT 8
TRAFFIC/SIGNALS/LIGHTING
ATTN: MARK GRAKE
marc.grake@dot.ohio.gov
513-933-6607

CINCINNATI BELL
209 W. 7TH ST., BLDG 121-900
CINCINNATI, OH 45202
ATTN: JASON BURNS
jason.burns@cinbell.com
PHONE: 513-397-0548

TATE MONROE WATER ASSN, INC.
ATTN: JEFF SMITH
jsmith@tatemonroe.com
PHONE: 513-734-9613

DUKE ENERGY - ELECTRIC
2010 DANA AVE., RM 410
CINCINNATI, OH 45207
ATTN: CHRIS TEPE
chirs.tepe@duke-energy.com
513-458-3855

VILLAGE OF NEW RICHMOND
DEPARTMENT OF UTILITIES
102 WILLOW STREET
NEW RICHMOND, OH 45157
NRUTILITIES@NEWRICHMOND.ORG
(513) 553-4146, EXT. 15

DUKE ENERGY - GAS
139 E. 4TH ST.
CINCINNATI, OH 45202
ATTN: KEVIN KUISTI
kevin.kuisi@duke-energy.com
513-287-4407

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 10:00 PM AND 6:00AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.4 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD:	GNSS SURVEY
MONUMENT TYPE:	TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD 88
GEOID:	GEOID 18

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD 83 (2011)
ELLIPSOID:	GRS 80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR:	0.999945430
ORIGIN OF COORDINATE SYSTEM:	(0,0)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. EXCEPT AS INDICATED ON SHEET ___, USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATION UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. ___ FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING _____ HOUR.

ITEM 607 - FENCE REBUILT, TYPE (CLT)

CAREFULLY RECONDITION AND RE-ERECT FENCE AND COMPONENT PARTS AS DETAILED ON THE PLANS. DO NOT DAMAGE THE FENCE OR COMPONENT PARTS. ANY NEW PARTS WHICH ARE NEEDED, AS DETERMINED BY THE ENGINEER, WILL BE SUPPLIED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

THE AMOUNT OF REBUILT FENCE TO BE PAID FOR WILL BE THE NUMBER OF FEET REBUILT, COMPLETE IN PLACE, AND MEASURED AS PROVIDED FOR IN SECTION 607.09 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

PAYMENT FOR THE ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR ITEM 607, FENCE REBUILT, TYPE CLT.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

MASONRY COLLAR

WHENEVER A PROPOSED CONDUIT IS TO BE CONNECT TO AN EXISTING CONDUIT, THE EXISTING CONDUIT SHOULD BE REMOVED TO A MANUFACTURED JOINT, THE PROPOSED CONDUIT SHOULD MATCH THE EXISTING CONDUIT MATERIAL. CONNECT THE TWO CONDUITS AT BELL AND SPIGOT JOINTS. THE MASONRY COLLAR PER DM-1.1 SHOULD ENCASE THE JOINT TO ENSURE A STABLE CONNECTION.

ITEM SPECIAL - PIPE CLEANOUT

THIS WORK CONSISTS OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. DISPOSE OF ALL MATERIAL PER 105.16 AND 105.17. CLEAN OUT TO THE APPROVAL OF THE ENGINEER.

CLEANOUT OF THE PIPE IS PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PIPE CLEANOUT. THIS PRICE INCLUDES THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM SPECIAL, PIPE CLEANOUT, 24" AND UNDER	500 FT
ITEM SPECIAL, PIPE CLEANOUT, 27" TO 48"	500 FT
ITEM SPECIAL, PIPE CLEANOUT, OVER 48"	500 FT

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	1,564 CY
659, SEEDING AND MULCHING	8,936 SY
659, REPAIR SEEDING AND MULCHING	447 SY
659, INTER-SEEDING	447 SY
659, COMMERCIAL FERTILIZER	1.25 TON
659, LIME	1.85 ACRES
659, WATER	50 MGAL
659, MOWING	21 MSF

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED FILTER STRIP

THIS PLAN UTILIZES VEGETATED FILTER STRIP(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AND ITEM 670, SLOPE EROSION PROTECTION TO ALL DISTURBED AREAS DESIGNATED AS VEGETATED FILTER STRIPS, THE EDGE OF SHOULDER, AND THE FORESLOPE AS SPECIFIED IN THE PLANS.

GENERAL NOTES

DESIGN AGENCY
WEPFER STRUCTUREPOINT INC.

DESIGNER AMD
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.16 TOTAL P.163

CLE-US52-4.67

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ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE MASH 2016 TYPE 1 IMPACT ATTENUATORS AS LISTED UNDER "PRODUCTS ACCEPTED FOR NEW, PERMANENT INSTALLATIONS" ON THE ROADWAY APPROVED PRODUCTS LIST POSTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1(UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, (SINGLE) (DOUBLE).

DESIGN AGENCY
MERHAN STRUCTUREPOINT INC.
DESIGNER AMD
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.17 TOTAL P.163

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ITEM 614, MAINTAINING TRAFFIC

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE VILLAGE OF NEW RICHMOND, AT LEAST 48 HOURS IN ADVANCE (EXCLUSIVE OF SATURDAY, SUNDAY OR HOLIDAYS) OF HIS INTENT TO DIVERT TRAFFIC AND TWO WEEKS IN ADVANCE OF A DETOUR. CONTRACTOR SHALL MEET WITH ALL BUSINESSES OF UPCOMING ROUNDABOUT TO BE CLOSED ONE WEEK BEFORE CLOSURE.

DURING THE CLOSURE OF US 52 ONE LANE TWO WAY TRAFFIC SHALL BE MAINTAINED FOR LOCAL TRAFFIC. SEE THE SEQUENCE OF CONSTRUCTION FOR THE PHASED SHIFTING OF TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 INCH X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE LOCATIONS SHOWN ON THE PLANS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS SHOWN ON THE PLANS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGNS

NOTICE OF CLOSURE SIGNS (W20-H13-60) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED U.S. 52 ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE TO BE DETERMINED. [AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.]

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

WILL BE
CLOSED
FOR DAYS
INFO:

W20-H13-60

DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL SIGNED DETOUR ROUTE, LOCAL ROUTES HAVE BEEN DETERMINED TO BE THE SECONDARY SIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THESE ROUTES ARE FOR THE CONSTRUCTION OF EACH ROUNDABOUT, AT EACH INTERSECTION BEING CONSTRUCTED DURING EACH PHASE, SHOWN ON SHEETS 22,23,24,25, 26, AND 27. DURING THE TIME THAT TRAFFIC IS DETOURED, FOR EACH LEG OF THE INTERSECTION THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE.
ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED LOCAL DETOUR ROUTE.

ITEM 301, ASPHALT CONCRETE BASE, PG 64-22	12 CU. YD.
ITEM 304, AGGREGATE BASE	12 CU. YD.
ITEM 441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22	1.5 CU. YD.
ITEM 407, TACK COAT	5 GAL.
ITEM 408, PRIME COAT	5 GAL.
ITEM 616, WATER	1 M. GAL.
ITEM 617, COMPACTED AGGREGATE, TYPE A	5 CU. YD.
ITEM 617, WATER	1 M. GAL.
ITEM 642, CENTER LINE	0.2 MILE

SEQUENCE OF CONSTRUCTION

US 52 MAIN LINE ROUNDABOUT CONSTRUCTION SEQUENCE OF OPERATIONS SHALL BE AS FOLLOWS UNLESS ALTERNATIVE PLAN IS SUBMITTED AND APPROVED BY ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES:

PHASE 1A, ERECT THE PROJECT DETOUR SIGNAGE AS PER THE PLAN FOR US 52. CONSTRUCT THE MEDIAN CROSSOVER AT THE WEST END OF THE PROJECT.

PHASE 1B, RESTRIPE THE DIVERSION AT THE EAST END OF THE PROJECT, ADJUST TRAFFIC SIGNALS AT US 52/ SYCAMORE ST. / HIGH ST (S.R. 132), AND US 52/ AUGUSTA ST./ BETHEL-NEW RICHMOND RD. INTERSECTIONS.

PHASE 1C, SHIFT THE EASTBOUND TRAFFIC TO THE SOUTH LANE OF THE WESTBOUND SIDE. CONTRACTOR SHALL CONSTRUCT THE ROUNDABOUTS IN SEQUENCE SO AT NO TIME NO MORE THAN ONE ROUNDABOUT IS UNDER CONSTRUCTION.

ERECT LOCAL DETOURS FOR THE NORTHERN SIDE STREETS WHEN WORKING ON A PARTICULAR ROUNDABOUT. CONSTRUCT THE SOUTHERN PERMAMENT PAVEMENT, CURB, SIDEWALK, SHARED-USE PATH, AND DRAINAGE AS REQUIRED FOR THE ROUNDABOUTS AT THE US 52/ SYCAMORE ST./ HIGH ST (S.R. 132), US 52 & WALNUT ST./ SHORT HILL RD., US 52/ AUGUSTA ST./ BETHEL-NEW RICHMOND RD. INTERSECTIONS.

PHASE 2A, ONCE THE SOUTH SIDE OF THE ROUNDABOUTS ARE PARTIALLY CONSTRUCTED, RESTRIPE THE EAST END OF THE PROJECT TO ACCOMMODATE THE WESTBOUND TRAFFIC TO SHIFT TO THE NORTHERN LANES OF THE EASTBOUND SIDE. ADJUST TRAFFIC SIGNALS ALONG THE SOUTH SIDE PAVEMENT TO ACCOMMODATE TWO-WAY TRAFFIC.

PHASE 2B, CONTRACTOR SHALL CONSTRUCT THE ROUNDABOUTS IN SEQUENCE SO AT NO TIME NO MORE THAN ONE ROUNDABOUT IS UNDER CONSTRUCTION. ERECT LOCAL DETOURS FOR THE SOUTHERN SIDE STREETS WHEN WORKING ON A PARTICULAR ROUNDABOUT. CONSTRUCT THE NORTHERN PAVEMENT, CURB, SIDEWALK, AND DRAINAGE AS REQUIRED FOR THE ROUNDABOUTS AT THE, US 52: SYCAMORE ST. / HIGH ST (S.R. 132), US 52: WALNUT ST./ SHORT HILL RD., AND US 52: AUGUSTA ST./ BETHEL-NEW RICHMOND RD. INTERSECTIONS.

PHASE 3, INSTALL SIGNAGE, RESTRIPE AND OPEN UP THE ROUNDABOUTS, REMOVE THE TRAFFIC SIGNALS, AND CONSTRUCT THE SHARED-USE PAVEMENT AND THE REMAININING WORK WHILE MAINTAINING TRAFFIC. REQUESTS FOR ANY FURTHER ROAD CLOSURES/MOVEMENT RESTRICTIONS SHALL BE SUBMITTED TO ENGINEER AND VILLAGE FOR APPROVAL.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
143 Engineers

DESIGNER
CDS

REVIEWER
CFD 11-01-25

PROJECT ID
114042

SHEET P.18 TOTAL 163

CLE-52-4.67

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(1)

DETOUR

M4-8-24

52

M1-4-24-2

(2)

DETOUR

M4-8-24

52

M1-4-24-2

M5-1-21

(3)

DETOUR

M4-8-24

52

M1-4-24-2

M5-1-21

(4)

DETOUR

M4-8-24

52

M1-4-24-2

M6-1-21

(5)

DETOUR

M4-8-24

52

M1-4-24-2

M6-1-21

(6)

DETOUR

M4-8-24

52

M1-4-24-2

M6-3-21

(7)

ROAD CLOSED
LOCAL TRAFFIC ONLY

R11-3-66

DETOUR

M4-10R-48

(8)

ROAD CLOSED
LOCAL TRAFFIC ONLY

R11-3-66

DETOUR

M4-10L-48

(9)

ROAD CLOSED
LOCAL TRAFFIC ONLY

R11-3-66

(10)

DETOUR
AHEAD

W20-2-36

(A)

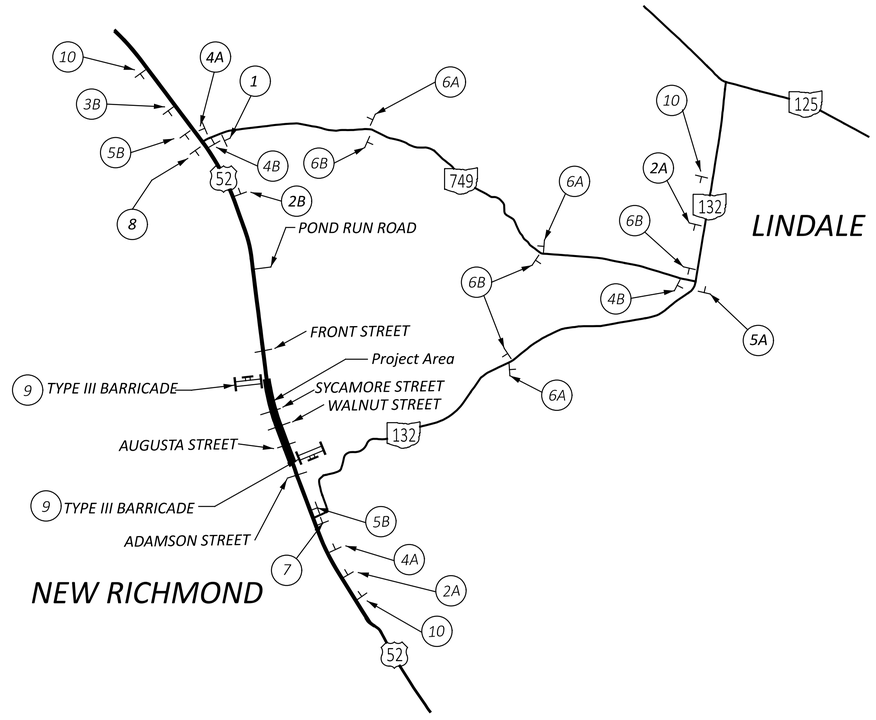
WEST

M3-4-24

(B)

EAST

M3-2-24



HORIZONTAL SCALE IN FEET
0 10 20 40

MAINTENANCE AND DETOUR ROUTE

CLE-52-4.67

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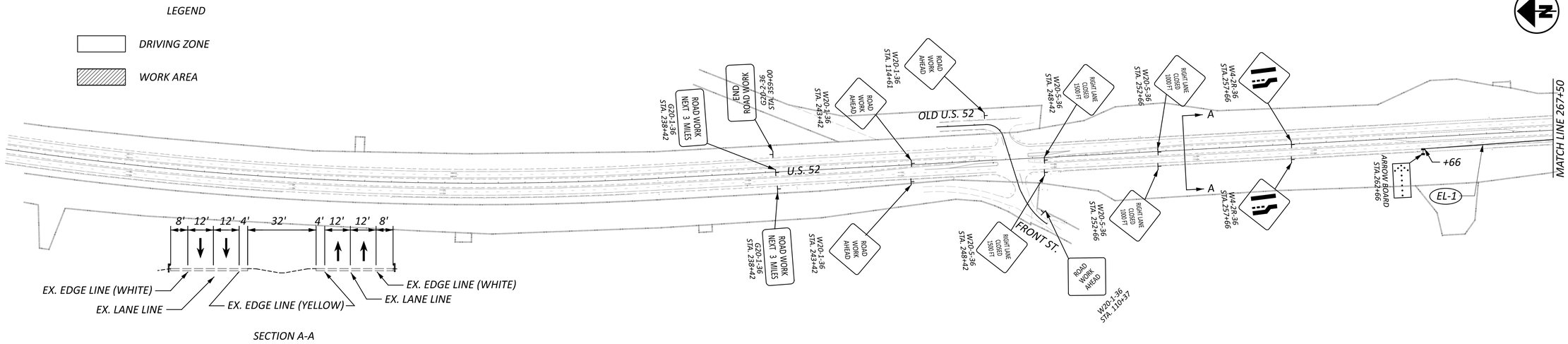
DESIGN AGENCY
143 Engineers

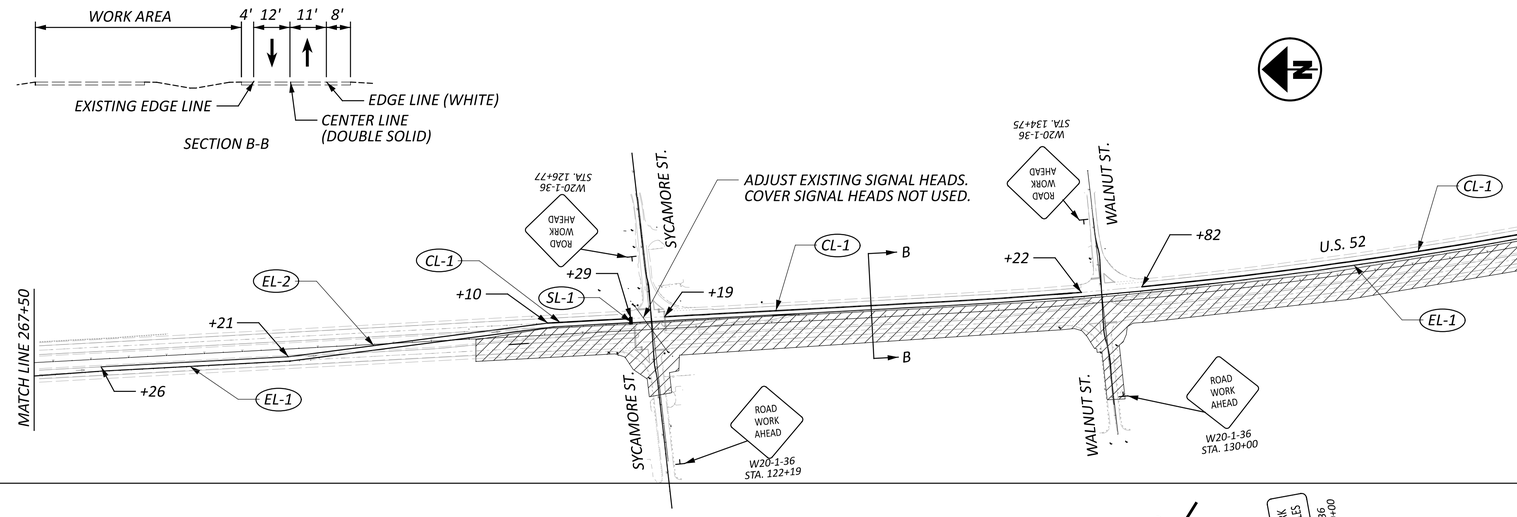
DESIGNER
CDS

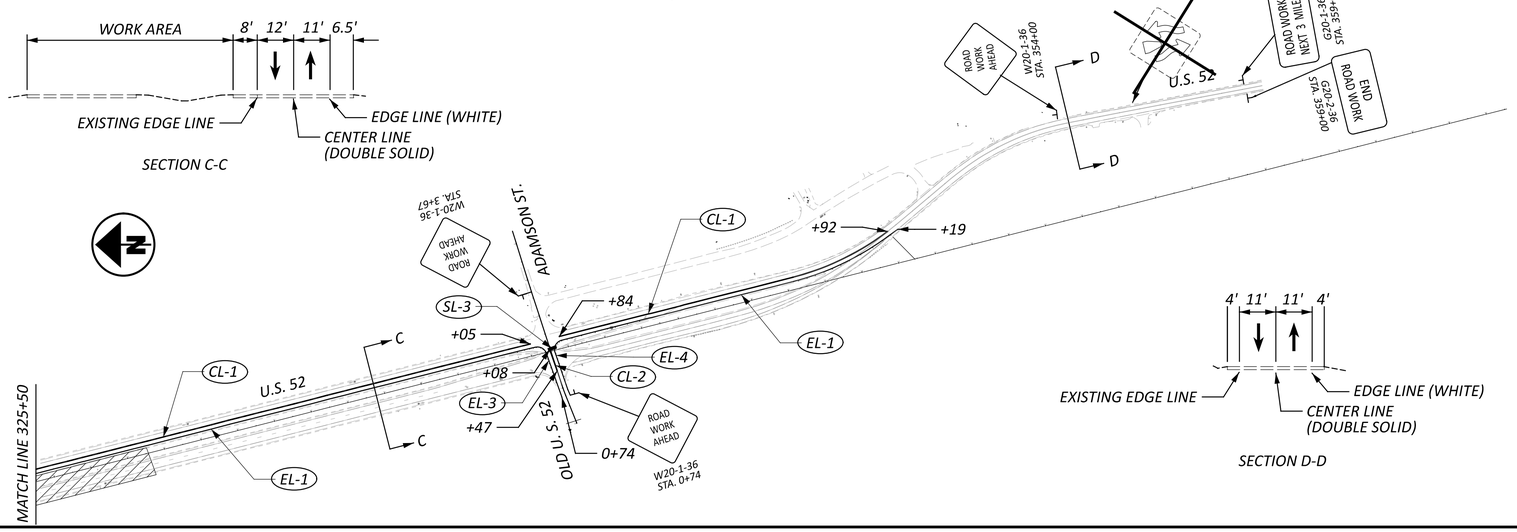
REVIEWER
CFD 11-01-25

PROJECT ID
114042

SHEET P.19 TOTAL 163







ESTIMATED QUANTITIES

REF No.	Station to Station	SIDE	ITEM 614 WORK ZONE CENTER LINE, CLASS I 740.06 TYPE 1 (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE 1 (WHITE)	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE 1 (YELLOW)	WORK ZONE STOP LINE, CLASS I, 24", 704.06, TYPE 1
			MILE	MILE	MILE	FT
			U.S.-52			
EL-1	262+66 to 349+19	RT/LT		1.6		
EL-2	269+26 to 281+10	RT/LT			0.2	
CL-1	281+10 to 348+92	LT	1.28			
SL-1	283+29	LT				11
SL-2	316+15	LT				11
			OLD U.S. 52			
EL-3	0+74 to 2+23	LT		0.03		
EL-4	0+74 to 2+23	RT		0.03		
CL-2	1+47 to 2+08	LT	0.01			
SL-3	2+08	LT/RT				15
SHEET TOTALS			1.29	1.66	0.2	37
TOTALS CARRIED TO THE SUBSUMMARY			**1.29**	**1.86**		**37**

HORIZONTAL SCALE IN FEET
0 50 100 200

MAINTENANCE OF TRAFFIC U.S. 52 PHASE 1

DESIGN AGENCY
143 Engineers
DESIGNER CDS
REVIEWER CFD 11-01-25
PROJECT ID 114042
SHEET P.20 TOTAL 161

CLE-52-4.67

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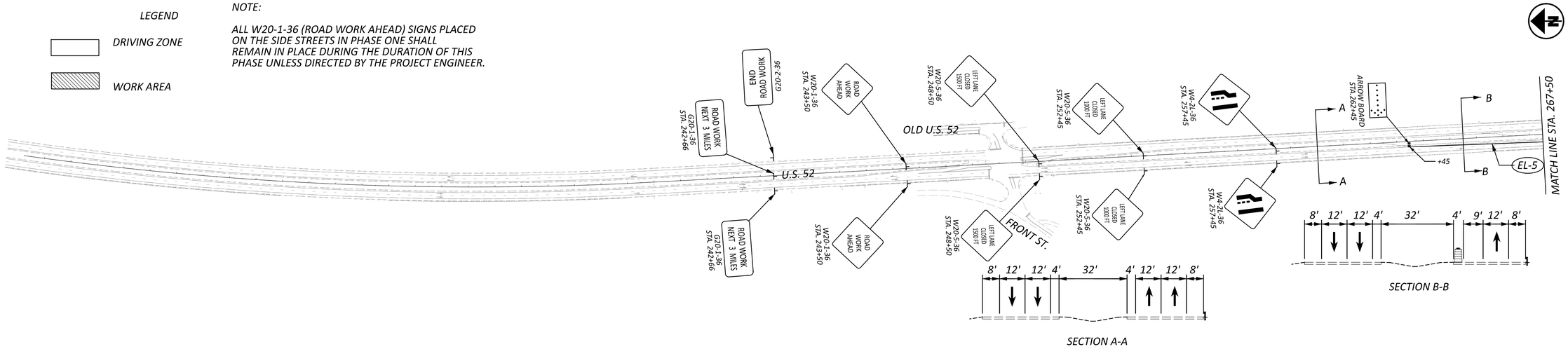
LEGEND

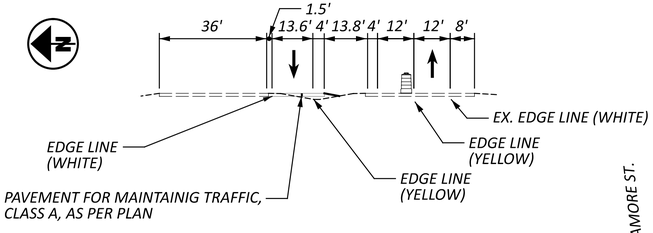
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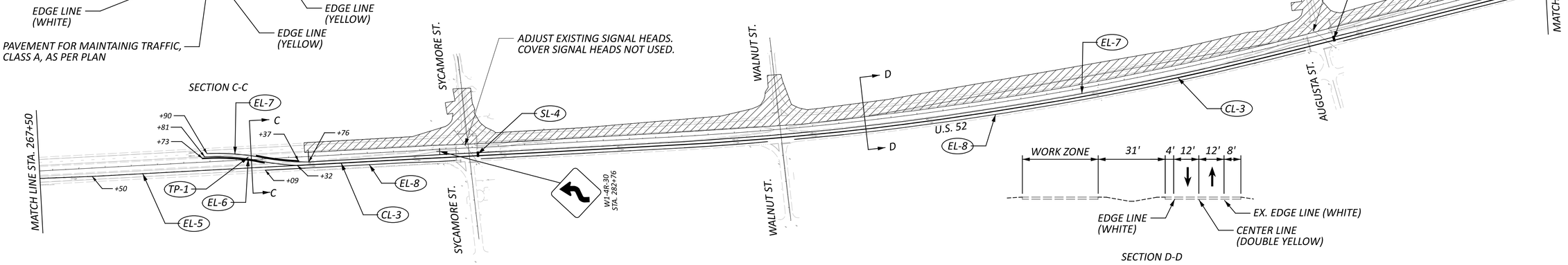
WORK AREA

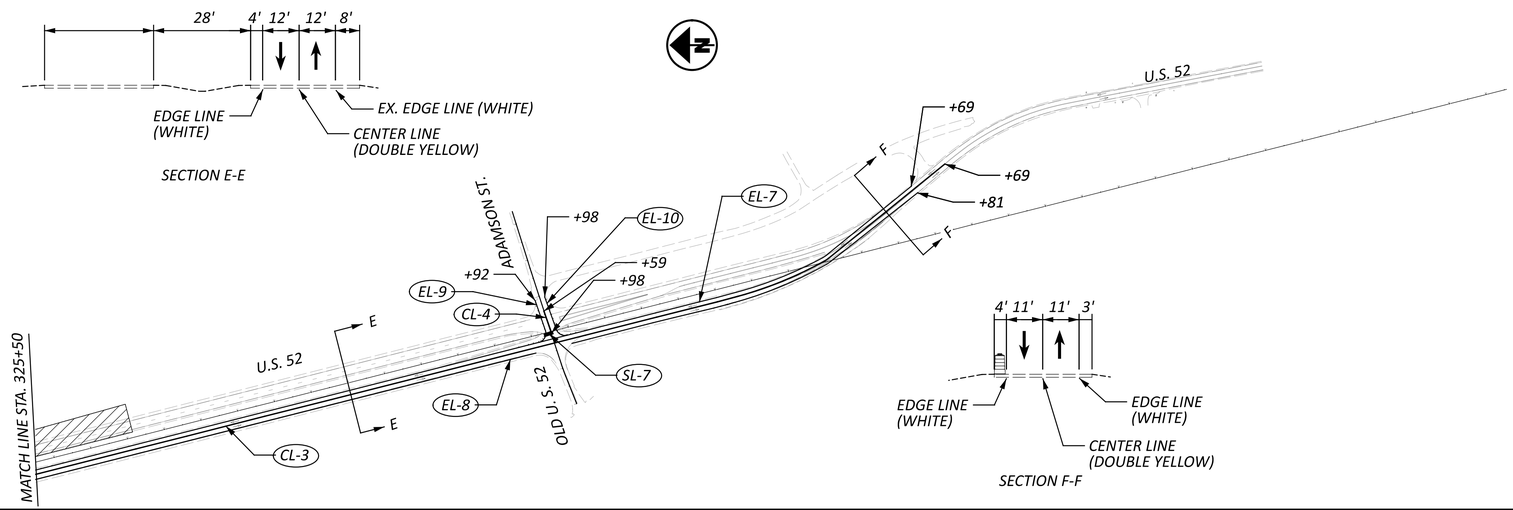
NOTE:

ALL W20-1-36 (ROAD WORK AHEAD) SIGNS PLACED ON THE SIDE STREETS IN PHASE ONE SHALL REMAIN IN PLACE DURING THE DURATION OF THIS PHASE UNLESS DIRECTED BY THE PROJECT ENGINEER.









Phase 2 ESTIMATED QUANTITIES

REF No.	Station to Station	SIDE	ITEM 614 WORK ZONE CENTER LINE, CLASS I 740.06 TYPE 1 (DOUBLE SOLID)	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE 1 (WHITE)	WORK ZONE EDGE LINE, CLASS I, 6" 704.06, TYPE 1 (YELLOW)	WORK ZONE STOP LINE, CLASS I, 24", 704.06, TYPE 1
			MILE	MILE	MILE	FT
U.S.-52						
EL-5	262+45 to 277+32	RT			0.28	
EL-6	273+81LT to 277+32RT	LT/RT			0.01	
EL-7	273+90LT to 349+69LT	LT/RT		1.43		
EL-8	276+09RT to 349+81LT	LT/RT		1.40		
CL-3	277+32 RTto 350+69 LT	LT/RT	1.40			
TP-1	273+73 LT to 277+37 RT	LT/RT				
SL-4	283+29	LT				12
SL-5	316+15	LT				12
OLD U.S. 52						
EL-9	1+82 to 2+92	LT		0.02		
EL-10	1+82 to 2+98	RT		0.02		
CL-4	1+98 to 2+59	CL	0.01			
SL-3	2+08	LT/RT				17
SHEET TOTALS			1.41	2.87	0.29	41
TOTALS CARRIED TO THE SUBSUMMARY			**1.41**	**3.16**		**41**

HORIZONTAL SCALE IN FEET
0 50 100 200

CONCEPTUAL MAINTENANCE OF TRAFFIC U.S. 52 PHASE 2

DESIGN AGENCY
143 Engineers

DESIGNER CDS

REVIEWER CFD 11-01-25

PROJECT ID 114042

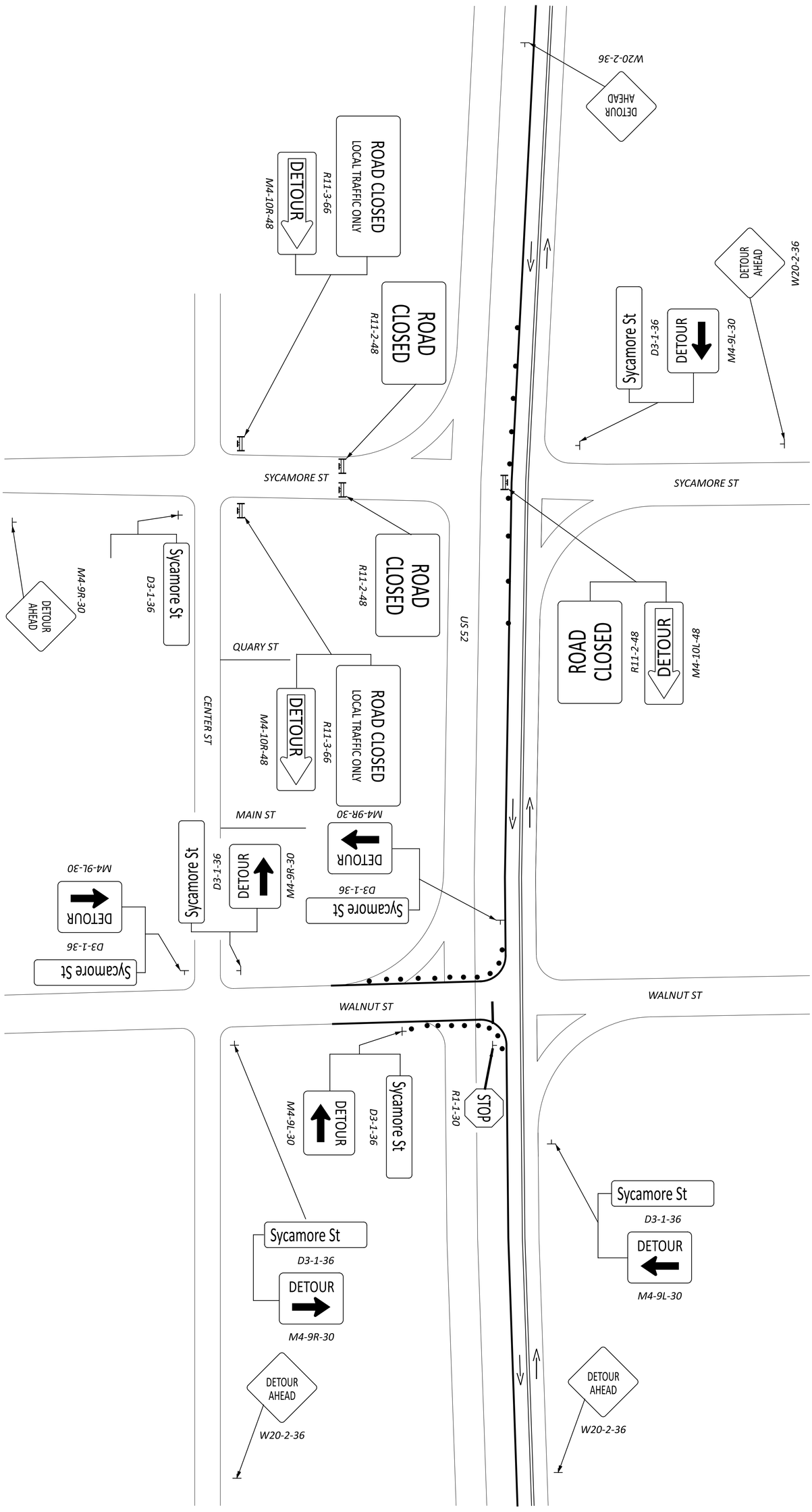
SHEET P.21 TOTAL 163

CLE-52-4.67

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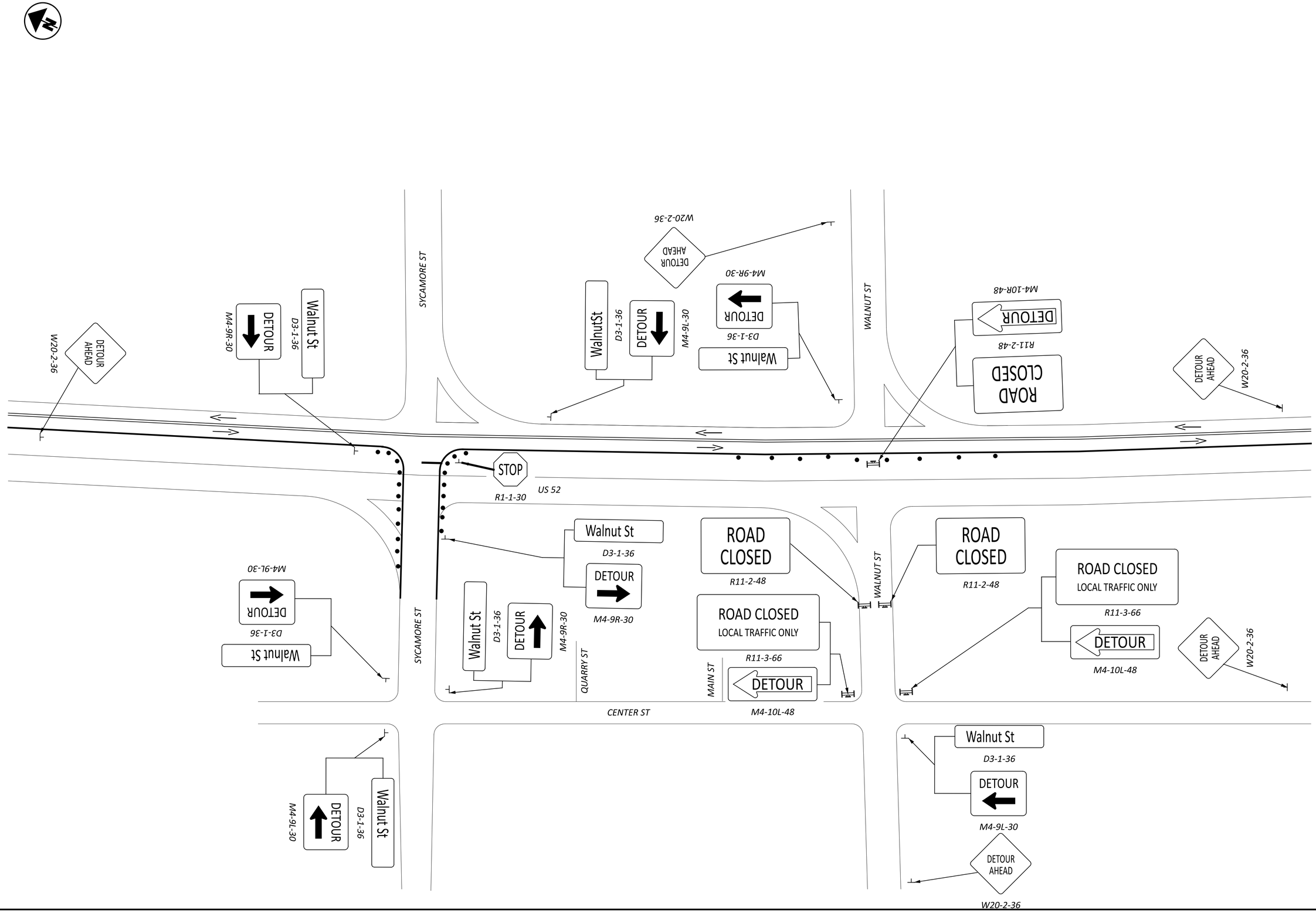
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DESIGN AGENCY: 143 Engineers
DESIGNER: CDS
REVIEWER: CFD 11-01-25
PROJECT ID: 114042
SHEET: P.22 | TOTAL: 163

MAINTENANCE OF TRAFFIC
PHASE 1 LOCAL DETOUR SYCAMORE STREET WEST LEG

HORIZONTAL SCALE IN FEET
0 20
10 40



HORIZONTAL SCALE IN FEET
0 10 20 40

MAINTENANCE OF TRAFFIC
PHASE 1 LOCAL DETOUR WALNUT STREET WEST LEG

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:40:47 PM USER: spisa
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DESIGN AGENCY
143 Engineers

DESIGNER
CDS

REVIEWER
CFD 11-01-25

PROJECT ID
114042

SHEET P.23 | TOTAL 163

MAINTENANCE OF TRAFFIC
PHASE 1 LOCAL DETOUR AUGUSTA STREET WEST LEG

HORIZONTAL SCALE IN FEET
0 10 20 40

COLUMBIA ST
COLUMBIA ST
UNION ST
CAROLINE ST
GREENMOUND RD
WALNUT ST
AUGUSTA ST
US 52
CENTER ST
HAMILTON ST
UNION ST
GEORGE ST
PLENTY ST
SOPHIA ST
WESTERN AVE
HOTEL ST

DETOUR AHEAD
W20-2-36
DETOUR
M4-9R-30
Augusta St
D3-1-36
DETOUR
M4-9L-30
DETOUR
M4-9R-30
Augusta St
D3-1-36
DETOUR
M4-9L-30
DETOUR AHEAD
W20-2-36
DETOUR
M4-10R-48
ROAD CLOSED
R11-2-48
DETOUR AHEAD
W20-2-36
STOP
R1-1-30
Augusta St
D3-1-36
DETOUR
M4-9R-30
Augusta St
D3-1-36
DETOUR
M4-9L-30
DETOUR
M4-9L-30
Augusta St
D3-1-36
DETOUR
M4-9L-30
ROAD CLOSED
R11-2-48
ROAD CLOSED
R11-2-48
DETOUR
M4-10L-48
ROAD CLOSED
R11-2-48
ROAD CLOSED
R11-2-48
DETOUR
M4-10L-48
Augusta St
D3-1-36
DETOUR
M4-9L-30
DETOUR AHEAD
W20-2-36
DETOUR AHEAD
W20-2-36

DESIGN AGENCY
143 Engineers

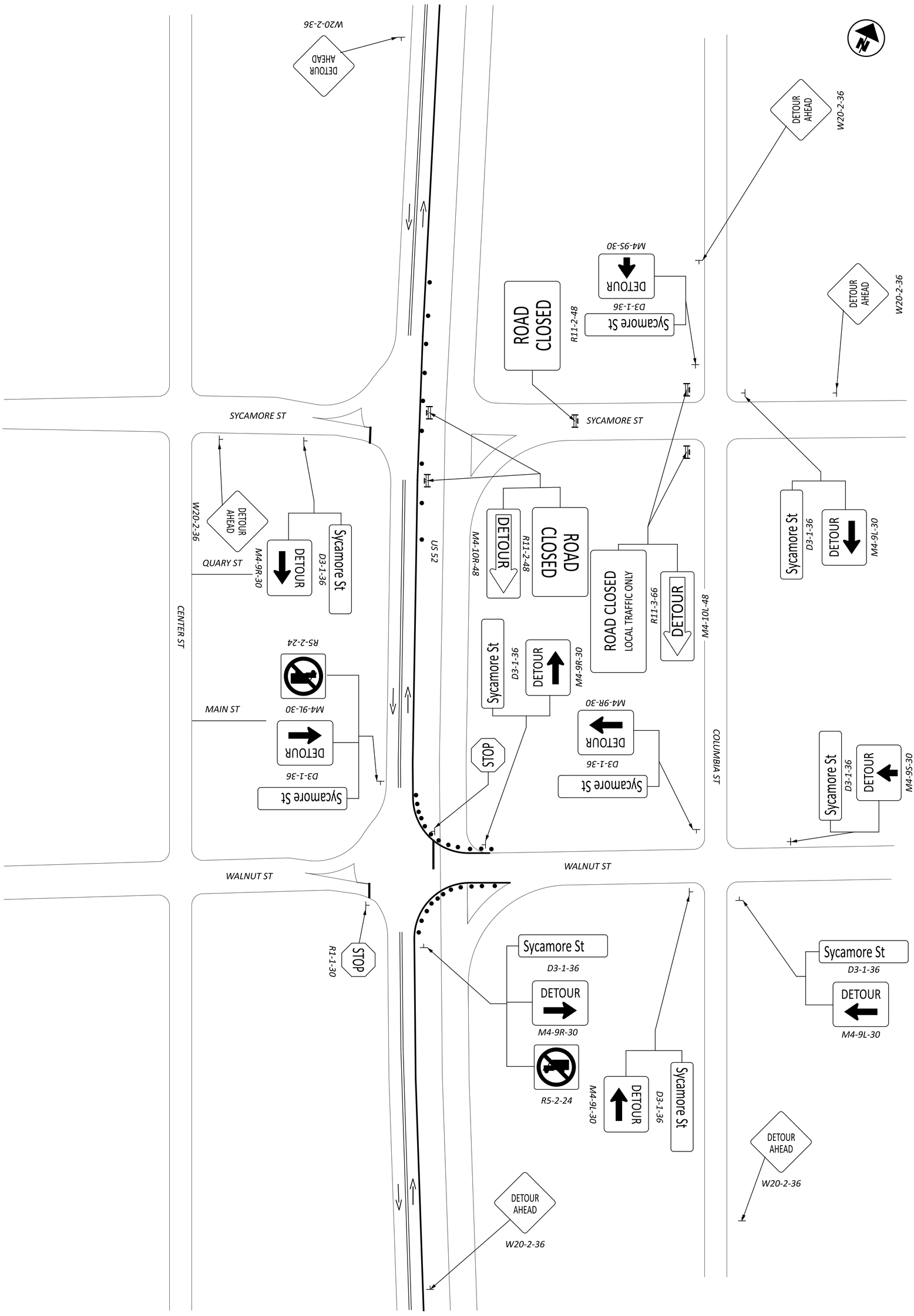
DESIGNER	CDS
REVIEWER	CFD 11-01-25
PROJECT ID	114042
SHEET	P.24
TOTAL	163

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:42:08 PM USER: spisa
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CLE-52-4.67

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MAINTENANCE OF TRAFFIC
PHASE 2 LOCAL DETOUR SYCAMORE STREET EAST LEG

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.25	163

PROJECT ID 114042

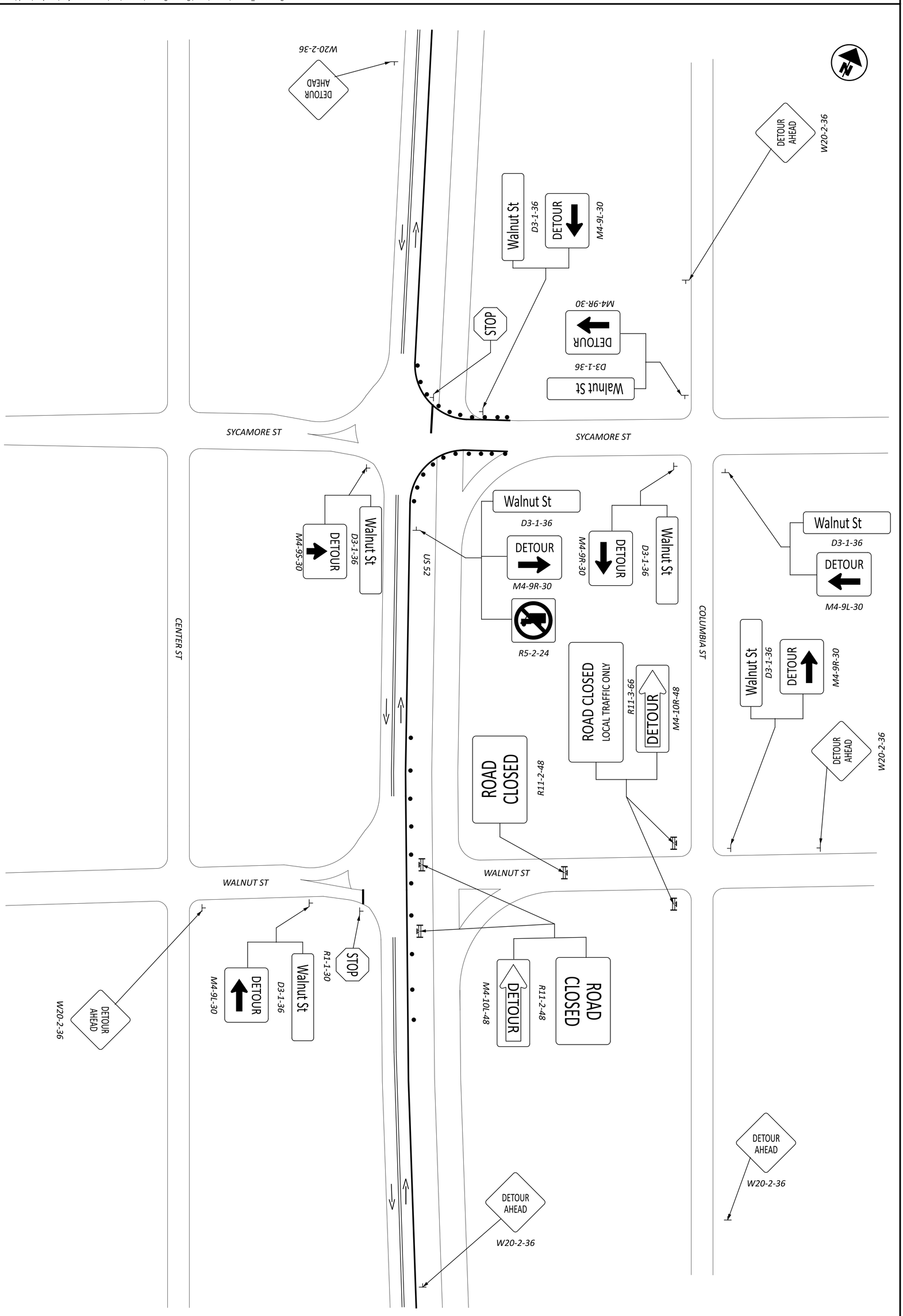
REVIEWER CFD 11-01-25

DESIGNER CDS

DESIGN AGENCY 143 Engineers

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:45:26 PM USER: spisa
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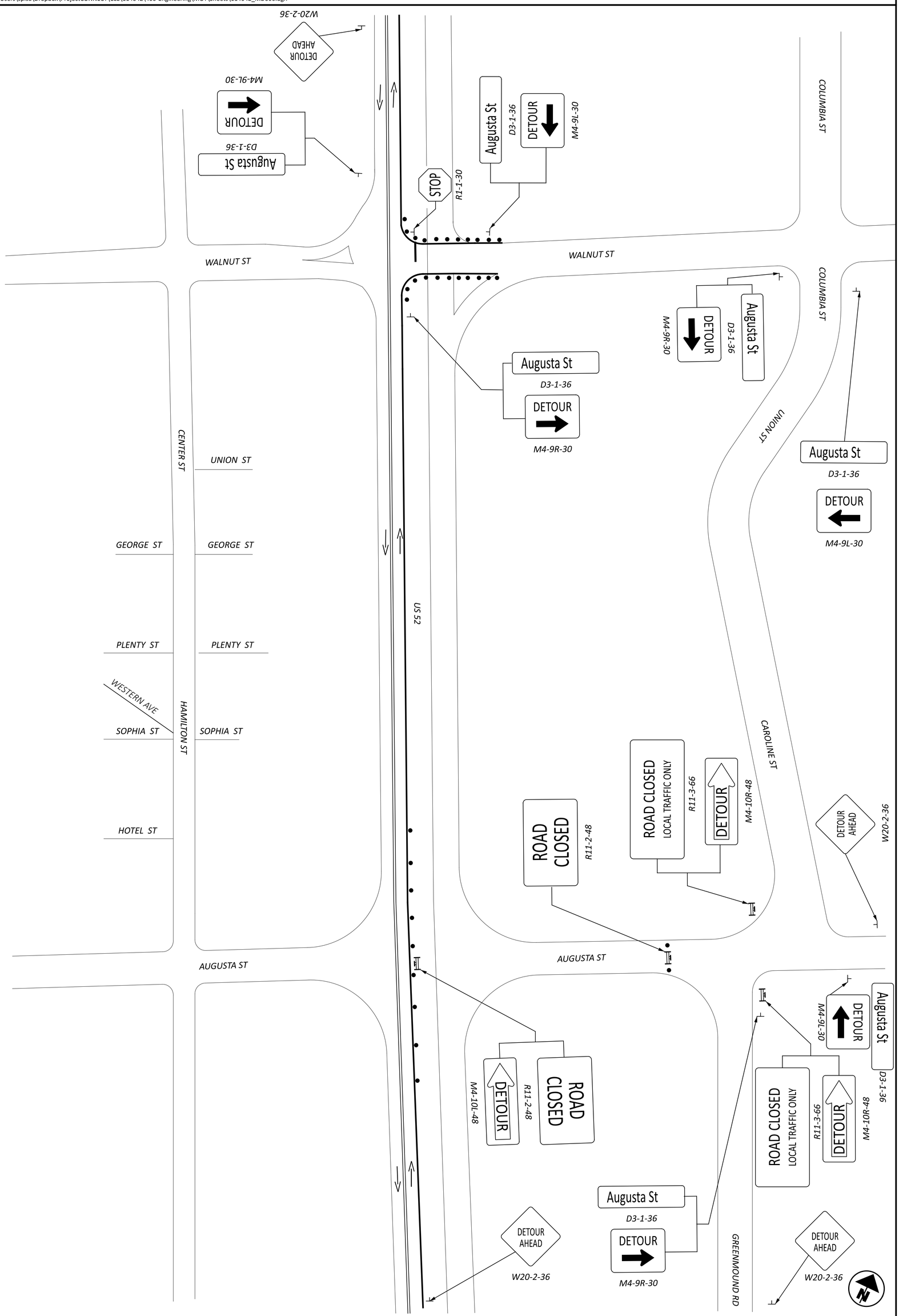
MAINTENANCE OF TRAFFIC
PHASE 2 LOCAL DETOUR WALNUT STREET EAST LEG

DESIGN AGENCY: 143 Engineers
DESIGNER: CDS
REVIEWER: CFD 11-01-25
PROJECT ID: 114042
SHEET: P.26 | TOTAL: 163

HORIZONTAL SCALE IN FEET
0 20
10 40

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:47:32 PM USER: spisa
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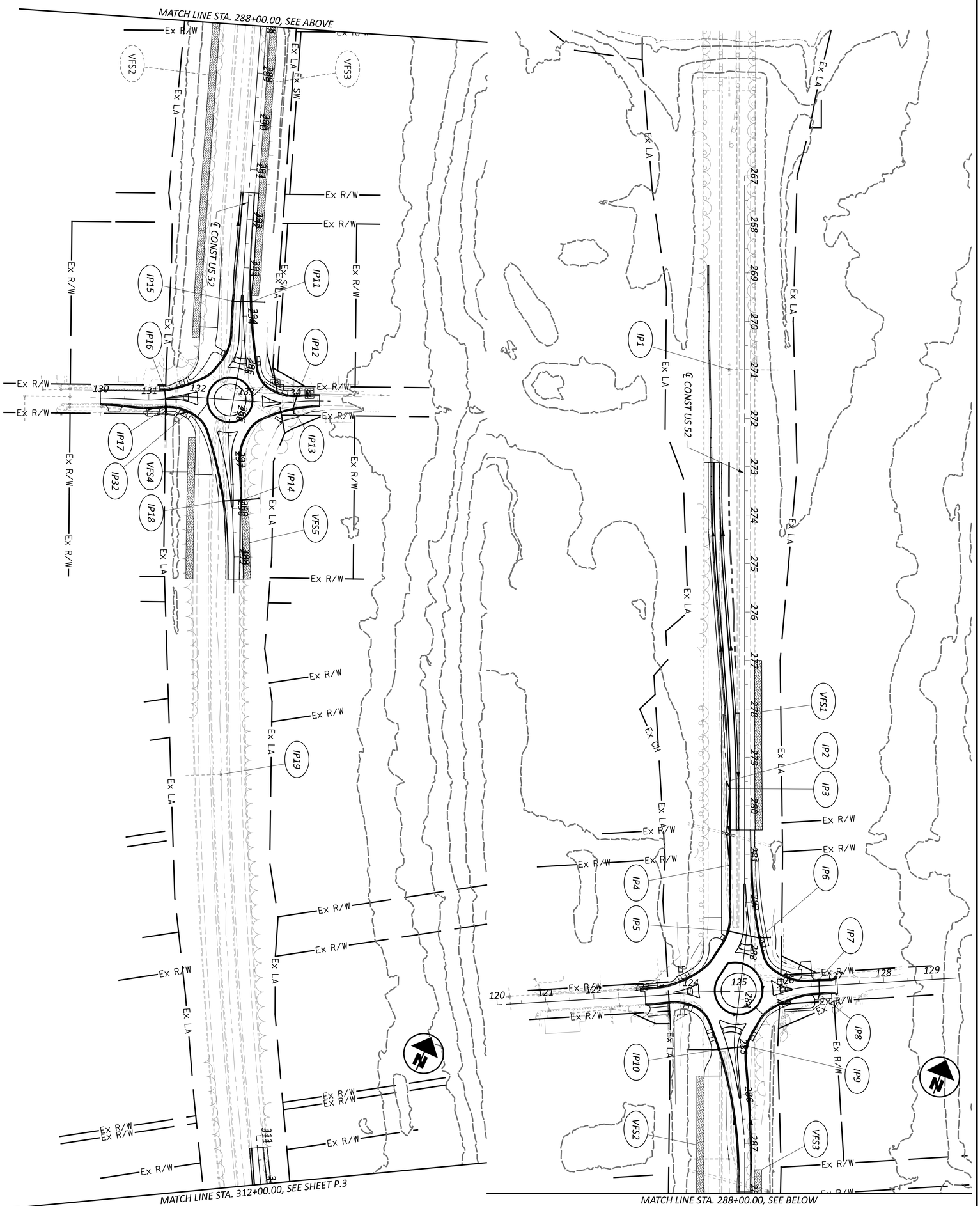


SHEET P. 27 TOTAL 163	PROJECT ID 114042	REVIEWER CFD 11-01-25	DESIGNER CDS	DESIGN AGENCY 143 Engineers

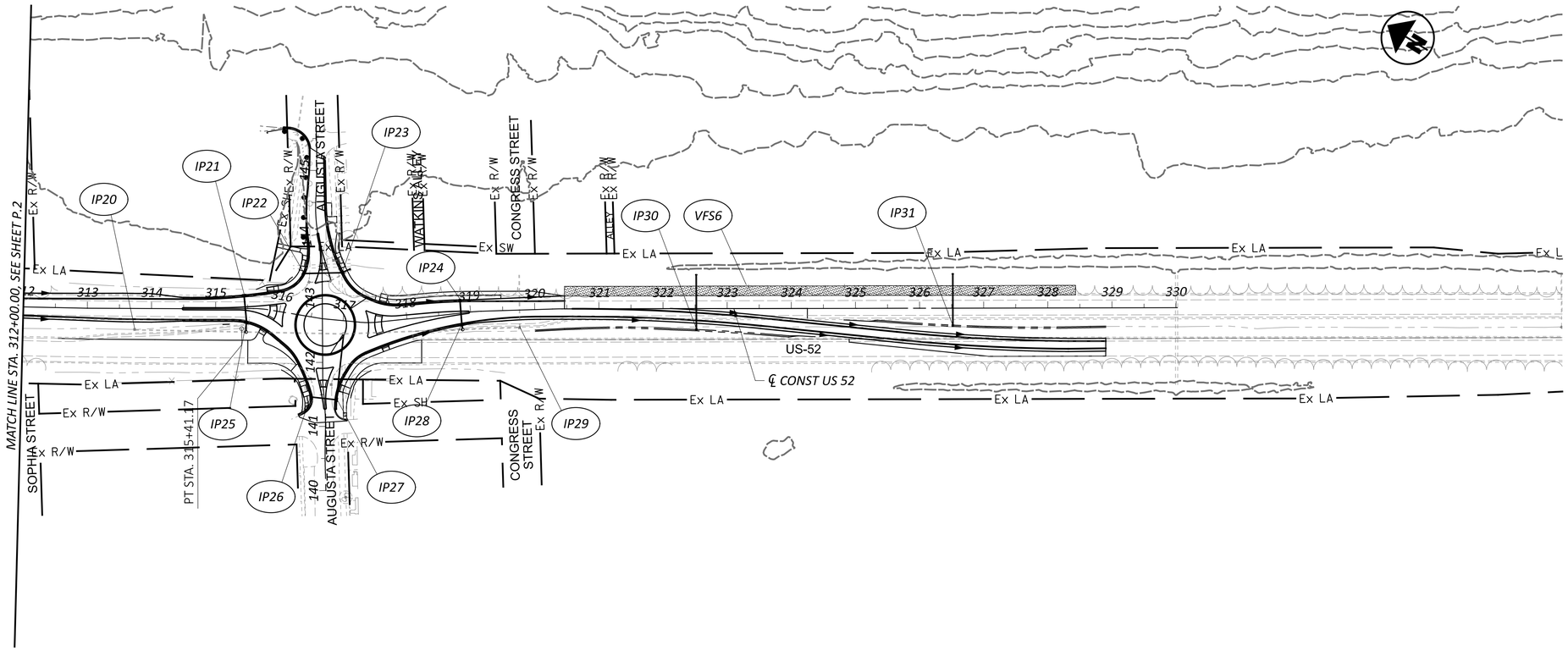
MAINTENANCE OF TRAFFIC
PHASE 2 LOCAL DETOUR AUGUSTA STREET EAST LEG

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: DE101 - SHEET PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:32:43 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Drainage\Sheets\114042_DE101.dgn



SHEET P.28	PROJECT ID 114042	REVIEWER MTL 03/10/26	DESIGNER FGW	DESIGN AGENCY AMERICAN STRUCTUREPOINT INC.	PROJECT SITE PLAN	HORIZONTAL SCALE IN FEET 0 100 50 200
TOTAL P.163						



HORIZONTAL SCALE IN FEET
0 50 100 200

PROJECT SITE PLAN

PROJECT DESCRIPTION			
CONVERT THE EXISTING FOR LANE DIVIDED SECTION OF US 52 TO ONE LANE OF TRAFFIC IN EACH DIRECTION USING EXISTING NORTHBOUND LANES OF US 52, AND CONVERT THE EXISTING SOUTHBOUND LANES TO A SHARED USE PATH. CONVERT THREE EXISTING INTERSECTIONS (SYCAMORE, WALNUT, AUGUSTA) TO ROUNDABOUTS.			
PROJECT DATA			
USGS QUADRANT NO. - NEW RICHMOND, OHIO - KENTUCKY			
PROJECT LATITUDE	38° 57' 08" N	PROJECT LONGITUDE	84° 16' 40" W
TOTAL AREA (RIGHT OF WAY)	21.97 AC	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION	0.67
PROJECT EARTH DISTURBED AREA	6.97 AC	RUNOFF COEFFICIENT FOR POST-CONSTRUCTION	0.68
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	2.00 AC	POST CONSTRUCTION BMP	VEGETATED FILTER STRIP
NOTICE OF INTENT EARTH DISTURBED AREA	8.97 AC	IMMEDIATE RECEIVING WATER	VARIOUS TRIBUTARIES
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION	8.45 AC	SUBSEQUENT RECEIVING WATER	OHIO RIVER
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION	8.81 AC	CURRENT LAND USES	RESIDENTIAL, COMMERCIAL

BEST MANAGEMENT PRACTICES

BMP TYPE	ID	ROADWAY	STATION START	STATION END	SIDE	EDA TREATMENT CREDIT (ACRES)
VEGETATED FILTER STRIP	VFS1	US 52	277+00	280+50	LT	0.16
VEGETATED FILTER STRIP	VFS2	US 52	285+52	294+46	RT	0.41
VEGETATED FILTER STRIP	VFS3	US 52	287+54	293+56	LT	0.28
VEGETATED FILTER STRIP	VFS4	US 52	296+53	299+46	RT	0.13
VEGETATED FILTER STRIP	VFS5	US 52	297+97	299+46	LT	0.07
VEGETATED FILTER STRIP	VFS6	US 52	320+46	328+43	LT	0.37
				TREATMENT PROVIDED		1.42
				TREATMENT REQUIRED*		1.39

* CALCULATED PER L&D VOL. 2, SEC. 1111.7

ESTIMATED SWPPP QUANTITIES	
INLET PROTECTION	31 EACH
FILTER FABRIC FENCE	9,800 FT
CONSTRUCTION ENTRANCE*	111 CY

*CONSTRUCTION ENTRANCE LOCATIONS MAY BE MODIFIED WITH APPROVAL FROM ENGINEER.

CARRIED TO GENERAL SUMMARY	
ITEM 659 - TOPSOIL	572 CY
ITEM 670 - SLOPE EROSION PROTECTION	5,145 SY
ITEM 832 - EROSION CONTROL	9,942 EACH

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.29 TOTAL P.163

CLE-US52-4.67

MODEL: DE102 - SHEET PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:33:20 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52. PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Drainage\Sheets\114042_DE102.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)

Ex LA

EXISTING DITCH

POT STA 267+00.00

15"

267 268 269 270 EX NORTHBOUND US-52 271

℄ CONST US 52

S20°42'04"E

MATCHLINE STA 271+50.00

DND

CONST LIMITS

25.0' IMPACT ATTENUATOR TYPE 2

14.0' BARRIER END SECTION

26.0'

BEGIN BARRIER TAPER
STA 269+43.47
74.50' RT

EX SOUTHBOUND US-52

SINGLE SLOPE BARRIER, TYPE B

BEGIN BARRIER RUN
STA 269+43.47
74.50' RT

CONST LIMITS

EXISTING DITCH

Ex LA

510 505 500 495 490 485

EX GRADE

EX ELEV @ ℄ CROSSOVER NORTH

497.75 497.72 497.66 497.61 497.58 497.55 497.50 497.43 497.34 497.29 497.25 497.20 497.17 497.11 497.04 497.02 497.00 497.04 497.09

267 268 269 270 271

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
BEGIN PROJECT TO STA 271+50

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER WTM

REVIEWER MTL 03/10/26

PROJECT ID 114042

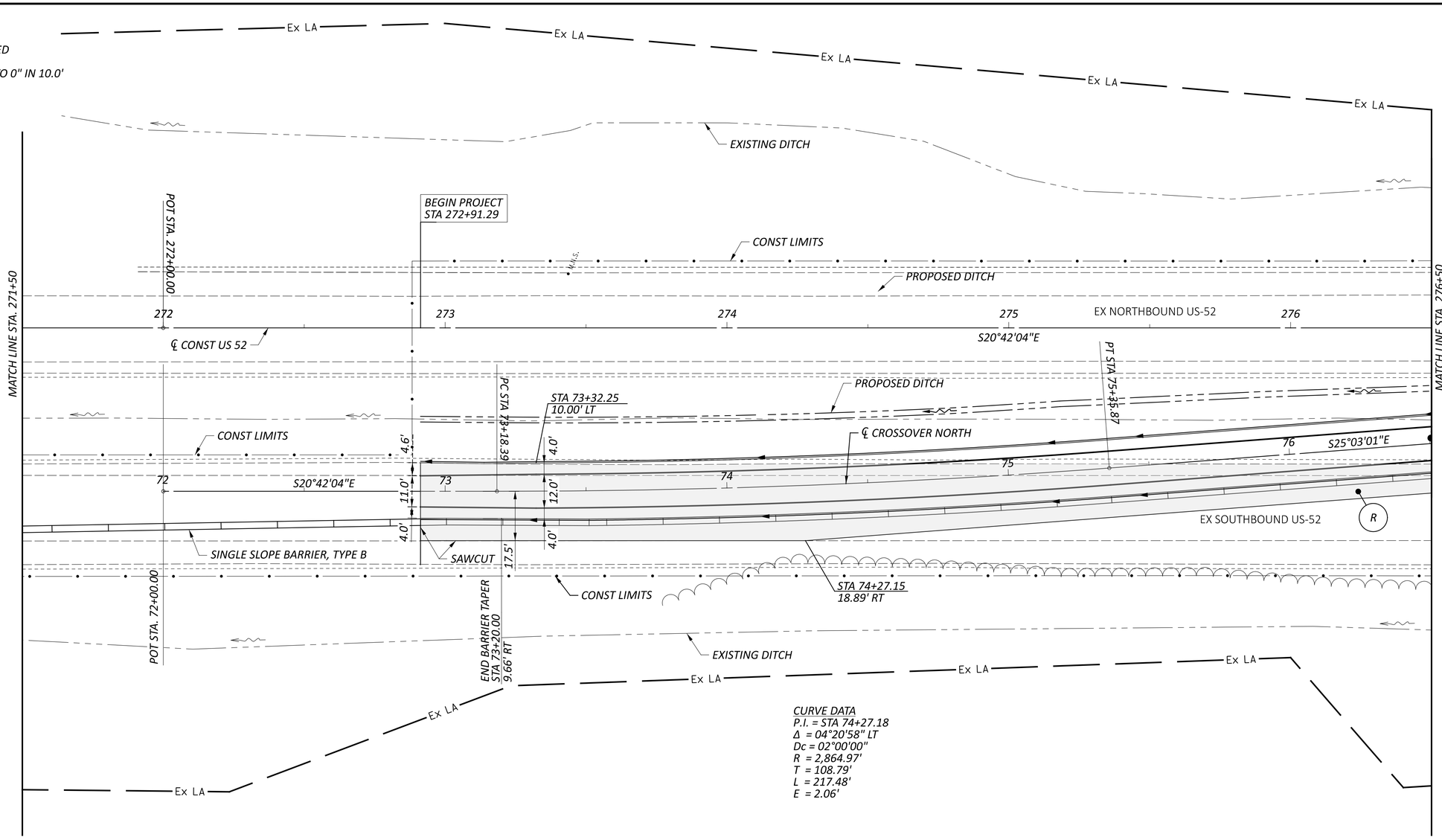
SHEET P.30 TOTAL P.163

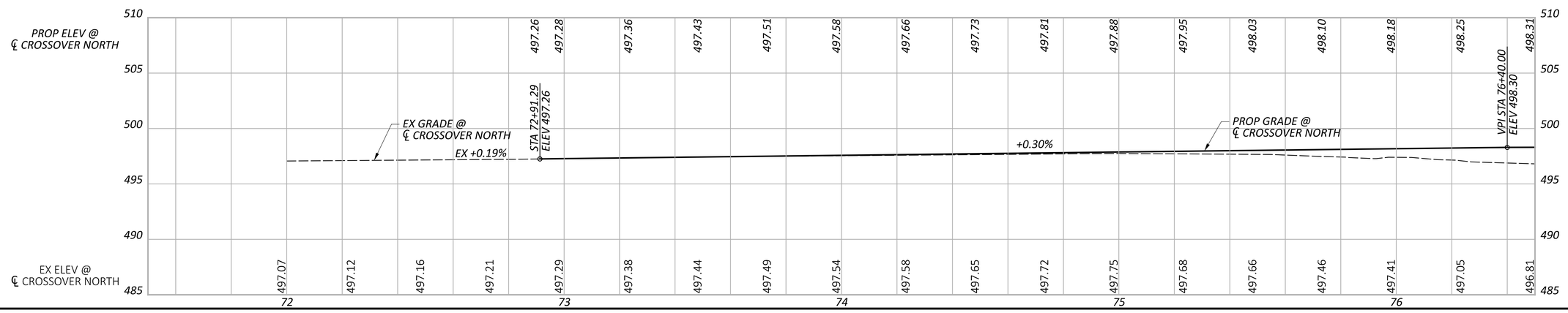
CLE-US52-4.67

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O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GP099.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 271+50 TO STA 276+50

DESIGN AGENCY
STRUCTUREPOINT LLC

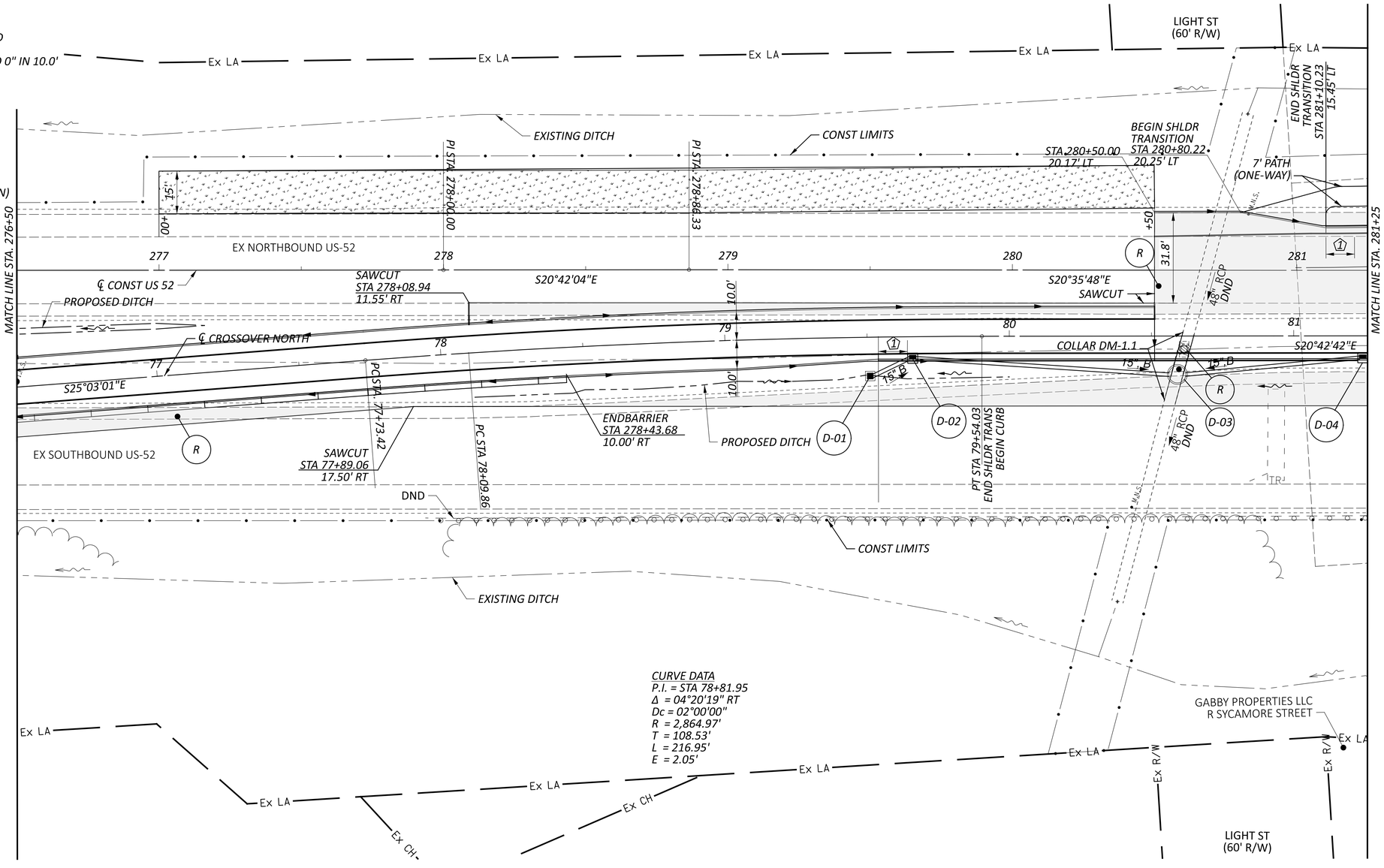
DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.31
TOTAL	P.163

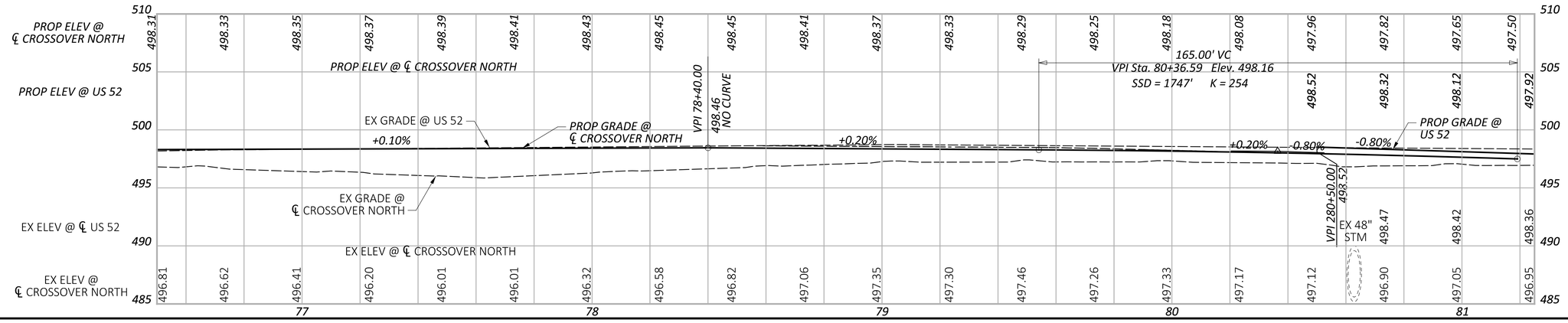
CLE-US52-4.67

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LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 276+50 TO STA 281+25

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.32
TOTAL	P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - GP102 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:34:57 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GP102.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)

C-1
CURVE DATA
P.I. = STA. 281+95.47
Δ = 04°23'29" LT
Dc = 06°21'58"
R = 900.00'
T = 34.51'
L = 68.98'
E = 0.66'

C-2
CURVE DATA
P.I. = STA. 282+46.26
Δ = 12°24'44" RT
Dc = 38°11'50"
R = 150.00'
T = 16.31'
L = 32.5'
E = .88'

C-3
CURVE DATA
P.I. = STA. 123+52.92
Δ = 07°23'06" LT
Dc = 22°41'29"
R = 252.50'
T = 16.30'
L = 32.55'
E = 0.53'

C-4
CURVE DATA
P.I. = STA. 123+82.08
Δ = 09°49'54" RT
Dc = 38°11'50"
R = 150.00'
T = 12.9'
L = 25.74'
E = .55'

C-5
CURVE DATA
P.I. = STA. 125+96.90
Δ = 11°26'16" LT
Dc = 38°11'50"
R = 150.00'
T = 15.02'
L = 29.94'
E = 0.75'

C-6
CURVE DATA
P.I. = STA. 126+31.48
Δ = 08°59'29" RT
Dc = 22°55'06"
R = 250.00'
T = 19.66'
L = 39.23'
E = .77'

C-7
CURVE DATA
P.I. = STA. 284+92.76
Δ = 13°11'46" LT
Dc = 38°11'50"
R = 150.00'
T = 17.35'
L = 34.55'
E = 1.00'

A POT STA 82+32.15

I STA 283+84.01, ℄ CONST US 52= STA 125+01.76,℄ CONST SCYAMORE ST

* = 10' NOSE RAMPING LIMITS

NOTES

HORIZONTAL SCALE IN FEET
0 10 20 40

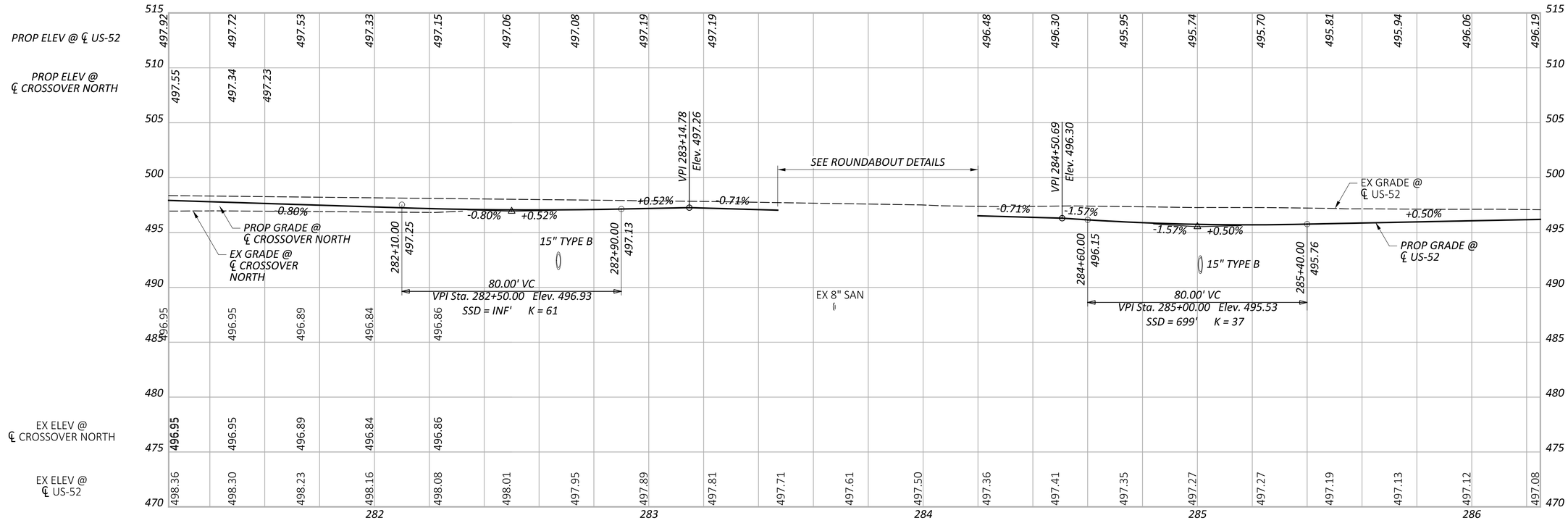
PLAN AND PROFILE-US 52
STA 281+25 TO STA 286+25

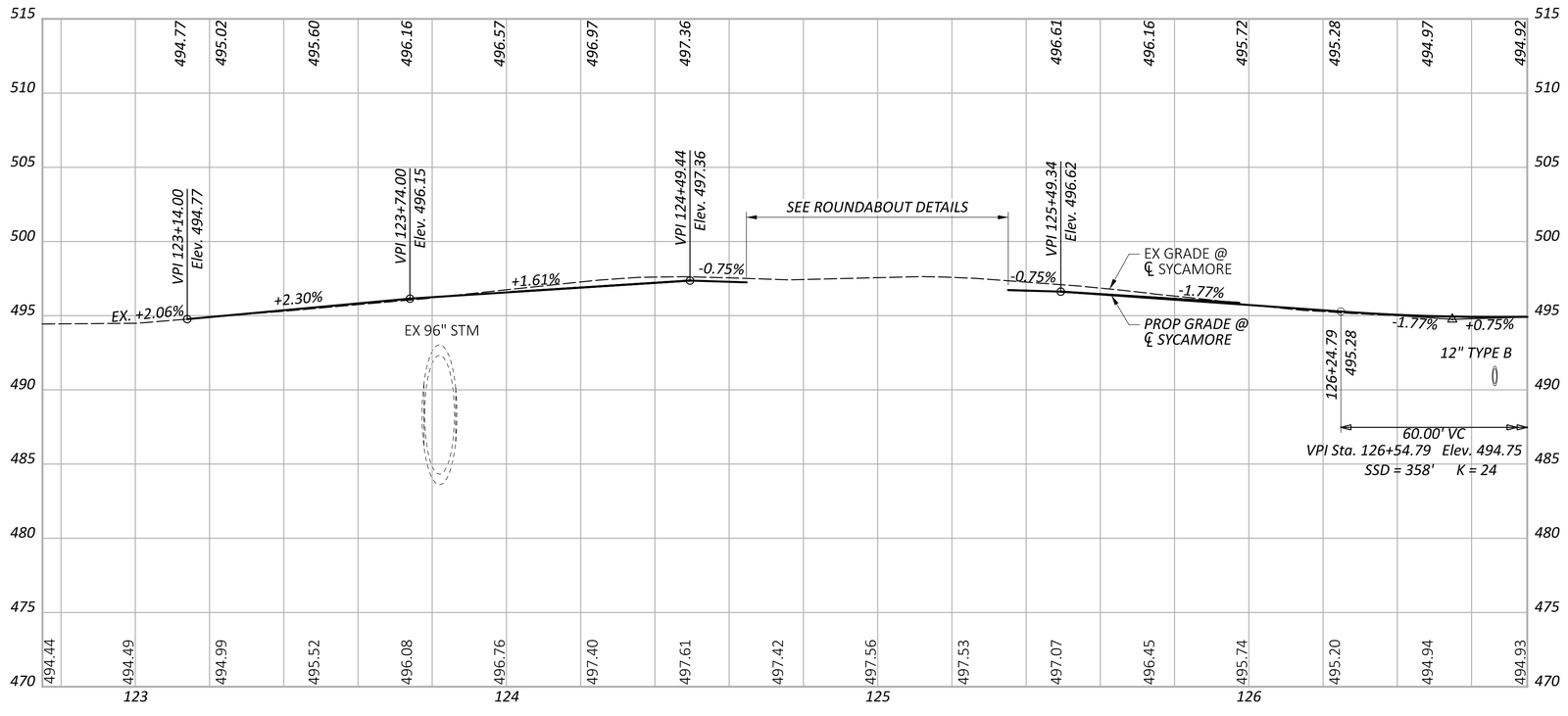
DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.33 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - GP103 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:35:26 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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PLAN AND PROFILE-US 52
SYCAMORE ROUNDABOUT PROFILES

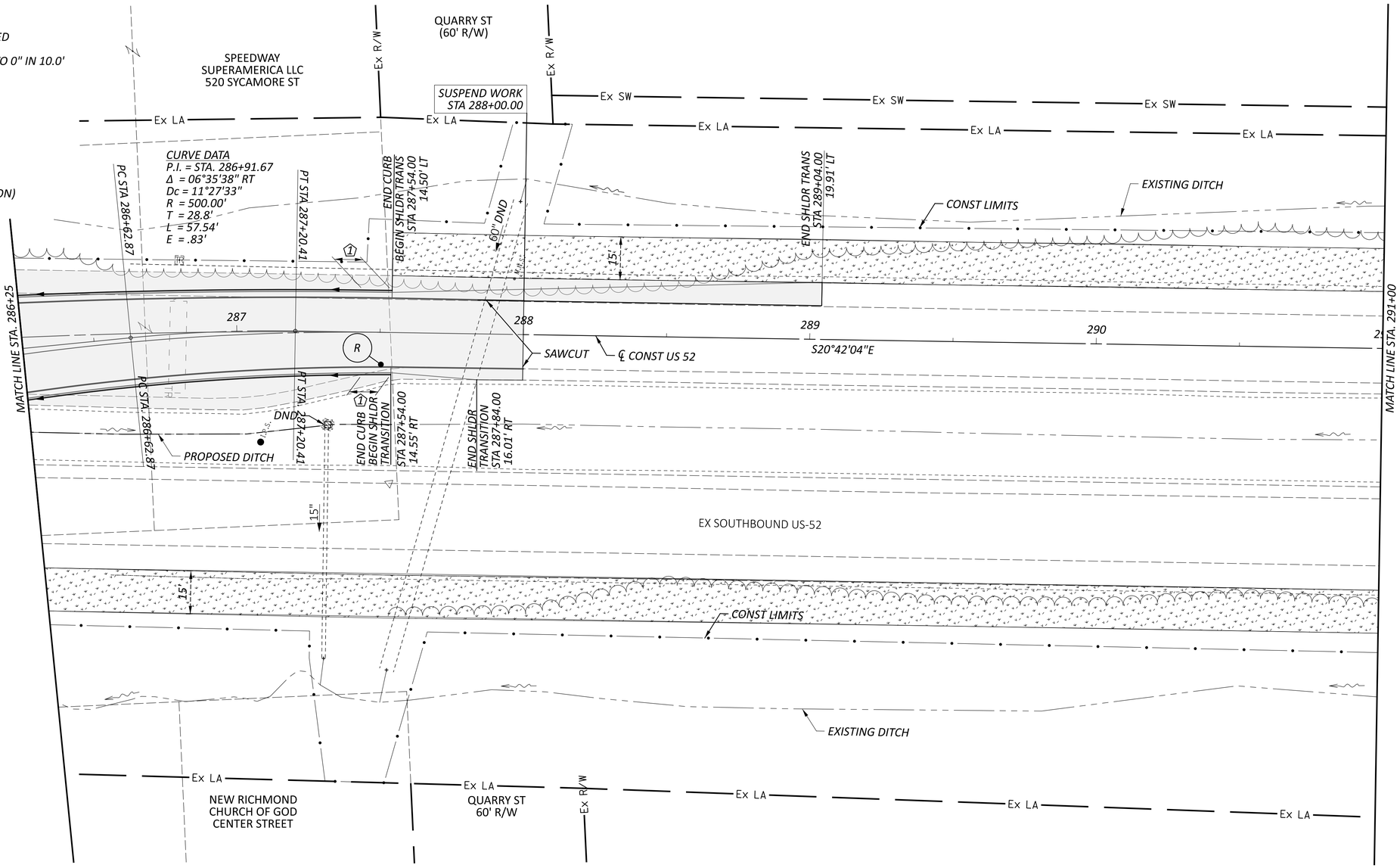
CLE-US52-4.67

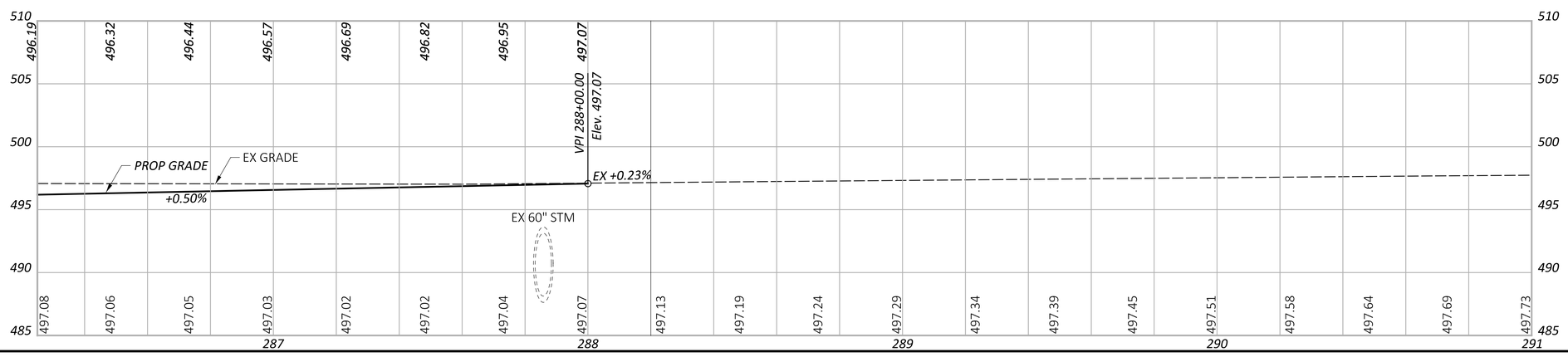
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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.
DESIGNER
WTM
REVIEWER
MTL 03/10/26
PROJECT ID
114042
SHEET P.34 TOTAL P.163

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 286+25 TO STA 291+00

DESIGN AGENCY
STRUCTUREPOINT LLC

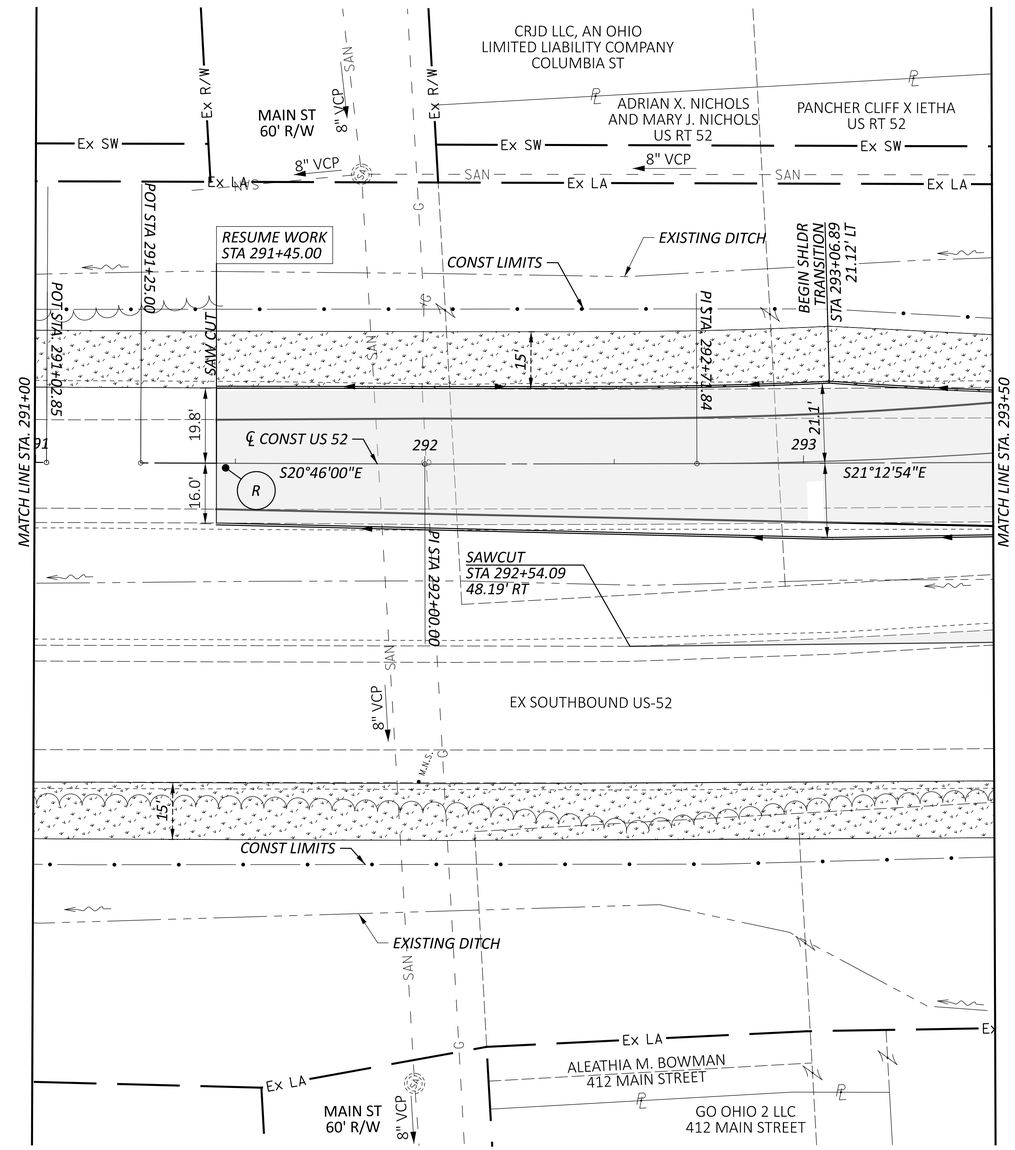
DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.35
TOTAL	P.163

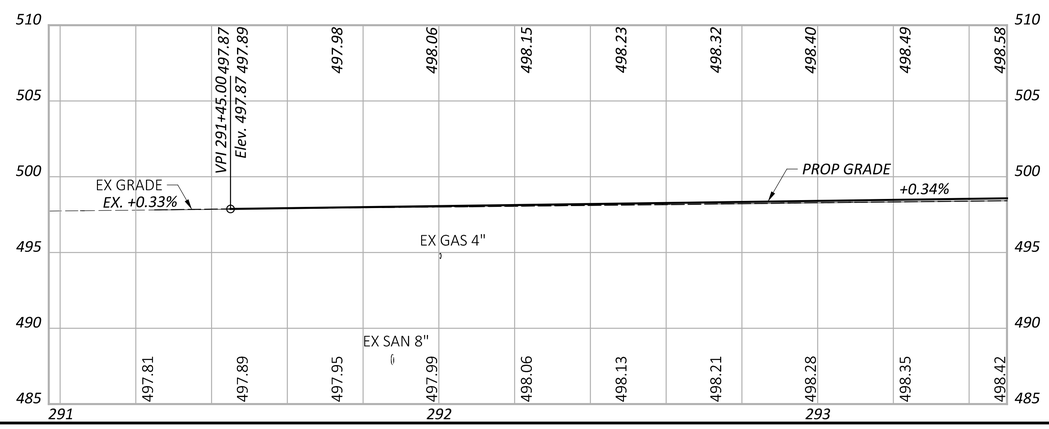
CLE-US52-4.67

MODEL: CLP_U052_SYC - GP104 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:36:45 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C: Design\114042\400-Engineering\Roadway\Sheets\114042_GP104.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 291+00 TO STA 293+50

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET / TOTAL	P.36 / P.163

CLE-US52-4.67

MODEL: CLP_U052_WAL - GP105 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:36:57 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GP105.dgn

C-1
CURVE DATA
P.I. = STA. 294+77.55
Δ = 09°38'41" RT
Dc = 38°11'50"
R = 150.00'
T = 12.65'
L = 25.25'
E = .53'

C-2
CURVE DATA
P.I. = STA. 130+38.82
Δ = 02°57'54" RT
Dc = 03°49'11"
R = 1,500.00'
T = 38.82'
L = 77.62'
E = .5'

C-3
CURVE DATA
P.I. = STA. 131+14.02
Δ = 13°41'55" LT
Dc = 18°54'34"
R = 303.00'
T = 36.39'
L = 72.44'
E = 2.18'

C-4
CURVE DATA
P.I. = STA. 131+68.19
Δ = 13°46'37" RT
Dc = 38°11'50"
R = 150.00'
T = 18.12'
L = 36.07'
E = 1.09'

C-5
CURVE DATA
P.I. = STA. 133+80.52
Δ = 12°12'53" LT
Dc = 38°11'50"
R = 150.00'
T = 16.05'
L = 31.98'
E = 0.86'

C-6
CURVE DATA
P.I. = STA. 134+20.71
Δ = 09°14'51" RT
Dc = 19°05'55"
R = 300.00'
T = 24.26'
L = 48.42'
E = .98'

C-7
CURVE DATA
P.I. = STA. 296+36.66
Δ = 13°23'43" LT
Dc = 28°38'52"
R = 200.00'
T = 23.49'
L = 46.76'
E = 1.37'

C-8
CURVE DATA
P.I. = STA. 297+97.41
Δ = 01°16'34" RT
Dc = 38°11'50"
R = 150.00'
T = 1.67'
L = 3.34'
E = .01'

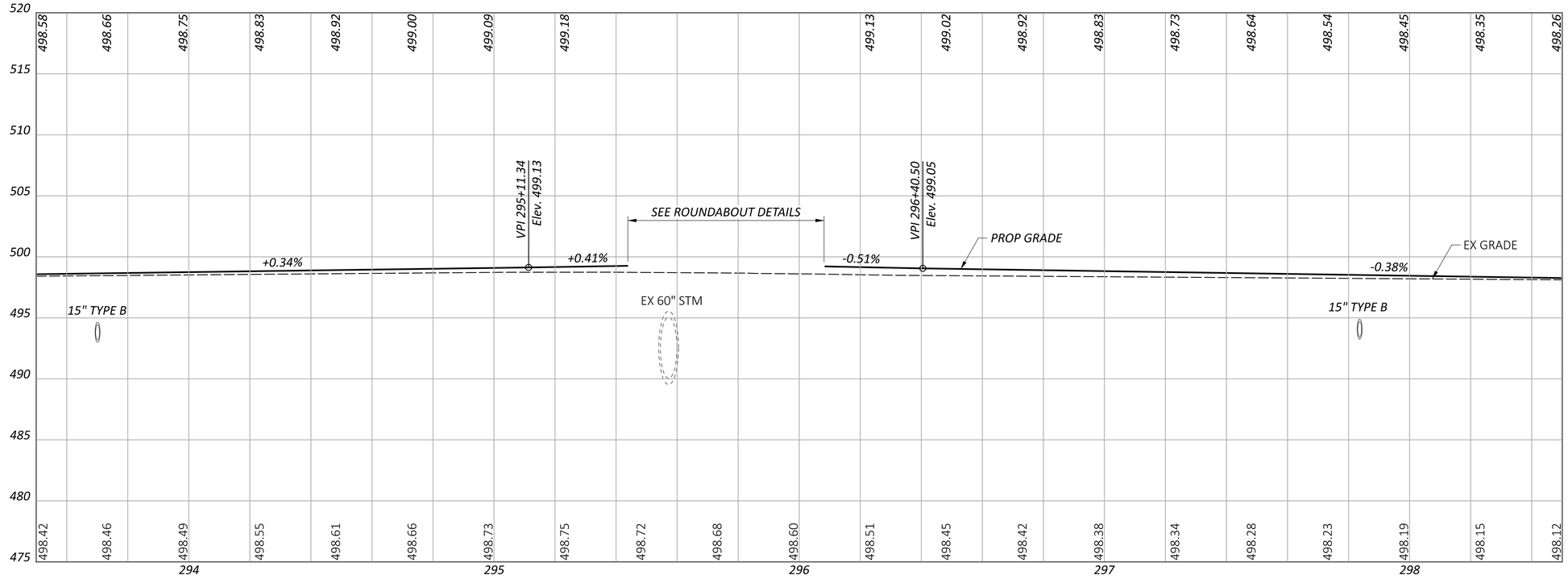
PLAN AND PROFILE-US 52
STA 293+50 TO STA 298+50

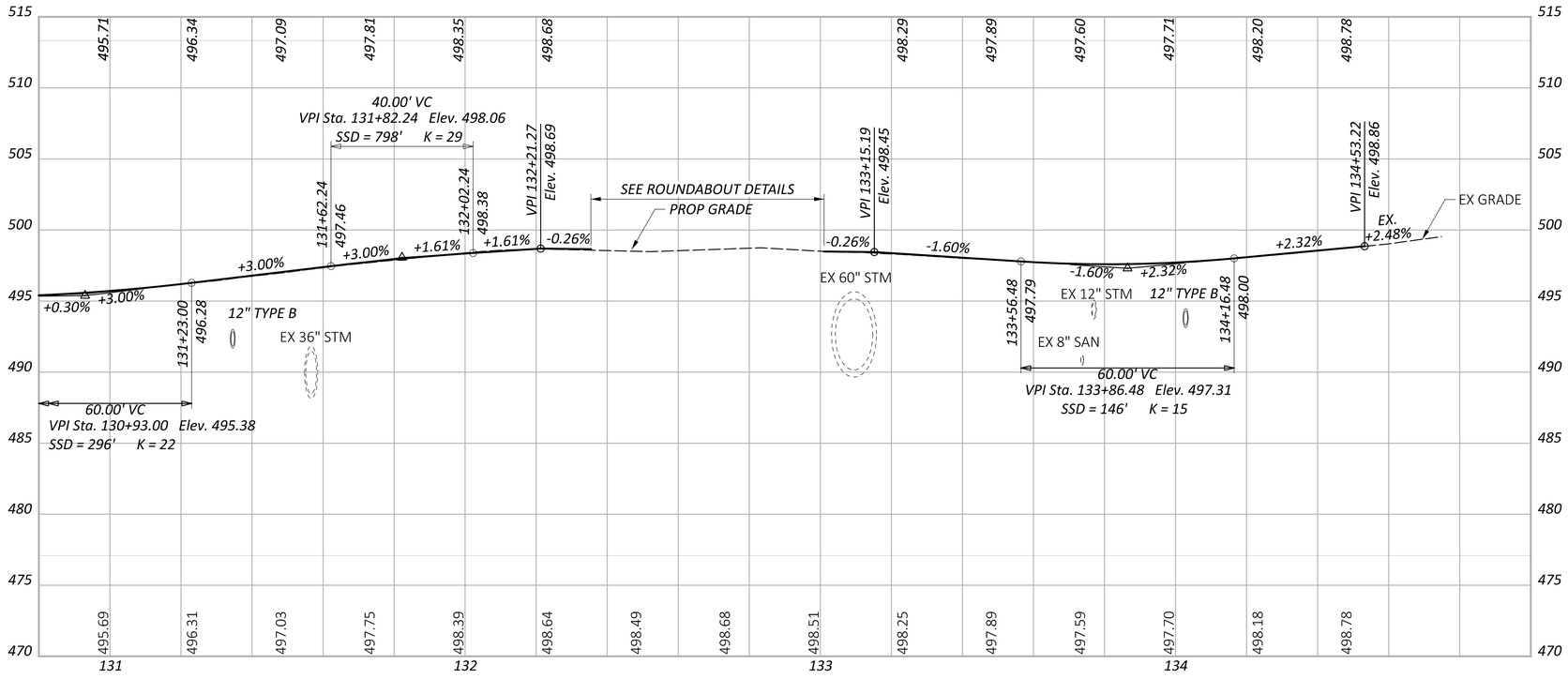
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.37
TOTAL	P.163

CLE-US52-4.67

MODEL: CLP_U052_WAL - GP106 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:37:10 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GP106.dgn





PLAN AND PROFILE-US 52
WALNUT ROUNDABOUT PROFILES

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
WTM

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.38 TOTAL P.163

CLE-US52-4.67

MODEL: P_CLP_U052_WAL - Profile 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:37:53 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER:
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GP106A.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)

DAREN SCHAFER AND ANNETTE SCHAFER
449 UNION STREET

UNION ST
60' R/W

GEORGE ST
60' R/W

Ex R/W

Ex LA

8" VCP

SAN

PI STA 299+00.00

SAWCUT END SHLDR TRANSITION BOTH SIDES PI STA 299+45.95

CONST LIMITS

EXISTING DITCH

15'

MATCH LINE STA. 298+50

299

S24°17'17"E

S26°39'54"E

℄ CONST US 52

S24°27'48"E

19.8'

15.9'

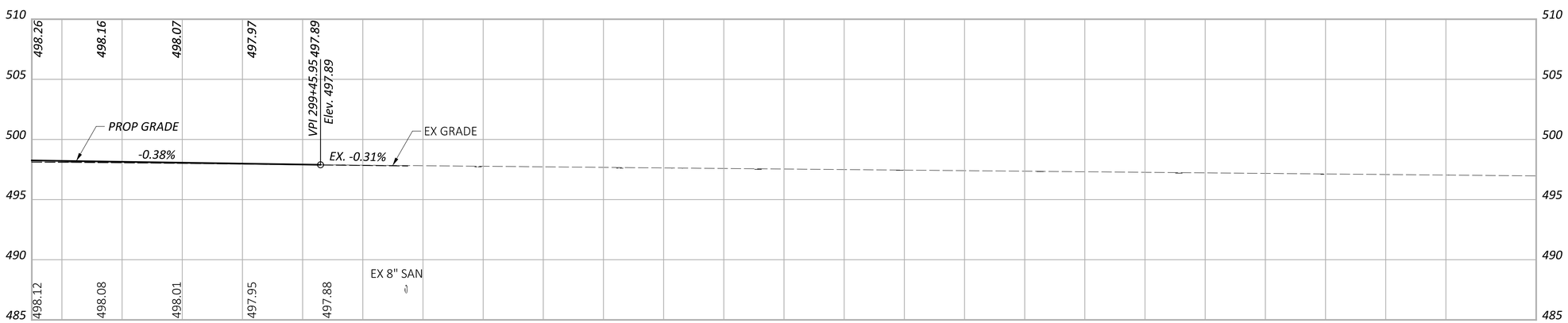
POT STA 299+74.93

SUSPEND WORK
STA 299+45.95

EX SOUTHBOUND US-52

+46

ROBERT CATRON AND
DONNA CATRON
407 UNION STREET



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 298+50 TO STA 303+00

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER WTM

REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.39 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_WAL - GP107 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:38:12 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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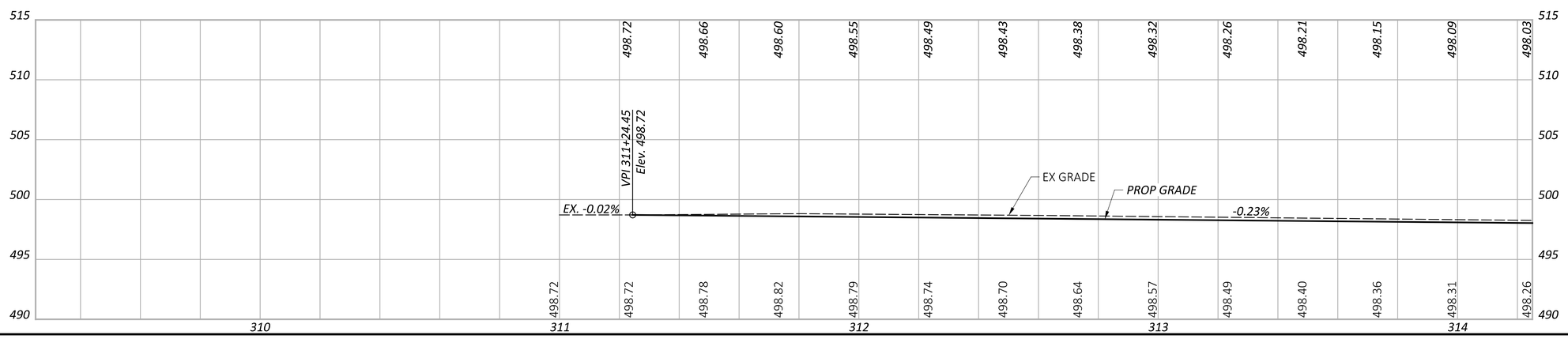
LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)

CURVE DATA
P.I. = STA 312+00.00
Δ = 00°56'09" LT
Dc = 00°28'04"
R = 12,245.67'
T = 100.00'
L = 200.00'
E = 0.41'

HORIZONTAL SCALE IN FEET
0 10 20 40

ALLEY 15' R/W
SOPHIA ST 82' R/W
Ex R/W
Ex LA
SAN
G
8" VCP
EXISTING DITCH
POT STA 311+00.00
SAWCUT STA 311+24.45 19.62' LT
STA 311+35.28 20.00' LT
PT STA 313+00.00
CONST LIMITS
BEGIN SHLDR TRANSITION STA 313+99.65 23.13' LT
MATCH LINE STA. 314+25
311
312
313
314
19.6'
15.6'
20.0'
16.0'
℄ CONST US 52
S31°26'57"E
SAWCUT STA 312+55.73 47.82' RT
BEGIN SHLDR TRANS STA 313+99.58 20.87' RT
ATG
15" DND
RESUME WORK STA 311+24.45
EX SOUTHBOUND US-52
28.1'



PLAN AND PROFILE-US 52
STA 310+STA 314+25

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.40 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_AUG - GP108 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:38:24 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GP108.dgn

C-1
CURVE DATA
P.I. = STA. 315+71.36
Δ = 09°35'53" RT
Dc = 38°11'50"
R = 150.00'
T = 12.59'
L = 25.13'
E = .53'

C-2
CURVE DATA
P.I. = STA. 140+57.20
Δ = 03°18'58" RT
Dc = 05°43'46"
R = 1,000.00'
T = 28.95'
L = 57.88'
E = .42'

C-3
CURVE DATA
P.I. = STA. 141+21.31
Δ = 08°02'56" LT
Dc = 11°27'33"
R = 500.00'
T = 35.18'
L = 70.24'
E = 1.24'

C-4
CURVE DATA
P.I. = STA. 141+64.43
Δ = 06°08'39" RT
Dc = 38°11'50"
R = 150.00'
T = 8.05'
L = 16.09'
E = .22'

C-5
CURVE DATA
P.I. = STA. 143+69.85
Δ = 12°27'15" LT
Dc = 38°11'50"
R = 150.00'
T = 16.37'
L = 32.60'
E = 0.89'

C-6
CURVE DATA
P.I. = STA. 144+21.57
Δ = 15°56'19" RT
Dc = 22°36'07"
R = 253.50'
T = 35.49'
L = 70.52'
E = 2.47'

C-7
CURVE DATA
P.I. = STA. 144+94.00
Δ = 04°16'57" LT
Dc = 05°43'46"
R = 1,000.00'
T = 37.39'
L = 74.75'
E = 0.70'

C-8
CURVE DATA
P.I. = STA. 317+40.14
Δ = 11°20'47" LT
Dc = 38°11'50"
R = 150.00'
T = 14.90'
L = 29.70'
E = 0.74'

C-9
CURVE DATA
P.I. = STA. 319+09.43
Δ = 05°08'36" RT
Dc = 38°11'50"
R = 150.00'
T = 6.74'
L = 13.47'
E = .15'

LEGEND
PAVEMENT REMOVED
CURB HT FROM 6" TO 0" IN 10.0'
TO BE REMOVED
EXISTING DITCH
PROPOSED DITCH
VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)

MATCH LINE STA. 144+05 SEE SHEET P.47
END CURB STA 144+01.68 18.33' LT
END CURB STA 144+01.31 18.22' RT
PRC STA 143+86.09
PC STA 143+53.48
PROPOSED DITCH
DND EX SIGN 25' TBR
PI STA 314+47.61
END SHLDR TRANS BEGIN CURB STA 314+49.74 17.48' LT
BEGIN WALK STA 315+75.64 34.09' LT
CONST LIMITS
REF LINE AUG NE
REF LINE AUG NL
REF LINE AUG NR
REF LINE AUG EL
REF LINE AUG SE
REF LINE AUG SL
REF LINE AUG SW
REF LINE AUG SR
REF LINE AUG CC
REF LINE AUG NW
REF LINE AUG WL
REF LINE AUG WR
℄ CONST US 52
℄ CONST AUGUSTA ST
S31°50'29"E
S22°14'35"E
S26°23'50"E
N57°55'35"E
S37°44'36"E
S38°04'45"E
PI STA 316+67.64
PI STA 317+54.94
PT STA 317+25.24
STA 317+74.71 39.87' LT
PI STA 318+24.52
STA 318+38.42 19.48' LT
END CURB BEGIN SHLDR NON-TRANSITIONAL
EXISTING DITCH
6' BIKE PATH
6' WALK
5' WALK
7' WALK
20.6'
19.4'
18.5'
18.0'
17.8'
18.3'
13.0'
4.0'
15.0'
13.8'
35.9'
36.0'
13.1'
14.3'
14.1'
12"RCP
15"RCP
60"RCP
15" B
12" B
D-21
D-22
D-23
D-24
D-25
D-26
D-27
D-28
D-29
D-30
D-31
C-1
C-2
C-3
C-4
C-5
C-6
C-7
316
317
318
319
142
141
SAWCUT STA 315+49.71 85.28' RT.
SAWCUT STA 315+58.76
PC STA 315+83.89
PT STA 315+83.89
PATH VARIES
WALK VARIES
TBR
TBRL
DND
DND 15" RCP
DND EX GAZEBO
DND 8" VCP
EX SIGN TBRL
PROPOSED DITCH
PT STA 141+72.46
PRC STA 141+56.38
END CURB STA 141+20.91 42.06 LT
SAWCUT STA 141+55.53 39.85' LT
SAWCUT STA 141+05.71 17.32' LT
SAWCUT STA 141+07.73 30.66' RT
SAWCUT STA 318+15.68 70.56' RT
STA 141+54.61 42.79' RT
END CURB BEGIN SHLDR TRANSITION STA 318+97.26 18.22' RT
STA 316+85.01 105.90' LT
END SHLDR TRANS BEGIN CURB STA 314+49.46 19.51' RT
PC STA 319+02.70
PT STA 319+16.16
PRC STA 140+86.14
PC STA 140+28.26
COLLAR DM-1.1
ATG CORE EX MH
ATG
OH-Comb
EX SH
EX R/W
EX LA
EX SW
EX R
EX L
SAN
Ex R 16.5' R/W WATKINS ALLEY
MATCH LINE STA. 314+25
MATCH LINE STA. 319+25
EX SOUTHBOUND US-52
HAMILTON ST 60' R/W
AUGUSTA ST 80' R/W
GRAVEL PARKING
ASPH PARKING
BLDG
CONC
MEET EX
N56°30'54"E
8" VCP
CONST LIMITS

NOTES
* = 10' NOSE RAMPING LIMITS
I STA 316+67.64, ℄ CONST US 52 = STA 142+68.05, ℄ CONST AUGUSTA ST

HORIZONTAL SCALE IN FEET
0 10 20 40

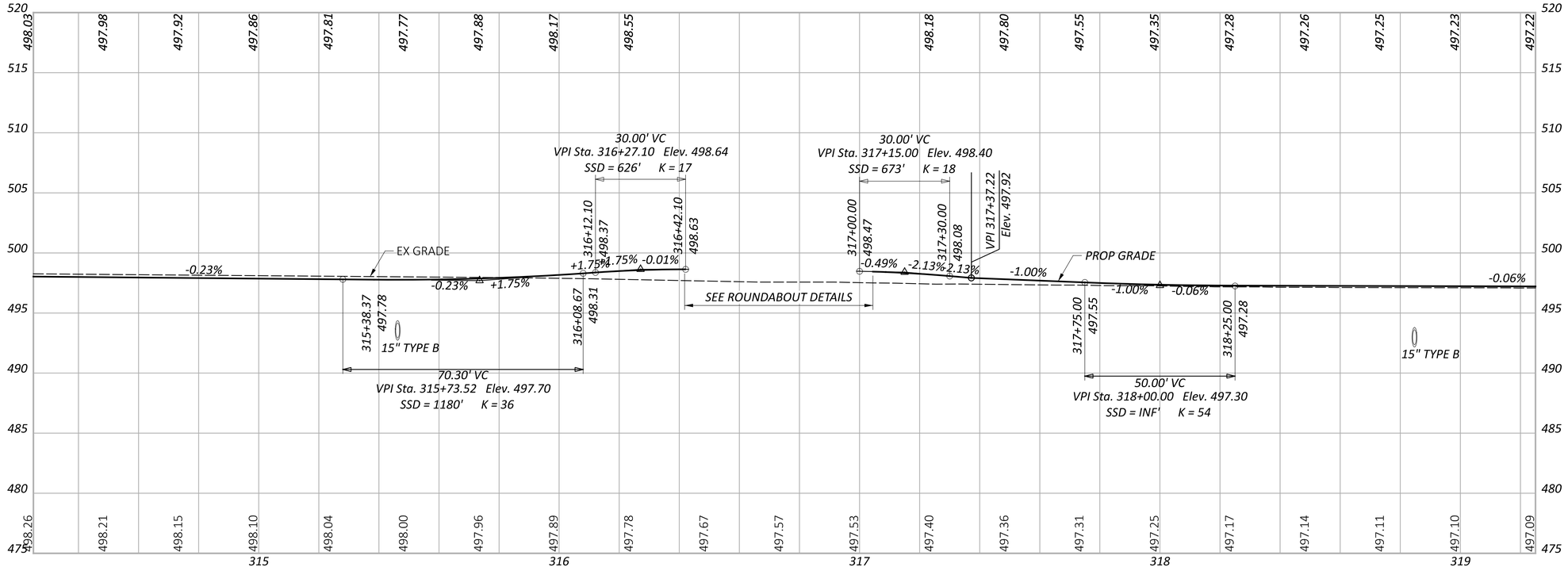
PLAN AND PROFILE-US 52
STA 314+25 TO STA 319+25

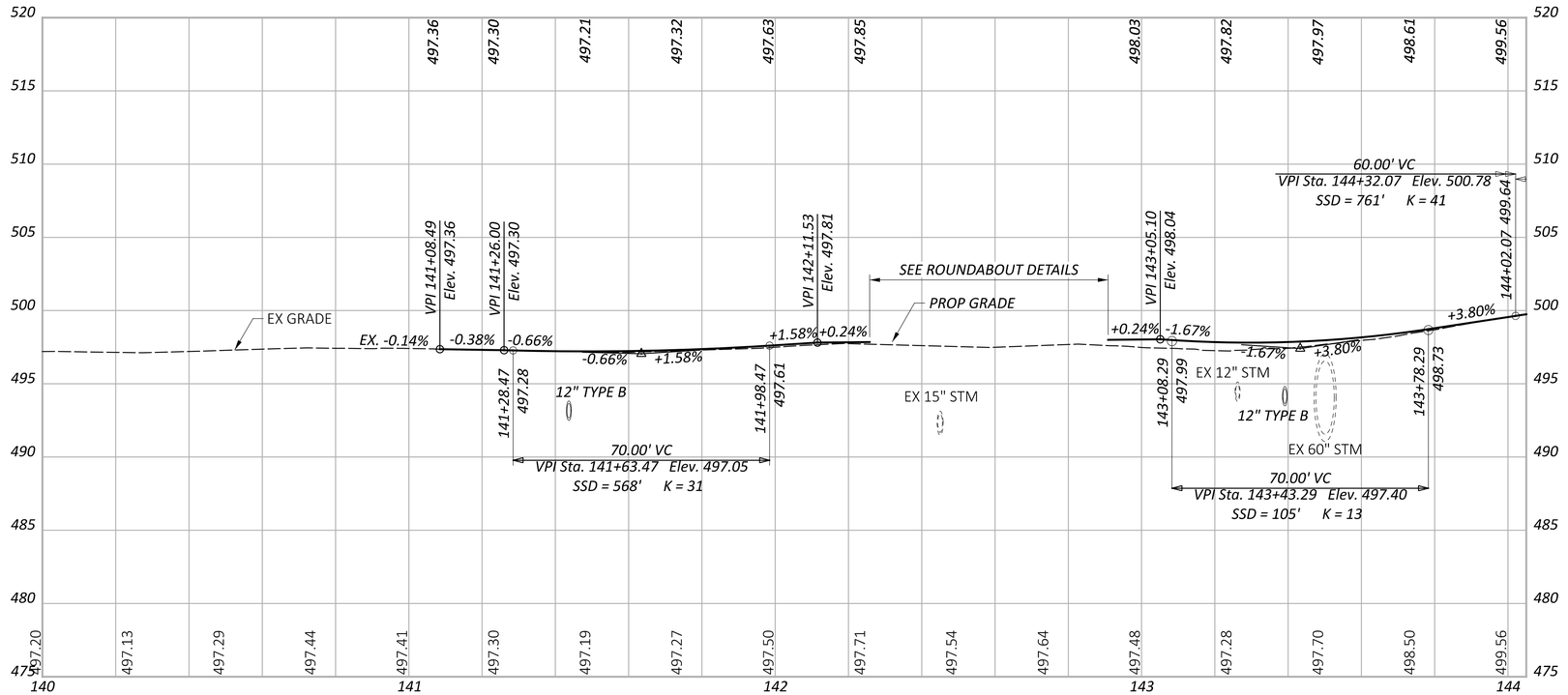
DESIGN AGENCY
STRUCTUREPOINT

DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.41
TOTAL	P.163

CLE-US52-4.67

MODEL: CLP_U052_AUG - GP109 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:38:35 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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PLAN AND PROFILE-US 52
AUGUSTA ROUNDABOUT PROFILES

CLE-US52-4.67

MODEL: P_CLP_U052_AUG - Profile 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:39:06 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WMeyer
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GP109A.dgn

DESIGN AGENCY
STRUCTUREPOINT

DESIGNER
WTM

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.42 | TOTAL P.163

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH

CONGRESS ST
60' R/W

ALLEY
12' R/W

Ex R/W

Ex LA

8" VCP — SAN — S

CURVE DATA
P.I. = STA 320+35.09
Δ = 01°42'34" RT
Dc = 11°27'33"
R = 500.00'
T = 7.46'
L = 14.92'
E = .06'

PC STA 320+27.63
PT STA 320+42.55
END SHLDR TRANS STA 320+46.43
19.90' LT
PI STA 321+01.87

15" RCP DND

EXISTING DITCH
CONST LIMITS
6' BIKE PATH
SAWCUT

MATCH LINE STA. 319+25
MATCH LINE STA. 324+00

S33°33'02"E
S31°50'29"E
S31°48'51"E

320 20
321 21
322 22
323 23

℄ CROSSOVER SOUTH
℄ CONST US 52

10.0'

D-32

ATG

POT STA 19+50.00
PT STA 20+09.00
PC STA 20+59.54
PT STA 23+54.15

PROPOSED DITCH

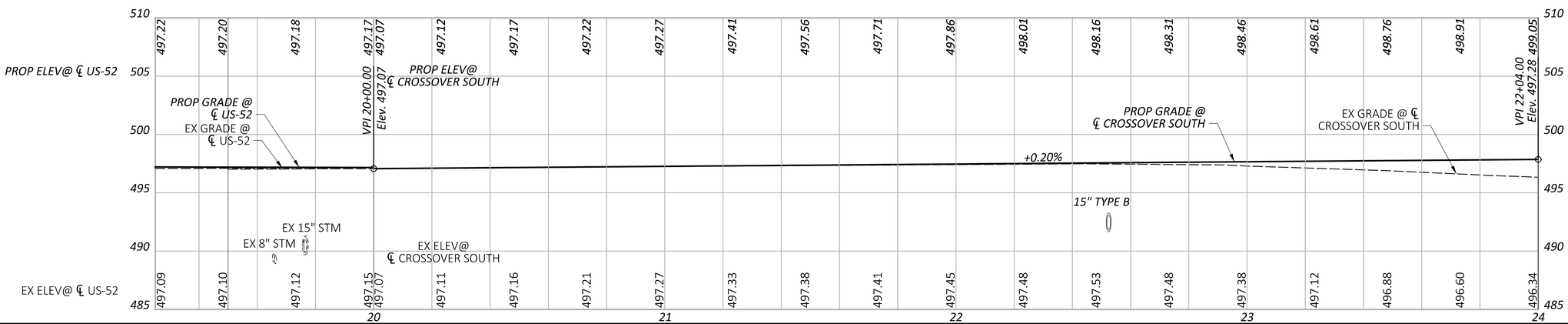
EX SOUTHBOUND US-52

CURVE DATA
P.I. = STA 19+79.52
Δ = 04°47'17" RT
Dc = 08°06'56"
R = 706.00'
T = 29.52'
L = 59'
E = .62'

CURVE DATA
P.I. = STA 22+06.97
Δ = 05°53'31" RT
Dc = 02°00'00"
R = 2,864.97'
T = 147.44'
L = 294.61'
E = 3.79'

CONST LIMITS
EXISTING DITCH

CONGRESS ST
60' R/W
NYS
8" VCP



HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 319+25 TO STA 324+00

DESIGN AGENCY
STRUCTUREPOINT LLC

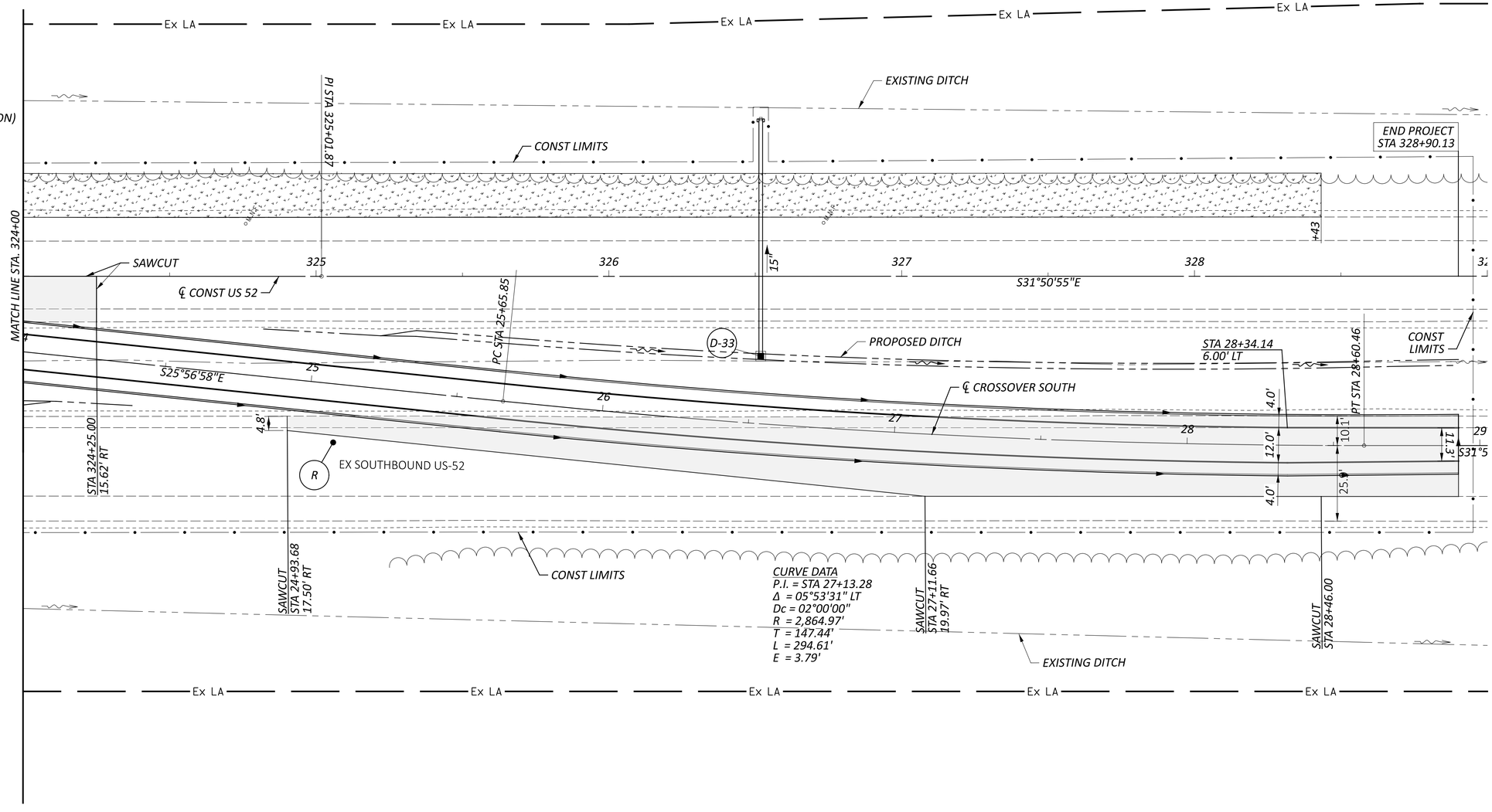
DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.43 TOTAL P.163

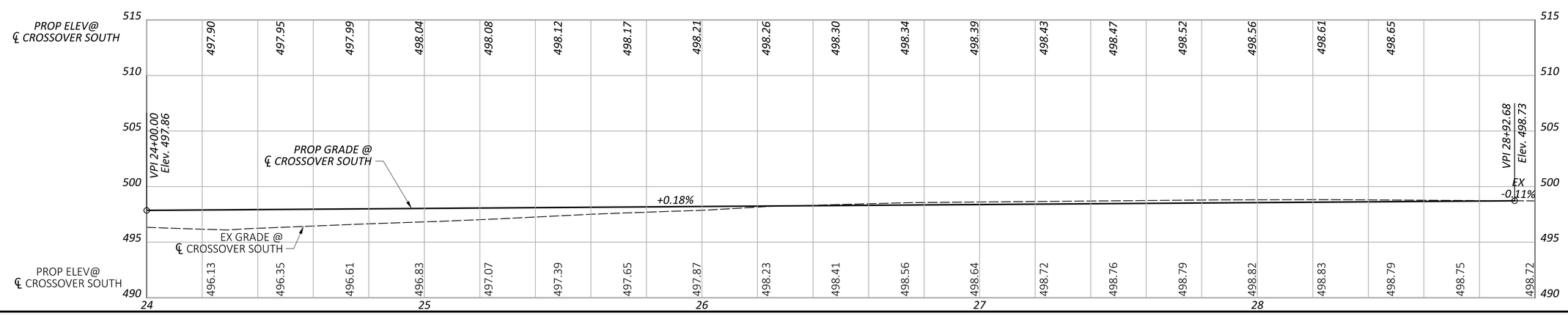
CLE-US52-4.67

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LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 324+00 TO END PROJECT

DESIGN AGENCY
STRUCTUREPOINT

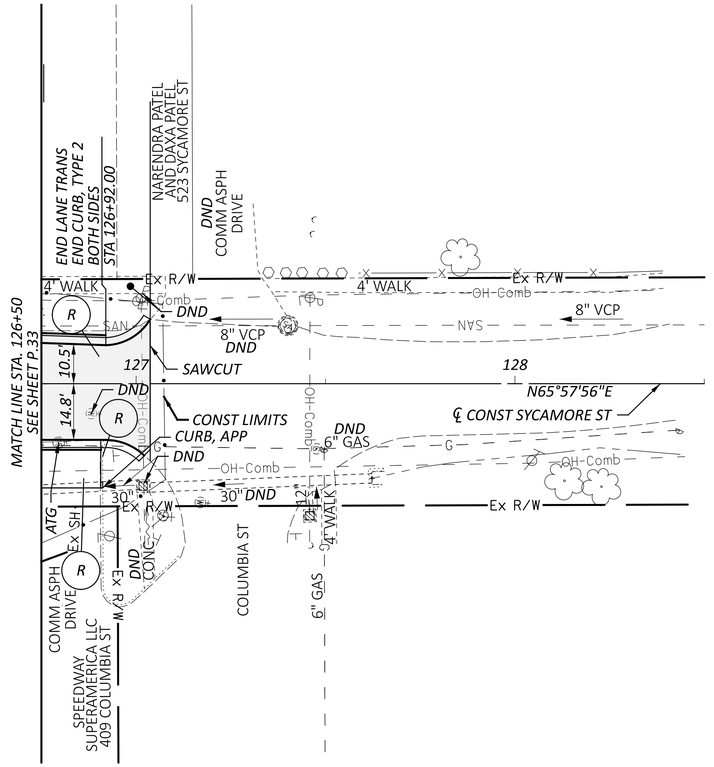
DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.44 TOTAL P.163

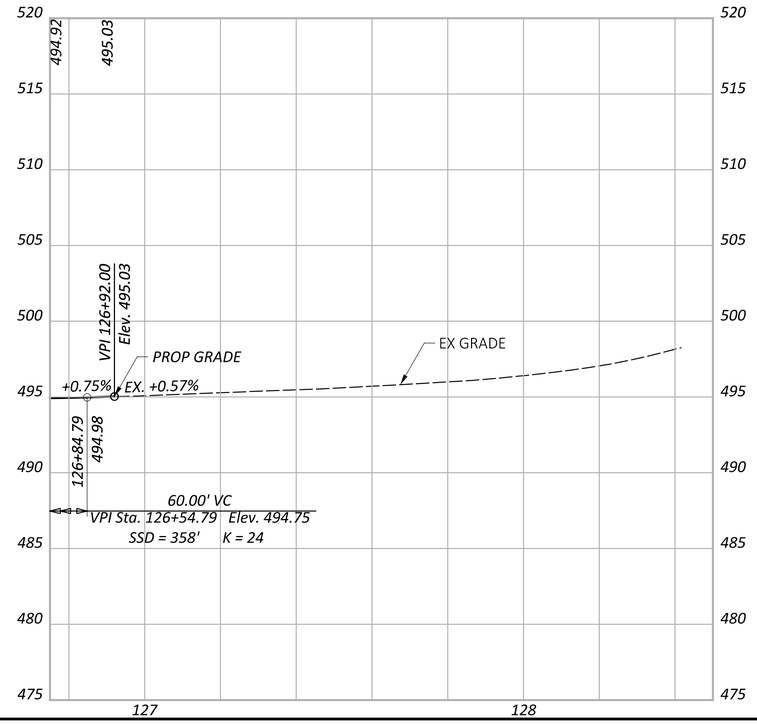
CLE-US52-4.67

MODEL: CLP_U052_AUG - GP111 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:39:57 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C Design\114042\400-Engineering\Roadway\Sheets\114042_GP111.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-SYCAMORE ST
STA 126+50 TO WORK END

DESIGN AGENCY
WILBUR SMITH STRUCTUREPOINT LLC

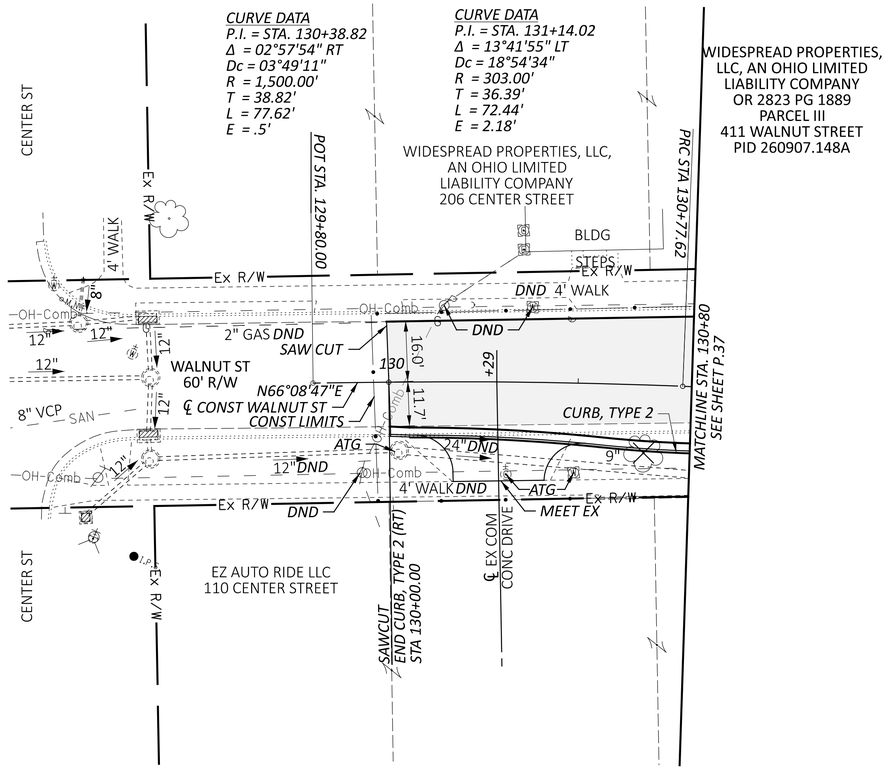
DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.45 TOTAL P.163

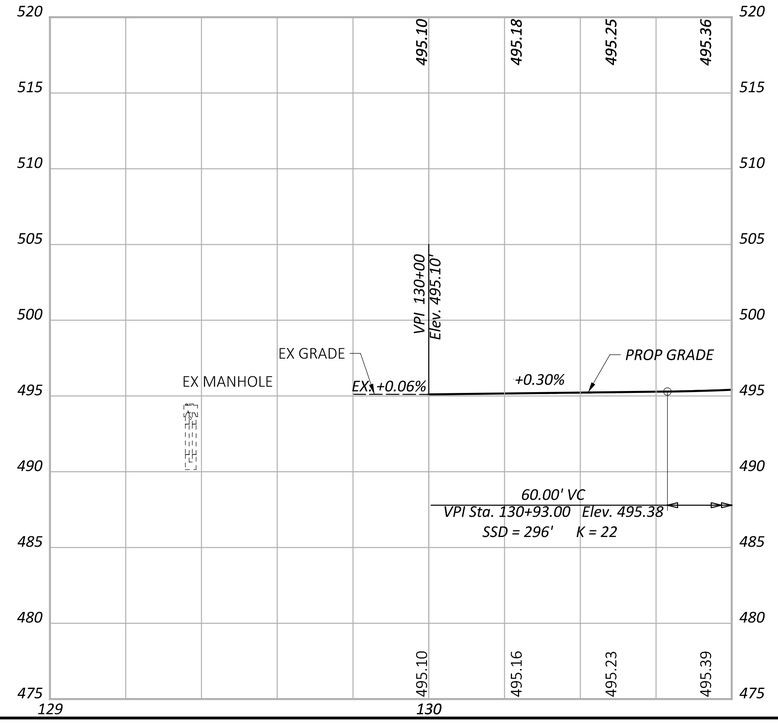
CLE-US52-4.67

MODEL: CLP_SVC - GP211 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:40:19 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)





HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-WALNUT ST BEGIN WORK TO STA 120+80

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

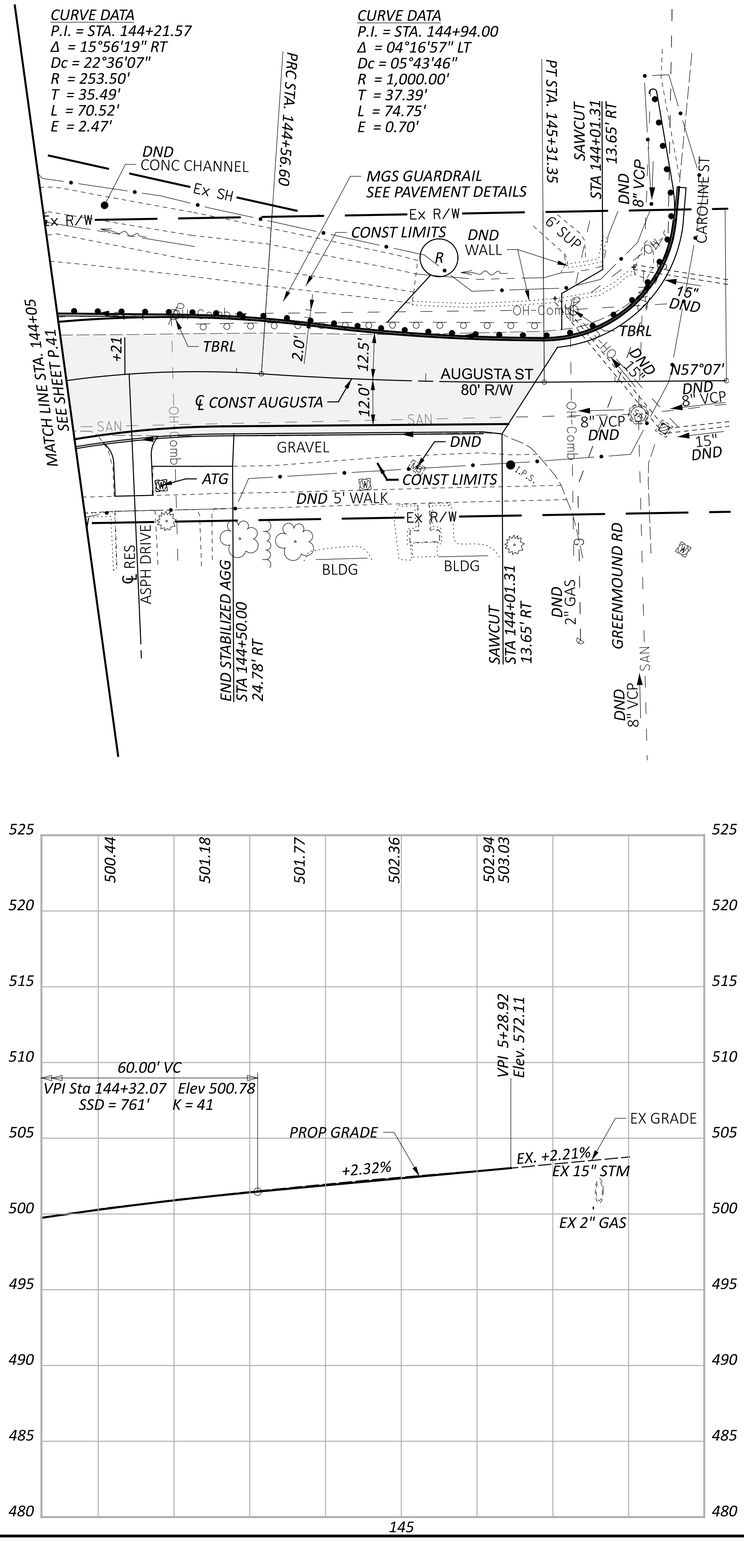
DESIGNER	WTM
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.46
TOTAL	P.163

CLE-US52-4.67

MODEL: CLP_WAL - GP221 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:40:39 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GP221.dgn

LEGEND

- PAVEMENT REMOVED
- (1) CURB HT FROM 6" TO 0" IN 10.0'
- (R) TO BE REMOVED
- EXISTING DITCH
- PROPOSED DITCH
- VEGETATED FILTER STRIP (INCLUDES TOPSOIL & SLOPE EROSION PROTECTION)



HORIZONTAL SCALE IN FEET
0 10 20 40

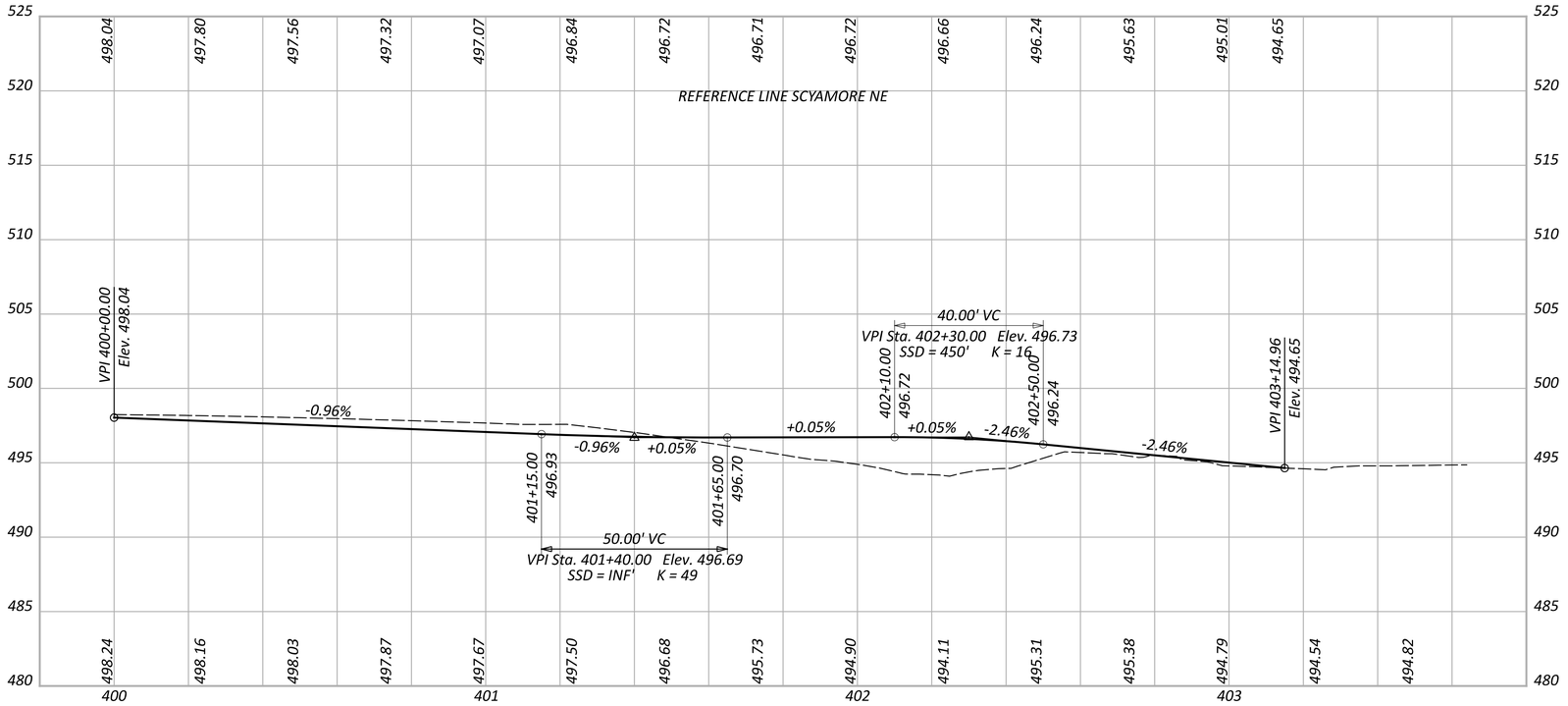
PLAN AND PROFILE-AUGUSTA ST STA 144+05 TO END WORK

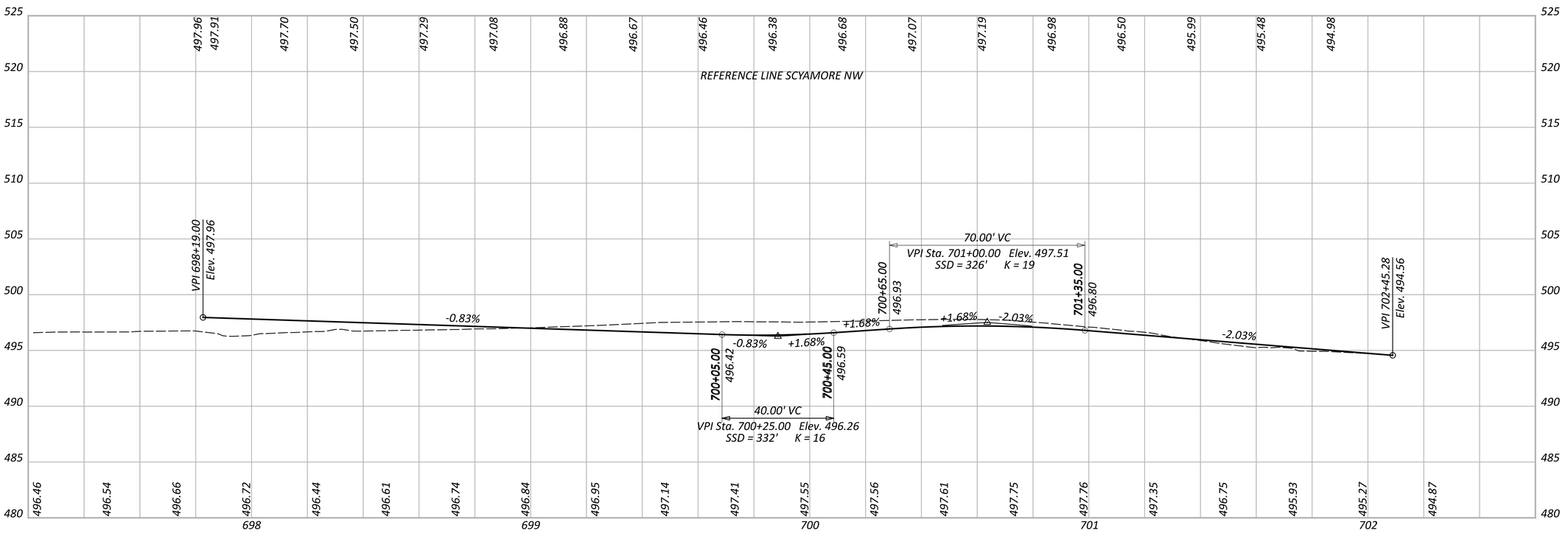
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.47 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_AUG - GP231 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:40:52 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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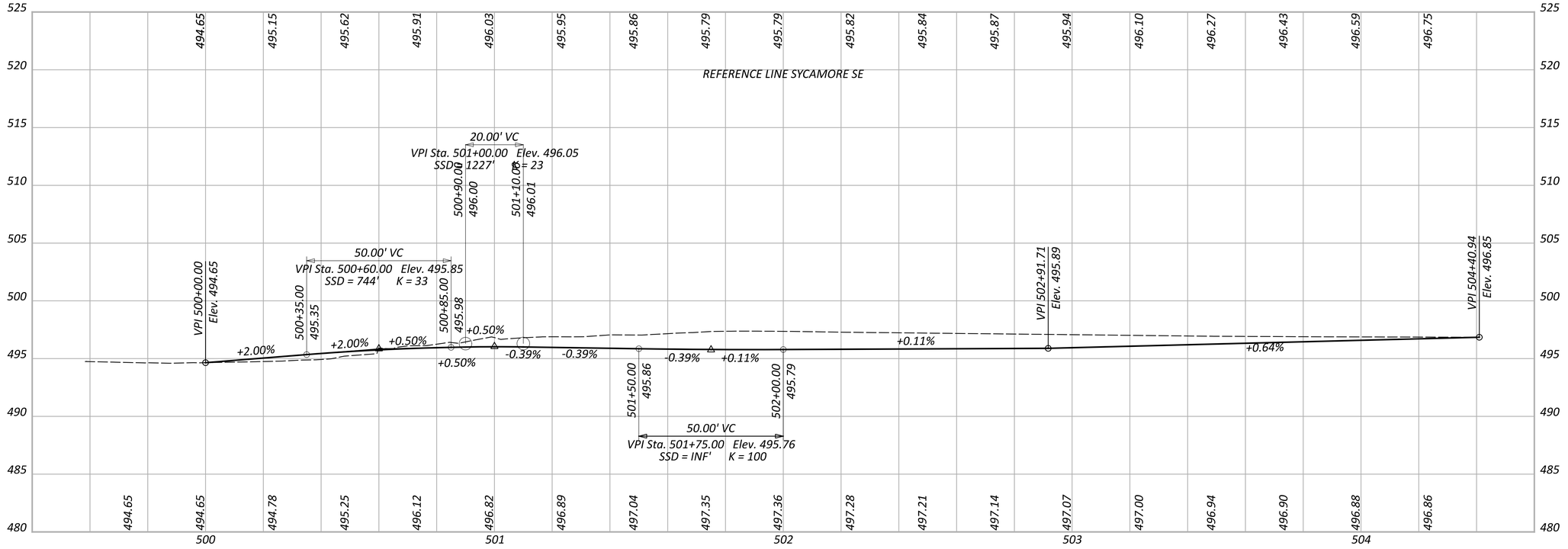
ROUNDABOUT PROFILES
REFERENCE LINES SYC-NE, SYC-NW

CLE-US52-4.67

MODEL: SYC_NE - SYC_NE PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:16 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 2019024S9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER JPK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.48 TOTAL P.163



ROUNDABOUT PROFILES
REFERENCE LINES SYC-SE, SYC-SW

CLE-US52-4.67

MODEL: P_SYC_SE - SYC_SE PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:31 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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DESIGN AGENCY
STRUCTUREPOINT LLC
MEMPHIS

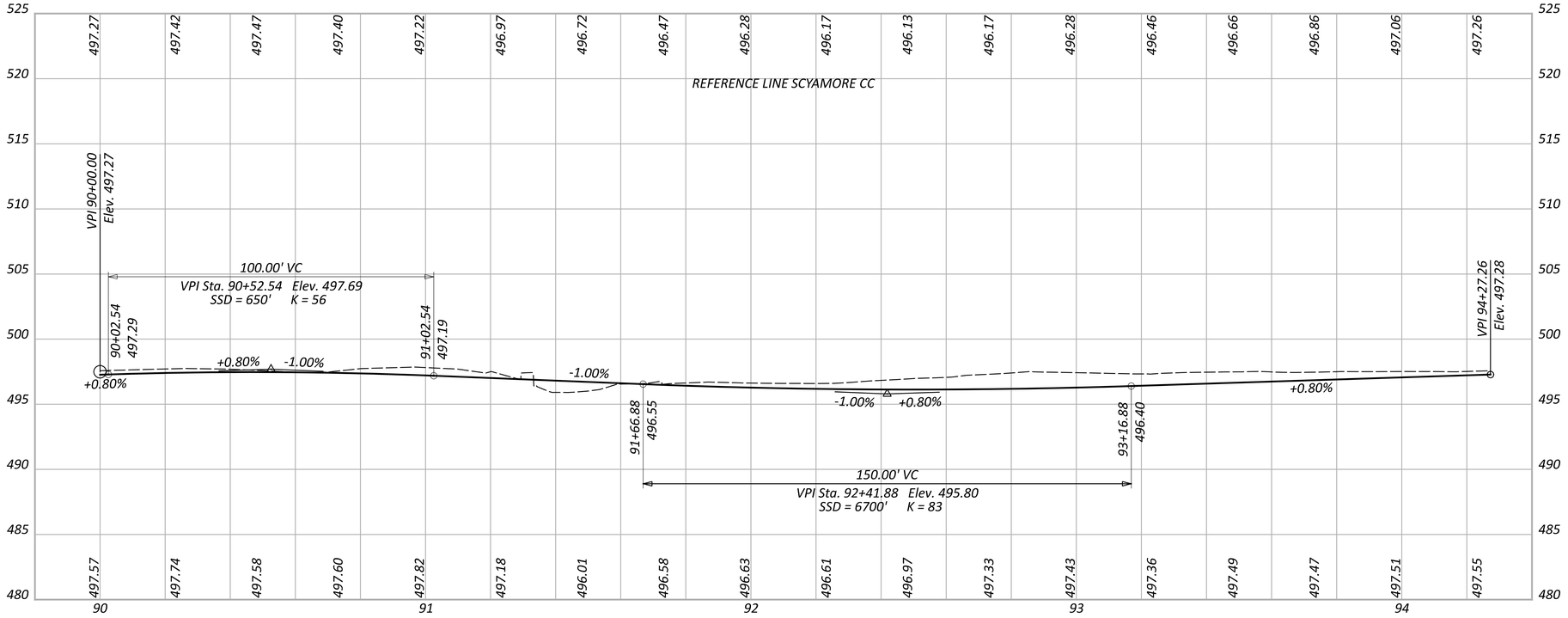
DESIGNER JPK

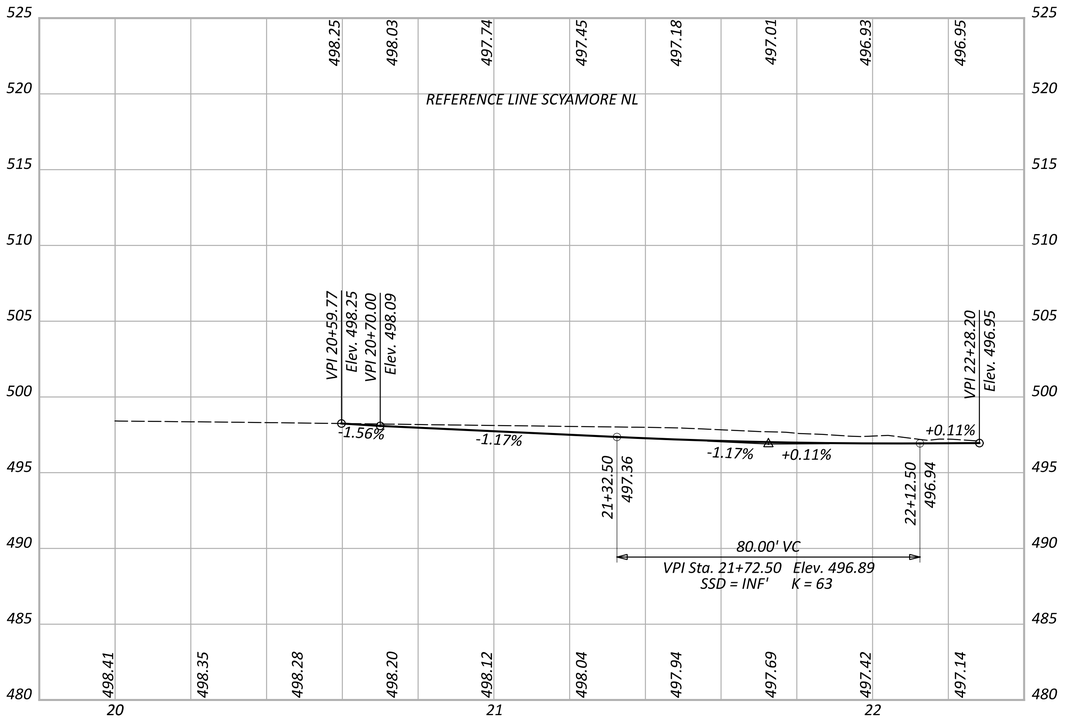
REVIEWER MTL 03/10/26

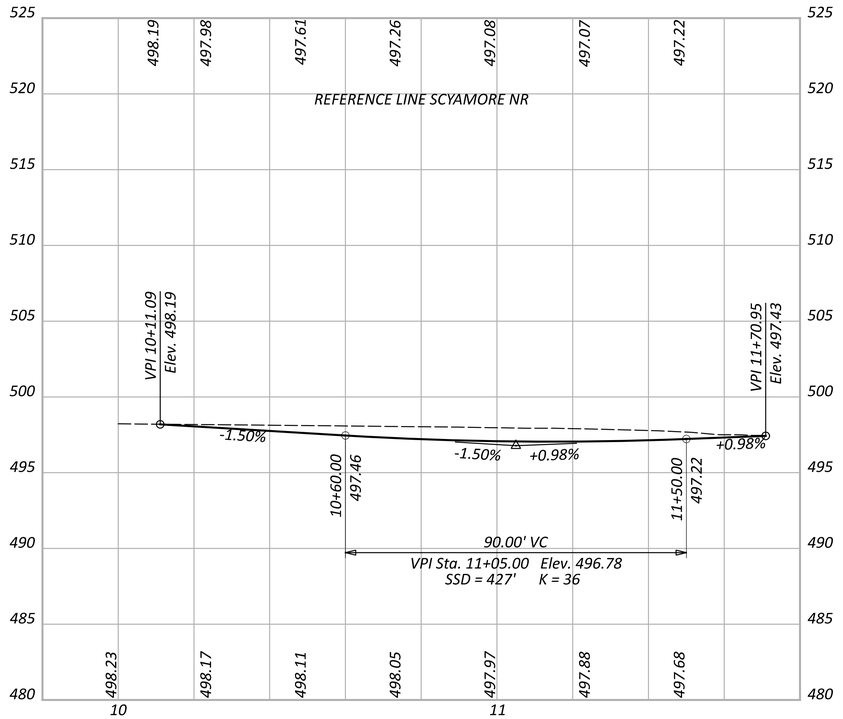
PROJECT ID 114042

SHEET P.49 TOTAL P.163

MODEL: P_SYC_CC - SYC_CC PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:36 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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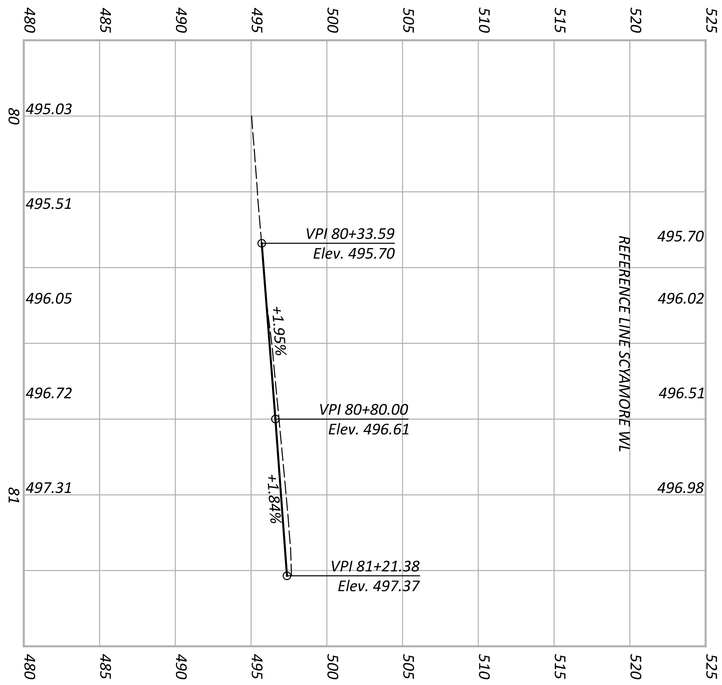


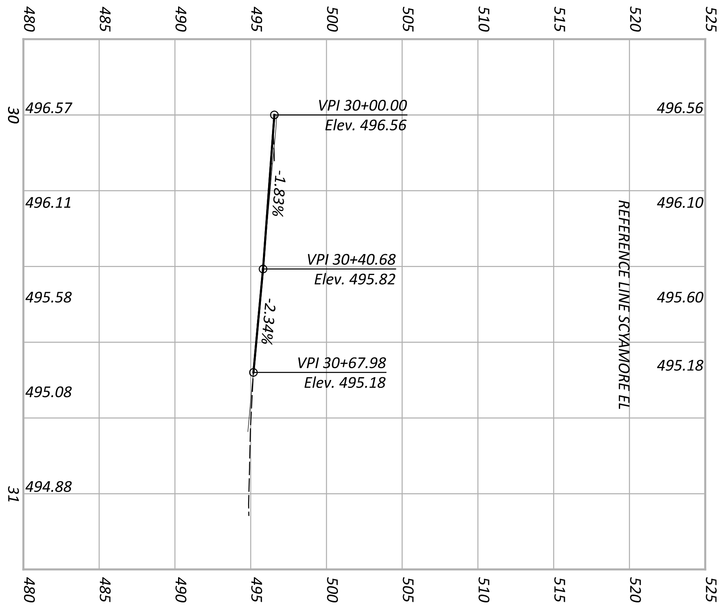
ROUNDABOUT PROFILES
REFERENCE LINES SYC-CC, SYC-NL. SYC-NR

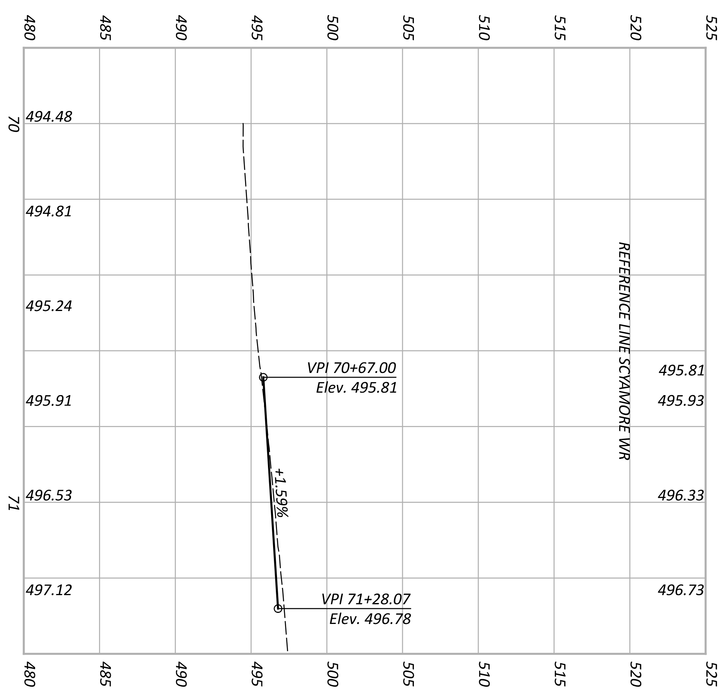
DESIGN AGENCY
STRUCTUREPOINT LLC

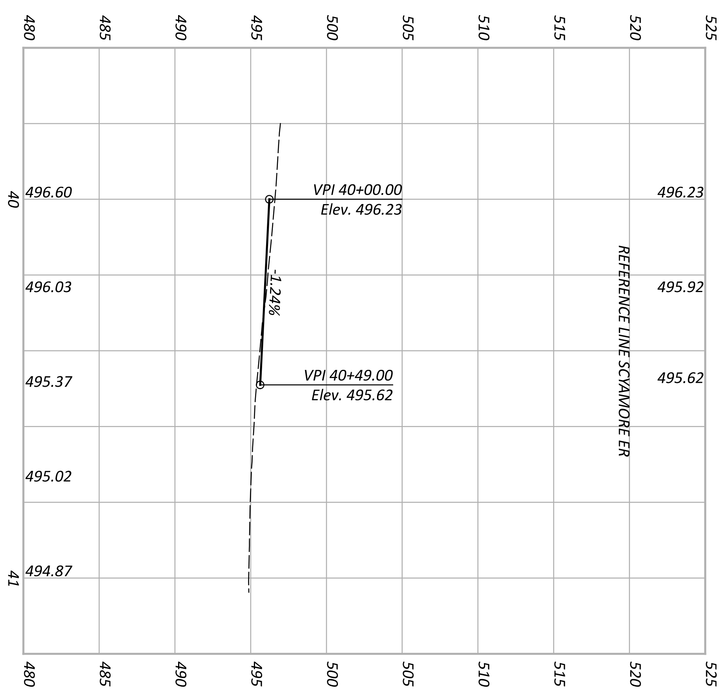
DESIGNER	JPK
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.50
TOTAL	P.163

MODEL: P_SYC_EL - SYC_NR-1 PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:42 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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SHEET	TOTAL
P.51	P.163

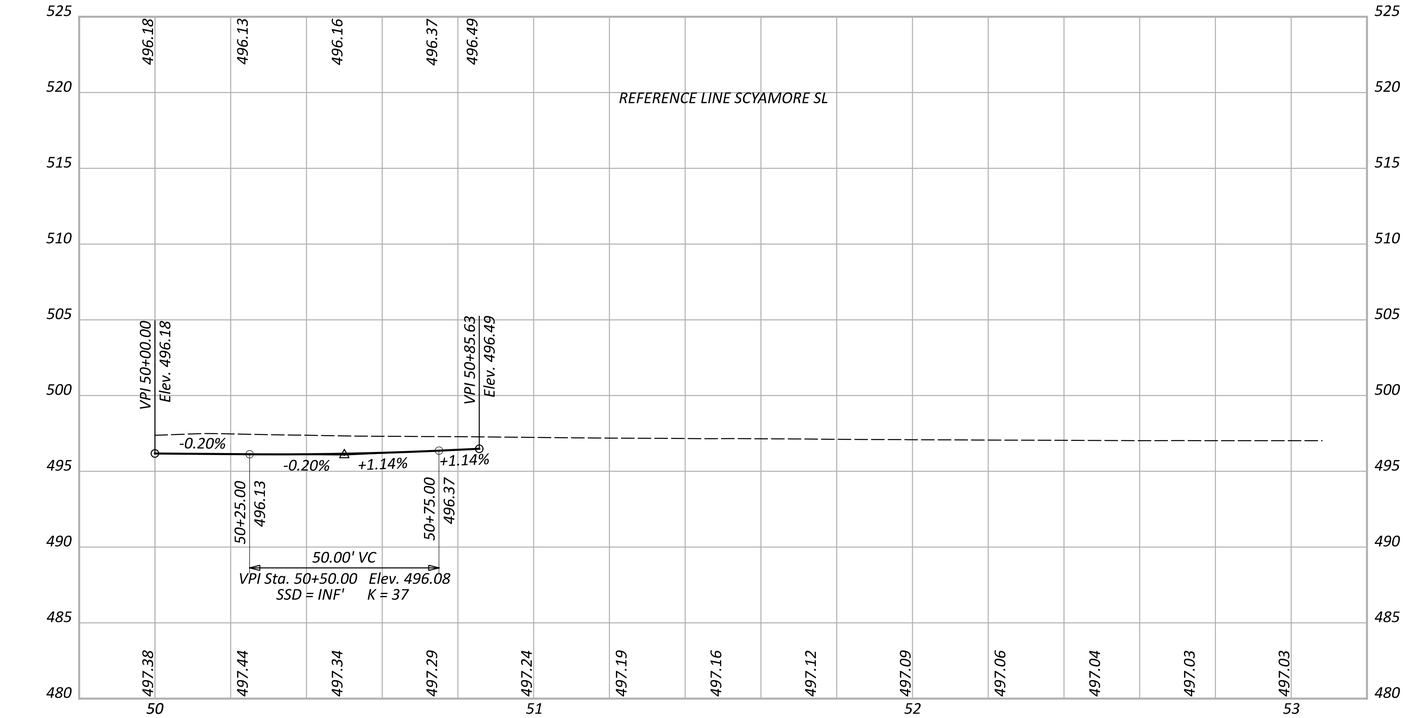
PROJECT ID: 114042

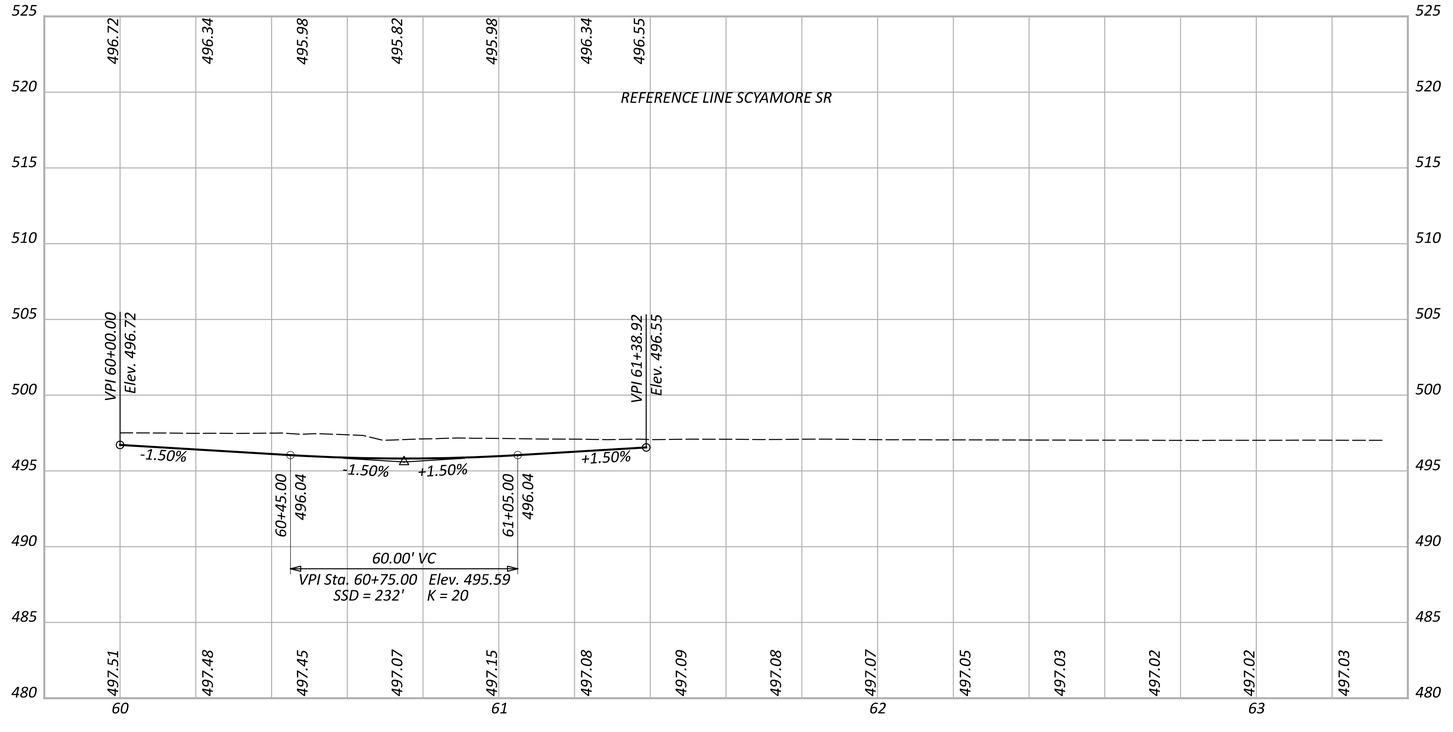
REVIEWER: MTL 03/10/26

DESIGNER: JPK

DESIGN AGENCY: AMERICAN STRUCTUREPOINT INC.

ROUNDABOUT PROFILES
REFERENCE LINES SYC-EL, SYC-ER, SYC-WL, SYC-WR





ROUNDABOUT PROFILES
REFERENCE LINES SYC-SL, SYC-SR

DESIGN AGENCY
MORTEZA STRUCTUREPOINT INC.

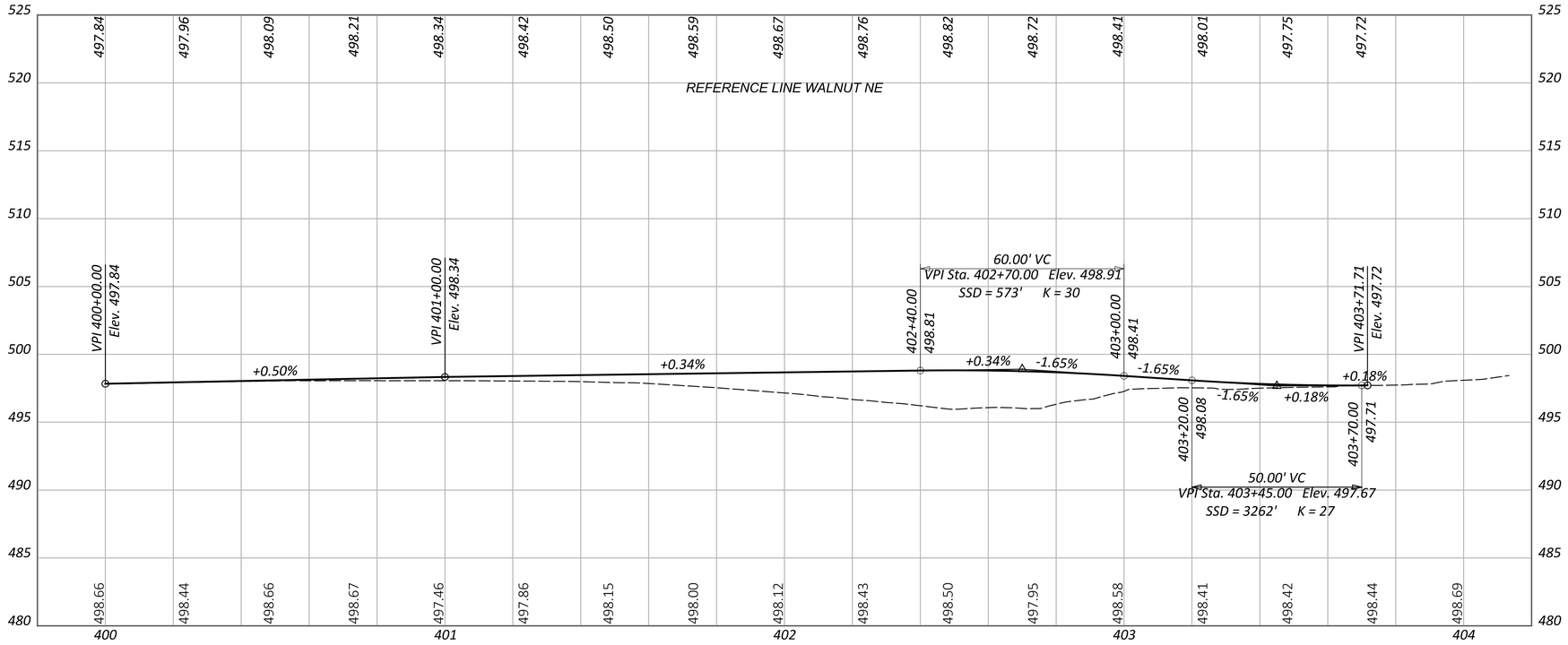
DESIGNER
JPK

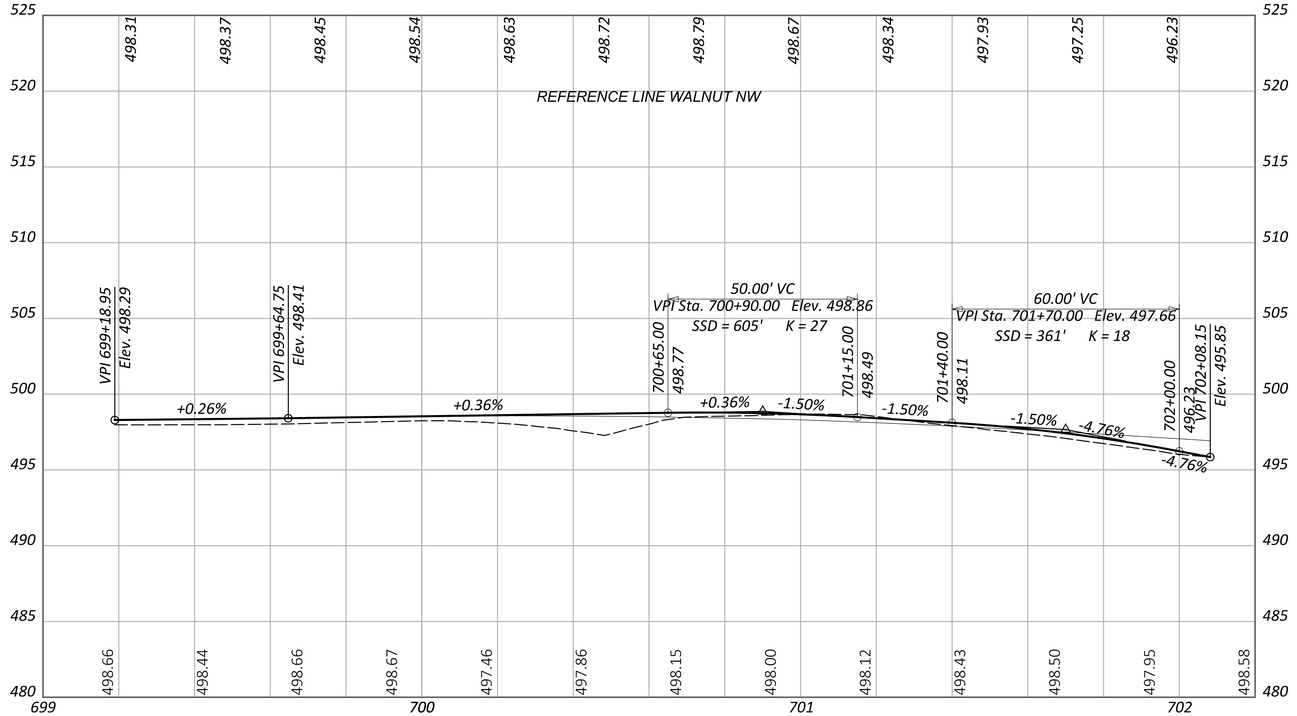
REVIEWER
MTL 03/10/26

PROJECT ID
114042

CLE-US52-4.67

MODEL: P_SYC_SL - SYC_SL PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:47 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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CLE-US52-4.67

MODEL: P_WAL_NE - WAL_NE PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:41:55 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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ROUNDABOUT PROFILES
REFERENCE LINES WAL-NE, WAL-NW

DESIGN AGENCY
STRUCTUREPOINT LLC

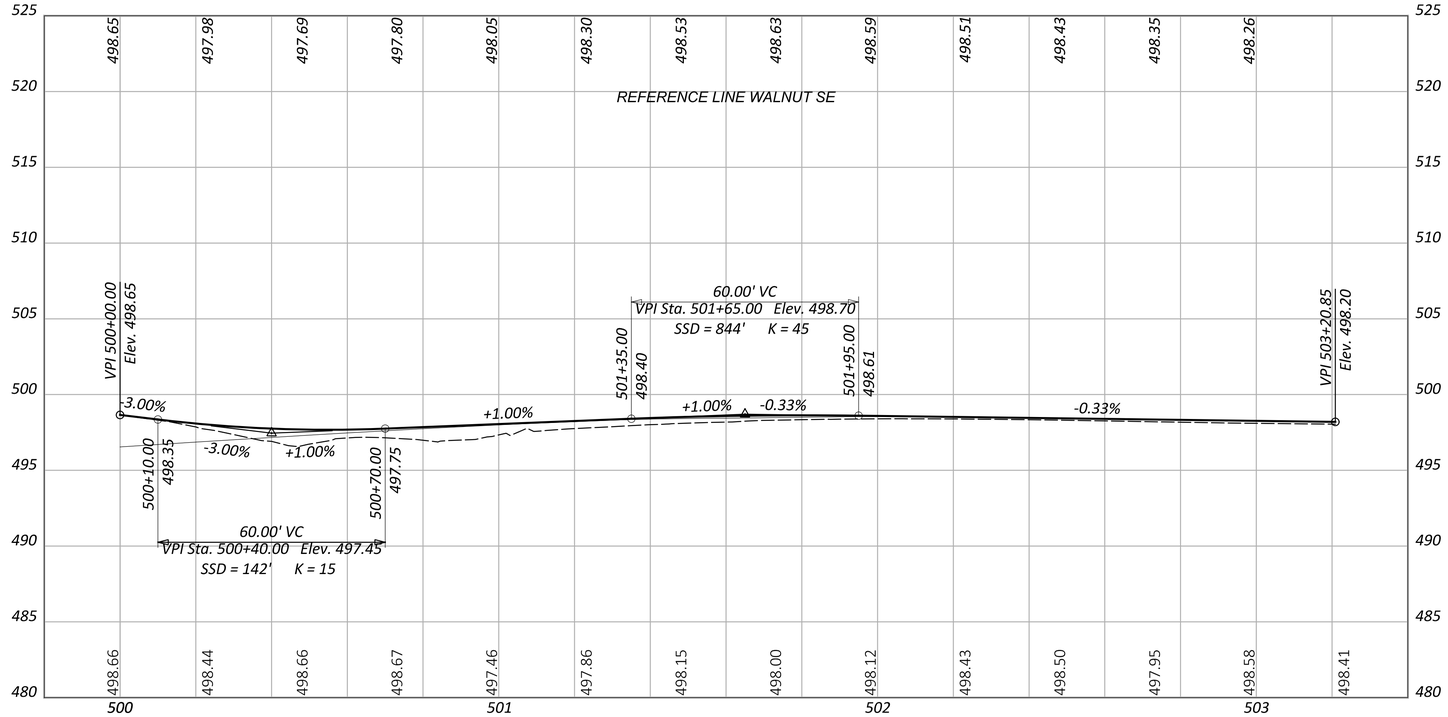
DESIGNER JPK

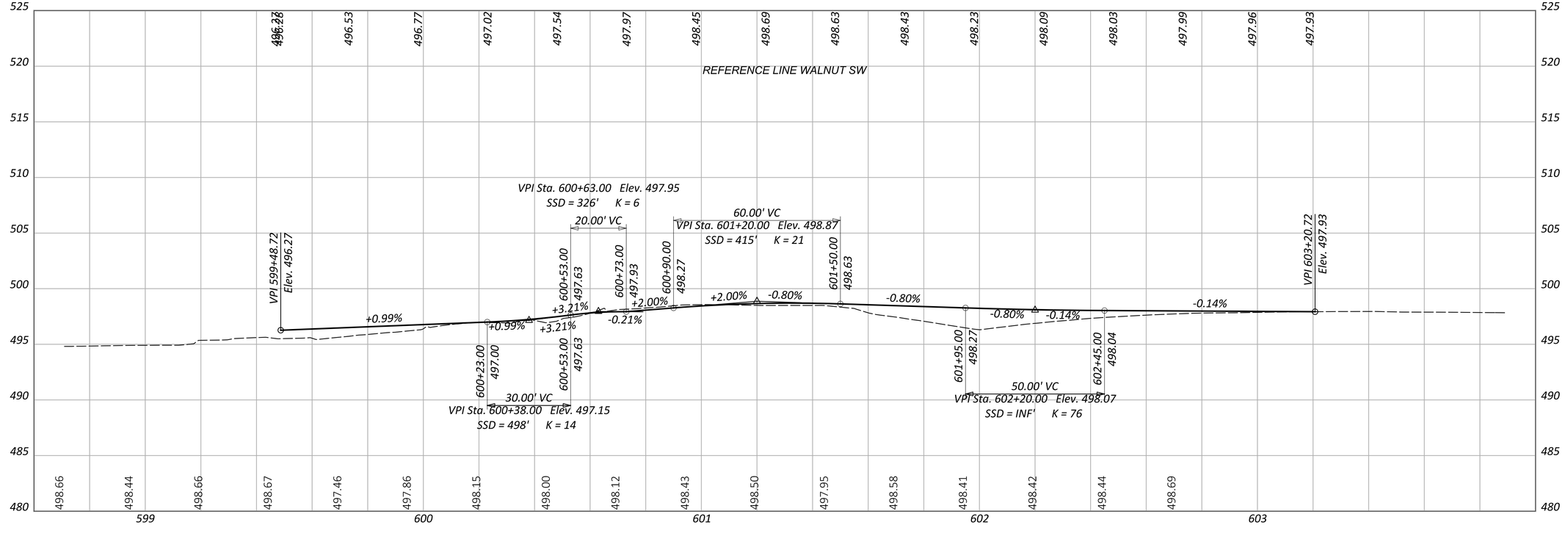
REVIEWER MTL 03/10/26

PROJECT ID 114042

SHEET P.53 TOTAL P.163

MODEL: P_WAL_SE - ADS PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:06 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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ROUNDABOUT PROFILES
REFERENCE LINES WAL-SE, WAL-SW

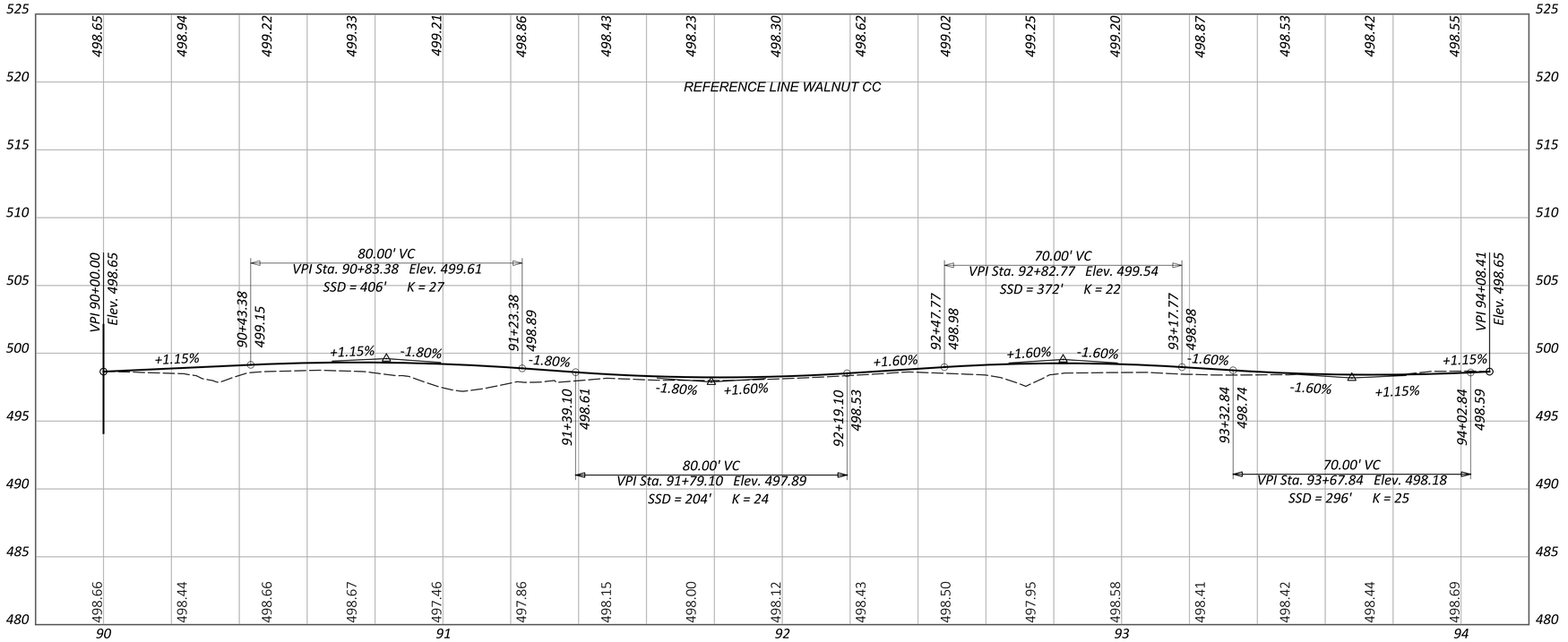
DESIGN AGENCY
MICHAEL BAKER INTERNATIONAL
STRUCTUREPOINT LLC

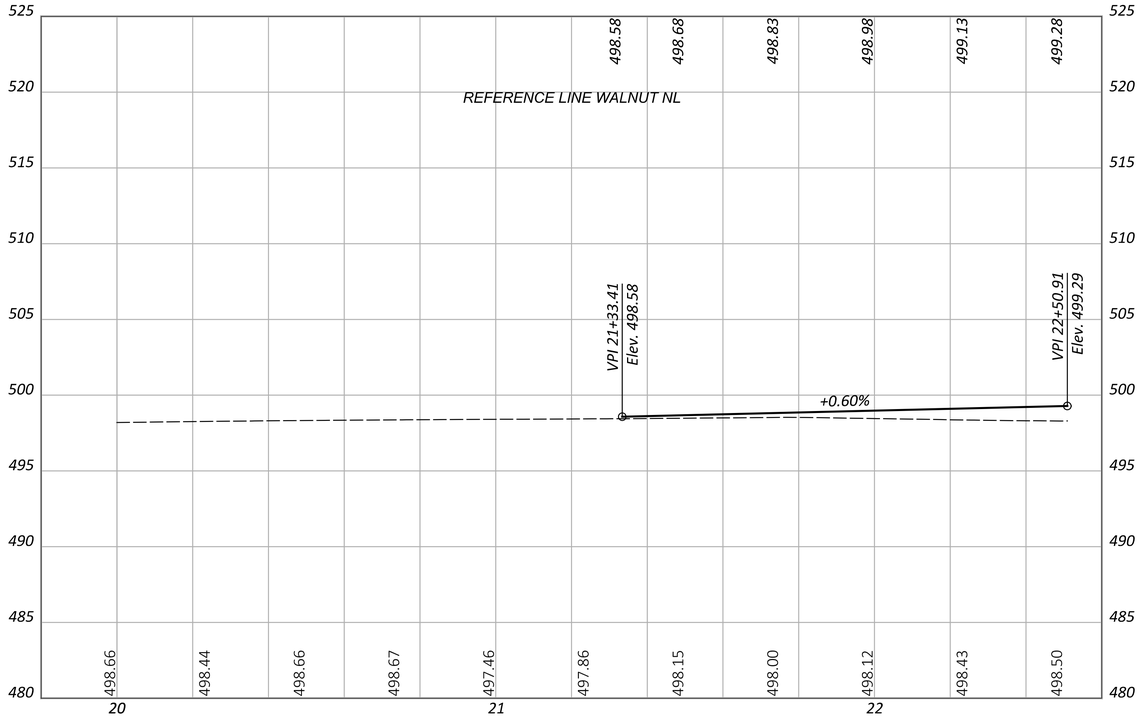
DESIGNER
JPK

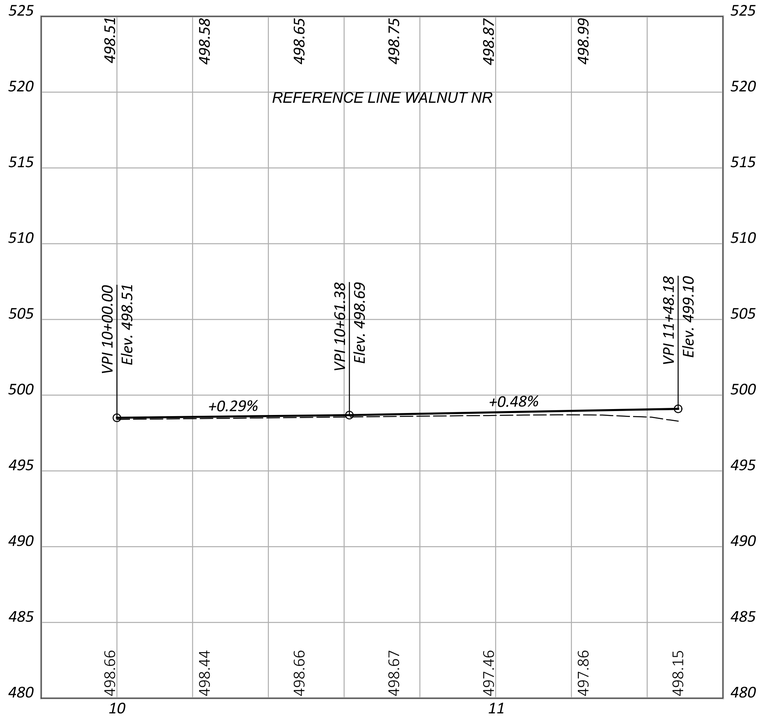
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.54 TOTAL P.163







ROUNDABOUT PROFILES
REFERENCE LINES WAL-CC, WAL-NL, WAL-NR

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
JPK

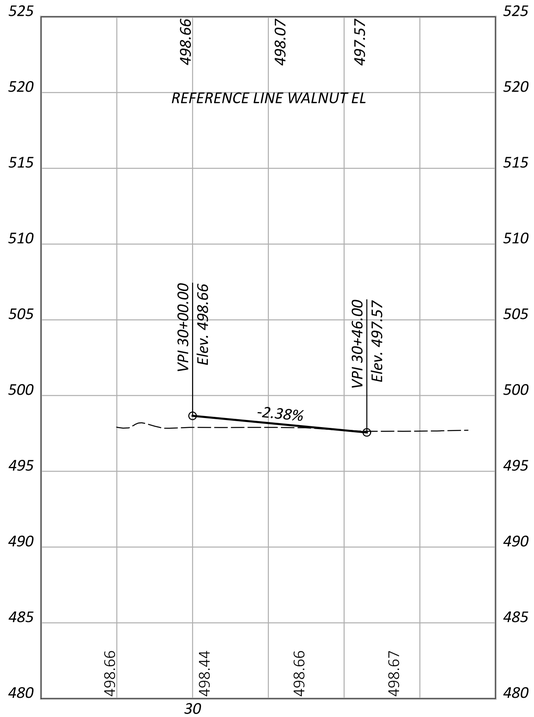
REVIEWER
MTL 03/10/26

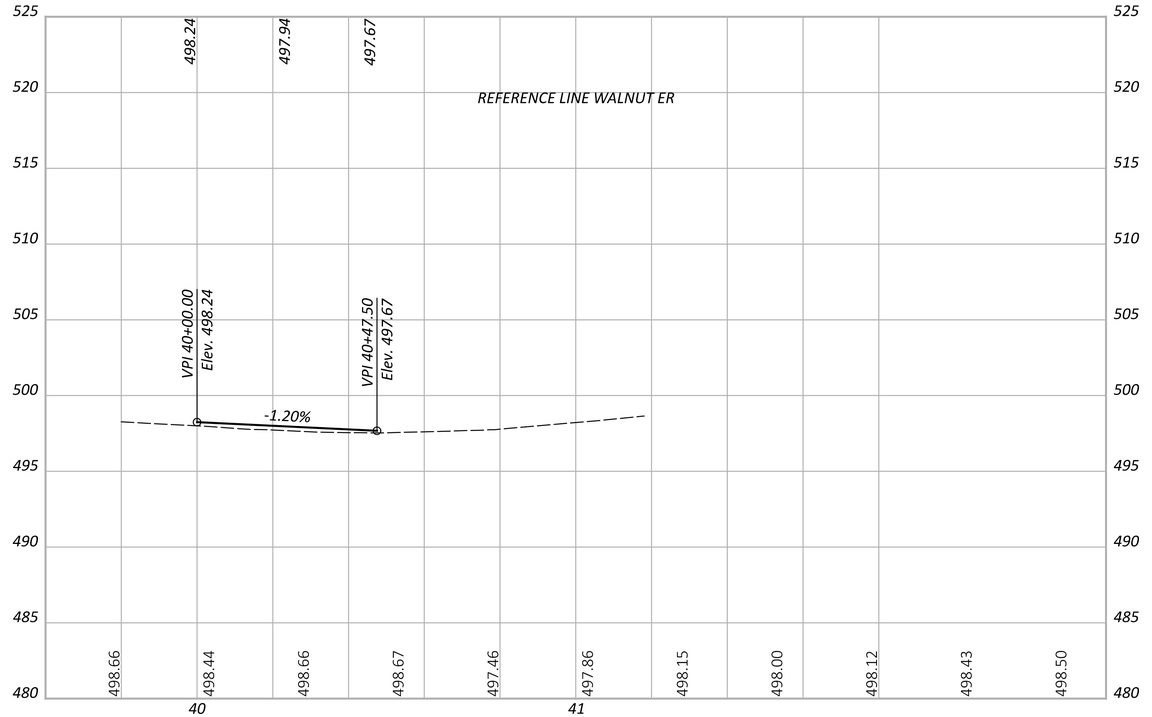
PROJECT ID
114042

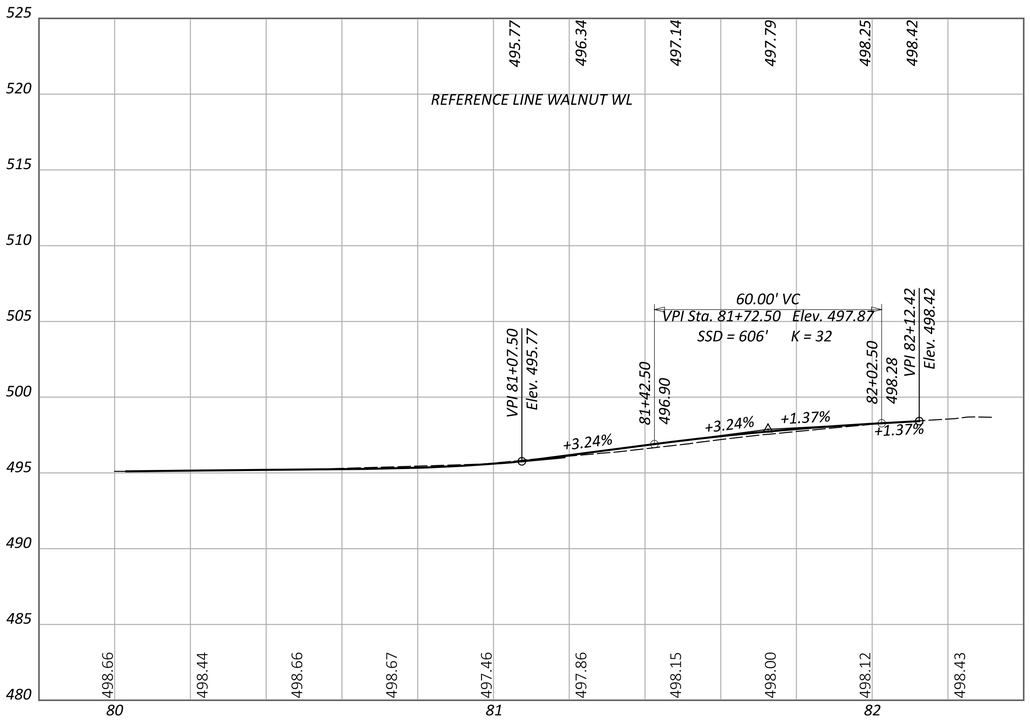
SHEET P.55 TOTAL P.163

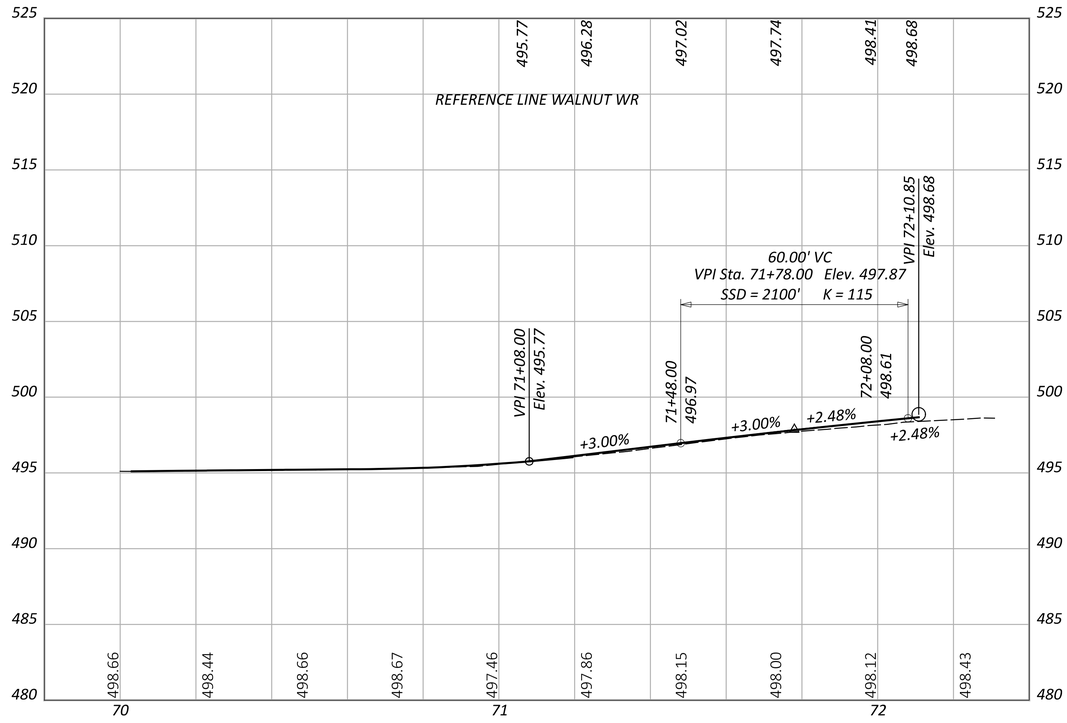
CLE-US52-4.67

MODEL: P_\WAL_CC - WAL_CC PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:13 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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ROUNDABOUT PROFILES
REFERENCE LINES WAL-EL, WAL-ER, WAL-WL, WAL-WR

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER JPK

REVIEWER MTL 03/10/26

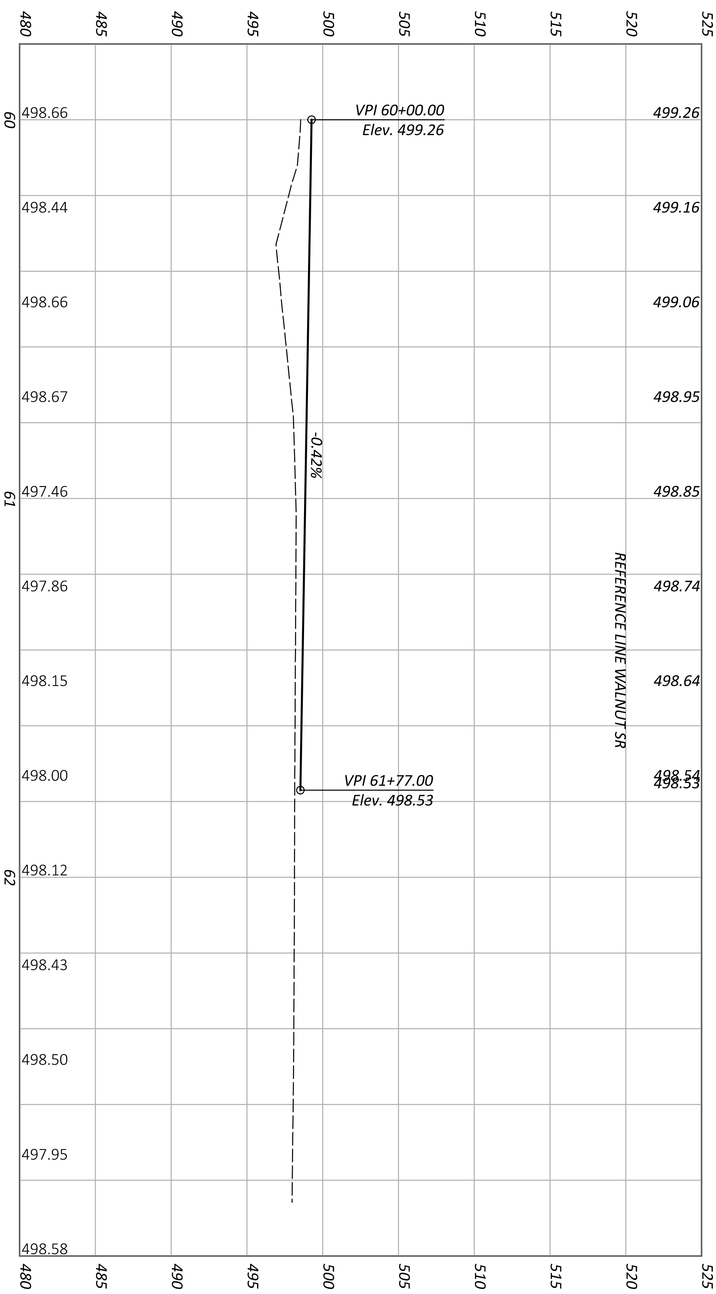
PROJECT ID 114042

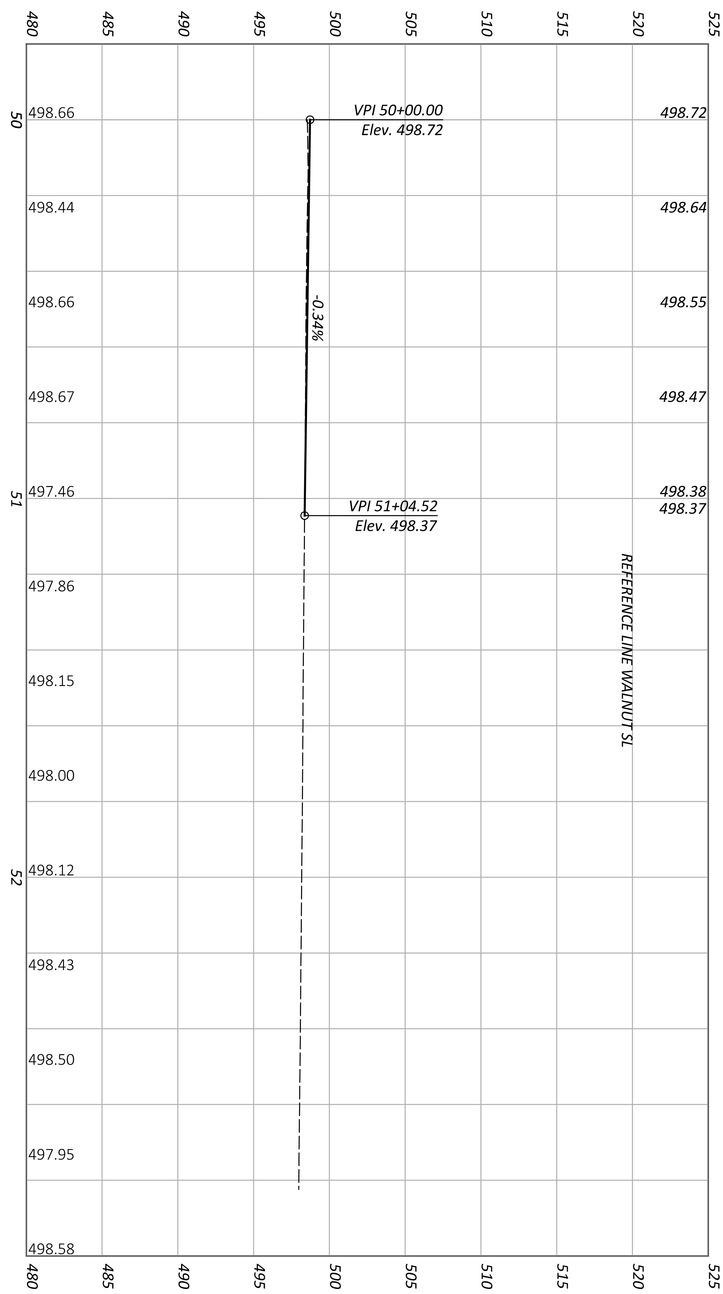
SHEET P.56 TOTAL P.163

CLE-US52-4.67

MODEL: P_WAL_NL - WAL_NL PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:21 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OH DOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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MODEL: P_WAL_WL - WAL_WL PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:28 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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SHEET	TOTAL
P.57	P.163

PROJECT ID: 114042

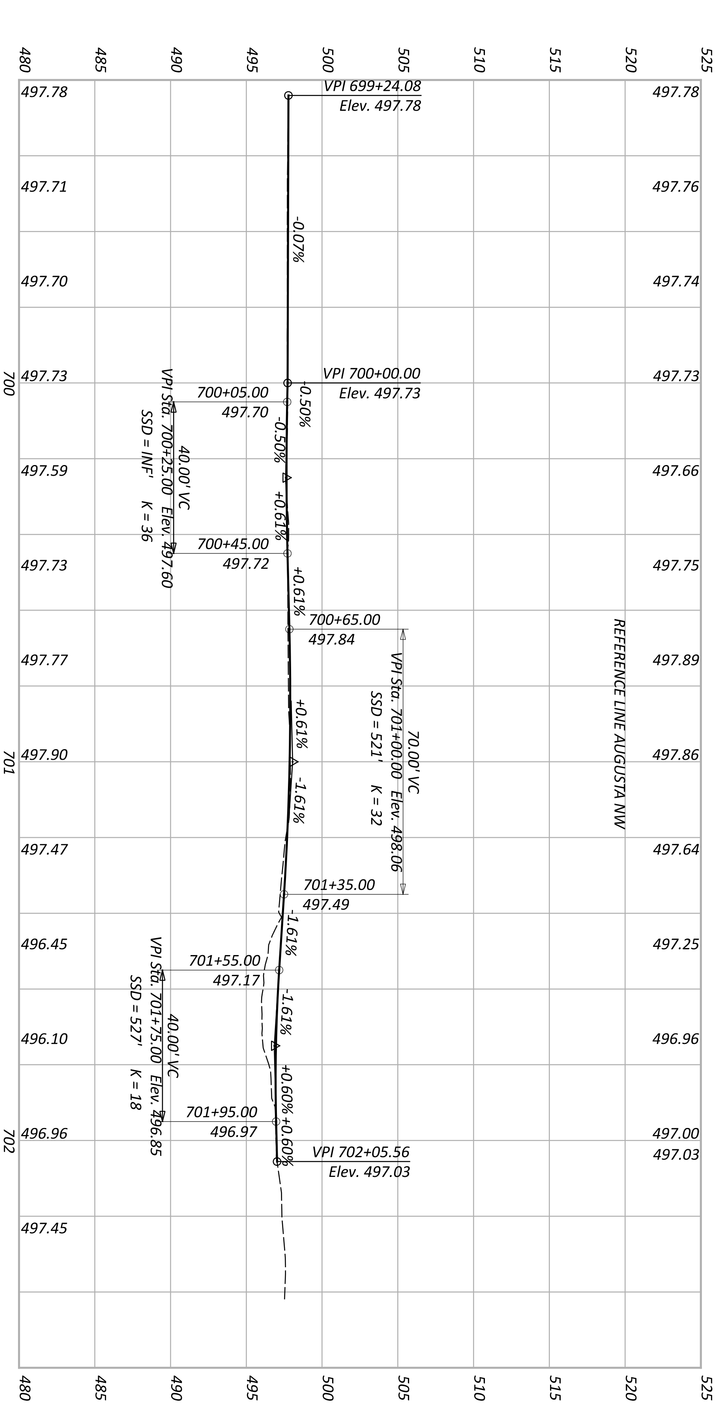
REVIEWER: MTL 03/10/26

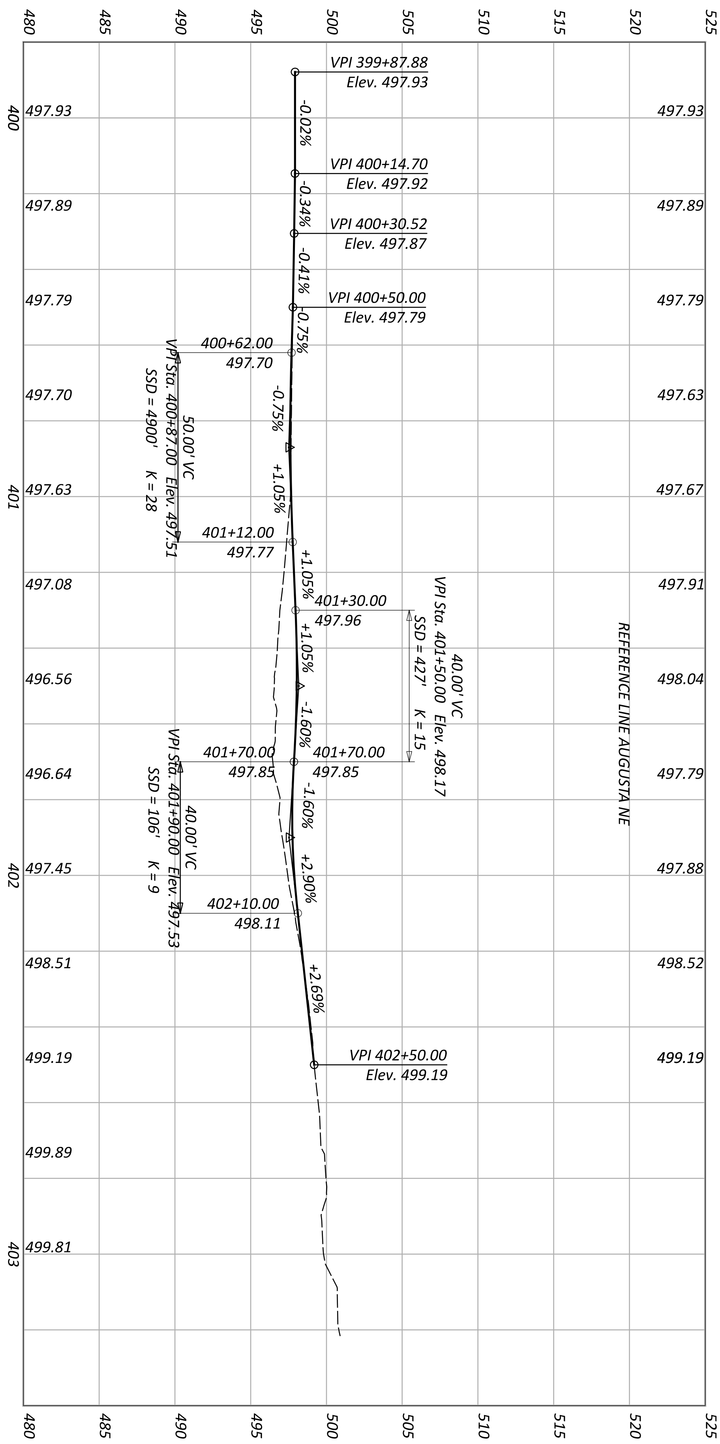
DESIGNER: JPK

DESIGN AGENCY: AMERICAN STRUCTUREPOINT INC.

ROUNDABOUT PROFILES
REFERENCE LINES WAL-SL, WAL-SR

MODEL: P_AUG_NE - AUG_NE PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:38 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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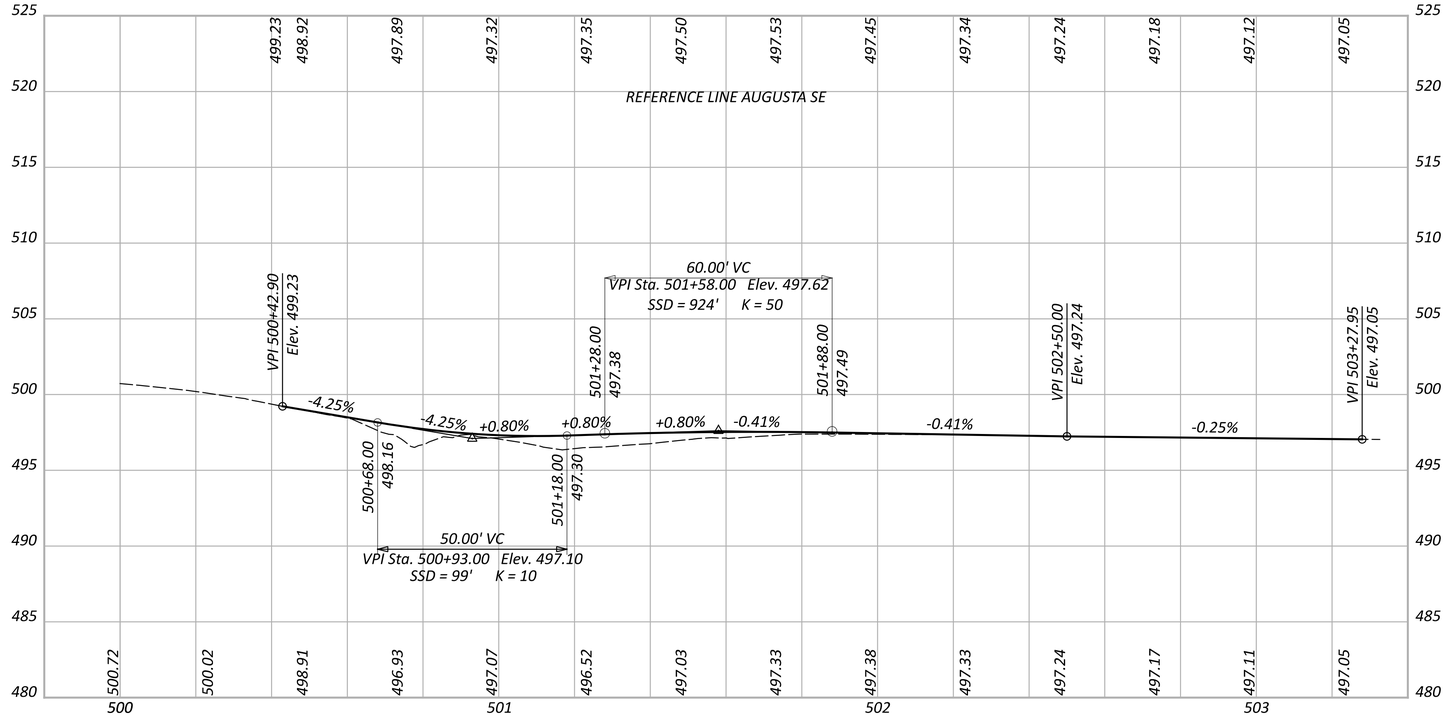


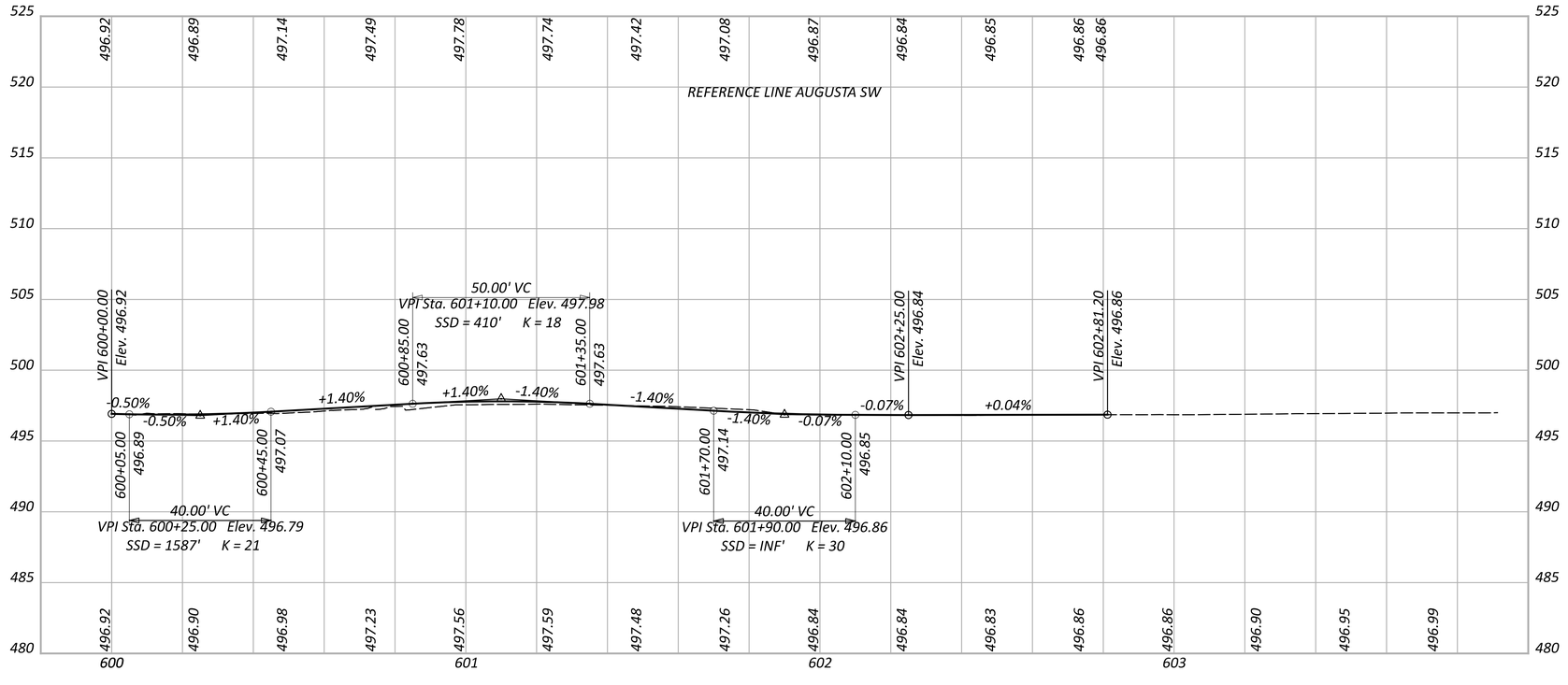


ROUNDABOUT PROFILES
REFERENCE LINES AUG-NE, AUG-NW

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
JPK	MTL 03/10/26	114042	P.58	P.163

DESIGN AGENCY: AMERICAN STRUCTUREPOINT INC.





ROUNDABOUT PROFILES
REFERENCE LINES AUG-SE, AUG-SW

CLE-US52-4.67

MODEL: P_AUG_SE - AUG_SE PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:45 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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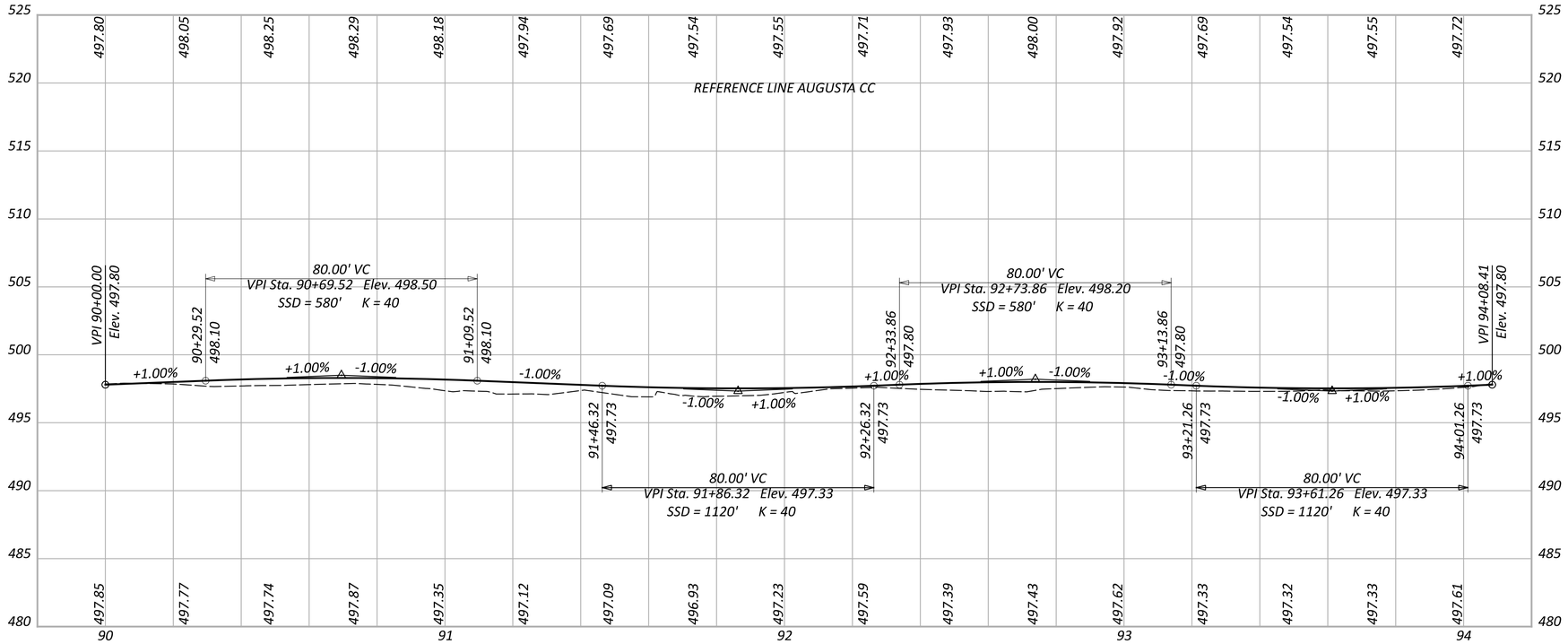
DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

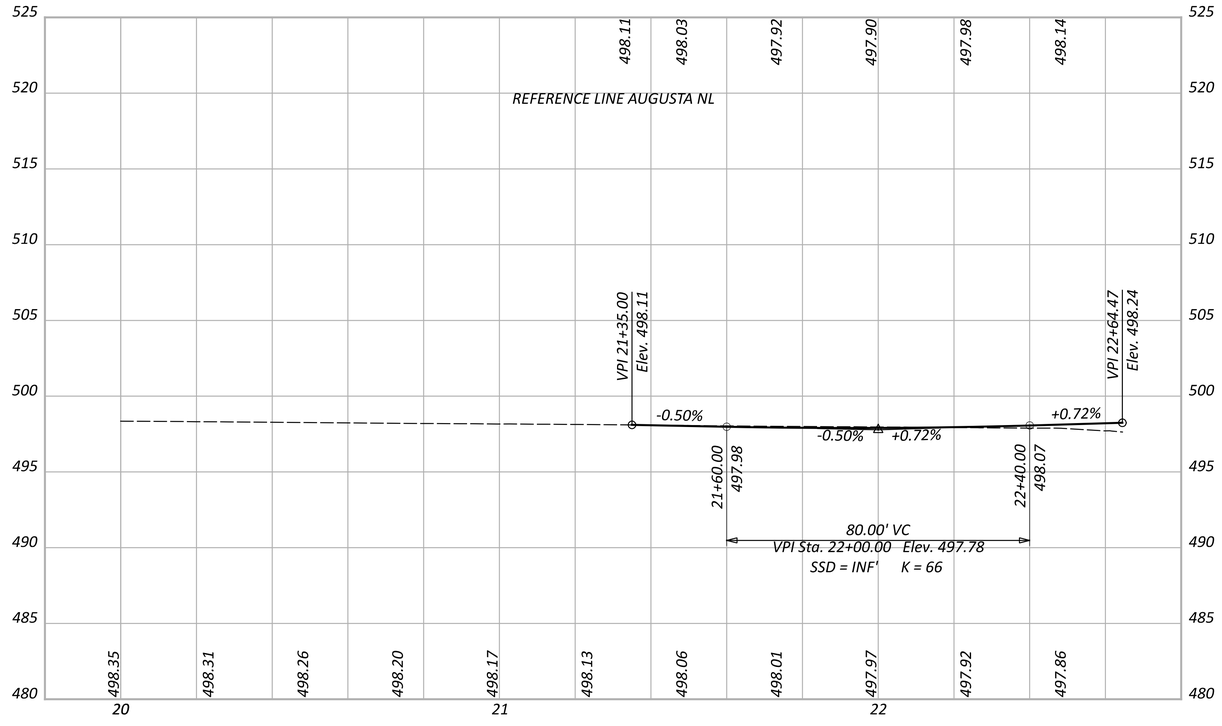
DESIGNER
JPK

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.59 TOTAL P.163





ROUNDABOUT PROFILES
REFERENCE LINES AUG-CC, AUG-NL

DESIGN AGENCY
STRUCTUREPOINT LLC
MEMBER

DESIGNER
JPK

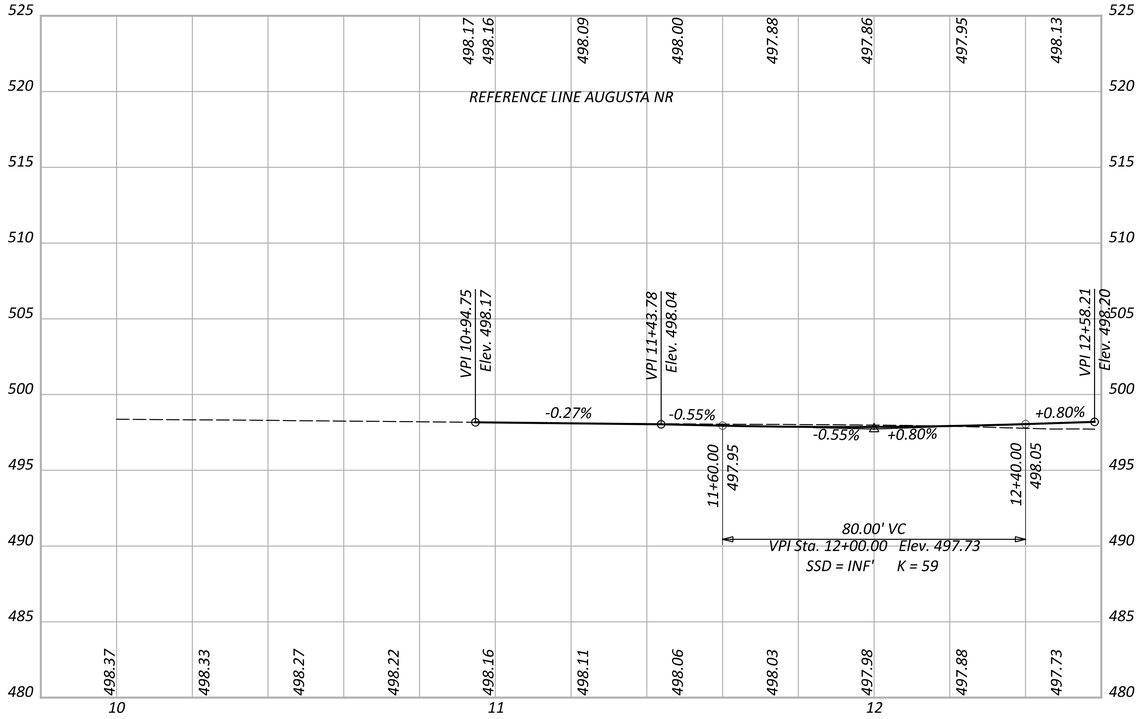
REVIEWER
MTL 03/10/26

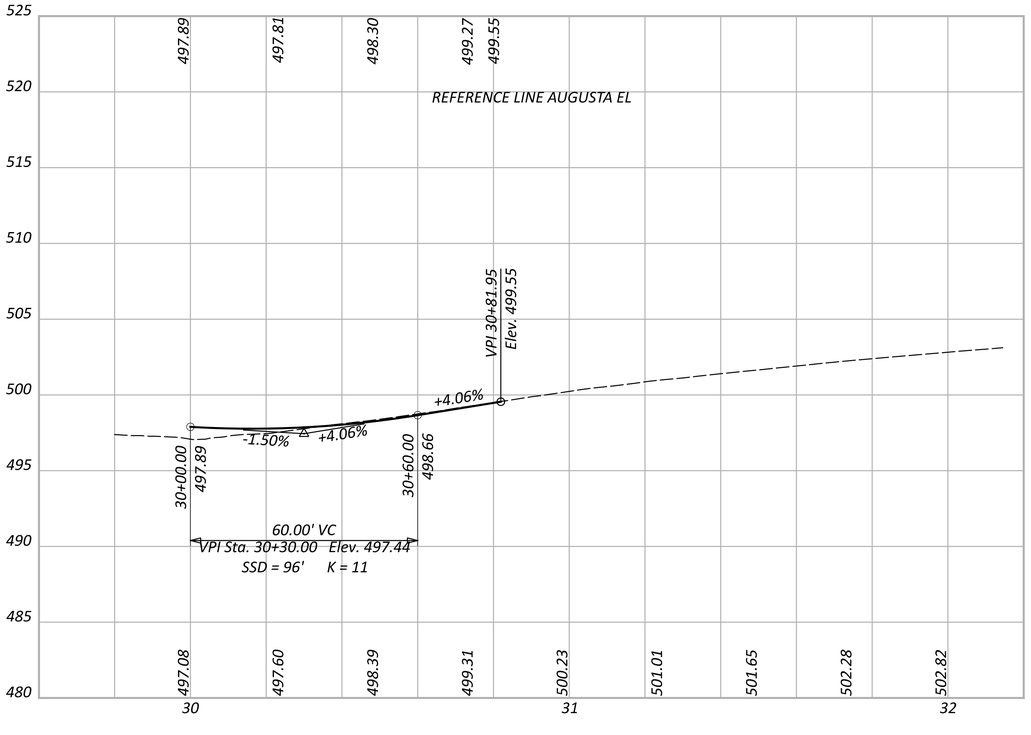
PROJECT ID
114042

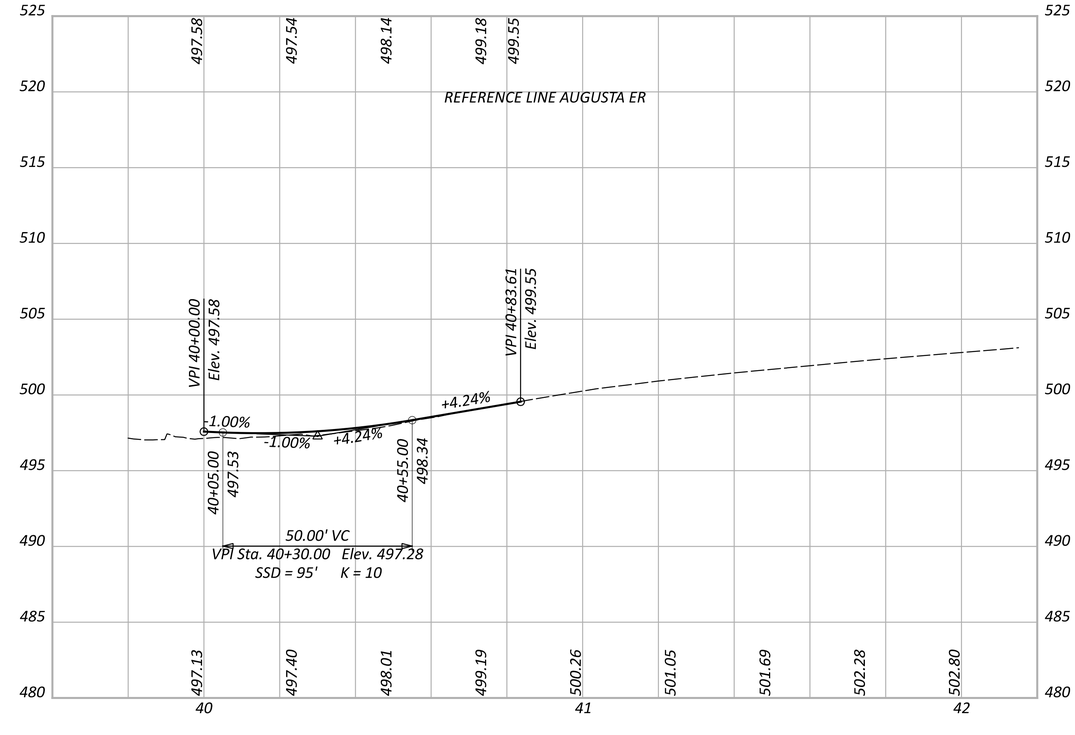
SHEET P.60 TOTAL P.163

CLE-US52-4.67

MODEL: P_AUG_CC - AUG_CC PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:50 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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ROUNDABOUT PROFILES
REFERENCE LINES AUG-NR, AUG-EL, AUG-ER

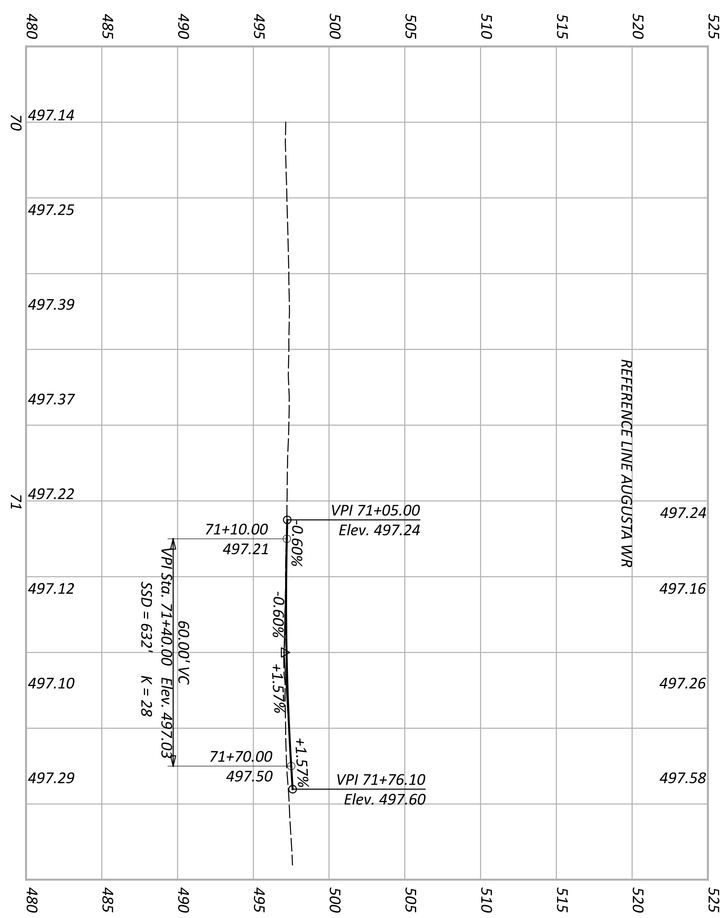
DESIGN AGENCY
WSP USA STRUCTUREPOINT INC.

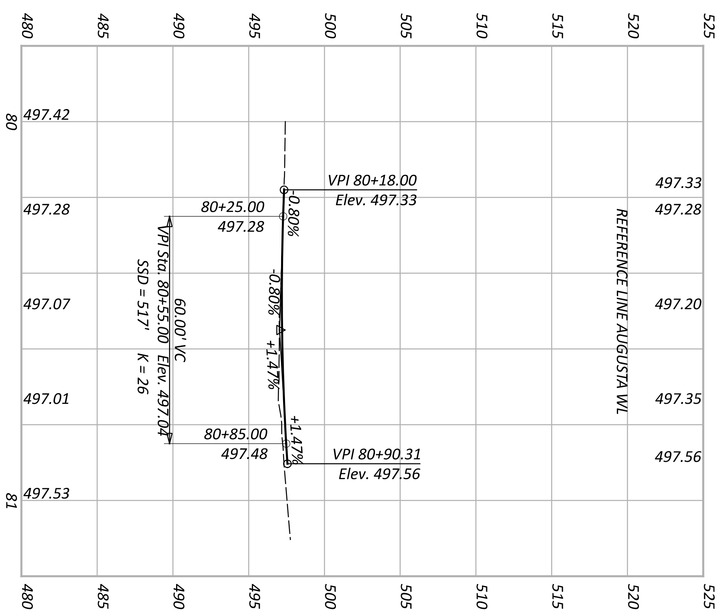
DESIGNER	JPK
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.61
TOTAL	P.163

CLE-US52-4.67

MODEL: AUG_NR - AUG_NR PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:42:55 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoads Designer 10.12.02.4
O:\2019\024459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GF024.dgn

MODEL: P_AUG_WL - AUG_WL PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:43:00 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_GF025.dgn



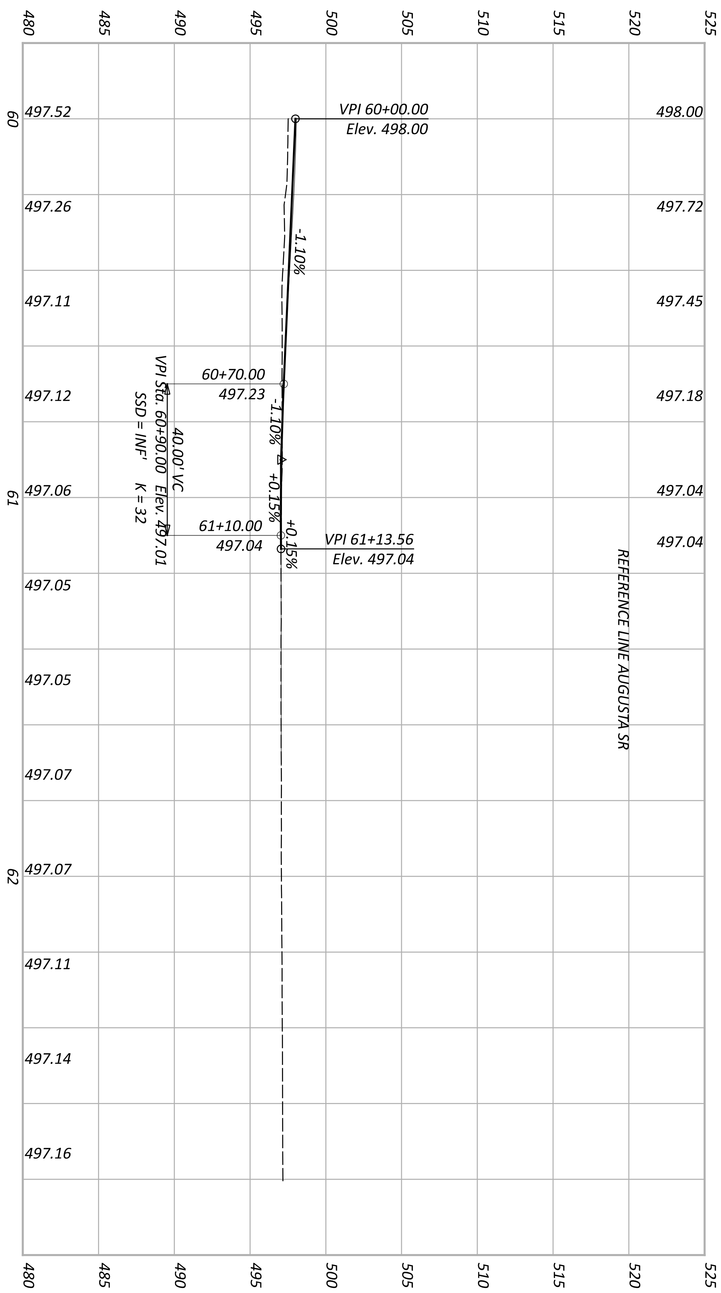


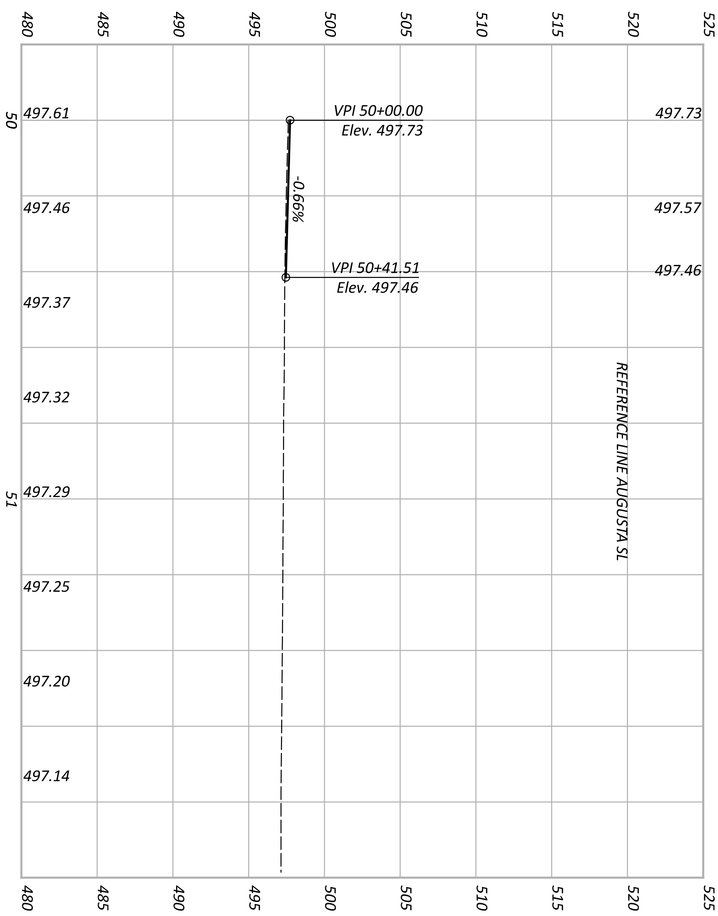
SHEET P.62 TOTAL P.163	PROJECT ID 114042	REVIEWER MTL 03/10/26	DESIGNER JPK

DESIGN AGENCY: AMERICAN STRUCTUREPOINT INC.

ROUNDABOUT PROFILES
REFERENCE LINES AUG-WL, AUG-WR

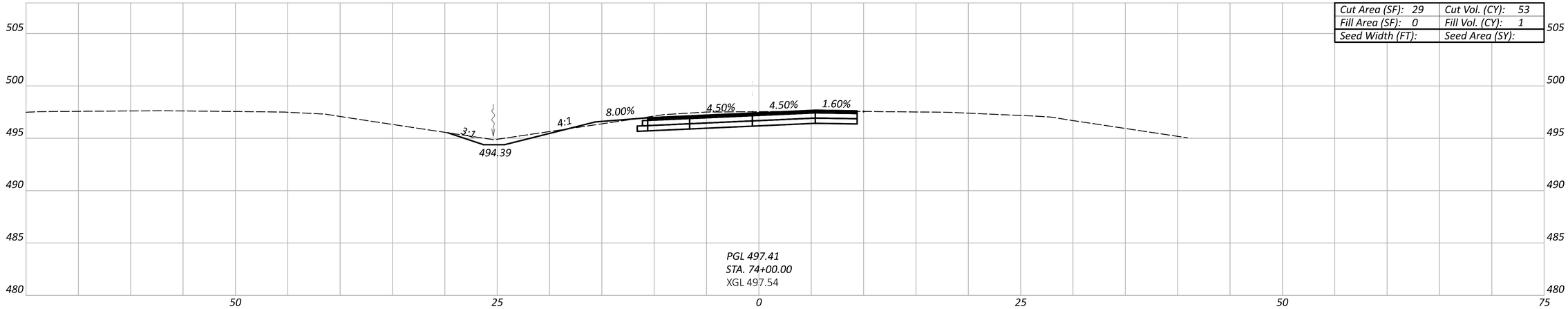
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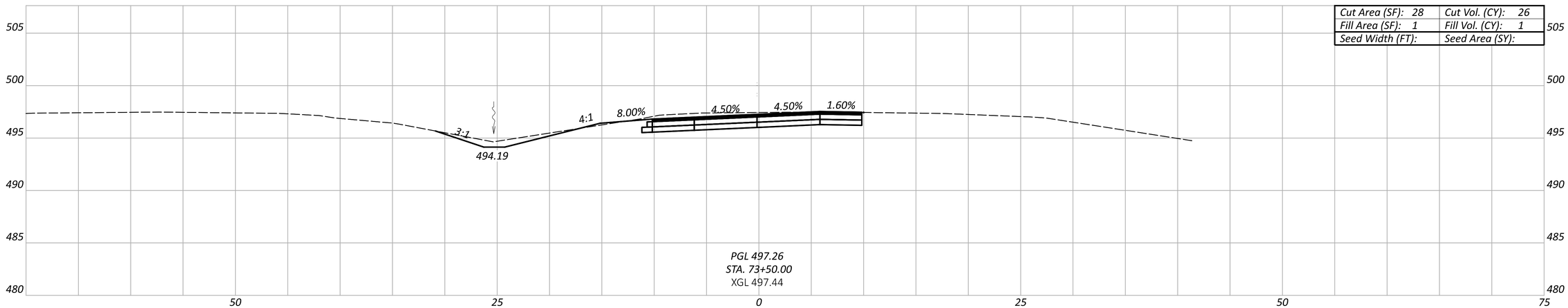


SHEET	TOTAL	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P.63	P.163	114042	MTL 03/10/26	JPK	AMERICAN STRUCTUREPOINT INC.

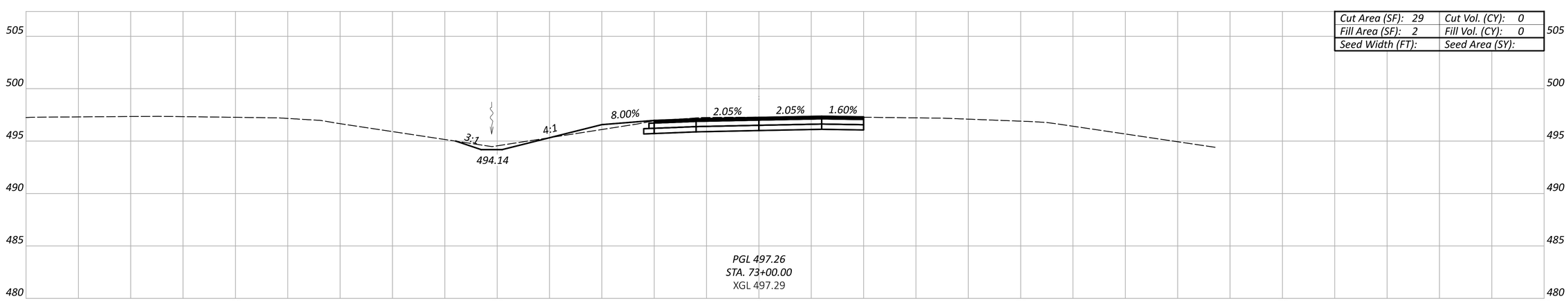
ROUNDABOUT PROFILES
REFERENCE LINES AUG-SL, AUG-SR



Cut Area (SF): 29	Cut Vol. (CY): 53
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Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 28	Cut Vol. (CY): 26
Fill Area (SF): 1	Fill Vol. (CY): 1
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 29	Cut Vol. (CY): 0
Fill Area (SF): 2	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 73+00.00 TO STA. 74+00.00

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

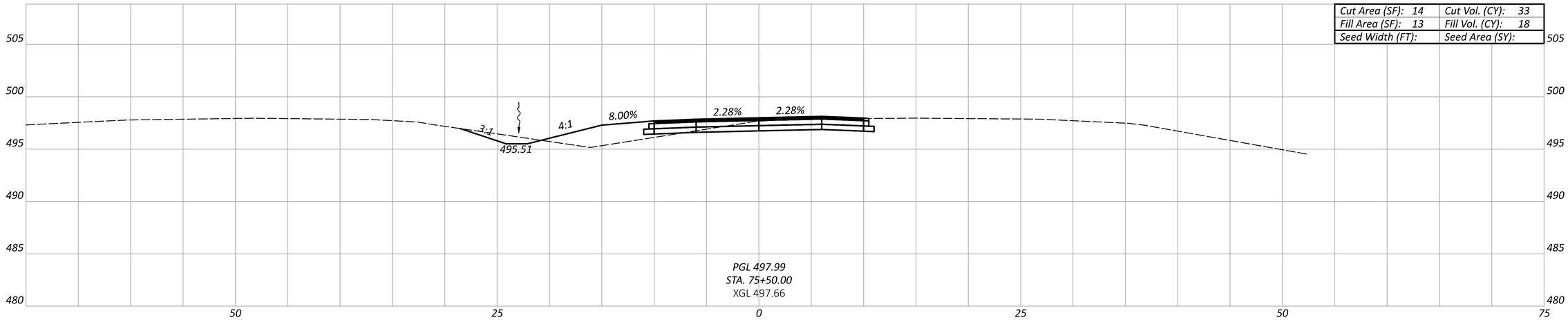
SHEET P.64 | TOTAL P.163

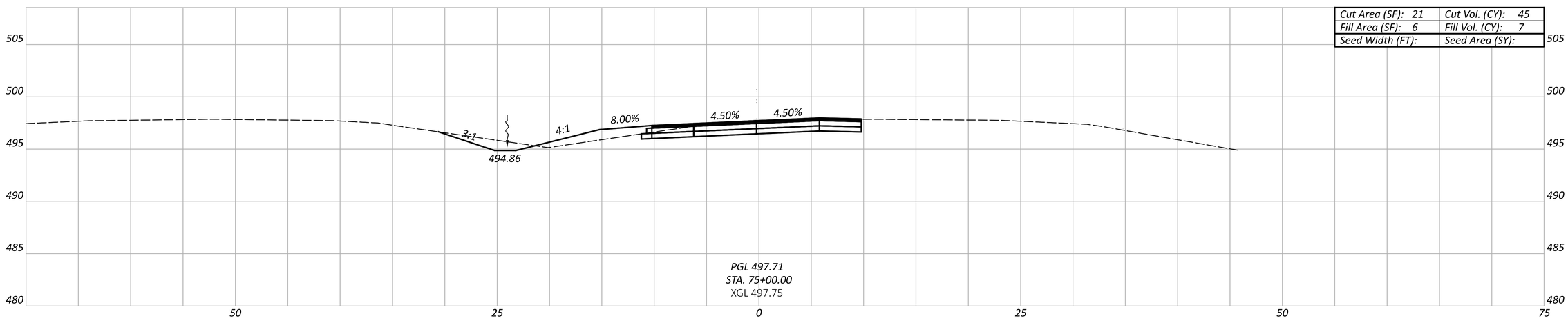
CLE-US52-4.67

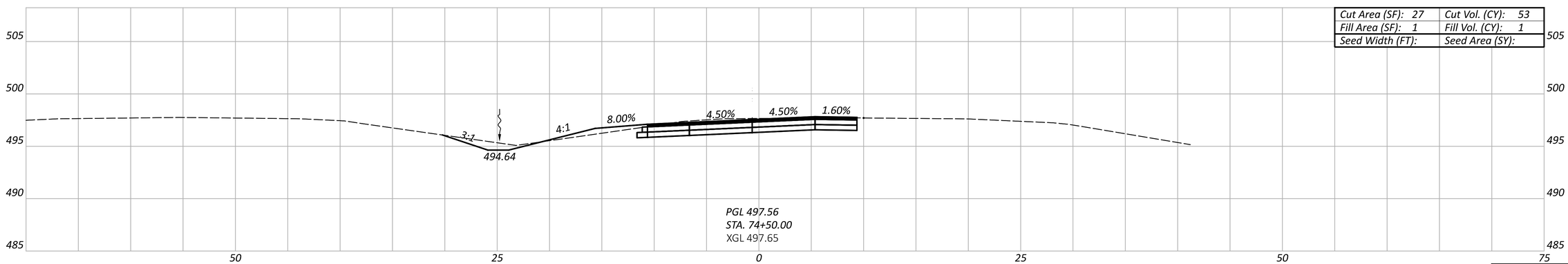
MODEL: Sycamore Crossover - 73+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:43:55 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

MODEL: Sycamore Crossover - 74+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:44:14 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

CLE-US52-4.67







CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 74+50.00 TO STA. 75+50.00

Sheet Totals		
Seeding	Cut	Fill

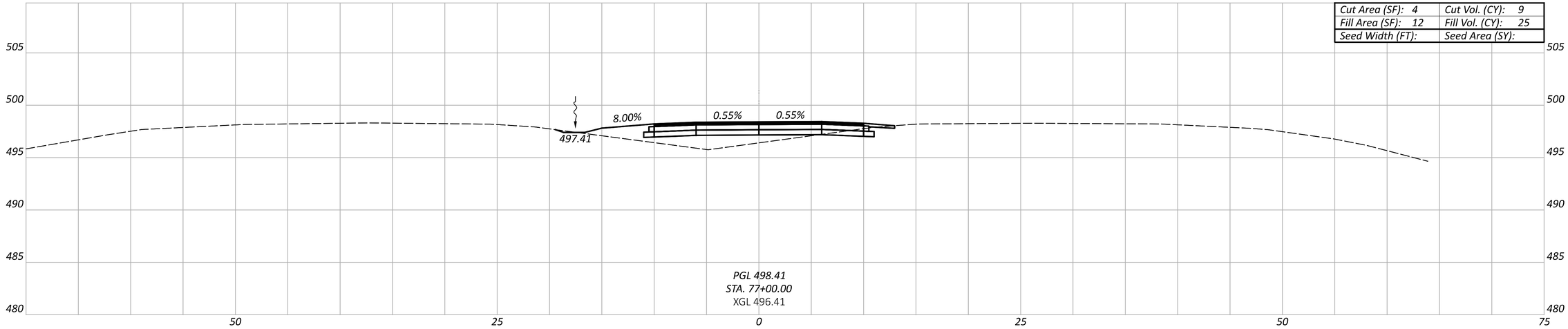
DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

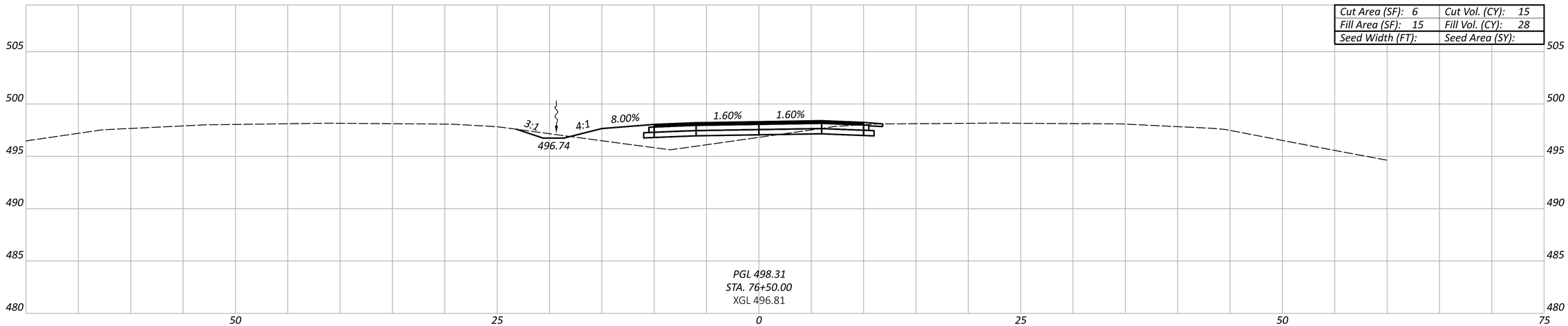
DESIGNER
AMD

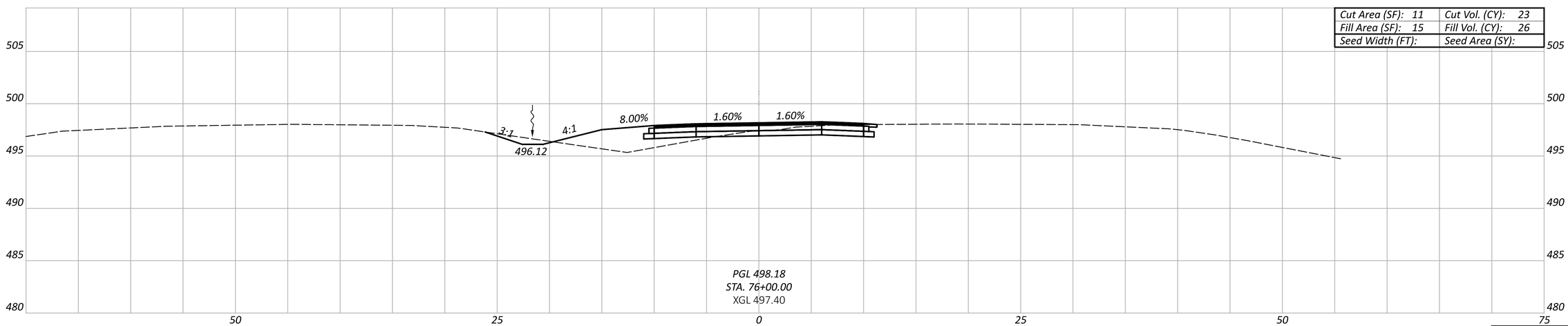
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.65 TOTAL P.163







CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 76+00.00 TO STA. 77+00.00

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

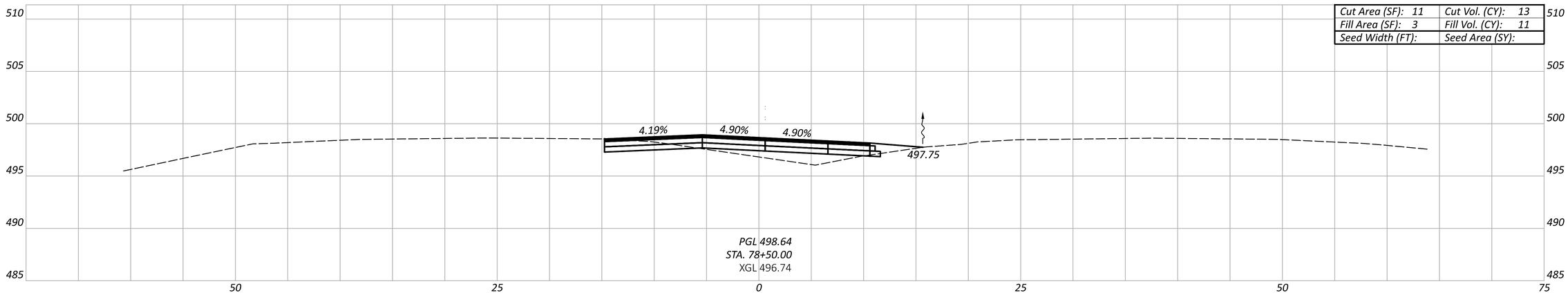
PROJECT ID
114042

Sheet Totals		
Seeding	Cut	Fill

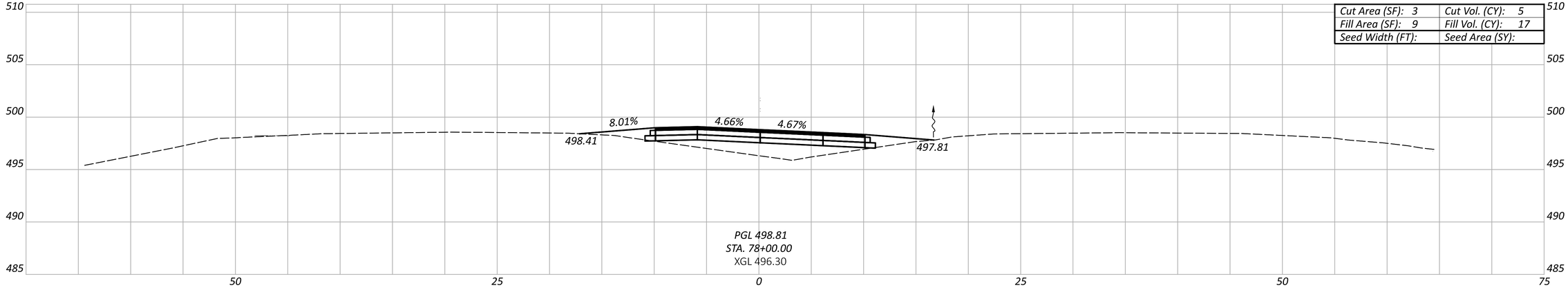
SHEET	TOTAL
P.66	P.163

CLE-US52-4.67

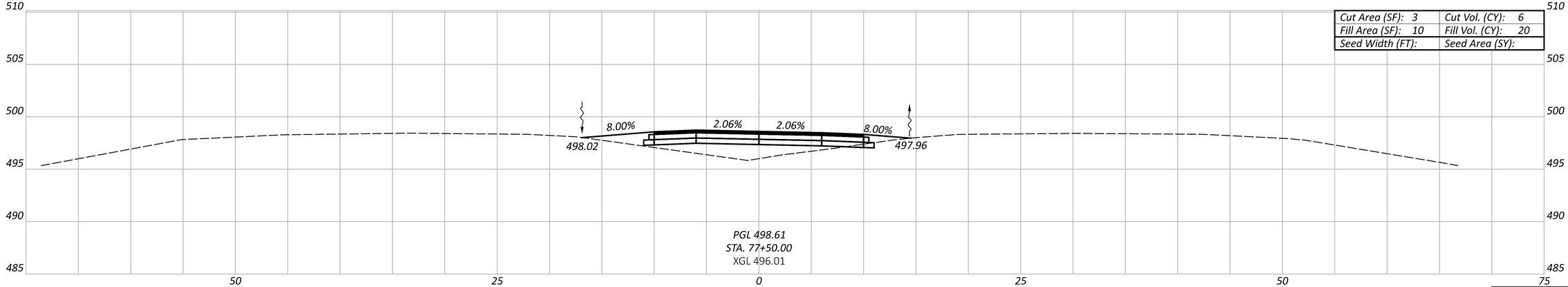
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O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn
WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
de.tbl USER:



Cut Area (SF): 11	Cut Vol. (CY): 13
Fill Area (SF): 3	Fill Vol. (CY): 11
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 3	Cut Vol. (CY): 5
Fill Area (SF): 9	Fill Vol. (CY): 17
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 3	Cut Vol. (CY): 6
Fill Area (SF): 10	Fill Vol. (CY): 20
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 77+50.00 TO STA. 78+50.00

DESIGN AGENCY
AMEREIN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

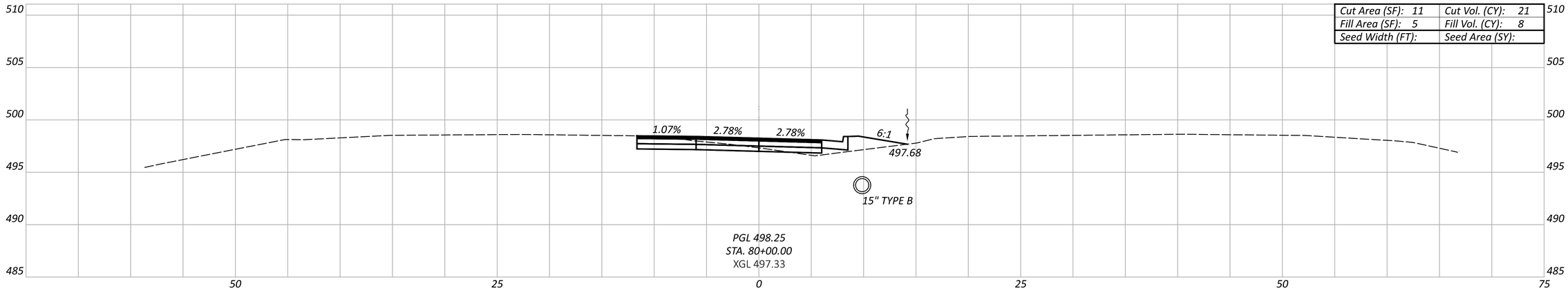
PROJECT ID
114042

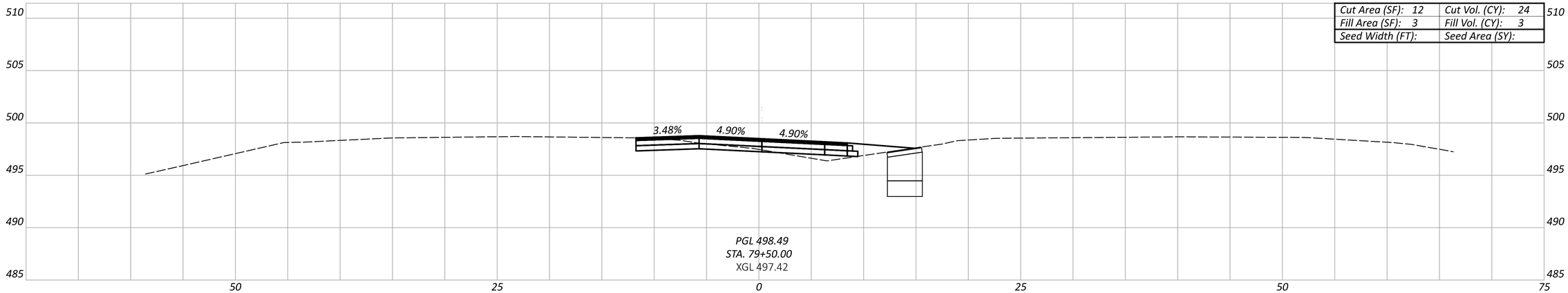
SHEET P.67 TOTAL P.163

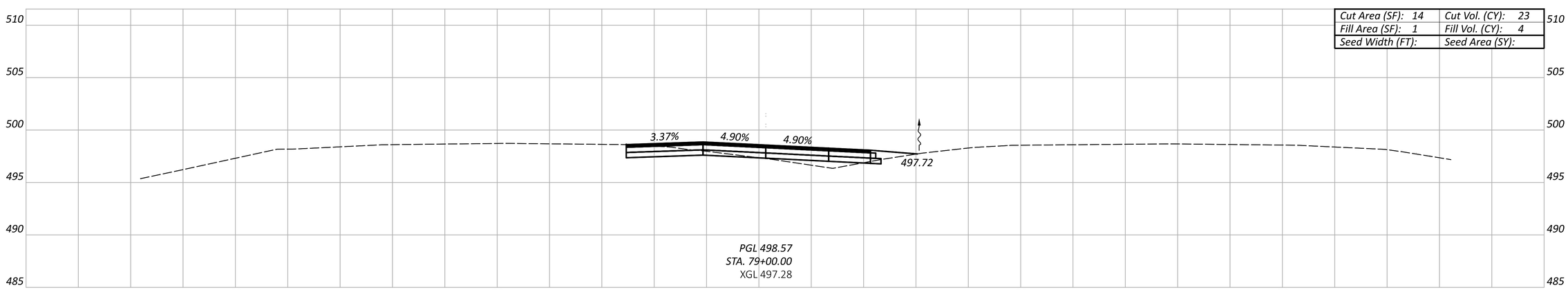
CLE-US52-4.67

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O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

MODEL: Sycamore Crossover - 79+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:44:47 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn







CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 79+00.00 TO STA. 80+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

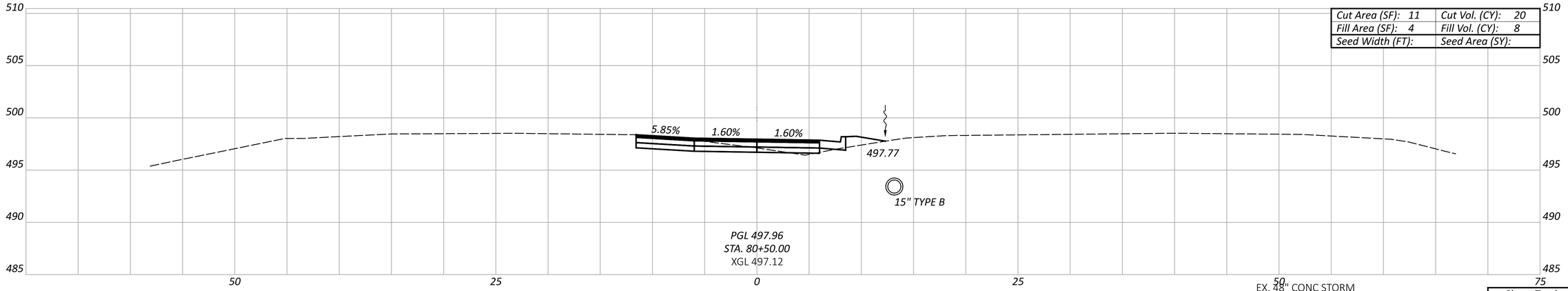
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.68 TOTAL P.163

MODEL: Sycamore Crossover - 80+50.00 |Sheet| PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:44:53 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

CLE-US52-4.67



Cut Area (SF): 11	Cut Vol. (CY): 20
Fill Area (SF): 4	Fill Vol. (CY): 8
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 NORTH
STA. 80+50.00 TO STA. 80+50.00

DESIGN AGENCY
MORGAN STRUCTUREPOINT INC.

DESIGNER
AMD

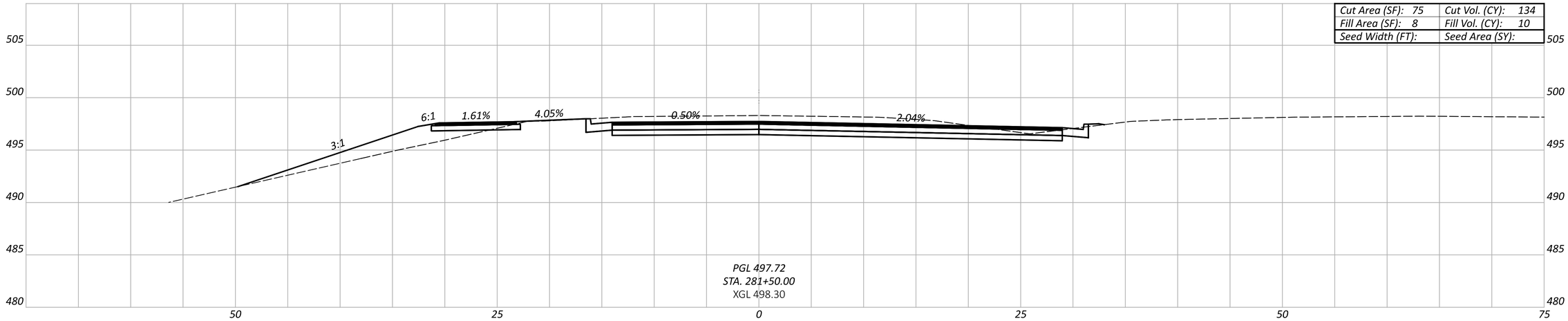
REVIEWER
MTL 03/10/26

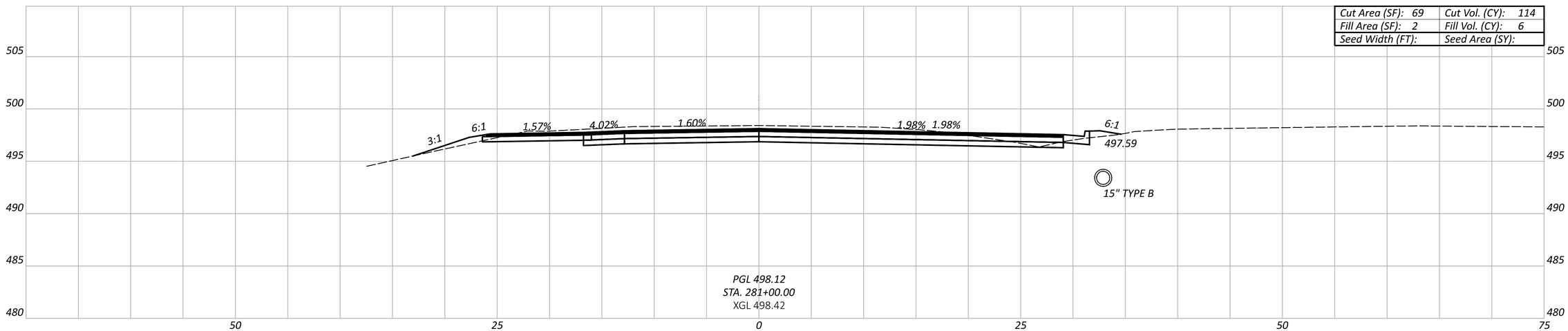
PROJECT ID
114042

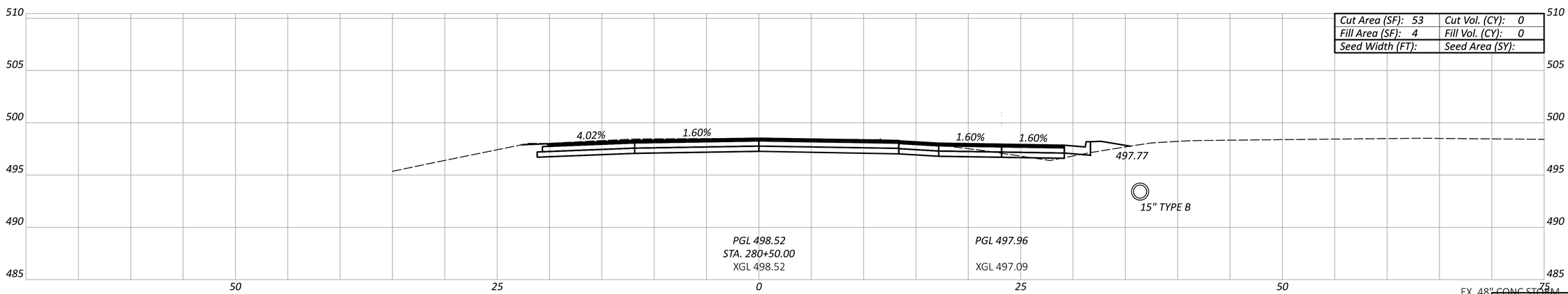
SHEET P.69 | TOTAL P.163

MODEL: CLP_U052_SYC - 280+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:45:06 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

CLE-US52-4.67







CROSS SECTIONS - US 52
STA. 280+50.00 TO STA. 281+50.00

Sheet Totals		
Seeding	Cut	Fill

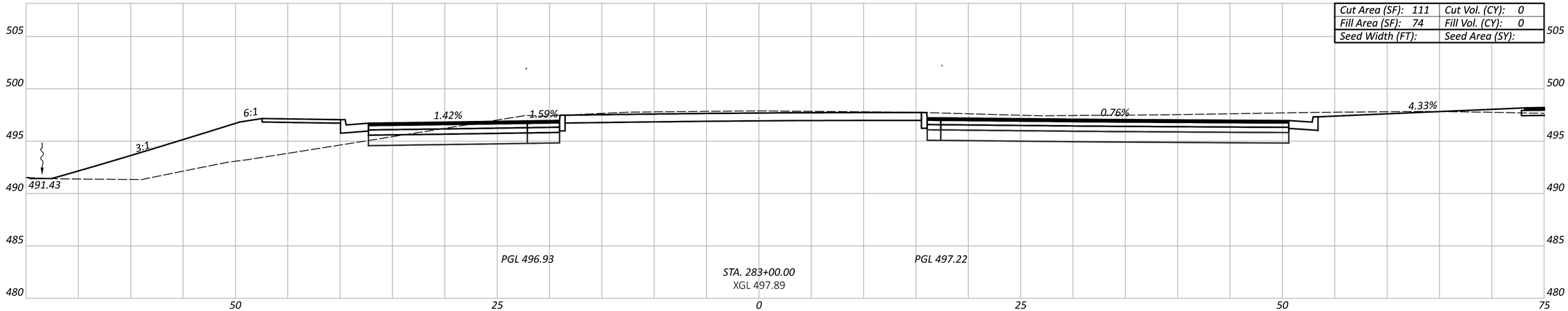
DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

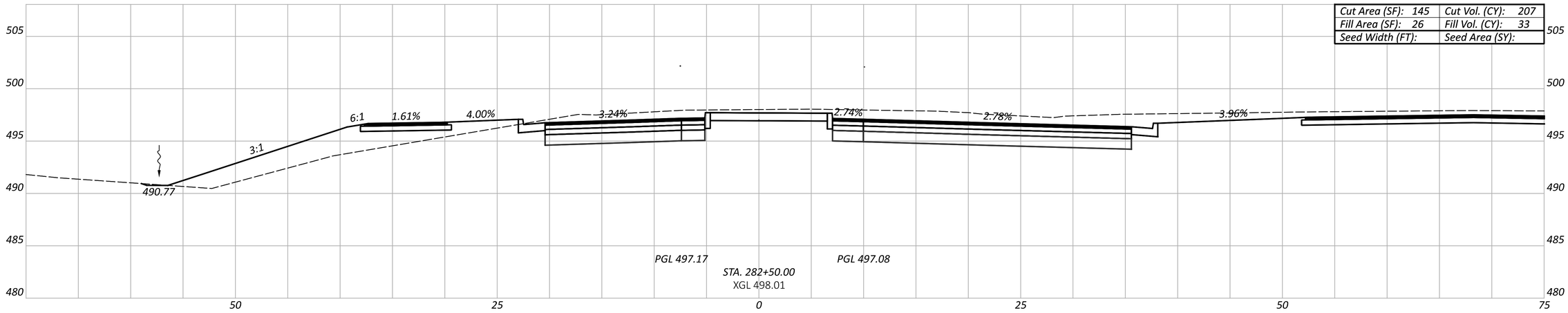
REVIEWER
MTL 03/10/26

PROJECT ID
114042

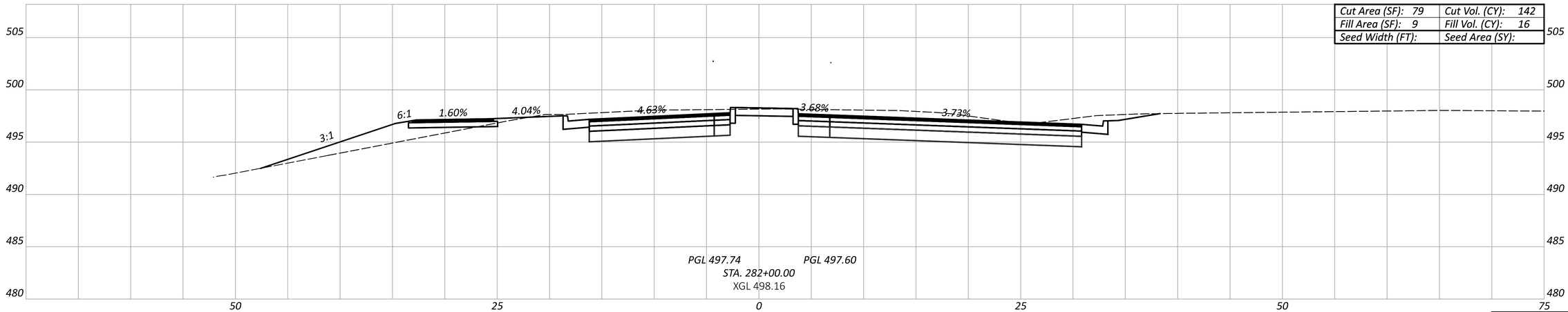
SHEET P.70 TOTAL P.163



Cut Area (SF): 111	Cut Vol. (CY): 0
Fill Area (SF): 74	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 145	Cut Vol. (CY): 207
Fill Area (SF): 26	Fill Vol. (CY): 33
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 79	Cut Vol. (CY): 142
Fill Area (SF): 9	Fill Vol. (CY): 16
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - US 52
STA. 282+00.00 TO STA. 283+00.00

DESIGN AGENCY
STRUCTUREPOINT

DESIGNER
AMD

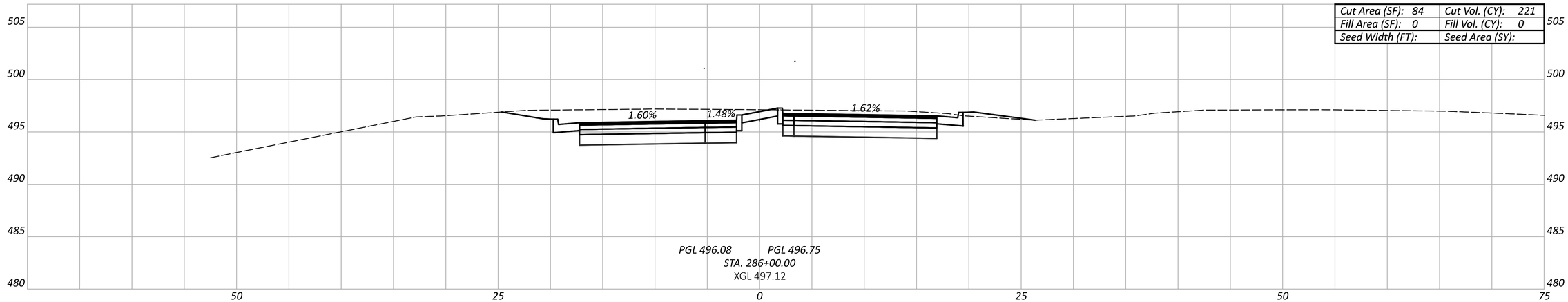
REVIEWER
MTL 03/10/26

PROJECT ID
114042

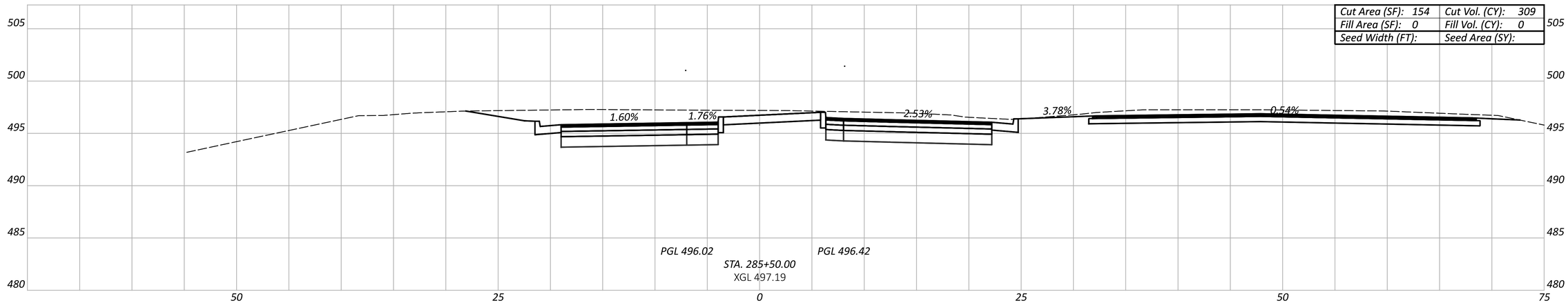
SHEET P.71 | TOTAL P.163

CLE-US52-4.67

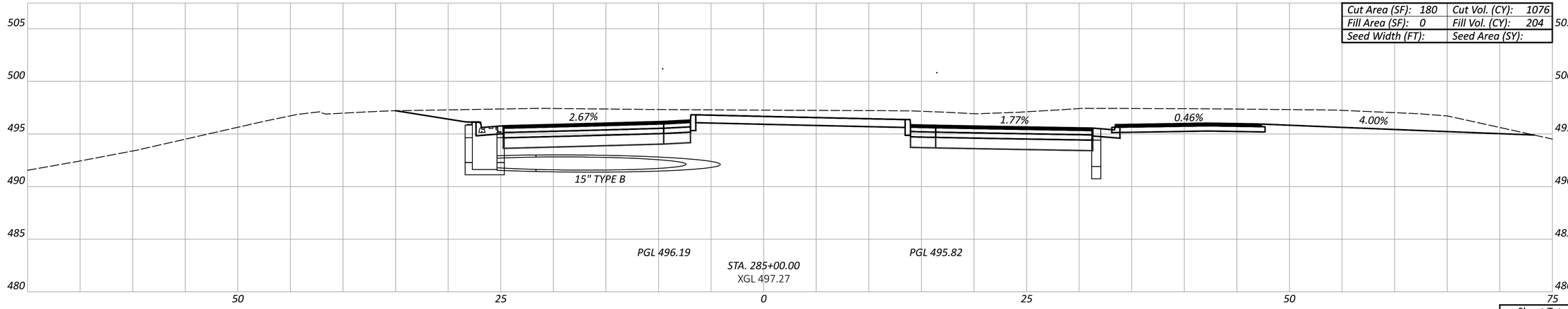
MODEL: CLP_U052_SYC - 282+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:45:17 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn



Cut Area (SF): 84	Cut Vol. (CY): 221
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 154	Cut Vol. (CY): 309
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 180	Cut Vol. (CY): 1076
Fill Area (SF): 0	Fill Vol. (CY): 204
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - US 52
STA. 285+00.00 TO STA. 286+00.00

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

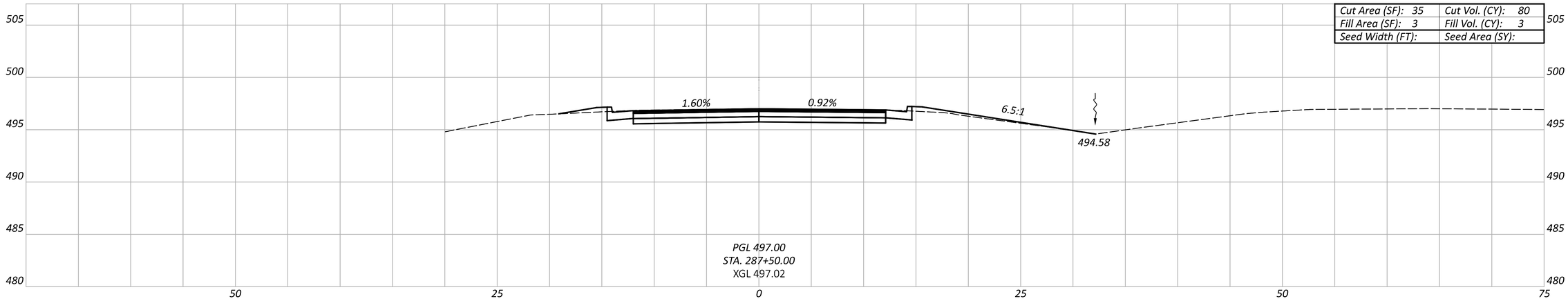
REVIEWER
MTL 03/10/26

PROJECT ID
114042

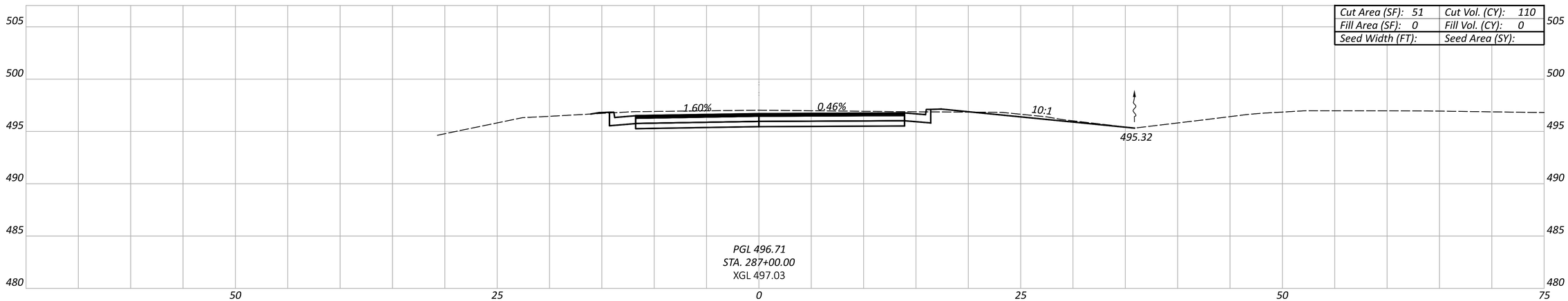
SHEET	TOTAL
P.72	P.163

CLE-US52-4.67

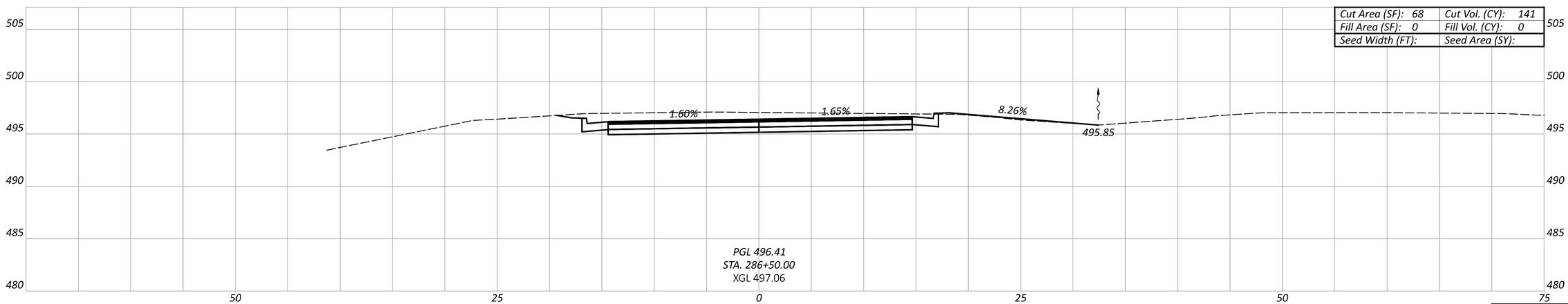
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O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn



Cut Area (SF): 35	Cut Vol. (CY): 80
Fill Area (SF): 3	Fill Vol. (CY): 3
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 51	Cut Vol. (CY): 110
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 68	Cut Vol. (CY): 141
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

CROSS SECTIONS - US 52
STA. 286+50.00 TO STA. 287+50.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

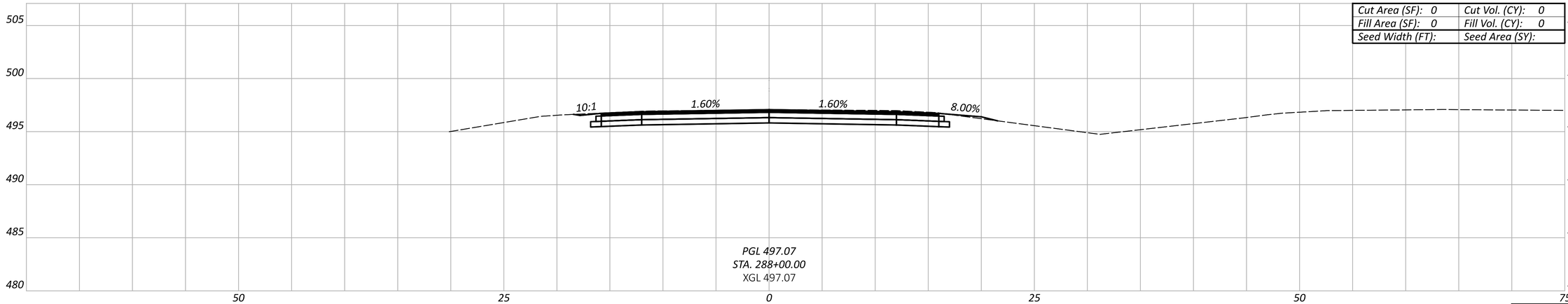
SHEET P.73 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - 286+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:45:40 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

MODEL: CLP_U052_SYC - 288+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:45:46 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS110.dgn

CLE-US52-4.67



CROSS SECTIONS - US 52
STA. 288+00.00 TO STA. 288+00.00

Sheet Totals		
Seeding	Cut	Fill

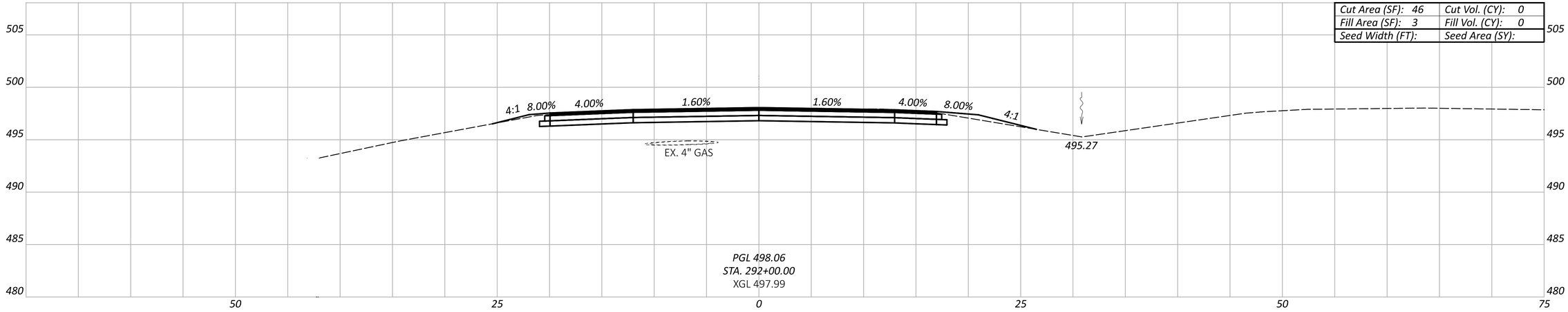
DESIGN AGENCY
MEDIACOM STRUCTUREPOINT LLC

DESIGNER
AMD

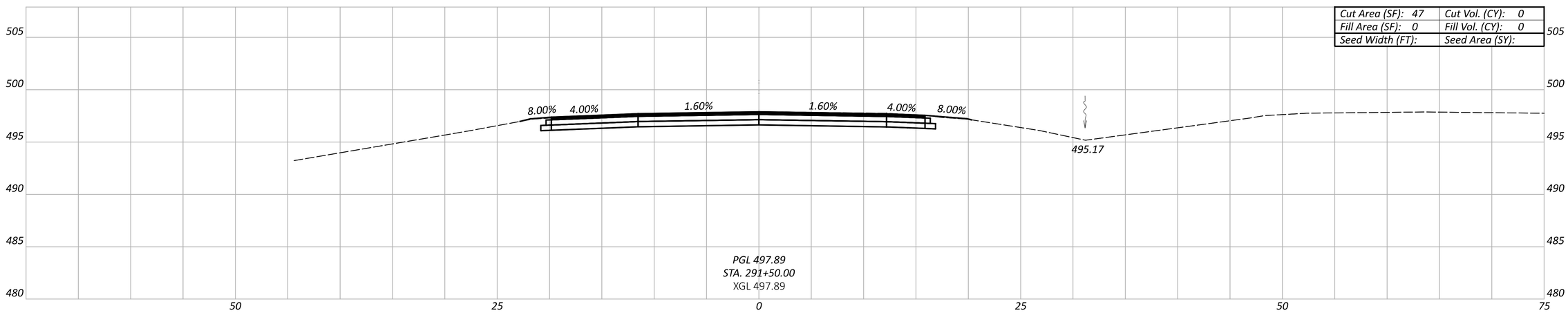
REVIEWER
MTL MM-DD-YY

PROJECT ID
114042

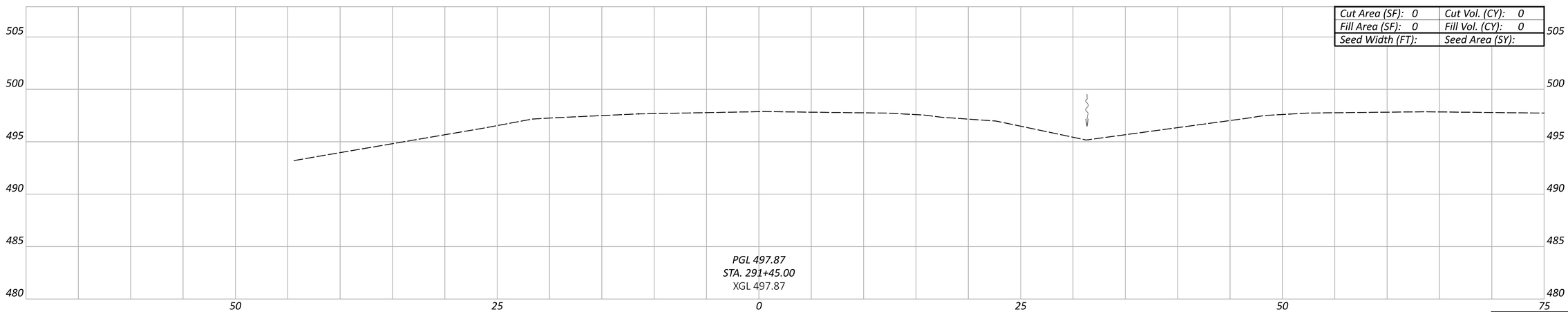
SHEET P.74 TOTAL P.162



Cut Area (SF): 46	Cut Vol. (CY): 0
Fill Area (SF): 3	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 47	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - US 52
STA. 291+45.00 TO STA. 292+00.00

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

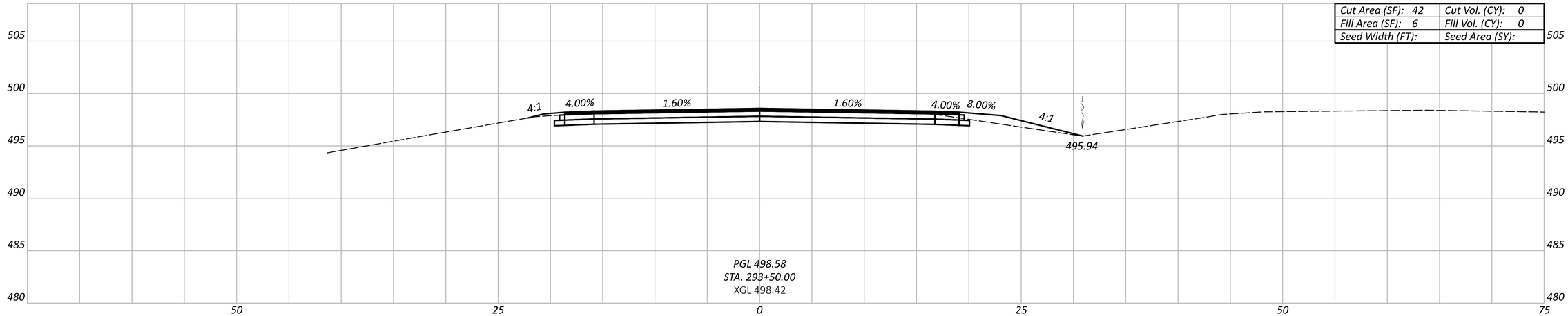
REVIEWER
MTL 03/10/26

PROJECT ID
114042

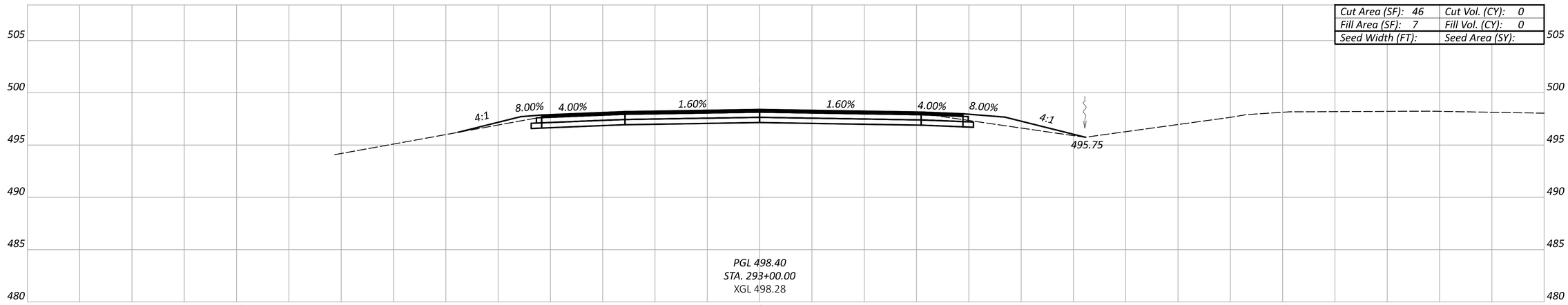
SHEET P.75 | TOTAL P.163

CLE-US52-4.67

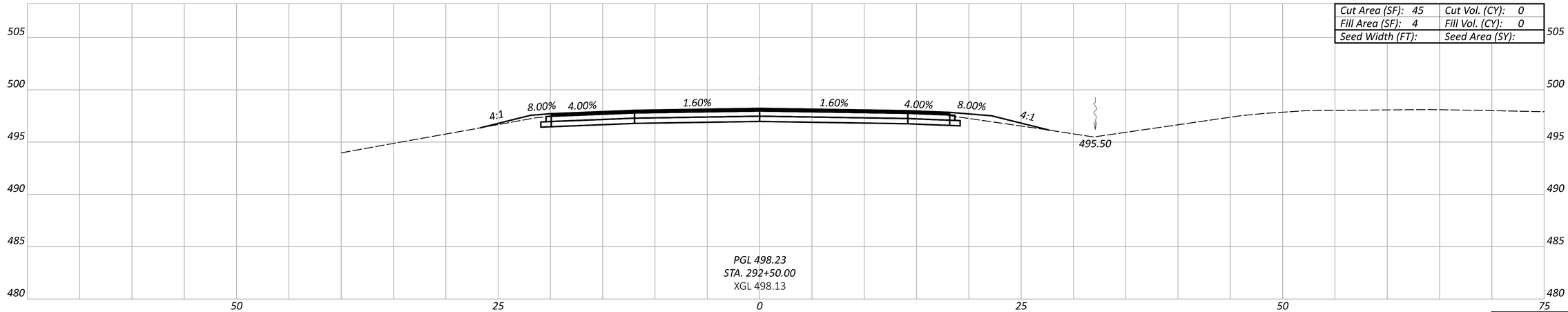
MODEL: CLP_U052_WAL - 291+45.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:46:08 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn



Cut Area (SF): 42	Cut Vol. (CY): 0
Fill Area (SF): 6	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 46	Cut Vol. (CY): 0
Fill Area (SF): 7	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 45	Cut Vol. (CY): 0
Fill Area (SF): 4	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CLE-US52-4.67

MODEL: CLP_U052_WAL - 292+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:46:47 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn

CROSS SECTIONS - US 52
STA. 292+50.00 TO STA. 293+50.00

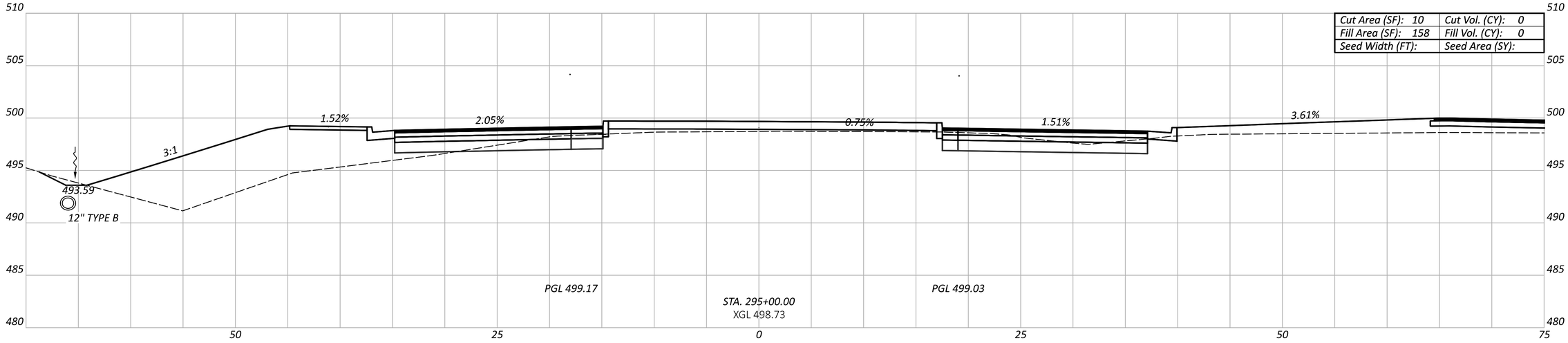
DESIGN AGENCY
MERIDIAN STRUCTUREPOINT INC.

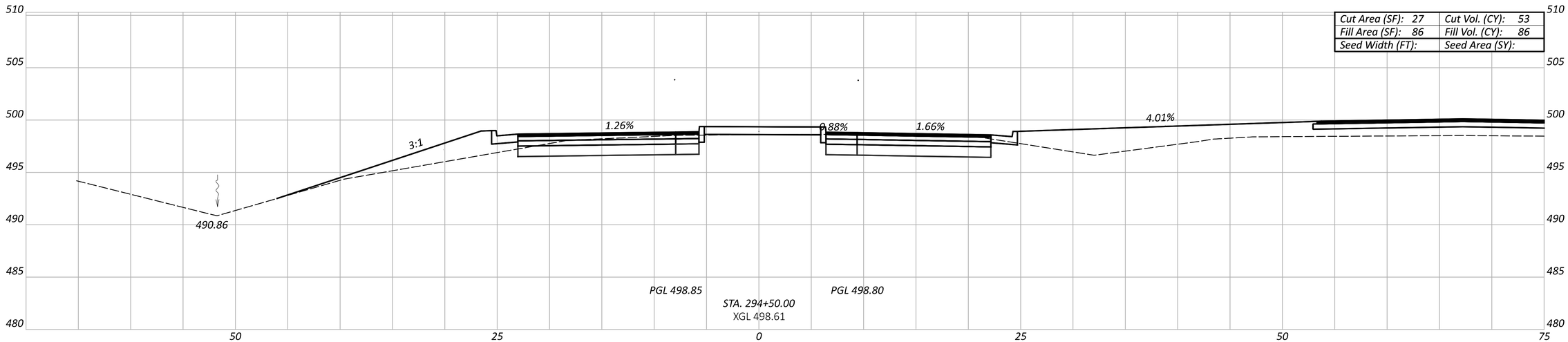
DESIGNER
AMD

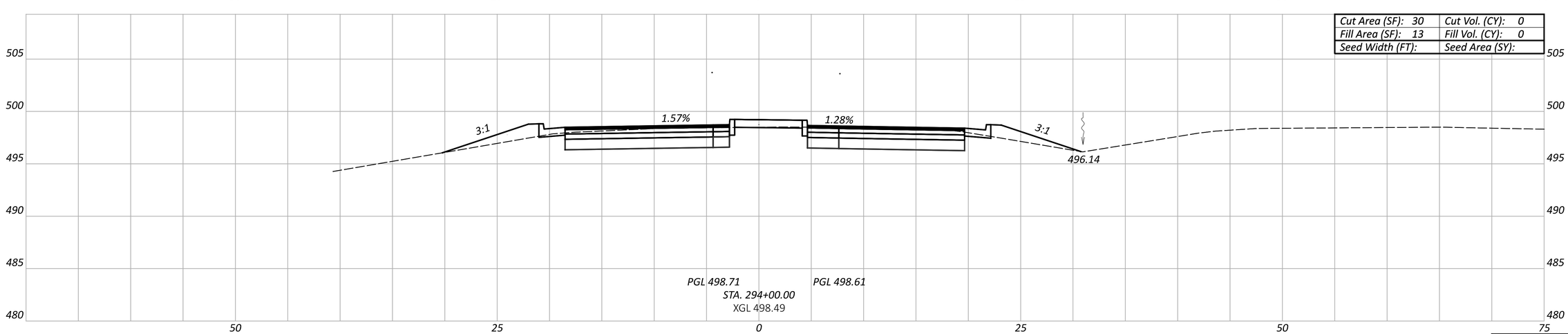
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET	TOTAL
P.76	P.163







CROSS SECTIONS - US 52
STA. 294+00.00 TO STA. 295+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

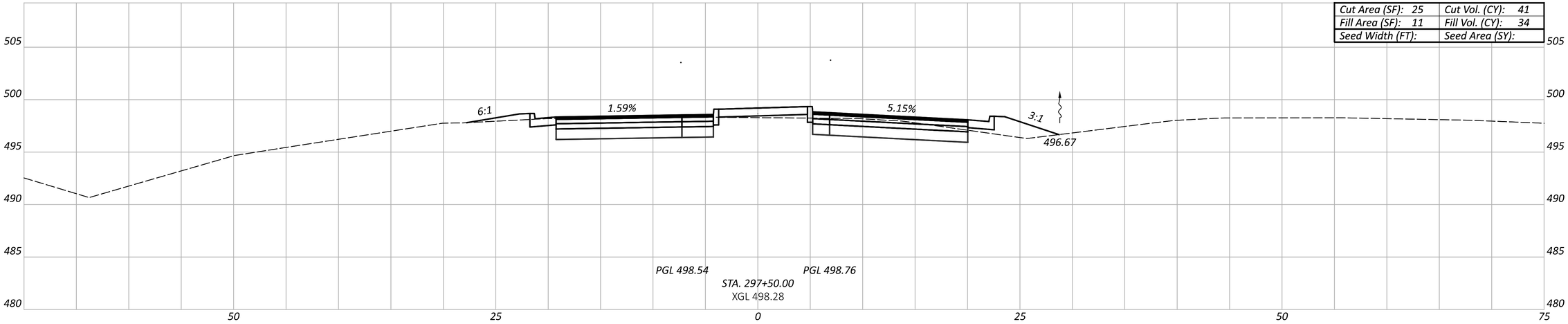
SHEET P.77 TOTAL P.163

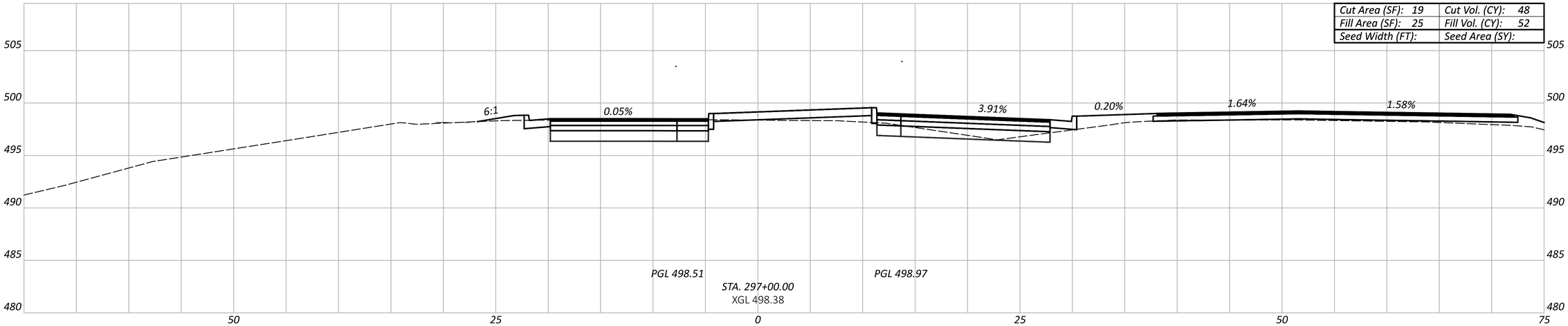
CLE-US52-4.67

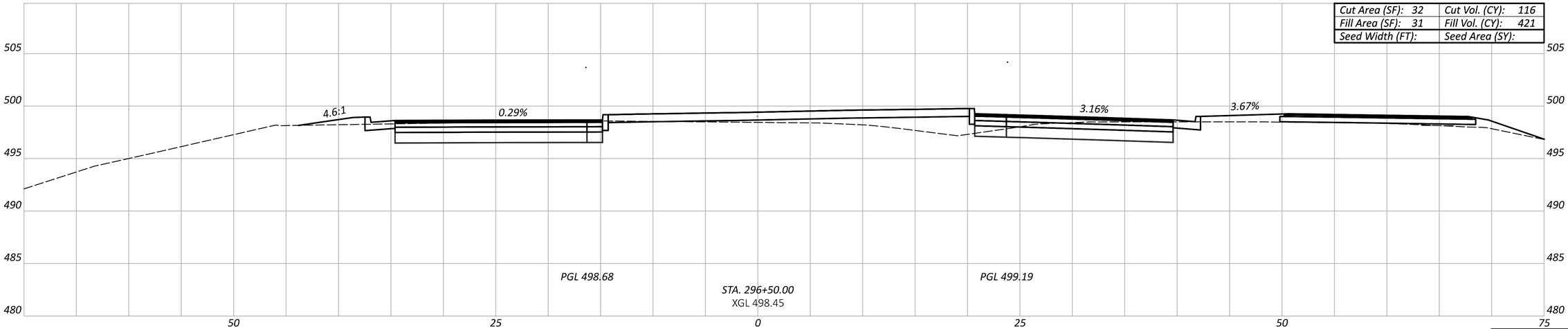
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O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn

MODEL: CLP_U052_WAL - 296+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:47:06 PM PLTDRV: OHIO_PDF.pltclp PENTBL: Ohio_Shade.tbl USER:
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4

CLE-US52-4.67







CROSS SECTIONS - US 52
STA. 296+50.00 TO STA. 297+50.00

Sheet Totals		
Seeding	Cut	Fill

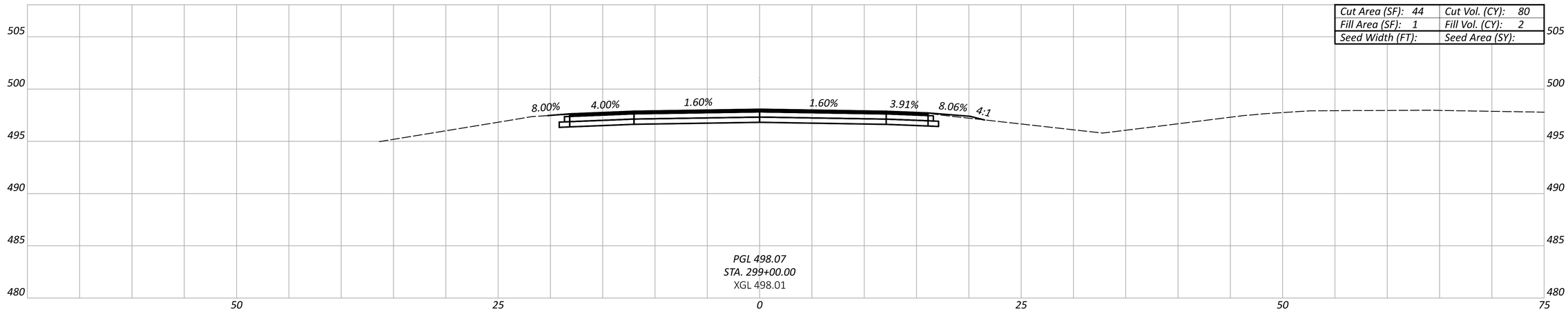
DESIGN AGENCY
STRUCTUREPOINT LLC
WIDENER

DESIGNER
AMD

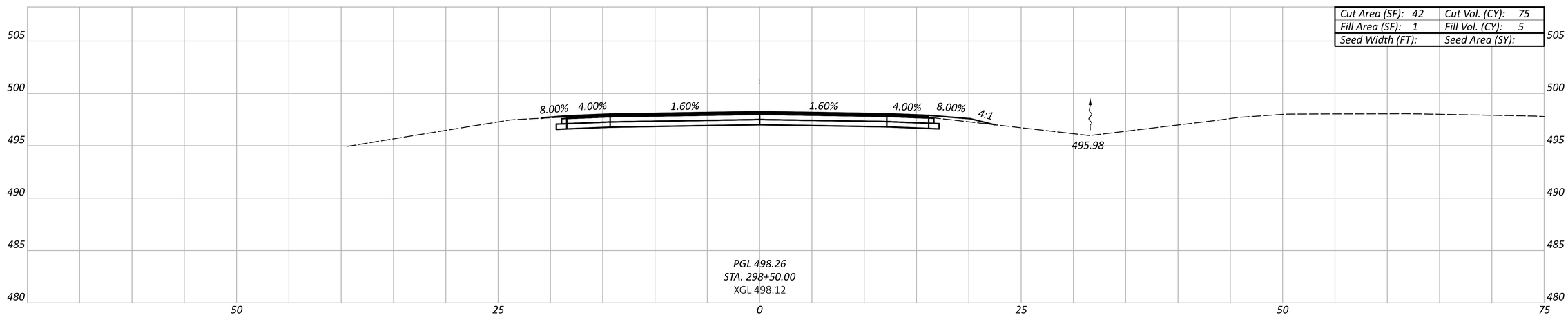
REVIEWER
MTL 03/10/26

PROJECT ID
114042

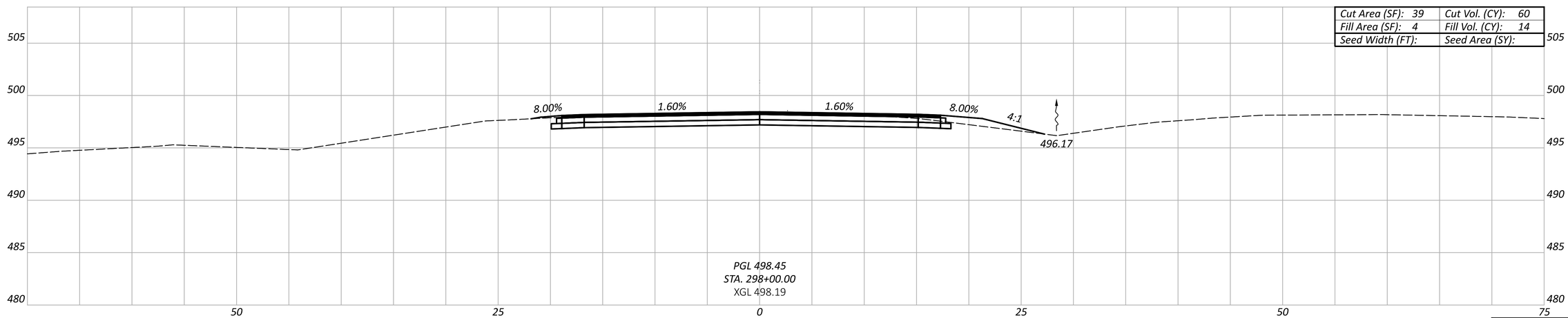
SHEET P.78 | TOTAL P.163



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Fill Area (SF): 1	Fill Vol. (CY): 2
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 42	Cut Vol. (CY): 75
Fill Area (SF): 1	Fill Vol. (CY): 5
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 39	Cut Vol. (CY): 60
Fill Area (SF): 4	Fill Vol. (CY): 14
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - US 52
STA. 298+00.00 TO STA. 299+00.00

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

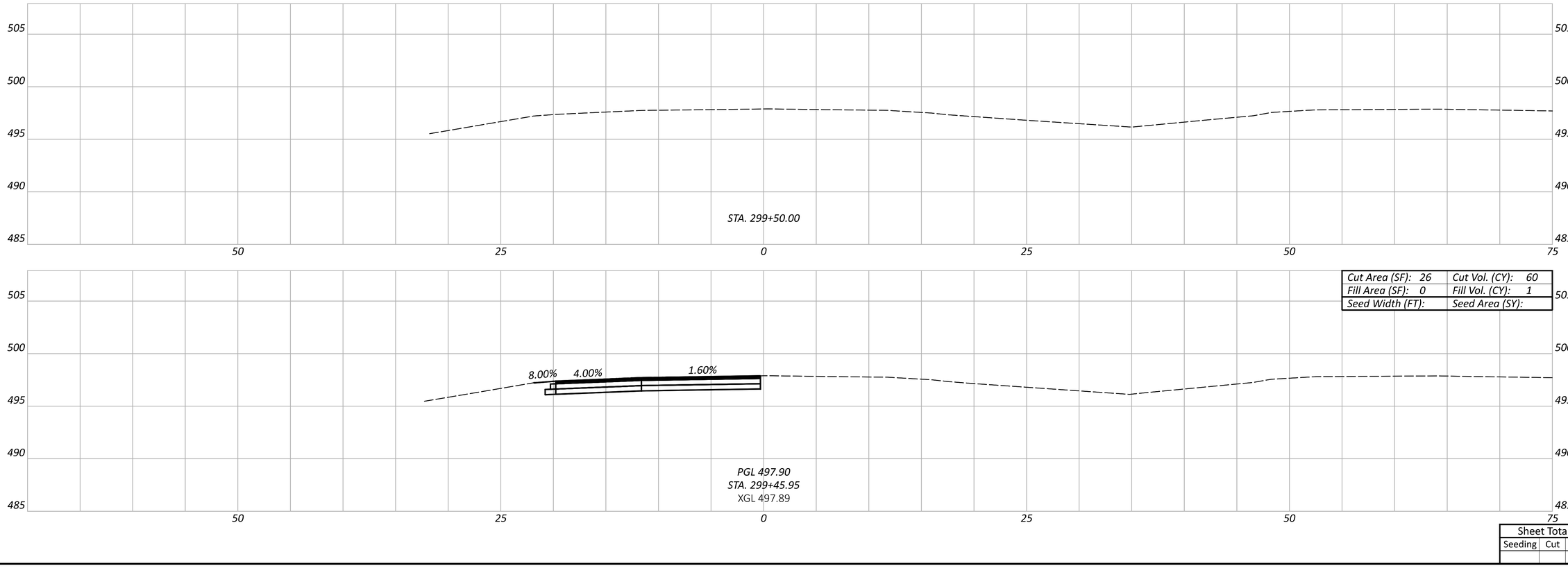
SHEET P.79 | TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_WAL - 298+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:47:15 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn

MODEL: CLP_U052_WAL - 299+45.95 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:47:22 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER:
WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS120.dgn

CLE-US52-4.67



CROSS SECTIONS - US 52
STA. 299+45.95 TO STA. 299+50.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
STRUCTUREPOINT LLC

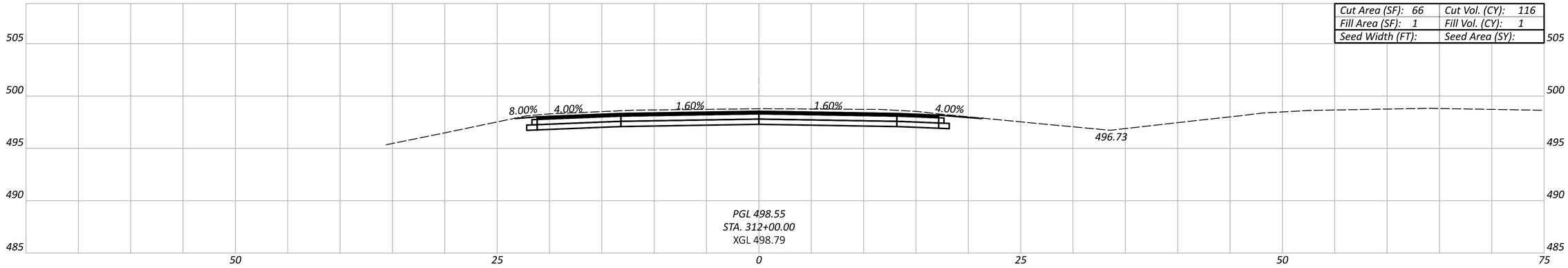
DESIGNER
AMD

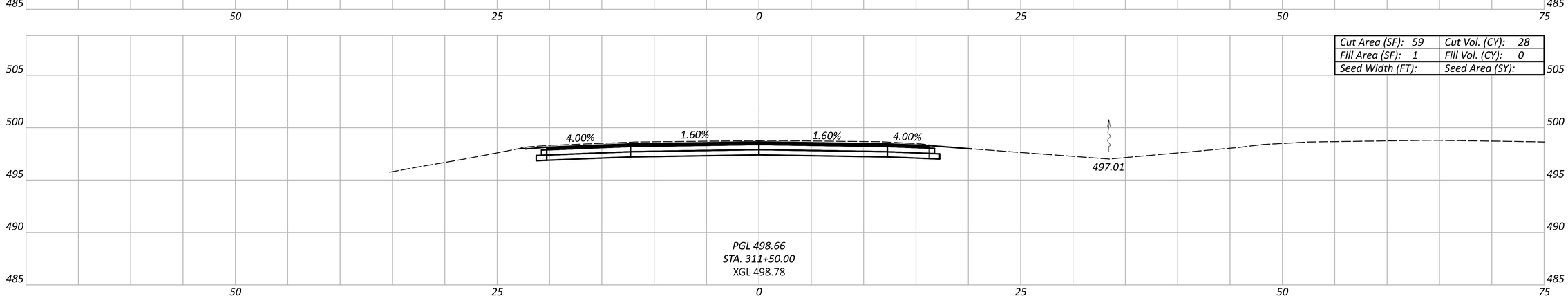
REVIEWER
MTL 03/10/26

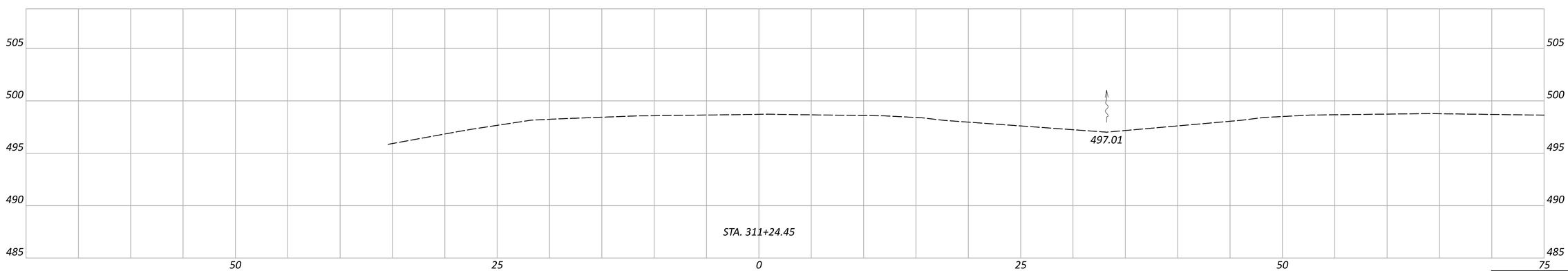
PROJECT ID
114042

SHEET P.80 TOTAL P.163

MODEL: CLP_U052_AUG - 311+24.45 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:48:01 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn







CROSS SECTIONS - US 52
STA. 311+24.45 TO STA. 312+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

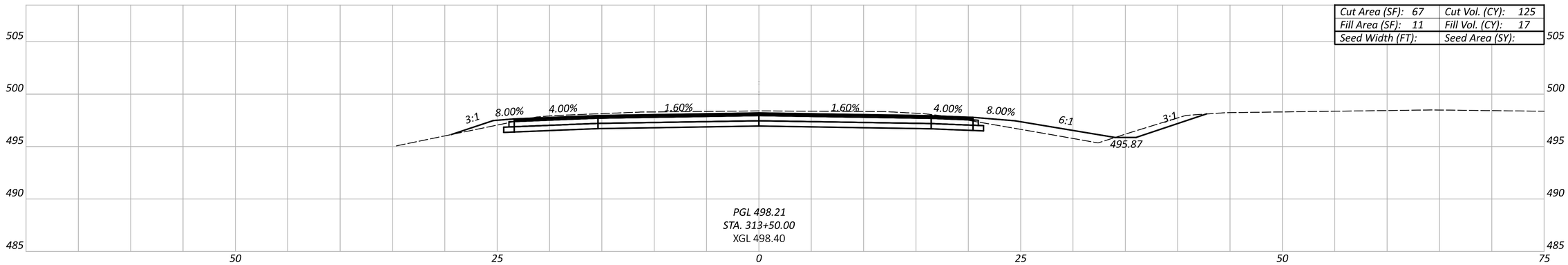
REVIEWER
MTL 03/10/26

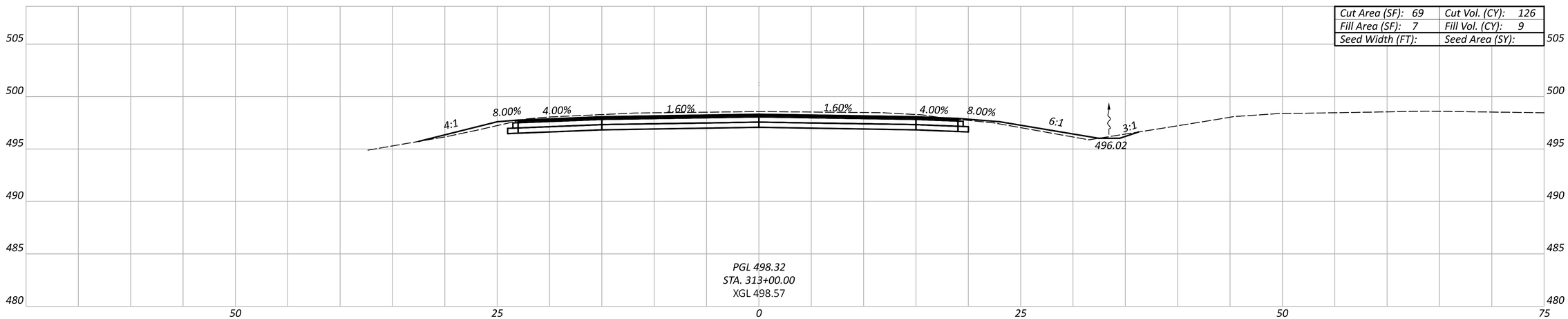
PROJECT ID
114042

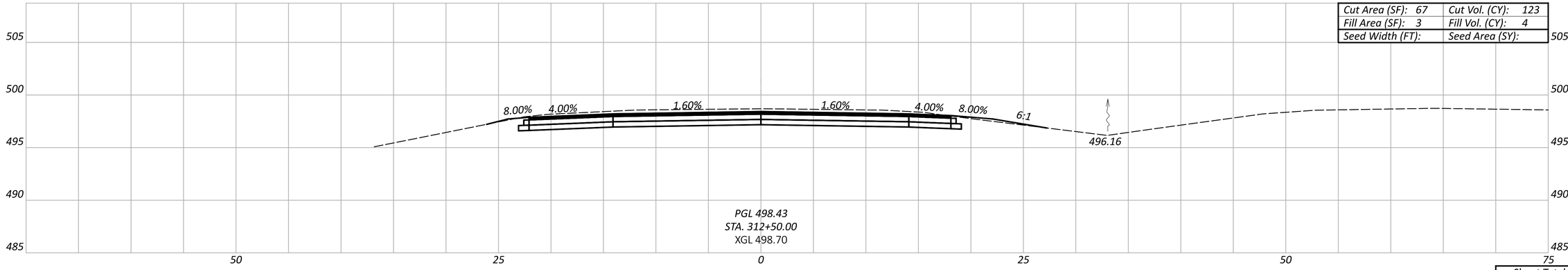
SHEET P.81 TOTAL P.163

MODEL: CLP_U052_AUG - 312+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:48:18 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn

CLE-US52-4.67







CROSS SECTIONS - US 52
STA. 312+50.00 TO STA. 313+50.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
MORGAN STRUCTUREPOINT INC.

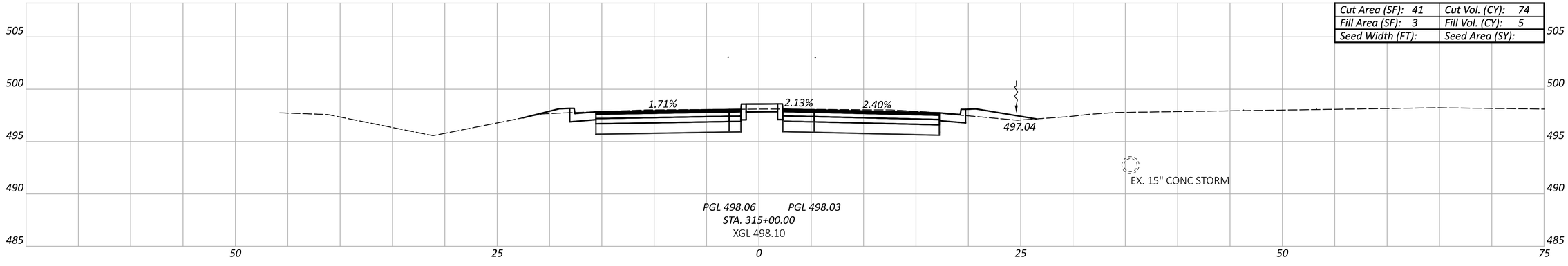
DESIGNER
AMD

REVIEWER
MTL 03/10/26

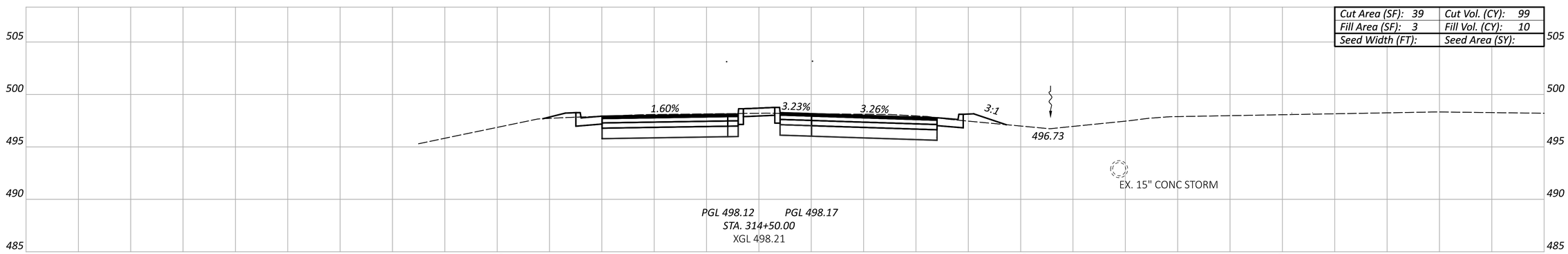
PROJECT ID
114042

SHEET P.82 TOTAL P.163

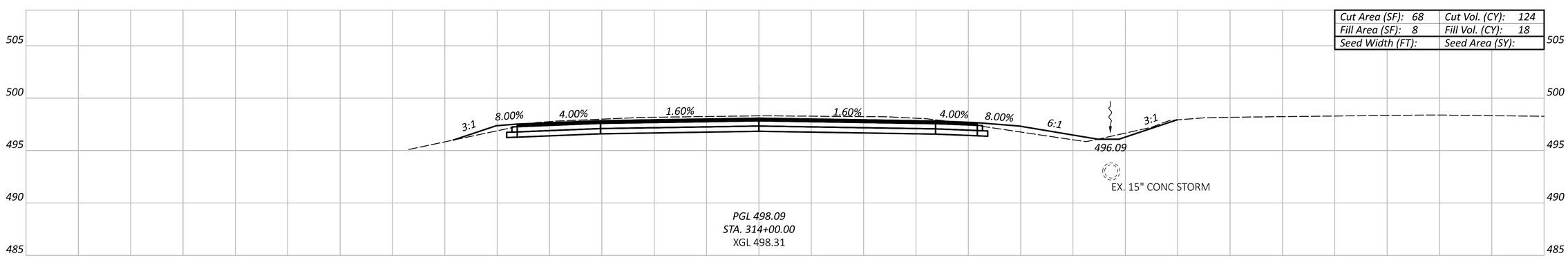
MODEL: CLP_U052_AUG - 314+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:48:25 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn



Cut Area (SF): 41	Cut Vol. (CY): 74
Fill Area (SF): 3	Fill Vol. (CY): 5
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 39	Cut Vol. (CY): 99
Fill Area (SF): 3	Fill Vol. (CY): 10
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 68	Cut Vol. (CY): 124
Fill Area (SF): 8	Fill Vol. (CY): 18
Seed Width (FT):	Seed Area (SY):

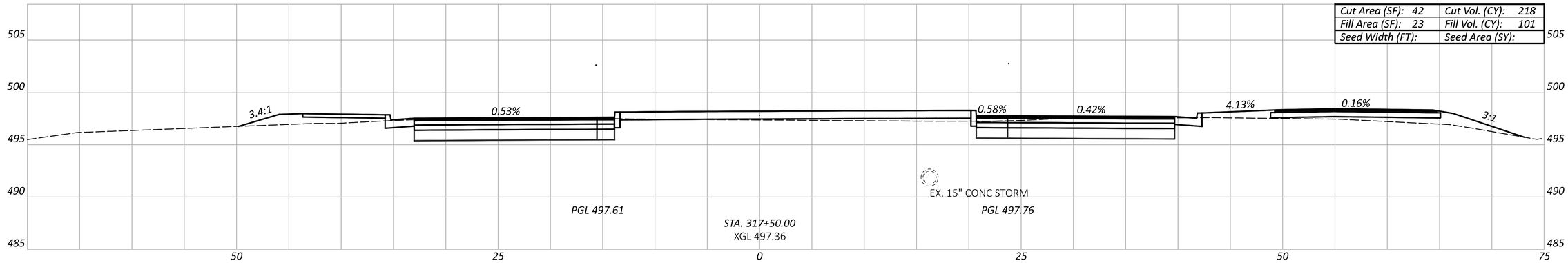
Sheet Totals		
Seeding	Cut	Fill

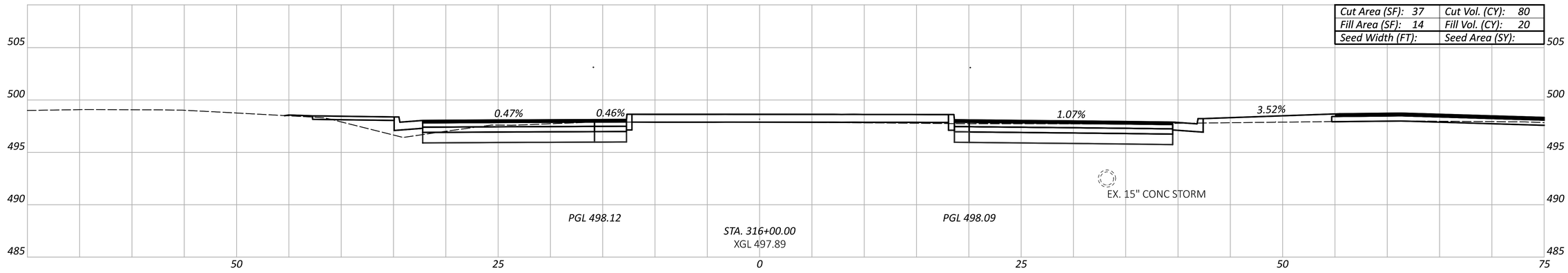
CROSS SECTIONS - US 52
STA. 314+00.00 TO STA. 315+00.00

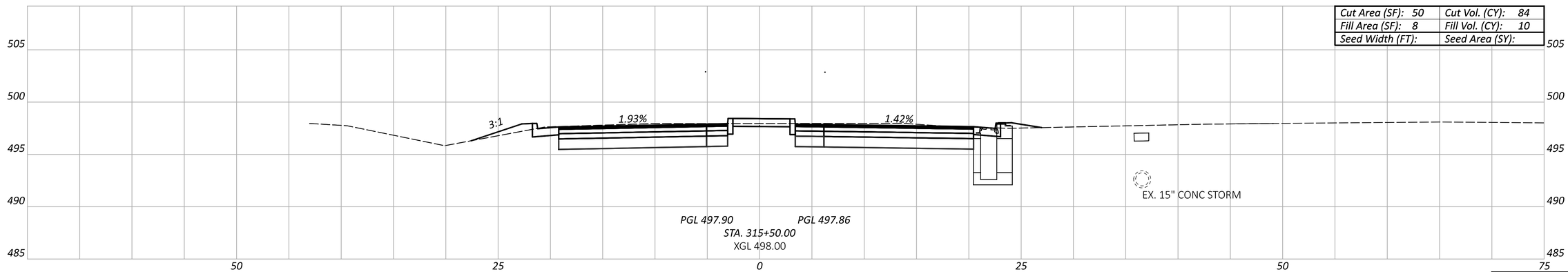
DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER	AMD
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.83
TOTAL	P.163

MODEL: CLP_U052_AUG - 315+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:48:45 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER:
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn
WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4







CROSS SECTIONS - US 52
STA. 315+50.00 TO STA. 317+50.00

Sheet Totals		
Seeding	Cut	Fill

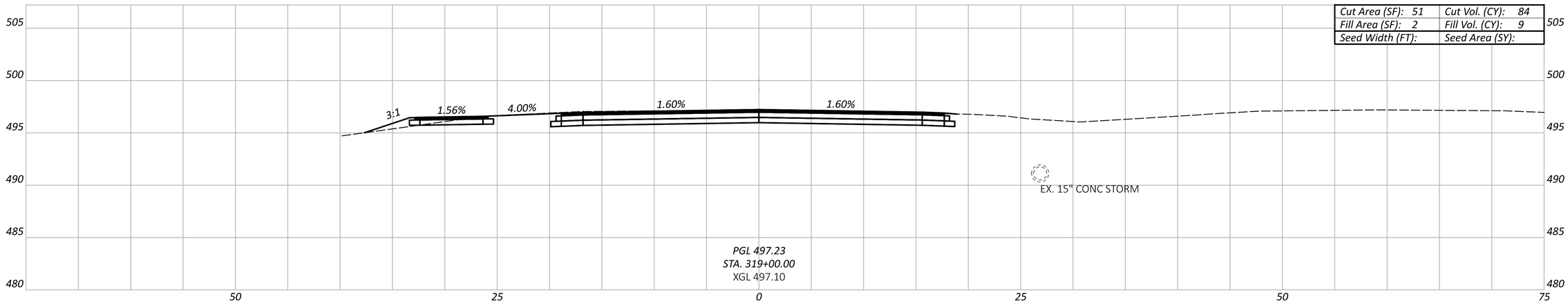
DESIGN AGENCY
AMEREN STRUCTUREPOINT INC.

DESIGNER
AMD

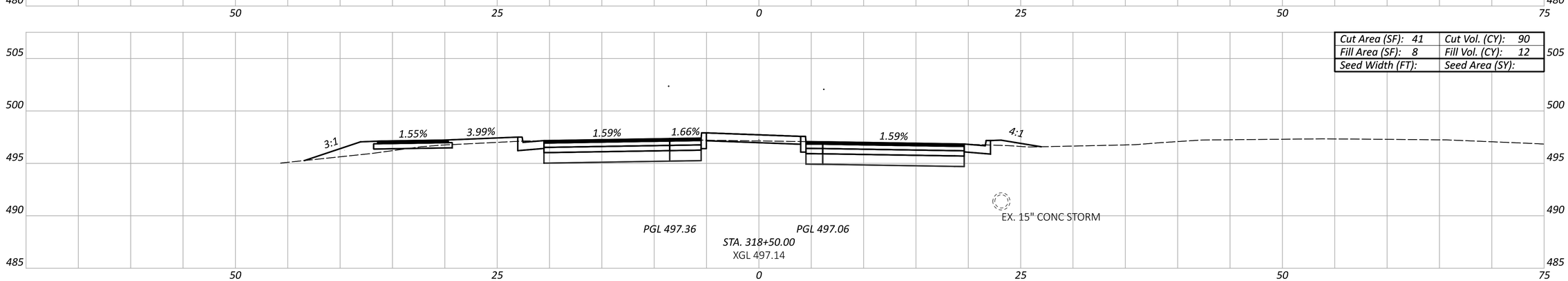
REVIEWER
MTL 03/10/26

PROJECT ID
114042

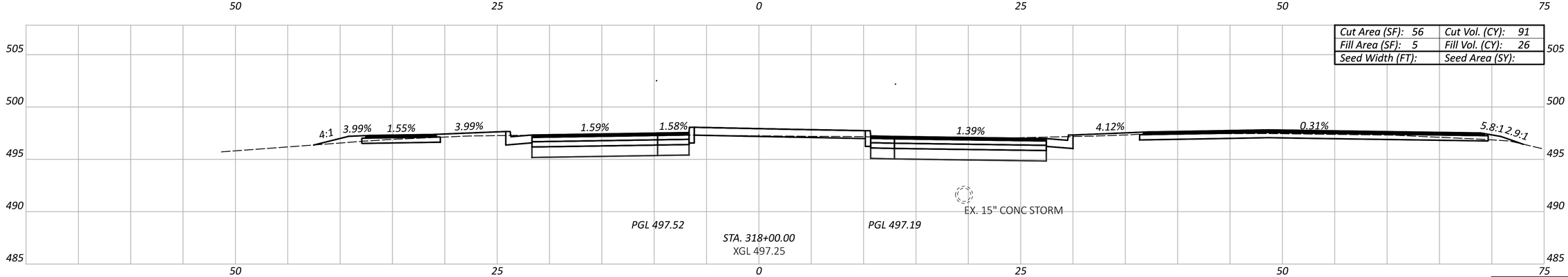
SHEET P.84 | TOTAL P.163



Cut Area (SF): 51	Cut Vol. (CY): 84
Fill Area (SF): 2	Fill Vol. (CY): 9
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 41	Cut Vol. (CY): 90
Fill Area (SF): 8	Fill Vol. (CY): 12
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 56	Cut Vol. (CY): 91
Fill Area (SF): 5	Fill Vol. (CY): 26
Seed Width (FT):	Seed Area (SY):

CROSS SECTIONS - US 52
STA. 318+00.00 TO STA. 319+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

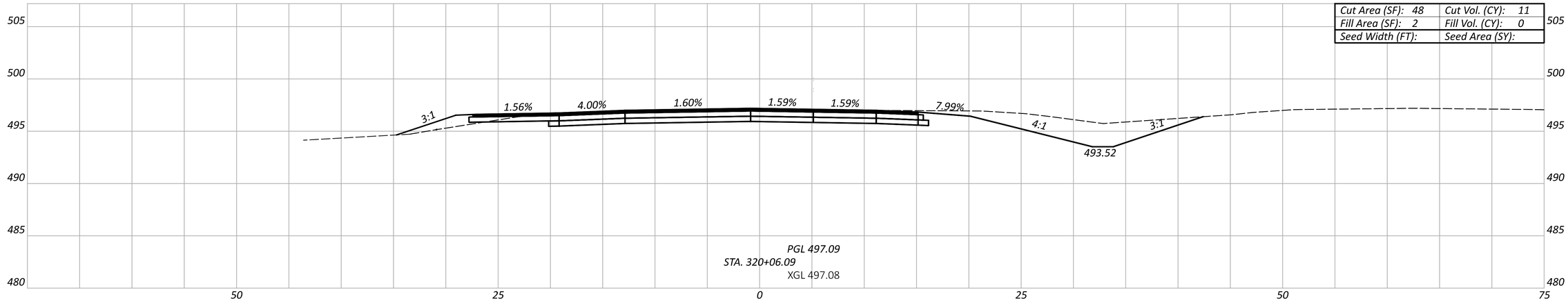
REVIEWER
MTL 03/10/26

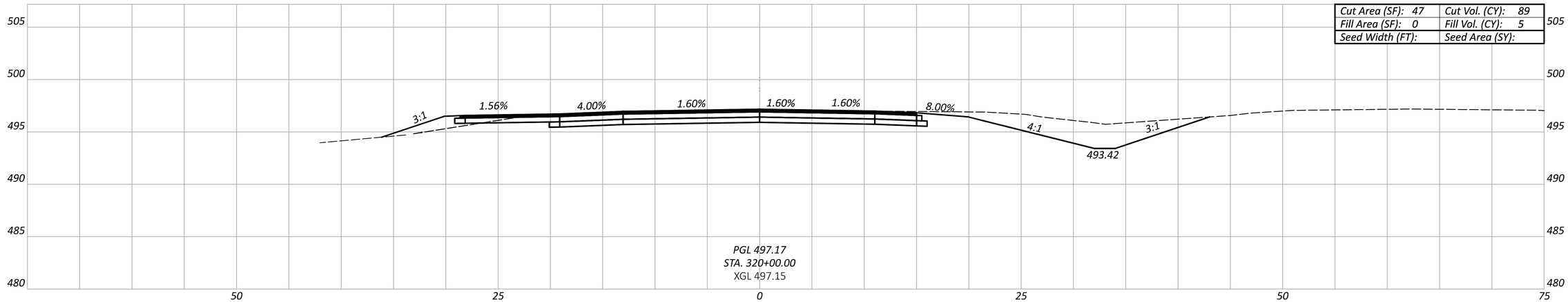
PROJECT ID
114042

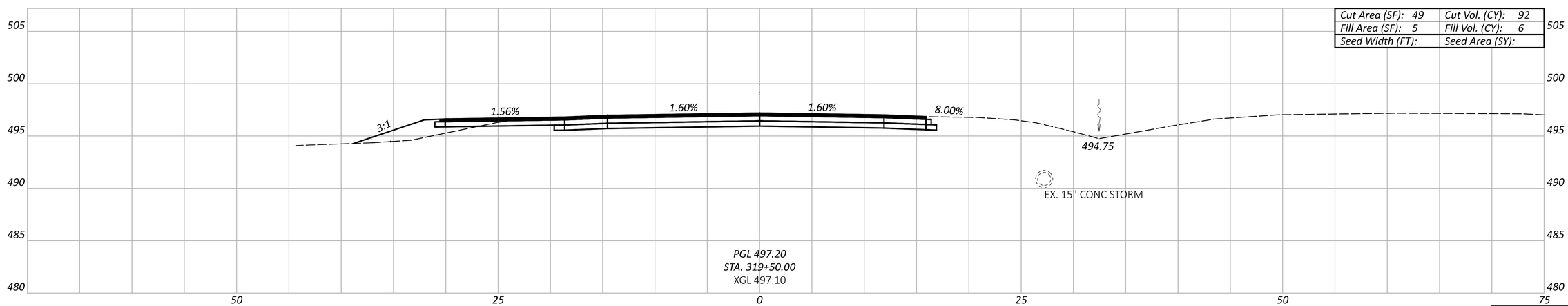
SHEET P.85 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_AUG - 318+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:48:54 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn







CROSS SECTIONS - US 52
STA. 319+50.00 TO STA. 320+06.09

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

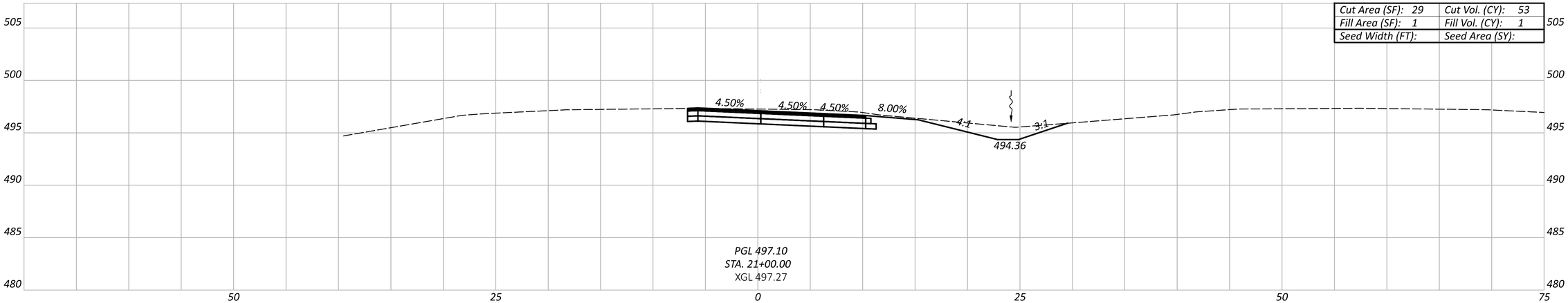
REVIEWER
MTL 03/10/26

PROJECT ID
114042

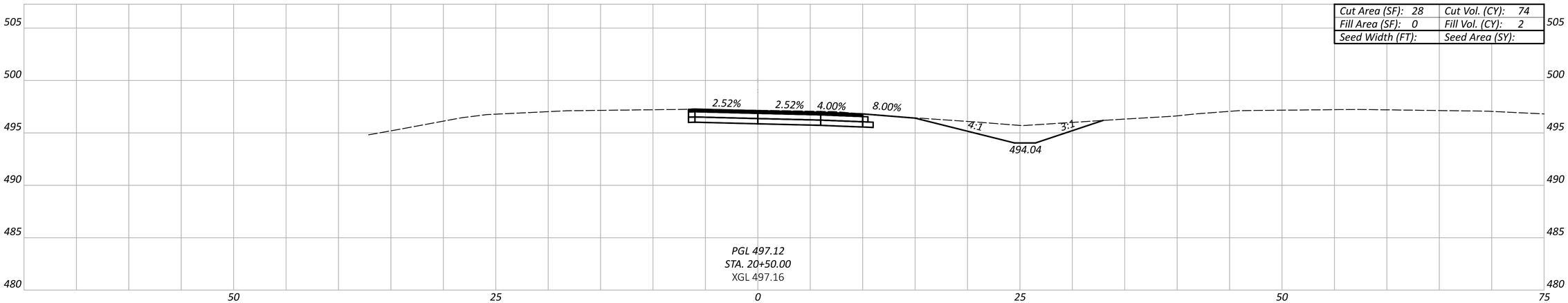
SHEET P.86 | TOTAL P.163

CLE-US52-4.67

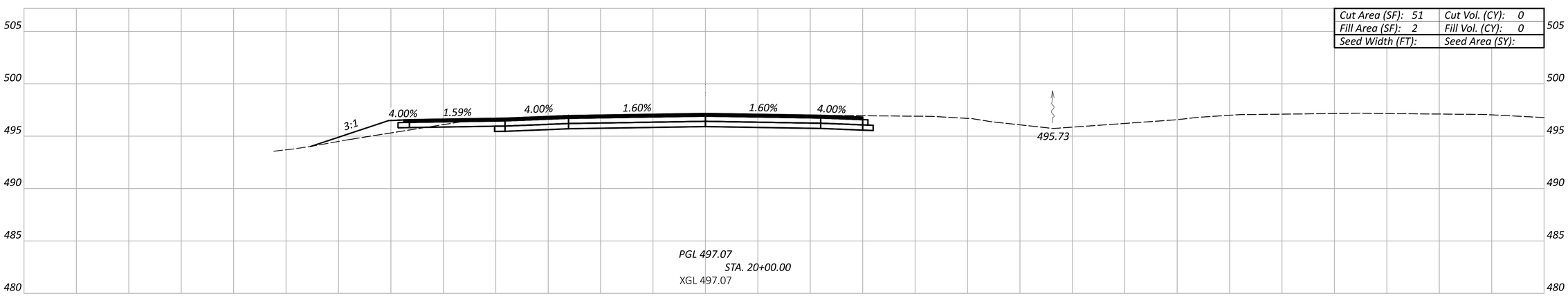
MODEL: CLP_U052_AUG - 319+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:01 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\40D-Engineering\Roadway\Sheets\114042_XS130.dgn



Cut Area (SF): 29	Cut Vol. (CY): 53
Fill Area (SF): 1	Fill Vol. (CY): 1
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 28	Cut Vol. (CY): 74
Fill Area (SF): 0	Fill Vol. (CY): 2
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 51	Cut Vol. (CY): 0
Fill Area (SF): 2	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 20+00.00 TO STA. 21+00.00

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

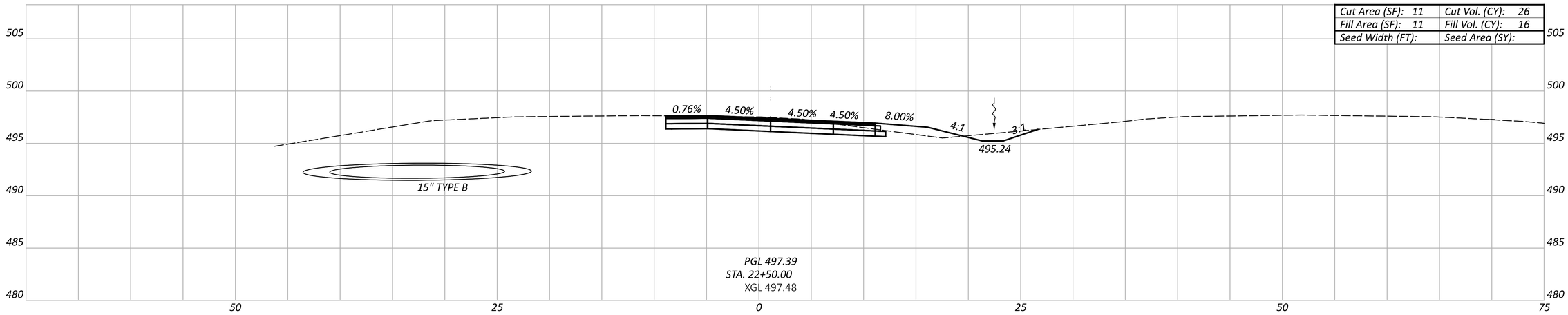
SHEET P.87 | TOTAL P.163

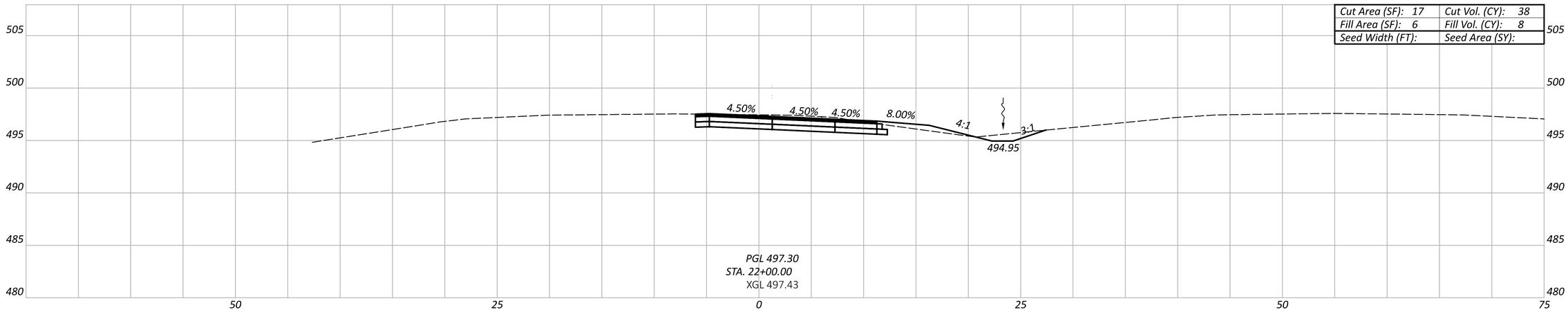
CLE-US52-4.67

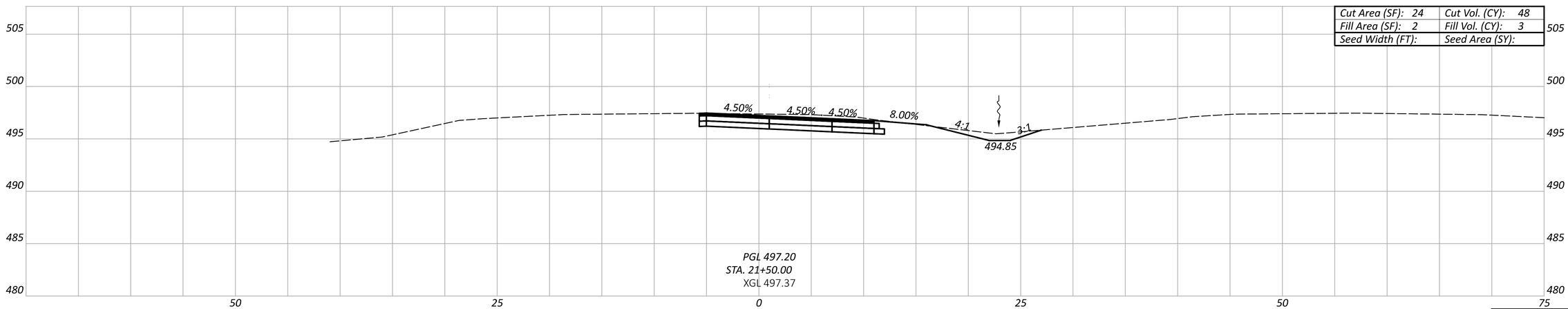
MODEL: Augusta Crossover - 20+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:05 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn

MODEL: Augusta Crossover - 21+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:12 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn

CLE-US52-4.67







CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 21+50.00 TO STA. 22+50.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

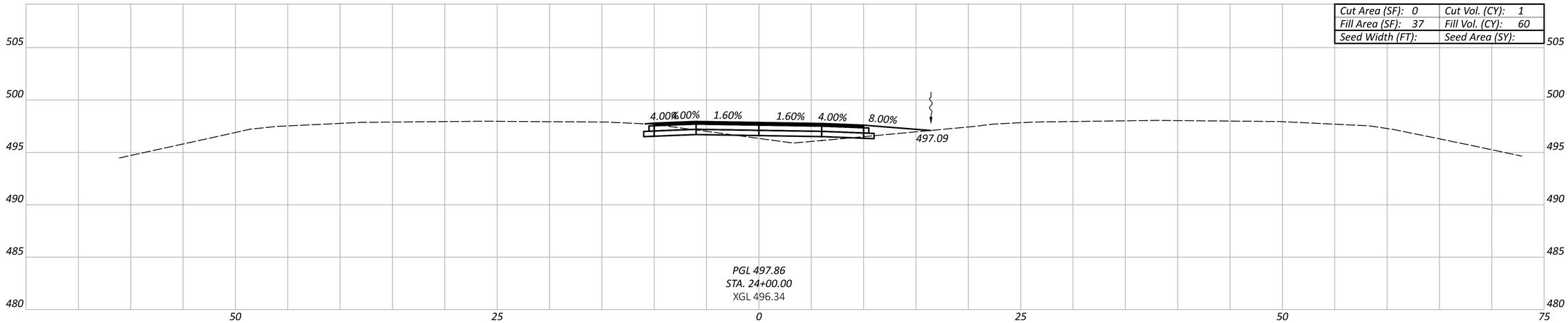
REVIEWER
MTL 03/10/26

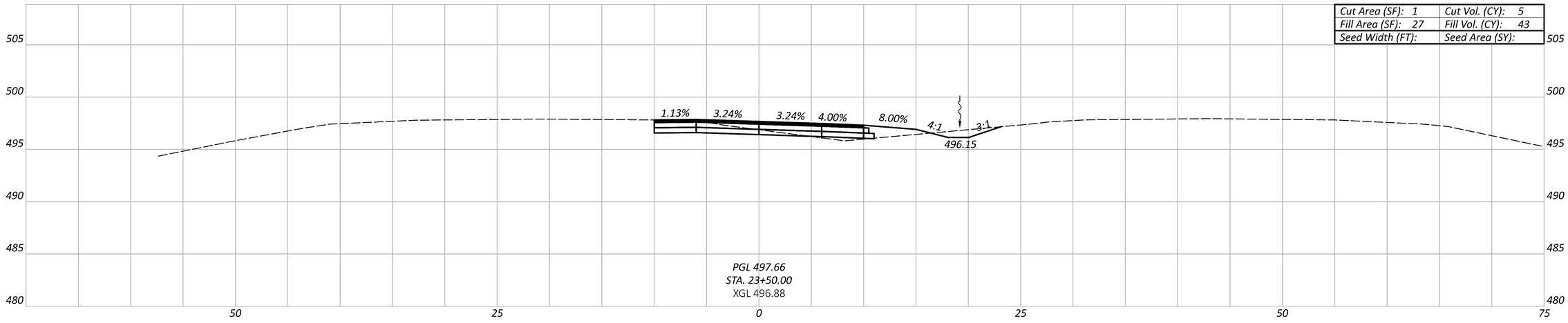
PROJECT ID
114042

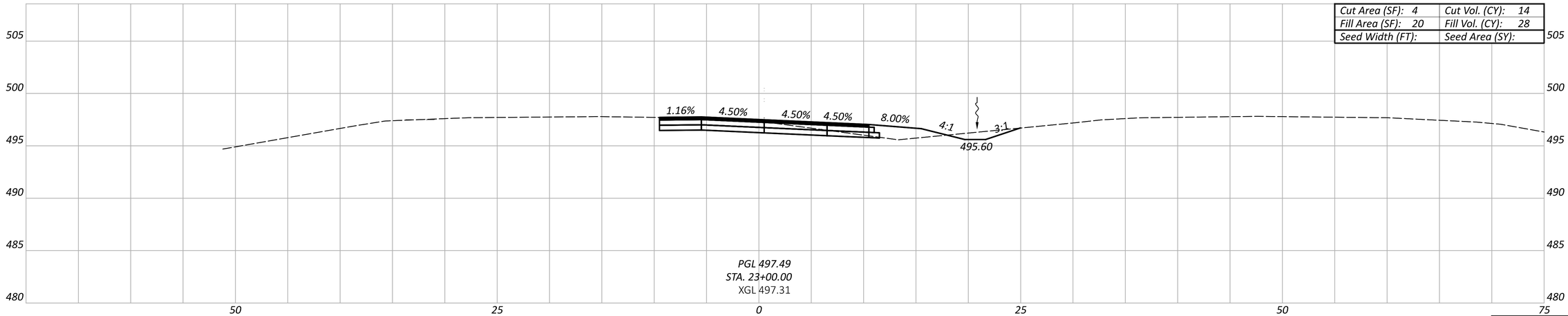
SHEET P.88 | TOTAL P.163

MODEL: Augusta Crossover - 23+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:19 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn

CLE-US52-4.67







CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 23+00.00 TO STA. 24+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
MORGAN STRUCTUREPOINT INC

DESIGNER
AMD

REVIEWER
MTL 03/10/26

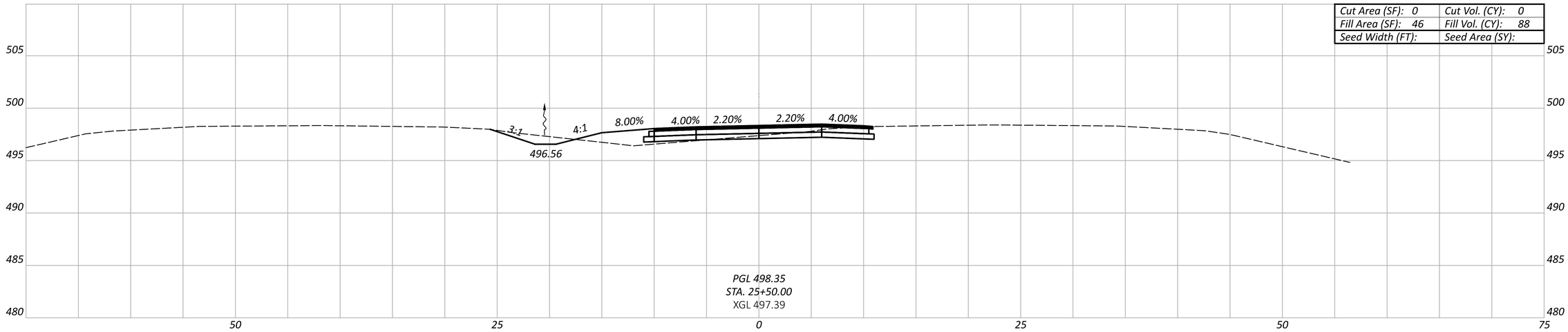
PROJECT ID
114042

SHEET	TOTAL
P.89	P.163

MODEL: Augusta Crossover - 24+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:26 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn

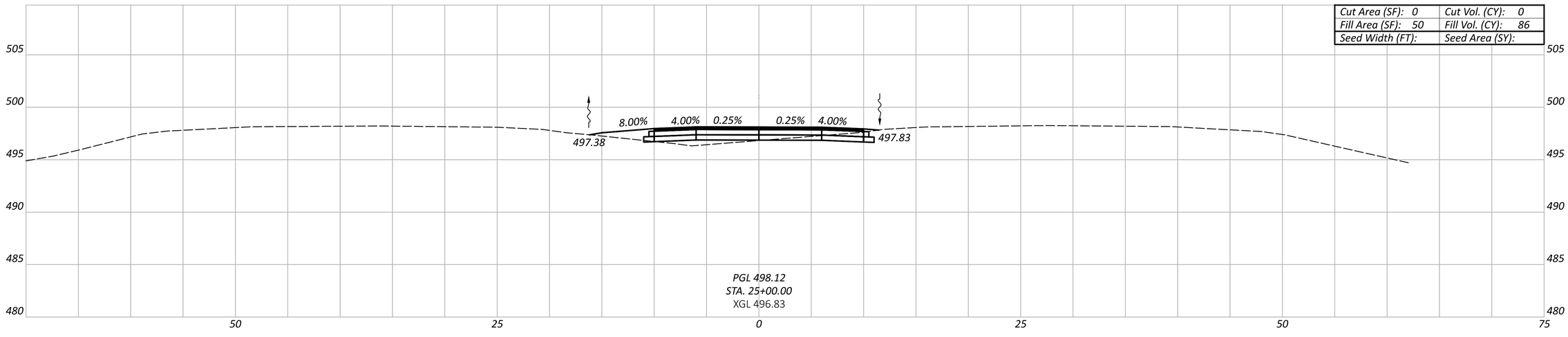
CLE-US52-4.67

Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 46	Fill Vol. (CY): 88
Seed Width (FT):	Seed Area (SY):



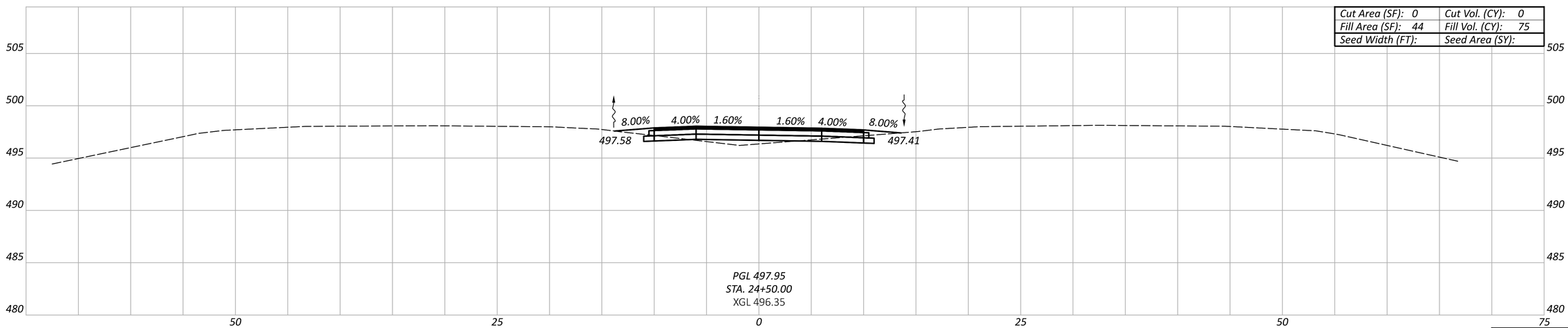
PGL 498.35
STA. 25+50.00
XGL 497.39

Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 50	Fill Vol. (CY): 86
Seed Width (FT):	Seed Area (SY):



PGL 498.12
STA. 25+00.00
XGL 496.83

Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 44	Fill Vol. (CY): 75
Seed Width (FT):	Seed Area (SY):



PGL 497.95
STA. 24+50.00
XGL 496.35

CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 24+50.00 TO STA. 25+50.00

Sheet Totals		
Seeding	Cut	Fill

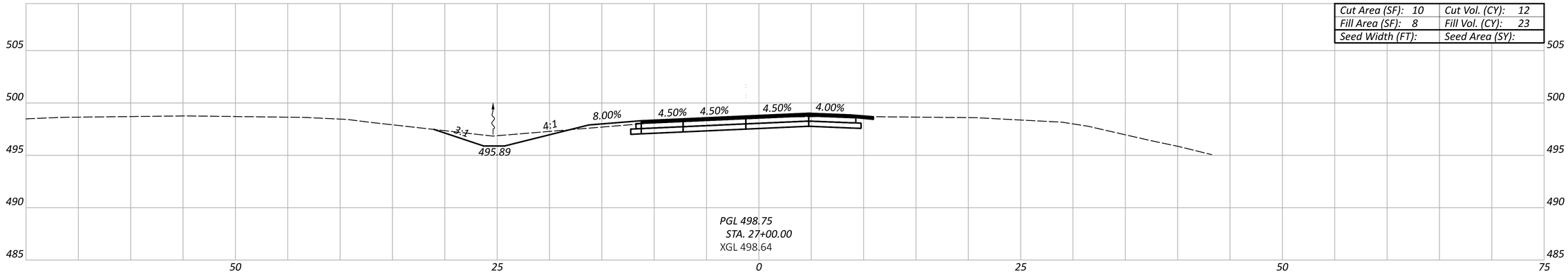
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

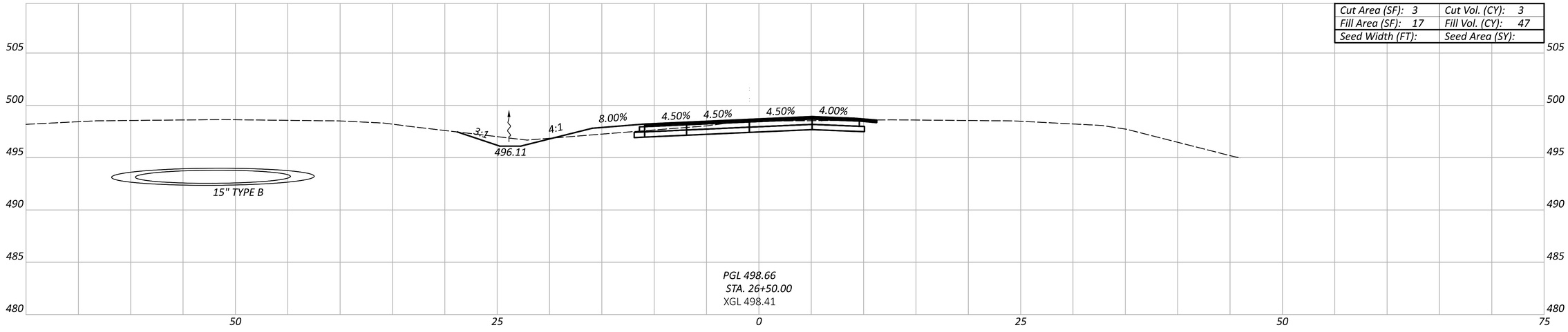
REVIEWER
MTL 03/10/26

PROJECT ID
114042

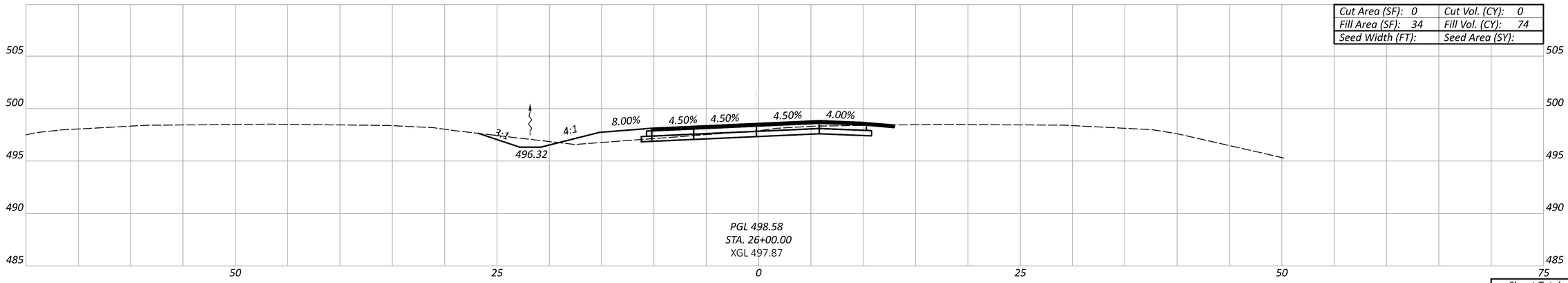
SHEET P.90 TOTAL P.163



Cut Area (SF): 10	Cut Vol. (CY): 12
Fill Area (SF): 8	Fill Vol. (CY): 23
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 3	Cut Vol. (CY): 3
Fill Area (SF): 17	Fill Vol. (CY): 47
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 0	Cut Vol. (CY): 0
Fill Area (SF): 34	Fill Vol. (CY): 74
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 26+00.00 TO STA. 27+00.00

DESIGN AGENCY
MPEAN STRUCTUREPOINT INC.

DESIGNER
AMD

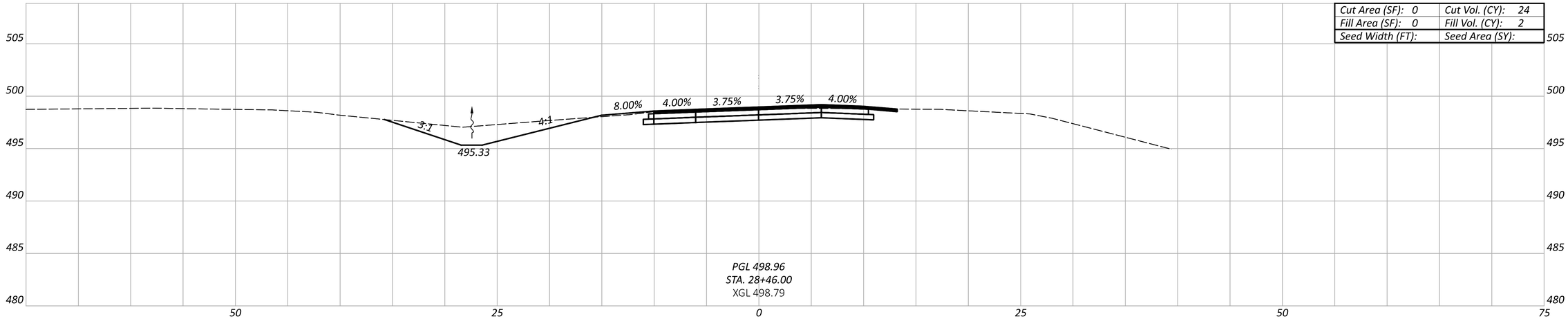
REVIEWER
MTL 03/10/26

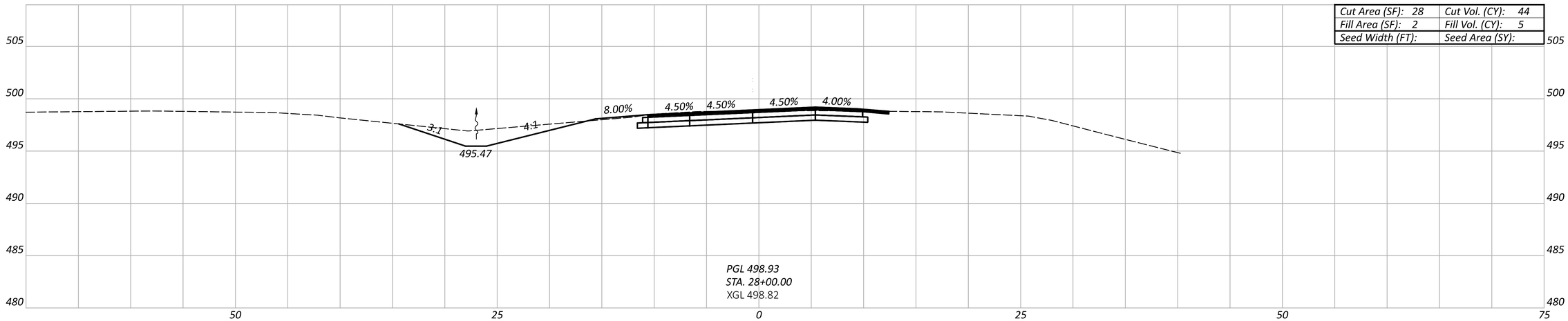
PROJECT ID
114042

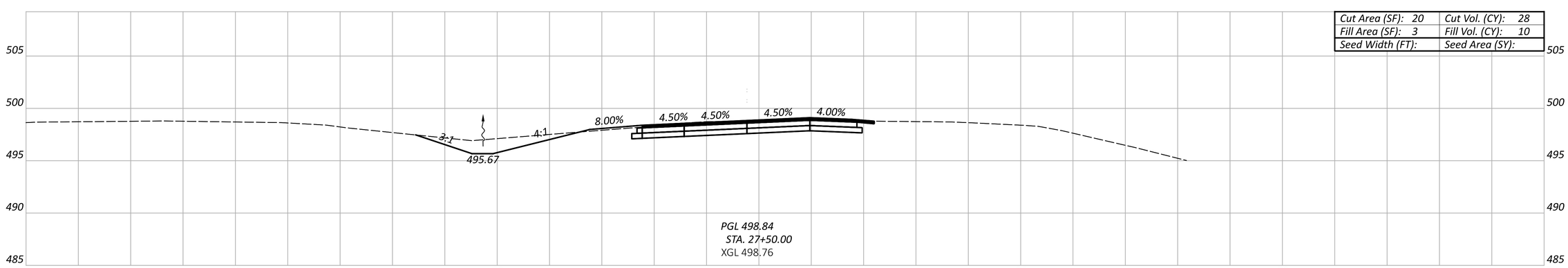
SHEET P.91 | TOTAL P.163

CLE-US52-4.67

MODEL: Augusta Crossover - 26+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:33 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
C:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn







Sheet Totals

Seeding	Cut	Fill

CROSS SECTIONS - CROSSOVER US 52 SOUTH
STA. 27+50.00 TO STA. 28+46.00

DESIGN AGENCY
MICHAEL BAKER INTERNATIONAL
STRUCTUREPOINT INC.

DESIGNER
AMD

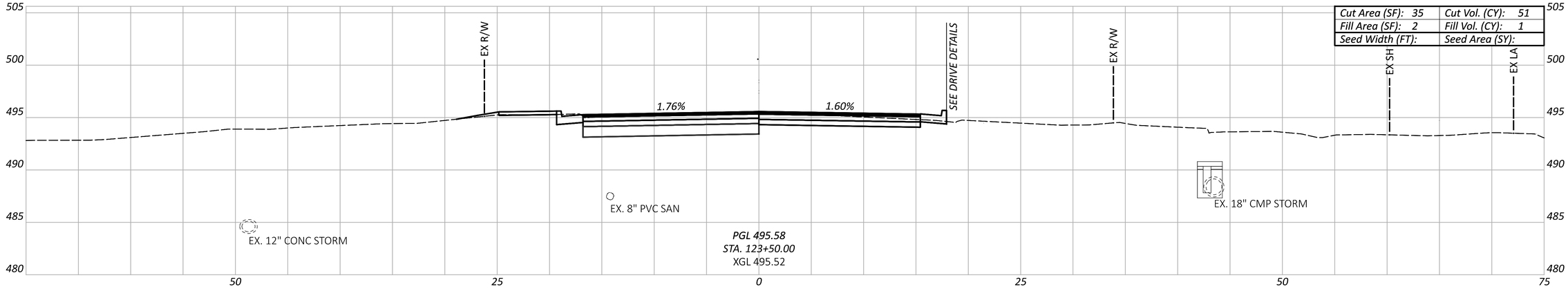
REVIEWER
MTL 03/10/26

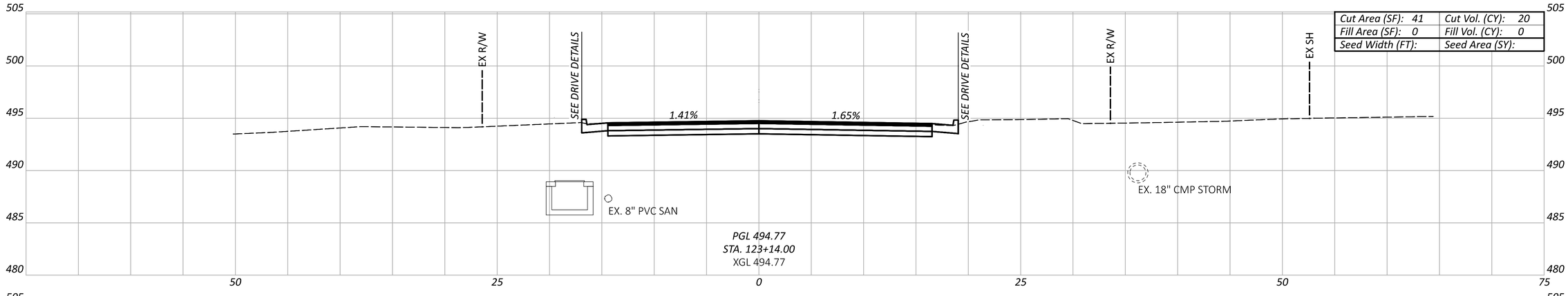
PROJECT ID
114042

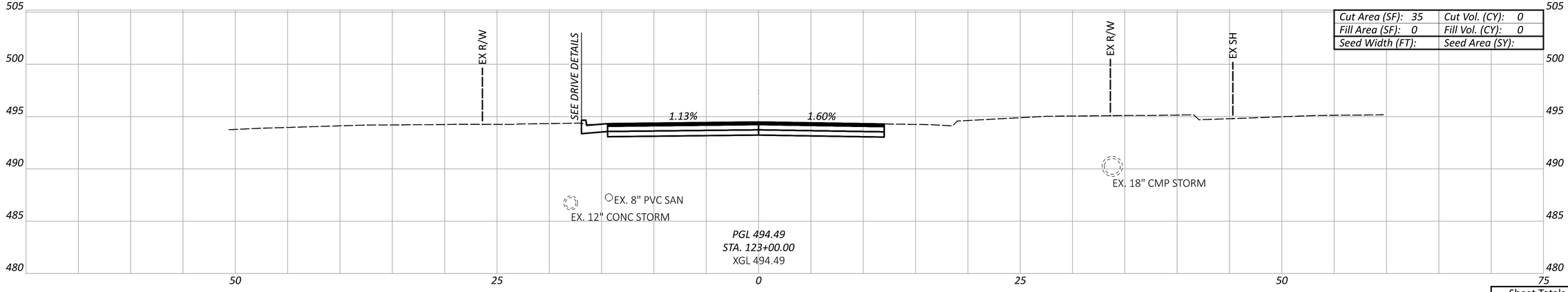
SHEET P.92 | TOTAL P.163

CLE-US52-4.67

MODEL: Augusta Crossover - 27+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:49:40 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_XS130.dgn







CROSS SECTIONS - SYCAMORE ST
STA. 123+00.00 TO STA. 123+50.00

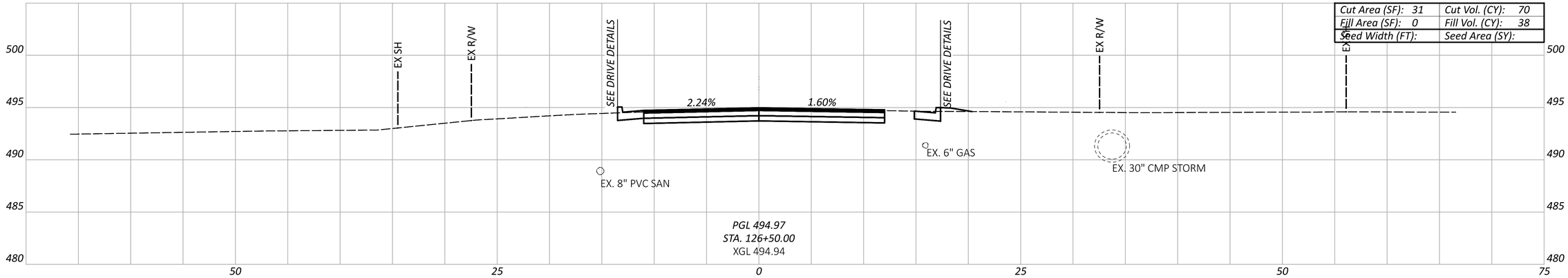
Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
STRUCTUREPOINT

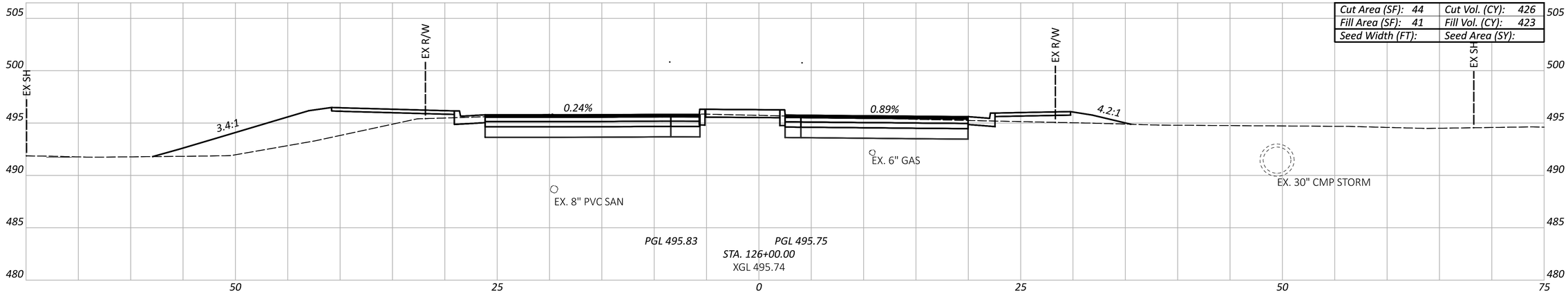
DESIGNER	AMD
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.93
TOTAL	P.163

CLE-US52-4.67

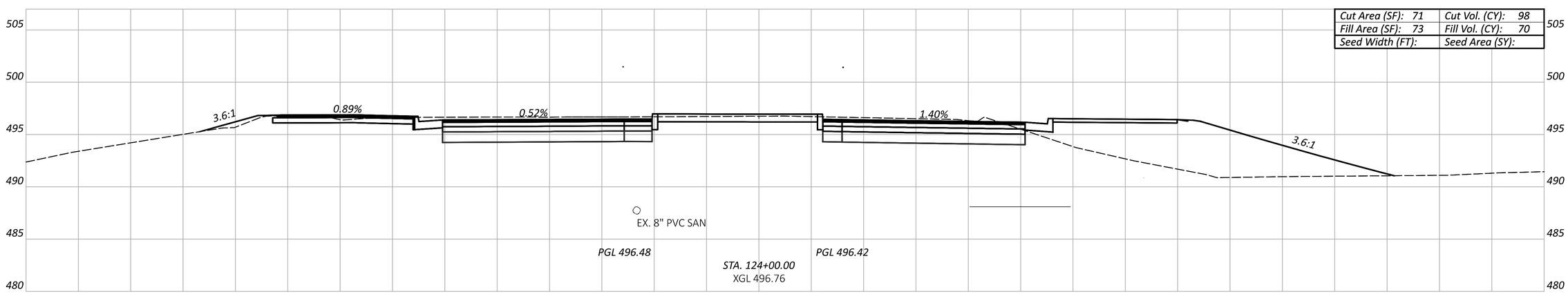
MODEL: CLP_SYC - 123+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:50:14 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS111.dgn



Cut Area (SF): 31	Cut Vol. (CY): 70
Fill Area (SF): 0	Fill Vol. (CY): 38
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 44	Cut Vol. (CY): 426
Fill Area (SF): 41	Fill Vol. (CY): 423
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 71	Cut Vol. (CY): 98
Fill Area (SF): 73	Fill Vol. (CY): 70
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

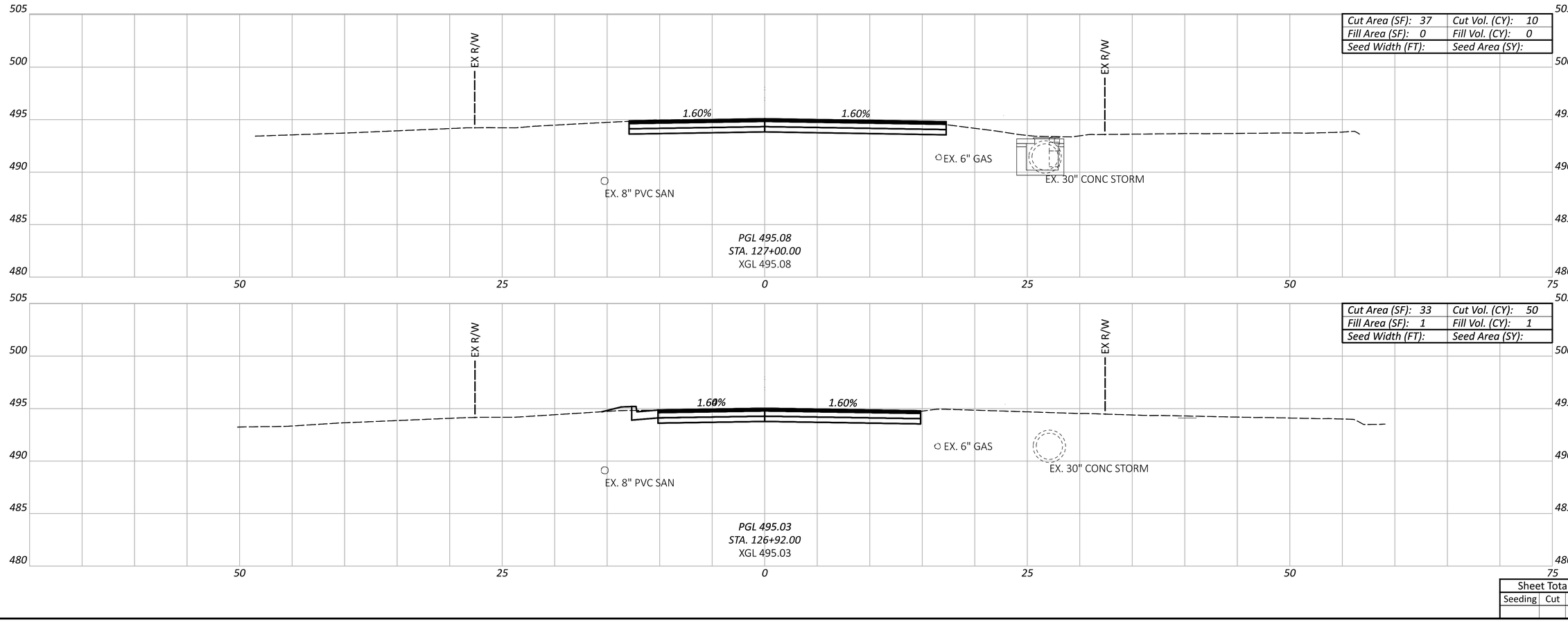
CROSS SECTIONS - SYCAMORE ST
STA. 124+00.00 TO STA. 126+50.00

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER	AMD
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.94
TOTAL	P.163

CLE-US52-4.67

MODEL: CLP_SYC - 124+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:50:39 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS111.dgn



CROSS SECTIONS - SYCAMORE ST
STA. 126+92.00 TO STA. 127+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

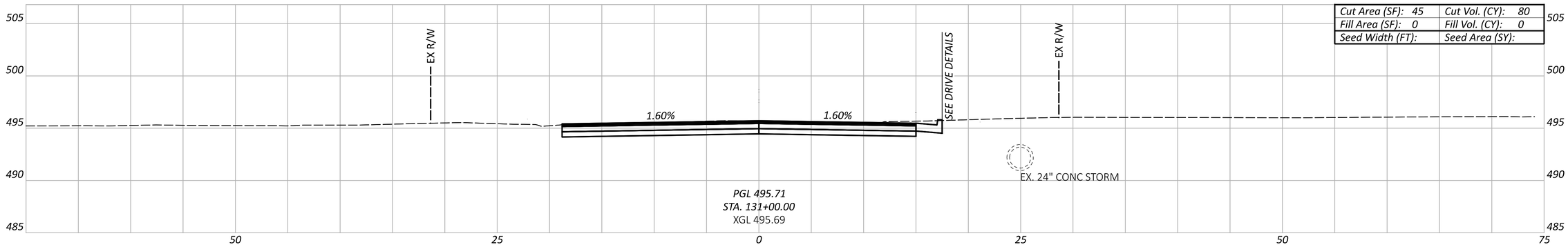
PROJECT ID
114042

SHEET P.95 TOTAL P.163

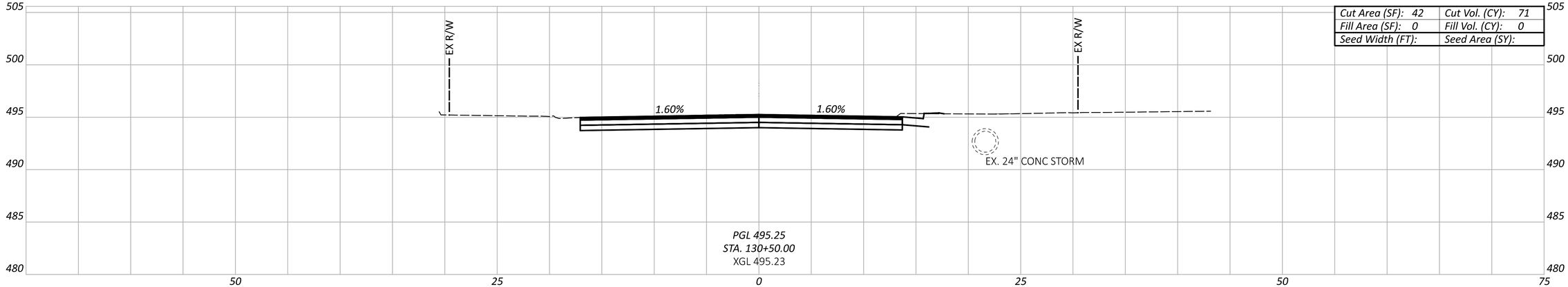
CLE-US52-4.67

MODEL: CLP_SYC - 126+92.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:50:51 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS111.dgn

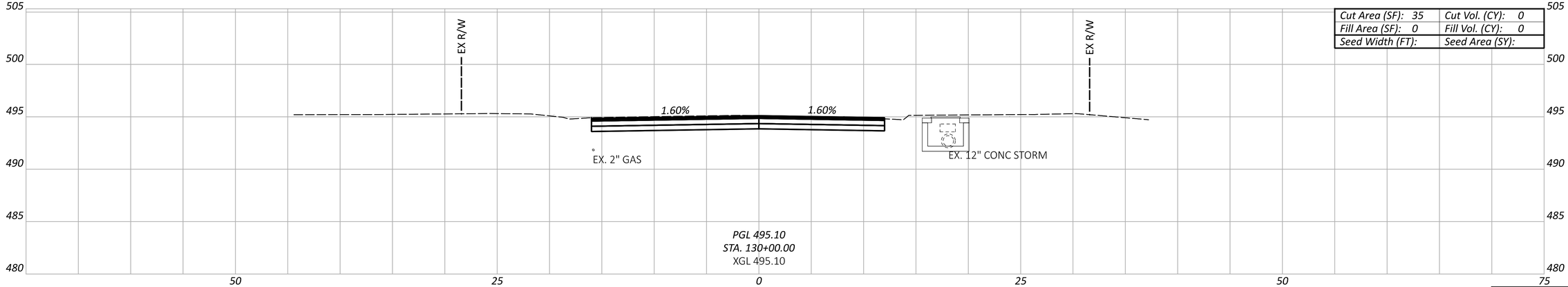
MODEL: CLP_WAL - 130+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:51:26 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS121.dgn



Cut Area (SF): 45	Cut Vol. (CY): 80
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 42	Cut Vol. (CY): 71
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):



Cut Area (SF): 35	Cut Vol. (CY): 0
Fill Area (SF): 0	Fill Vol. (CY): 0
Seed Width (FT):	Seed Area (SY):

Sheet Totals		
Seeding	Cut	Fill

CROSS SECTIONS - WALNUT ST
STA. 130+00.00 TO STA. 131+00.00

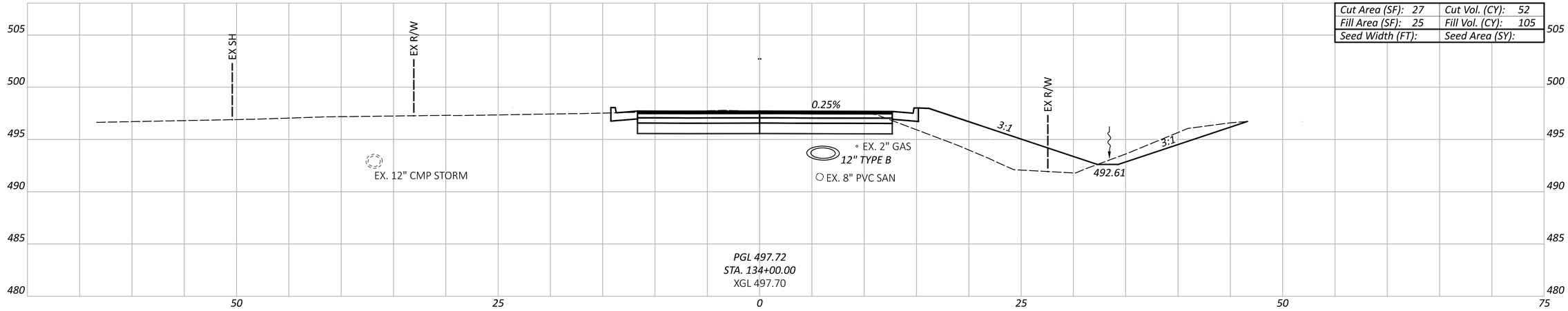
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
AMD

REVIEWER
MTL 03/10/26

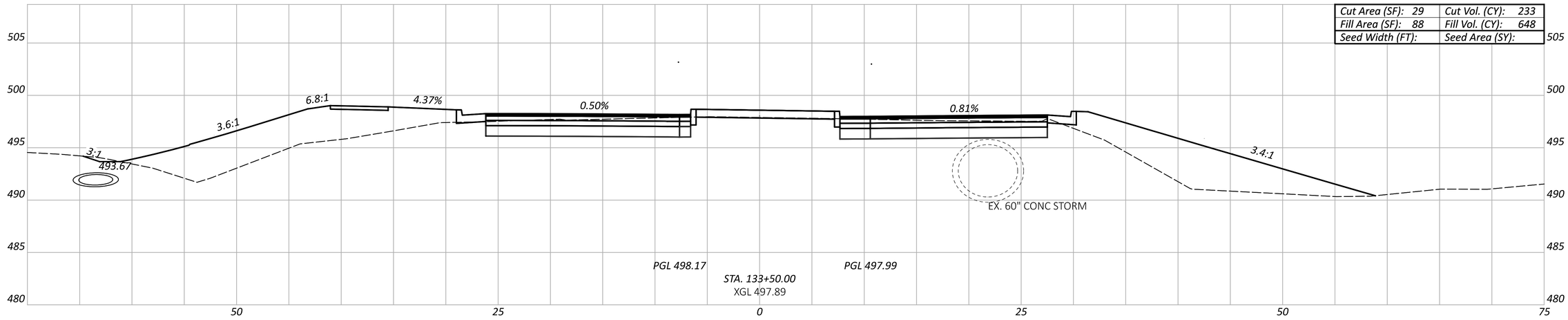
PROJECT ID
114042

SHEET P.96 TOTAL P.163



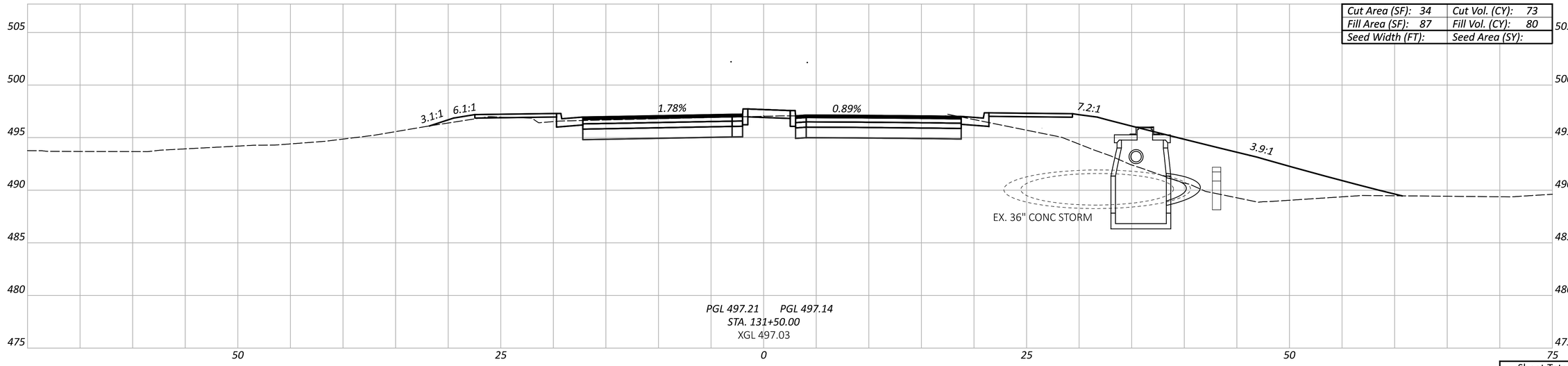
Cut Area (SF): 27	Cut Vol. (CY): 52
Fill Area (SF): 25	Fill Vol. (CY): 105
Seed Width (FT):	Seed Area (SY):

PGL 497.72
STA. 134+00.00
XGL 497.70



Cut Area (SF): 29	Cut Vol. (CY): 233
Fill Area (SF): 88	Fill Vol. (CY): 648
Seed Width (FT):	Seed Area (SY):

PGL 498.17 PGL 497.99
STA. 133+50.00
XGL 497.89



Cut Area (SF): 34	Cut Vol. (CY): 73
Fill Area (SF): 87	Fill Vol. (CY): 80
Seed Width (FT):	Seed Area (SY):

PGL 497.21 PGL 497.14
STA. 131+50.00
XGL 497.03

CROSS SECTIONS - WALNUT ST
STA. 131+50.00 TO STA. 134+00.00

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

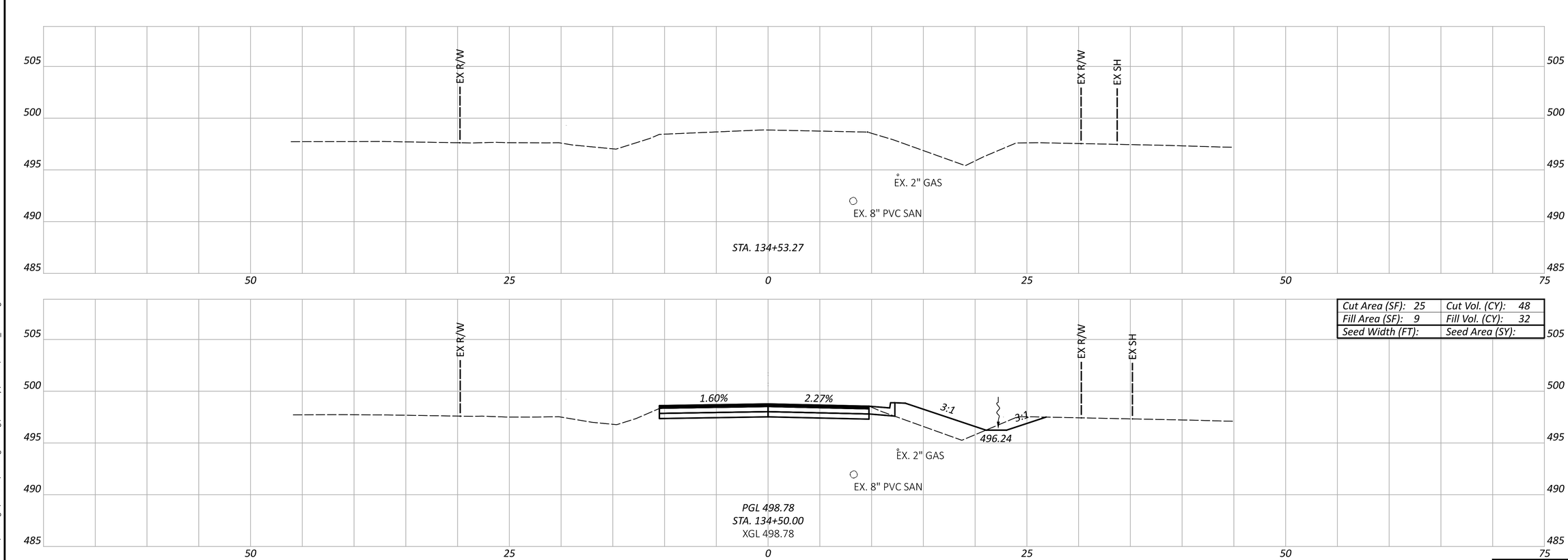
SHEET P.97 TOTAL P.163

CLE-US52-4.67

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WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4

MODEL: CLP_WAL - 134+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:52:11 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS121.dgn

CLE-US52-4.67



Cut Area (SF): 25	Cut Vol. (CY): 48
Fill Area (SF): 9	Fill Vol. (CY): 32
Seed Width (FT):	Seed Area (SY):

CROSS SECTIONS - WALNUT ST
STA. 134+50.00 TO STA. 134+53.27

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

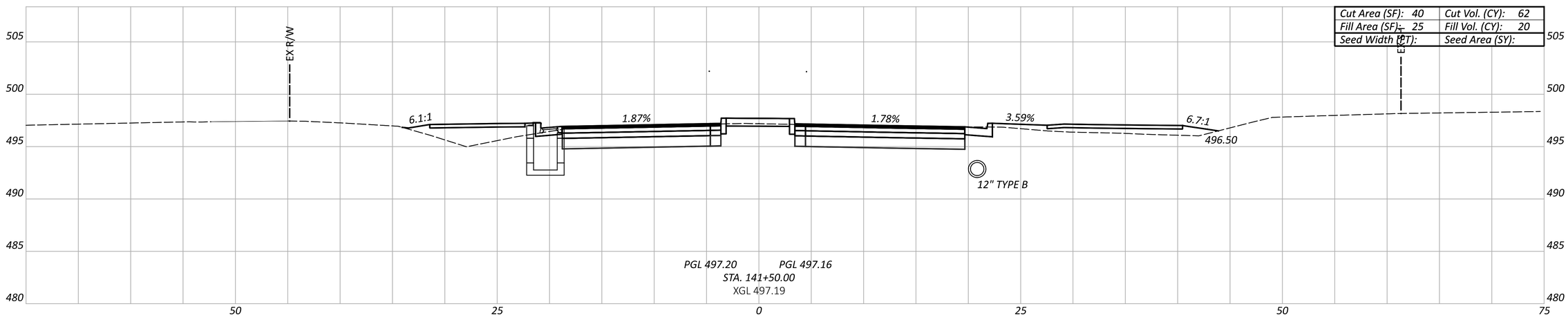
SHEET P.98 TOTAL P.163

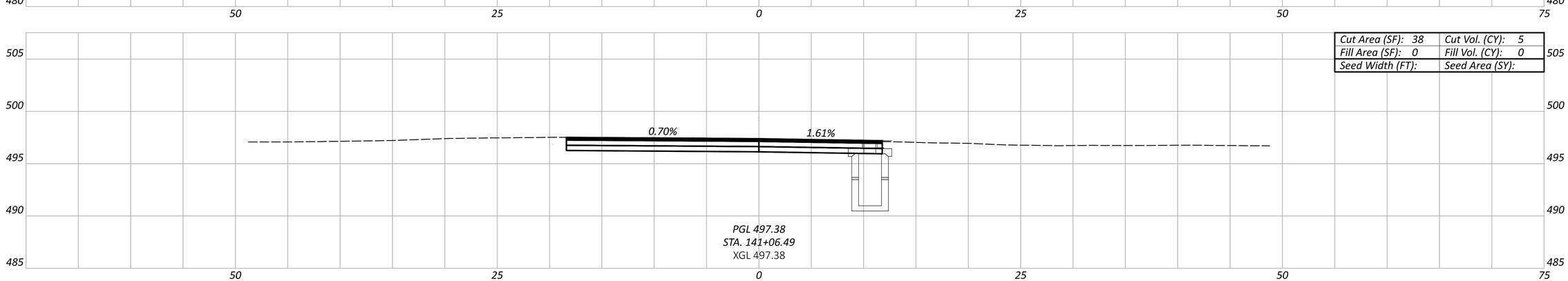
Sheet Totals

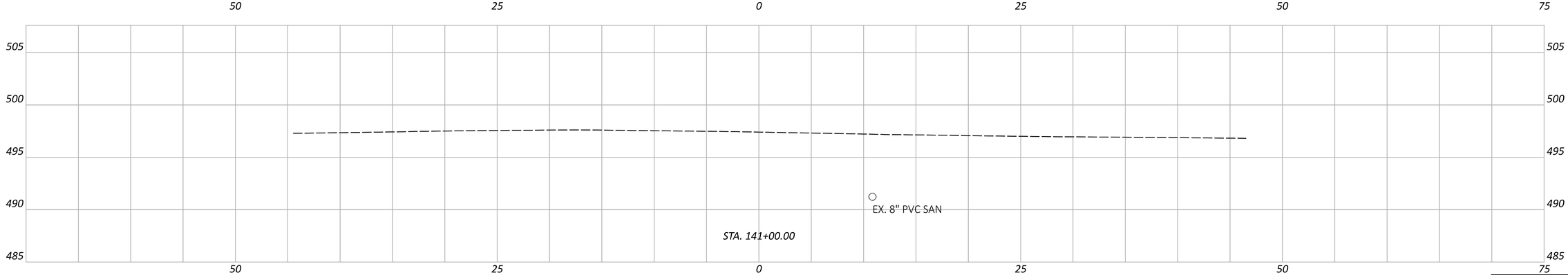
Seeding	Cut	Fill

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O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS131.dgn

CLE-US52-4.67







CROSS SECTIONS - AUGUSTA ST
STA. 141+00.00 TO STA. 141+50.00

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

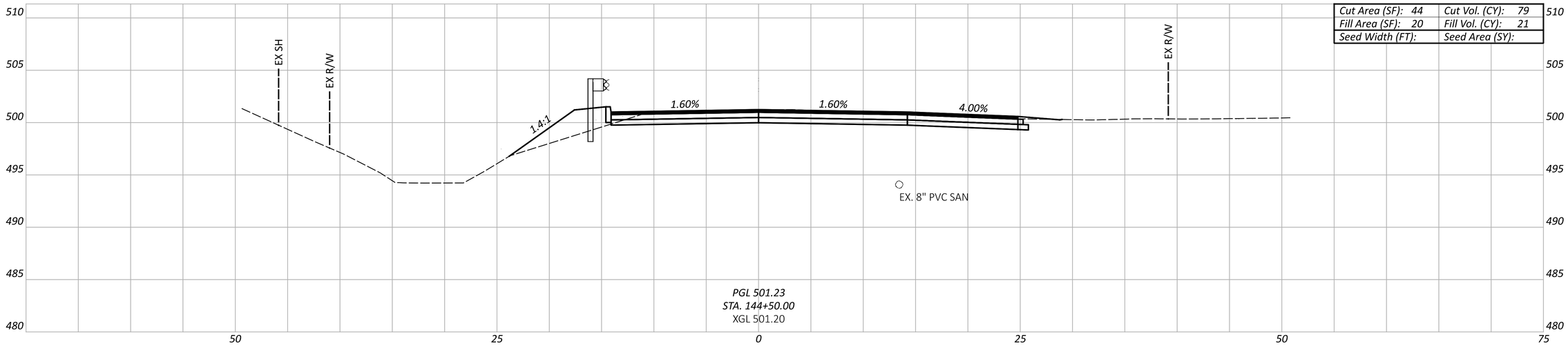
DESIGNER
AMD

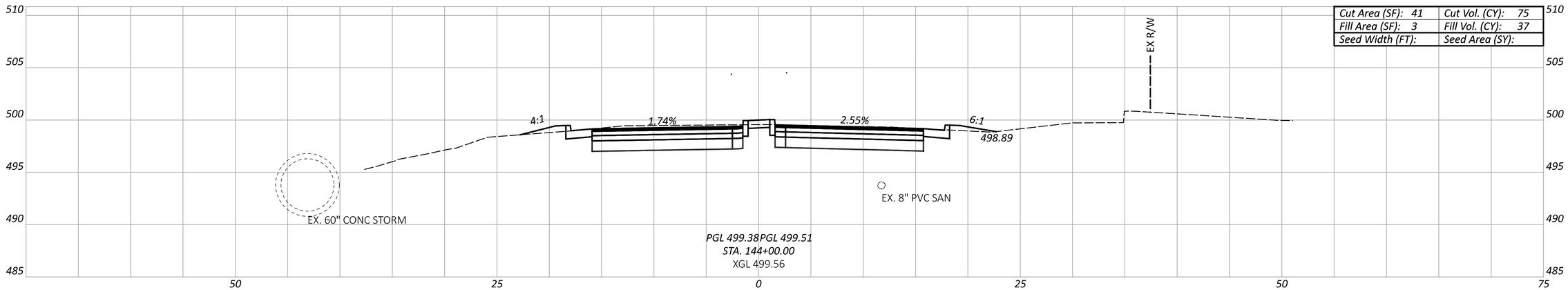
REVIEWER
MTL 03/10/26

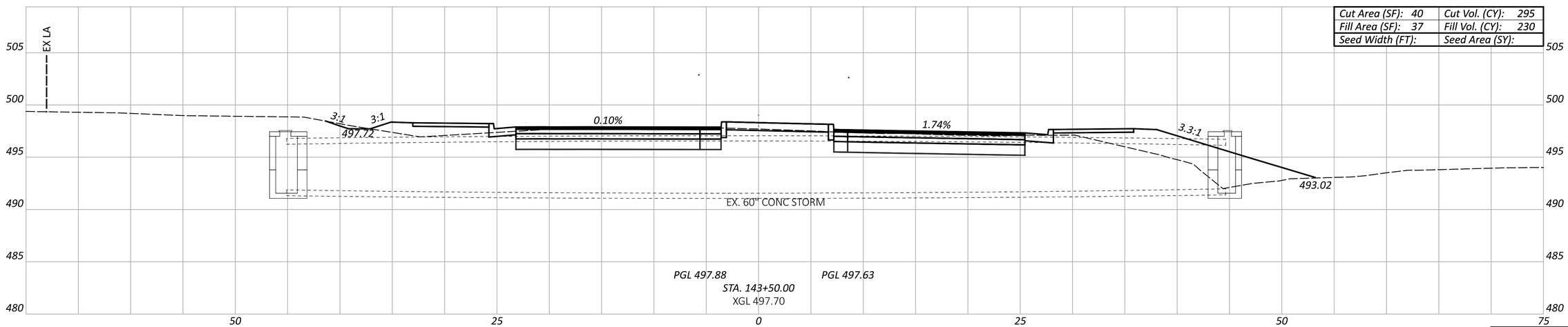
PROJECT ID
114042

Sheet Totals		
Seeding	Cut	Fill

SHEET P.99 TOTAL P.163







CROSS SECTIONS - AUGUSTA ST
STA. 143+50.00 TO STA. 144+50.00

CLE-US52-4.67

MODEL: CLP_AUG - 143+50.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:53:31 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS131.dgn

Sheet Totals

Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

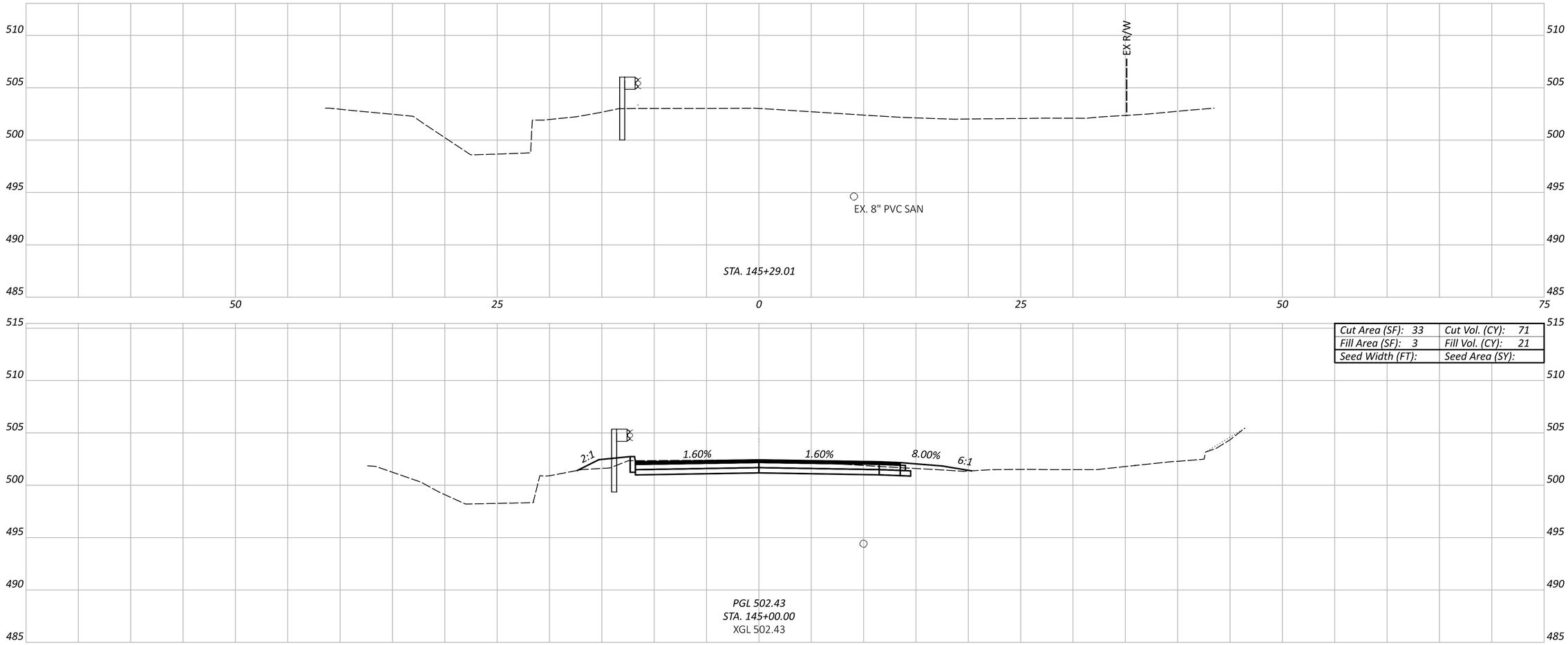
DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.100 | TOTAL P.163

MODEL: CLP_AUG - 145+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:53:40 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245 9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
O:\2019\02459\C. Design\114042\400-Engineering\Roadway\Sheets\114042_XS131.dgn



Cut Area (SF): 33	Cut Vol. (CY): 71
Fill Area (SF): 3	Fill Vol. (CY): 21
Seed Width (FT):	Seed Area (SY):

CROSS SECTIONS - AUGUSTA ST
STA. 145+00.00 TO STA. 145+29.01

Sheet Totals		
Seeding	Cut	Fill

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
AMD

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.101 TOTAL P.163

CLE-US52-4.67

CROSSOVER NORTH SUPERELEVATION TRANSITION TABLE

CURVE 5 PI STA. 74+27.18 Dc = 02° 00' 00"

CURVE 6 PI STA. 78+81.95 Dc = 02° 00' 00"

DESCRIPTION	TRANSITION RATE	LEFT SIDE						CENTERLINE CONTROL		RIGHT SIDE					
		EDGE OF SHOULDER	SHOULDER CROSS SLOPE	SHOULDER WIDTH	EDGE OF PAVEMENT	PAVEMENT CROSS SLOPE	PAVEMENT WIDTH	STATION	ELEVATION (PGL)	PAVEMENT WIDTH	PAVEMENT CROSS SLOPE	EDGE OF PAVEMENT	SHOULDER WIDTH	SHOULDER CROSS SLOPE	EDGE OF SHOULDER
NORMAL CROWN		497.00	-0.040	4.0	497.16	-0.016	6.0	72+91.29	497.26	6.0	-0.016	497.36	4.0	0.040	497.52
		497.00	-0.040	4.0	497.16	-0.021	6.0	73+00.00	497.29	6.0	-0.021	497.41	4.0	0.040	497.57
		497.00	-0.040	4.0	497.16	-0.034	6.0	73+25.00	497.36	6.0	-0.034	497.56	4.0	0.036	497.70
FULL SUPER		496.97	-0.045	4.0	497.15	-0.045	6.0	73+46.82	497.42	6.0	-0.045	497.69	4.0	0.025	497.79
		496.98	-0.045	4.0	497.16	-0.045	6.0	73+50.00	497.43	6.0	-0.045	497.70	4.0	0.025	497.80
		497.06	-0.045	4.0	497.24	-0.045	6.0	73+75.00	497.51	6.0	-0.045	497.78	4.0	0.025	497.88
		497.13	-0.045	4.0	497.31	-0.045	6.0	74+00.00	497.58	6.0	-0.045	497.85	4.0	0.025	497.95
		497.21	-0.045	4.0	497.39	-0.045	6.0	74+25.00	497.66	6.0	-0.045	497.93	4.0	0.025	498.03
		497.28	-0.045	4.0	497.46	-0.045	6.0	74+50.00	497.73	6.0	-0.045	498.00	4.0	0.025	498.10
		497.36	-0.045	4.0	497.54	-0.045	6.0	74+75.00	497.81	6.0	-0.045	498.08	4.0	0.025	498.18
		497.43	-0.045	4.0	497.61	-0.045	6.0	75+00.00	497.88	6.0	-0.045	498.15	4.0	0.025	498.25
FULL SUPER		497.45	-0.045	4.0	497.63	-0.045	6.0	75+07.43	497.90	6.0	-0.045	498.17	4.0	0.025	498.27
		497.59	-0.040	4.0	497.75	-0.033	6.0	75+25.00	497.96	6.0	-0.033	498.16	4.0	0.037	498.30
		497.72	-0.040	4.0	497.88	-0.026	6.0	75+50.00	498.03	6.0	-0.026	498.18	4.0	0.040	498.34
NORMAL CROWN		497.81	-0.040	4.0	497.97	-0.016	6.0	75+62.96	498.07	6.0	-0.016	498.17	4.0	0.040	498.33
		497.85	-0.040	4.0	498.01	-0.016	6.0	75+75.00	498.10	6.0	-0.016	498.20	4.0	0.040	498.36
		497.92	-0.040	4.0	498.08	-0.016	6.0	76+00.00	498.18	6.0	-0.016	498.27	4.0	0.040	498.43
		498.00	-0.040	4.0	498.16	-0.016	6.0	76+25.00	498.25	6.0	-0.016	498.35	4.0	0.040	498.51
		498.05	-0.040	4.0	498.21	-0.016	6.0	76+50.00	498.31	6.0	-0.016	498.40	4.0	0.040	498.56
		498.07	-0.040	4.0	498.23	-0.016	6.0	76+75.00	498.33	6.0	-0.016	498.42	4.0	0.040	498.58
NORMAL CROWN		498.07	-0.040	4.0	498.23	-0.016	6.0	76+79.92	498.33	6.0	-0.016	498.43	4.0	0.040	498.59
		498.15	-0.040	4.0	498.31	-0.006	6.0	77+00.00	498.35	6.0	-0.006	498.38	4.0	0.040	498.54
LEVEL CROWN		498.20	-0.040	4.0	498.36	0.000	6.0	77+10.56	498.36	6.0	0.000	498.36	4.0	-0.040	498.20
		498.57	0.040	4.0	498.41	0.008	6.0	77+25.00	498.37	6.0	0.008	498.32	4.0	-0.040	498.16
REVERSE CROWN		498.64	0.040	4.0	498.48	0.016	6.0	77+41.20	498.38	6.0	0.016	498.28	4.0	-0.040	498.12
		498.67	0.040	4.0	498.51	0.020	6.0	77+50.00	498.39	6.0	0.020	498.27	4.0	-0.040	498.11
		498.75	0.038	4.0	498.60	0.032	6.0	77+75.00	498.41	6.0	0.032	498.22	4.0	-0.036	498.07
		498.79	0.027	4.0	498.69	0.043	6.0	78+00.00	498.43	6.0	0.043	498.17	4.0	-0.027	498.06
FULL SUPER		498.80	0.025	4.0	498.70	0.045	6.0	78+04.39	498.43	6.0	0.045	498.16	4.0	-0.025	498.06
		498.82	0.025	4.0	498.72	0.045	6.0	78+25.00	498.45	6.0	0.045	498.18	4.0	-0.025	498.08
		498.82	0.025	4.0	498.72	0.045	6.0	78+50.00	498.45	6.0	0.045	498.18	4.0	-0.025	498.08
		498.78	0.025	4.0	498.68	0.045	6.0	78+75.00	498.41	6.0	0.045	498.14	4.0	-0.025	498.04
		498.74	0.025	4.0	498.64	0.045	6.0	79+00.00	498.37	6.0	0.045	498.10	4.0	-0.025	498.00
		498.70	0.025	4.0	498.60	0.045	6.0	79+25.00	498.33	6.0	0.045	498.06	4.0	-0.025	497.96
		498.66	0.025	4.0	498.56	0.045	6.0	79+50.00	498.29	6.0	0.045	498.02	4.0	-0.025	497.92
FULL SUPER		497.65	0.025	4.0	497.55	0.045	6.0	79+59.40	497.28	6.0	0.045	497.01	4.0	-0.025	496.91
		498.60	0.032	4.0	498.47	0.038	6.0	79+75.00	498.25	6.0	0.038	498.02	4.0	-0.032	497.89
		498.51	0.040	4.0	498.35	0.029	6.0	80+00.00	498.18	6.0	0.029	498.00	4.0	-0.040	497.84
REVERSE CROWN		498.35	0.040	4.0	498.19	0.016	6.0	80+22.59	498.09	6.0	0.016	497.99	4.0	-0.040	497.83

CROSSOVER SOUTH SUPERELEVATION TRANSITION TABLE

CURVE 25 PI STA. 22+06.97 Dc = 02° 00' 00"

CURVE 26 PI STA. 27+13.28 Dc = 02° 00' 00"

DESCRIPTION	TRANSITION RATE	LEFT SIDE						CENTERLINE CONTROL		RIGHT SIDE					
		EDGE OF SHOULDER	SHOULDER CROSS SLOPE	SHOULDER WIDTH	EDGE OF PAVEMENT	PAVEMENT CROSS SLOPE	PAVEMENT WIDTH	STATION	ELEVATION (PGL)	PAVEMENT WIDTH	PAVEMENT CROSS SLOPE	EDGE OF PAVEMENT	SHOULDER WIDTH	SHOULDER CROSS SLOPE	EDGE OF SHOULDER
NORMAL CROWN		496.88	-0.040	4.0	497.04	-0.016	6.0	20+32.44	497.14	6.0	-0.016	497.24	4.0	0.040	497.40
		496.86	-0.040	4.0	497.02	-0.025	6.0	20+50.00	497.17	6.0	-0.025	497.33	4.0	0.040	497.49
		496.83	-0.040	4.0	496.99	-0.038	6.0	20+75.00	497.22	6.0	-0.038	497.45	4.0	0.031	497.58
FULL SUPER		496.80	-0.045	4.0	496.98	-0.045	6.0	20+87.97	497.25	6.0	-0.045	497.52	4.0	0.025	497.62
		496.82	-0.045	4.0	497.00	-0.045	6.0	21+00.00	497.27	6.0	-0.045	497.54	4.0	0.025	497.64
		496.87	-0.045	4.0	497.05	-0.045	6.0	21+25.00	497.32	6.0	-0.045	497.59	4.0	0.025	497.69
		496.92	-0.045	4.0	497.10	-0.045	6.0	21+50.00	497.37	6.0	-0.045	497.64	4.0	0.025	497.74
		496.97	-0.045	4.0	497.15	-0.045	6.0	21+75.00	497.42	6.0	-0.045	497.69	4.0	0.025	497.79
		497.02	-0.045	4.0	497.20	-0.045	6.0	22+00.00	497.47	6.0	-0.045	497.74	4.0	0.025	497.84
		497.07	-0.045	4.0	497.25	-0.045	6.0	22+25.00	497.52	6.0	-0.045	497.79	4.0	0.025	497.89
		497.12	-0.045	4.0	497.30	-0.045	6.0	22+50.00	497.57	6.0	-0.045	497.84	4.0	0.025	497.94
		497.17	-0.045	4.0	497.35	-0.045	6.0	22+75.00	497.62	6.0	-0.045	497.89	4.0	0.025	497.99
		497.22	-0.045	4.0	497.40	-0.045	6.0	23+00.00	497.67	6.0	-0.045	497.94	4.0	0.025	498.04
		497.26	-0.045	4.0	497.44	-0.045	6.0	23+25.00	497.71	6.0	-0.045	497.98	4.0	0.025	498.08
FULL SUPER		497.29	-0.040	4.0	497.45	-0.045	6.0	23+25.71	497.72	6.0	-0.045	497.99	4.0	0.025	498.09
		497.41	-0.040	4.0	497.57	-0.032	6.0	23+50.00	497.76	6.0	-0.032	497.96	4.0	0.038	498.11
		497.54	-0.040	4.0	497.70	-0.019	6.0	23+75.00	497.81	6.0	-0.019	497.93	4.0	0.040	498.09
NORMAL CROWN		497.56	-0.040	4.0	497.72	-0.016	6.0	23+81.24	497.82	6.0	-0.016	497.92	4.0	0.040	498.08
		497.61	-0.040	4.0	497.77	-0.016	6.0	24+00.00	497.86	6.0	-0.016	497.96	4.0	0.040	498.12
		497.65	-0.040	4.0	497.81	-0.016	6.0	24+25.00	497.90	6.0	-0.016	498.00	4.0	0.040	498.16
		497.69	-0.040	4.0	497.85	-0.016	6.0	24+50.00	497.95	6.0	-0.016	498.04	4.0	0.040	498.20
NORMAL CROWN		497.73	-0.040	4.0	497.89	-0.016	6.0	24+72.34	497.99	6.0	-0.016	498.09	4.0	0.040	498.25
		497.74	-0.040	4.0	497.90	-0.015	6.0	24+75.00	497.99	6.0	-0.015	498.08	4.0	0.040	498.24
		497.86	-0.040	4.0	498.02	-0.002	6.0	25+00.00	498.04	6.0	-0.002	498.05	4.0	0.040	498.21
LEVEL CROWN		497.89	-0.040	4.0	498.05	0.000	6.0	25+04.99	498.05	6.0	0.000	498.05	4.0	0.040	498.21
		497.98	-0.040	4.0	498.14	0.010	6.0	25+25.00	498.08	6.0	0.010	498.02	4.0	0.040	498.18
REVERSE CROWN		498.04	-0.040	4.0	498.20	0.016	6.0	25+37.64	498.10	6.0	0.016	498.00	4.0	0.040	498.16
		498.10	-0.040	4.0	498.26	0.022	6.0	25+50.00	498.12	6.0	0.022	497.99	4.0	0.040	498.15
		498.23	-0.036	4.0	498.37	0.034	6.0	25+75.00	498.17	6.0	0.034	497.96	4.0	0.040	498.12
FULL SUPER		498.38	-0.025	4.0	498.48	0.045	6.0	25+96.81	498.21	6.0	0.045	497.94	4.0	0.045	498.12
		498.38	-0.025	4.0	498.48	0.045	6.0	26+00.00	498.21	6.0	0.045	497.94	4.0	0.045	498.12
		498.43	-0.025	4.0	498.53	0.045	6.0	26+25.00	498.26	6.0	0.045	497.99	4.0	0.045	498.17
		498.47	-0.025	4.0	498.57	0.045	6.0	26+50.00	498.30	6.0	0.045	498.03	4.0	0.045	498.21
		498.51	-0.025	4.0	498.61	0.045	6.0	26+75.00	498.34	6.0	0.045	498.07	4.0	0.045	498.25
		498.56	-0.025	4.0	498.66	0.045	6.0	27+00.00	498.39	6.0	0.045	498.12	4.0	0.045	498.30
		498.60	-0.025	4.0	498.70	0.045	6.0	27+25.00	498.43	6.0	0.045	498.16	4.0	0.045	498.34
		498.64	-0.025	4.0	498.74	0.045	6.0	27+50.00	498.47	6.0	0.045	498.20	4.0	0.045	498.38
		498.69	-0.025	4.0	498.79	0.045	6.0	27+75.00	498.52	6.0	0.045	498.25	4.0	0.045	498.43
		498.73	-0.025	4.0	498.83	0.045	6.0	28+00.00	498.56	6.0	0.045	498.29	4.0	0.045	498.47
		498.78	-0.025	4.0	498.88	0.045	6.0	28+25.00	498.61	7.0	0.045	498.29	4.0	0.045	498.47
FULL SUPER		498.78	-0.025	4.0	498.88	0.045	6.0	28+29.49	498.61	8.0	0.045	498.25	4.0	0.045	498.43
		498.73	-0.034	4.0	498.86	0.036	6.0	28+50.00	498.65	9.0	0.036	498.33	4.0	0.040	498.49
		498.65	-0.046	4.0	498.84	0.024	6.0	28+75.00	498.69	10.0	0.024	498.45	4.0	0.040	498.61
NORMAL CROWN		498.67	-0.040	4.0	498.83	0.016	6.0	28+92.68	498.73	11.0	0.016	498.55	4.0	0.040	498.71

SUPERELEVATION TABLES

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
WTM

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.102 TOTAL P.163

CLE-US52-4.67

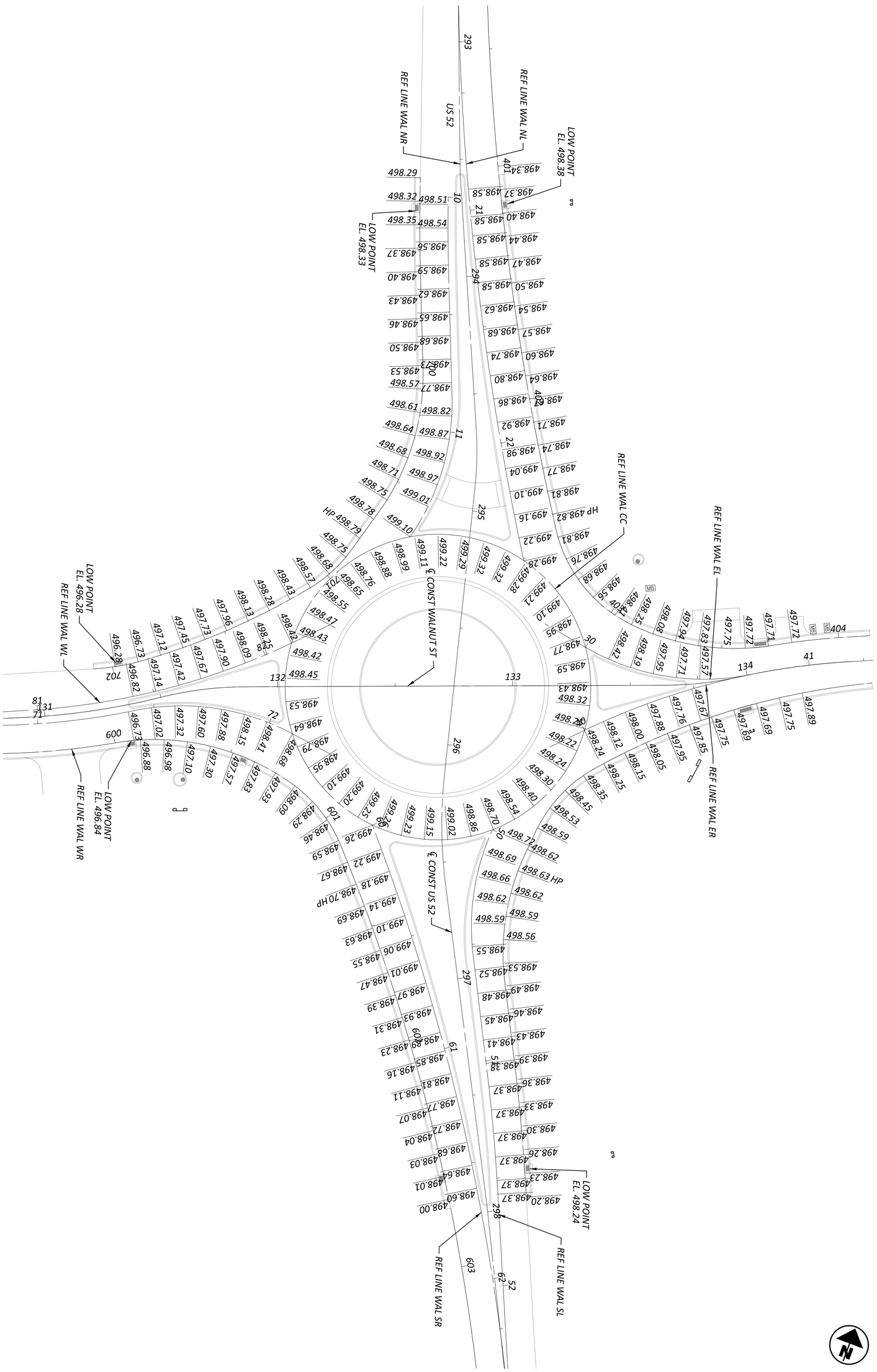
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ROUNDABOUT DETAIL
SYCAMORE ST

HORIZONTAL SCALE IN FEET
0 10 20 40

REF LINE SYC NL
REF LINE SYC EL
REF LINE SYC ER
REF LINE SYC CC
REF LINE SYC SL
REF LINE SYC SR
REF LINE SYC NR
REF LINE SYC WL
REF LINE SYC WR
℄ CONST SYCAMORE ST
℄ CONST US 52
LOW POINT EL. 496.70
LOW POINT EL. 495.78
LOW POINT EL. 496.37
LOW POINT EL. 495.48
HP 496.72
HP 496.70
HP 497.48
HP 496.03
HP 496.49
CL
CR
OL
OR
EL
ER
NL
NR
SL
SR
WL
WR
000.0 ALT3
400 401 402 403 500 502 503 603 699 700 701 702 704 708 80 94 96 60 61 62 52 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 53 54 55 56 57 58 59 63 64 65 66 67 68 69 71 72 73 74 75 76 77 78 79 81 82 83 84 85 86 87 88 89 90 91 92 93 95 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:56:32 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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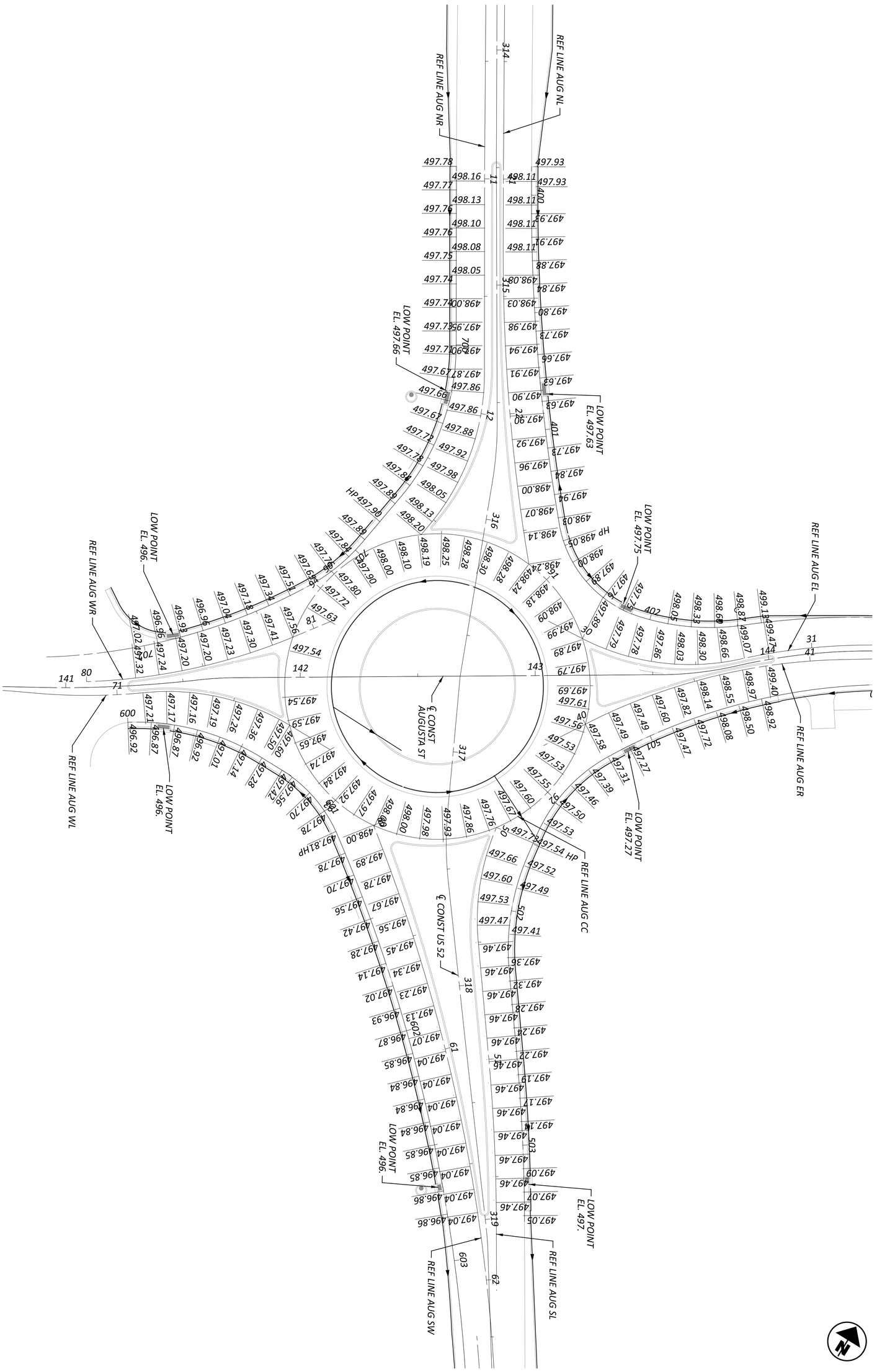


SHEET P.104 TOTAL P.163	PROJECT ID 114042	REVIEWER MTL 03/10/26	DESIGNER XXX	AMERICAN STRUCTUREPOINT INC. DESIGN AGENCY	ROUNDABOUT DETAIL WALNUT ST

HORIZONTAL SCALE IN FEET
0 20
10 40

CLE-US52-4.67

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:57:43 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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SHEET P.105	TOTAL P.163	PROJECT ID 114042	REVIEWER MTL 03/10/26	DESIGNER XXX	DESIGN AGENCY AMERICAN STRUCTUREPOINT INC.

ROUNDABOUT DETAIL
AUGUSTA ST

HORIZONTAL SCALE IN FEET
0 20
10 40

A STA. 10+12.97 (REF LINE SYC NR), 3.00' LT
NORTHING: 353227.1851, EASTING: 1462097.3402
ELEV. = 497.62

B STA. 20+63.19 (REF LINE SYC NL), 1.00' RT
NORTHING: 353228.6911, EASTING: 1462101.0446
ELEV. = 497.62

C STA. 10+96.27 (REF LINE SYC NR), 3.00' LT
NORTHING: 353149.2725, EASTING: 1462126.7991
ELEV. = 497.18

D STA. 11+54.11 (REF LINE SYC NR), 1.00' LT
NORTHING: 353091.2538, EASTING: 1462130.6626
ELEV. = 497.28

E STA. 11+54.97 (REF LINE SYC NR), 2.55' LT
NORTHING: 353090.1020, EASTING: 1462132.0157
ELEV. = 497.27

F STA. 22+08.20 (REF LINE SYC NL), 3.00' RT
NORTHING: 353100.1404, EASTING: 1462168.5330
ELEV. = 496.98

G STA. 22+10.55 (REF LINE SYC NL), 7.79' RT
NORTHING: 353095.5638, EASTING: 1462165.7808
ELEV. = 497.04

H STA. 30+07.29 (REF LINE SYC EL), 1.00' RT
NORTHING: 353062.8661, EASTING: 1462221.9897
ELEV. = 496.44

I STA. 30+06.58 (REF LINE SYC EL), 2.75' RT
NORTHING: 353061.2766, EASTING: 1462220.9684
ELEV. = 496.45

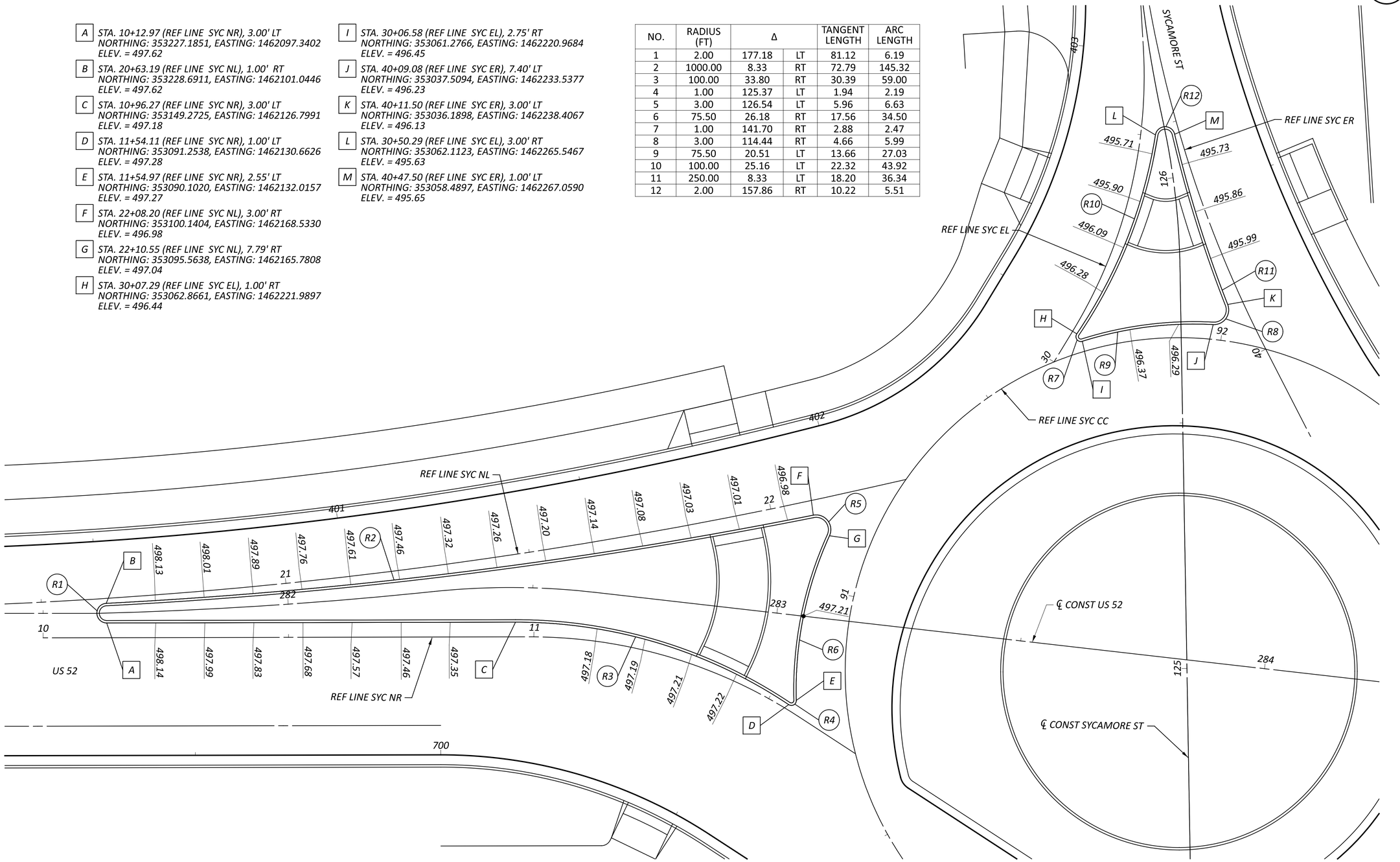
J STA. 40+09.08 (REF LINE SYC ER), 7.40' LT
NORTHING: 353037.5094, EASTING: 1462233.5377
ELEV. = 496.23

K STA. 40+11.50 (REF LINE SYC ER), 3.00' LT
NORTHING: 353036.1898, EASTING: 1462238.4067
ELEV. = 496.13

L STA. 30+50.29 (REF LINE SYC EL), 3.00' RT
NORTHING: 353062.1123, EASTING: 1462265.5467
ELEV. = 495.63

M STA. 40+47.50 (REF LINE SYC ER), 1.00' LT
NORTHING: 353058.4897, EASTING: 1462267.0590
ELEV. = 495.65

NO.	RADIUS (FT)	Δ		TANGENT LENGTH	ARC LENGTH
1	2.00	177.18	LT	81.12	6.19
2	1000.00	8.33	RT	72.79	145.32
3	100.00	33.80	RT	30.39	59.00
4	1.00	125.37	LT	1.94	2.19
5	3.00	126.54	LT	5.96	6.63
6	75.50	26.18	RT	17.56	34.50
7	1.00	141.70	RT	2.88	2.47
8	3.00	114.44	RT	4.66	5.99
9	75.50	20.51	LT	13.66	27.03
10	100.00	25.16	LT	22.32	43.92
11	250.00	8.33	LT	18.20	36.34
12	2.00	157.86	RT	10.22	5.51



HORIZONTAL SCALE IN FEET
0 5 10 20

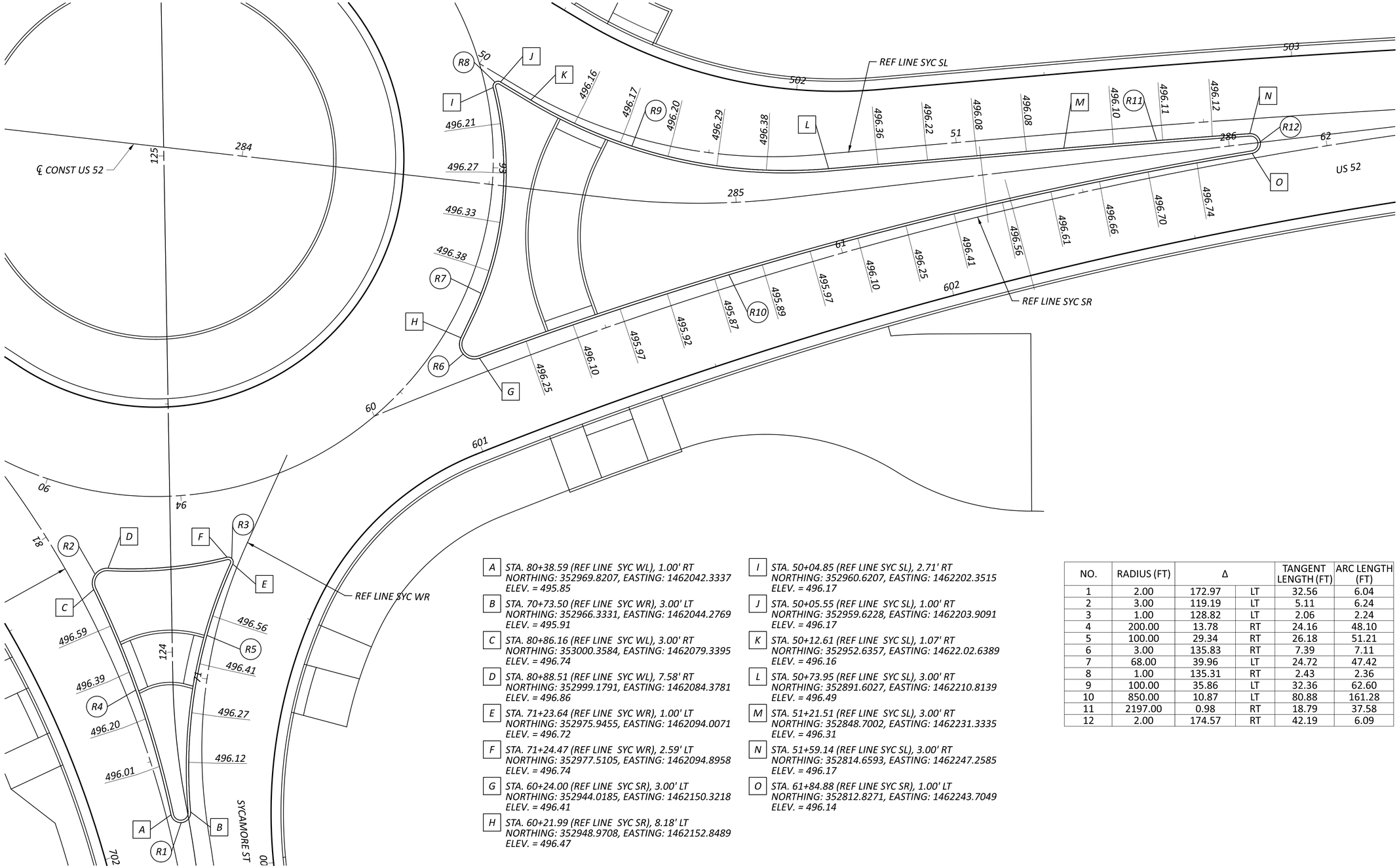
SPLITTER ISLAND DETAILS SYCAMORE NORTH AND EAST

DESIGN AGENCY
MIDWEST STRUCTUREPOINT INC.

DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.106 TOTAL P.163

CLE-US52-4.67

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A STA. 80+38.59 (REF LINE SYC WL), 1.00' RT
NORTHING: 352969.8207, EASTING: 1462042.3337
ELEV. = 495.85

B STA. 70+73.50 (REF LINE SYC WR), 3.00' LT
NORTHING: 352966.3331, EASTING: 1462044.2769
ELEV. = 495.91

C STA. 80+86.16 (REF LINE SYC WL), 3.00' RT
NORTHING: 353000.3584, EASTING: 1462079.3395
ELEV. = 496.74

D STA. 80+88.51 (REF LINE SYC WL), 7.58' RT
NORTHING: 352999.1791, EASTING: 1462084.3781
ELEV. = 496.86

E STA. 71+23.64 (REF LINE SYC WR), 1.00' LT
NORTHING: 352975.9455, EASTING: 1462094.0071
ELEV. = 496.72

F STA. 71+24.47 (REF LINE SYC WR), 2.59' LT
NORTHING: 352977.5105, EASTING: 1462094.8958
ELEV. = 496.74

G STA. 60+24.00 (REF LINE SYC SR), 3.00' LT
NORTHING: 352944.0185, EASTING: 1462150.3218
ELEV. = 496.41

H STA. 60+21.99 (REF LINE SYC SR), 8.18' LT
NORTHING: 352948.9708, EASTING: 1462152.8489
ELEV. = 496.47

I STA. 50+04.85 (REF LINE SYC SL), 2.71' RT
NORTHING: 352960.6207, EASTING: 1462202.3515
ELEV. = 496.17

J STA. 50+05.55 (REF LINE SYC SL), 1.00' RT
NORTHING: 352959.6228, EASTING: 1462203.9091
ELEV. = 496.17

K STA. 50+12.61 (REF LINE SYC SL), 1.07' RT
NORTHING: 352952.6357, EASTING: 14622.02.6389
ELEV. = 496.16

L STA. 50+73.95 (REF LINE SYC SL), 3.00' RT
NORTHING: 352891.6027, EASTING: 1462210.8139
ELEV. = 496.49

M STA. 51+21.51 (REF LINE SYC SL), 3.00' RT
NORTHING: 352848.7002, EASTING: 1462231.3335
ELEV. = 496.31

N STA. 51+59.14 (REF LINE SYC SL), 3.00' RT
NORTHING: 352814.6593, EASTING: 1462247.2585
ELEV. = 496.17

O STA. 61+84.88 (REF LINE SYC SR), 1.00' LT
NORTHING: 352812.8271, EASTING: 1462243.7049
ELEV. = 496.14

NO.	RADIUS (FT)	Δ		TANGENT LENGTH (FT)	ARC LENGTH (FT)
1	2.00	172.97	LT	32.56	6.04
2	3.00	119.19	LT	5.11	6.24
3	1.00	128.82	LT	2.06	2.24
4	200.00	13.78	RT	24.16	48.10
5	100.00	29.34	RT	26.18	51.21
6	3.00	135.83	RT	7.39	7.11
7	68.00	39.96	LT	24.72	47.42
8	1.00	135.31	RT	2.43	2.36
9	100.00	35.86	LT	32.36	62.60
10	850.00	10.87	LT	80.88	161.28
11	2197.00	0.98	RT	18.79	37.58
12	2.00	174.57	RT	42.19	6.09

HORIZONTAL SCALE IN FEET
0 5 10 20

SPLITTER ISLAND DETAILS
SYCAMORE SOUTH AND WEST

CLE-US52-4.67

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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.107 TOTAL P.163

A STA. 20+85.95 (REF LINE WAL NR), 4.99' RT
NORTHING: 352109.9830 , EASTING: 1462521.4646
ELEV. = 498.55

B STA. 10+00.00 (REF LINE WAL NR), 3.00 LT
NORTHING: 352102.3575 , EASTING: 1462524.1951
ELEV. = 498.56

C STA. 20+86.17 (REF LINE WAL NL), 1.00' RT
NORTHING: 352111.4848 , EASTING: 1462525.1683
ELEV. = 498.58

D STA. 10+34.72 (REF LINE WAL NR), 3.00' LT
NORTHING: 352070.0513, EASTING: 1462536.5603
ELEV. = 498.69

E STA. 10+82.13 (REF LINE WAL NR), 3.00' LT
NORTHING: 352026.1574 , EASTING: 1462554.4623
ELEV. = 498.86

F STA. 11+43.07 (REF LINE WAL NR), 1.00' LT
NORTHING: 351965.1677, EASTING: 1462559.1329
ELEV. = 499.10

G STA. 11+43.84 (REF LINE WAL NR), 2.66' LT
NORTHING: 351964.0673, EASTING: 1462560.6020
ELEV. = 499.12

H STA. 22+37.99 (REF LINE WAL NL), 3.00' RT
NORTHING: 351977.2003, EASTING: 1462596.3542
ELEV. = 499.28

I STA. 22+40.96 (REF LINE WAL NL), 7.63' RT
NORTHING: 351972.6369, EASTING: 1462593.7532
ELEV. = 499.26

J STA. 30+05.07 (REF LINE WAL EL), 1.00' RT
NORTHING: 351940.8933, EASTING: 1462648.3029
ELEV. = 498.50

K STA. 30+04.36 (REF LINE WAL EL), 2.68' RT
NORTHING: 351939.3113, EASTING: 1462647.3783
ELEV. = 498.54

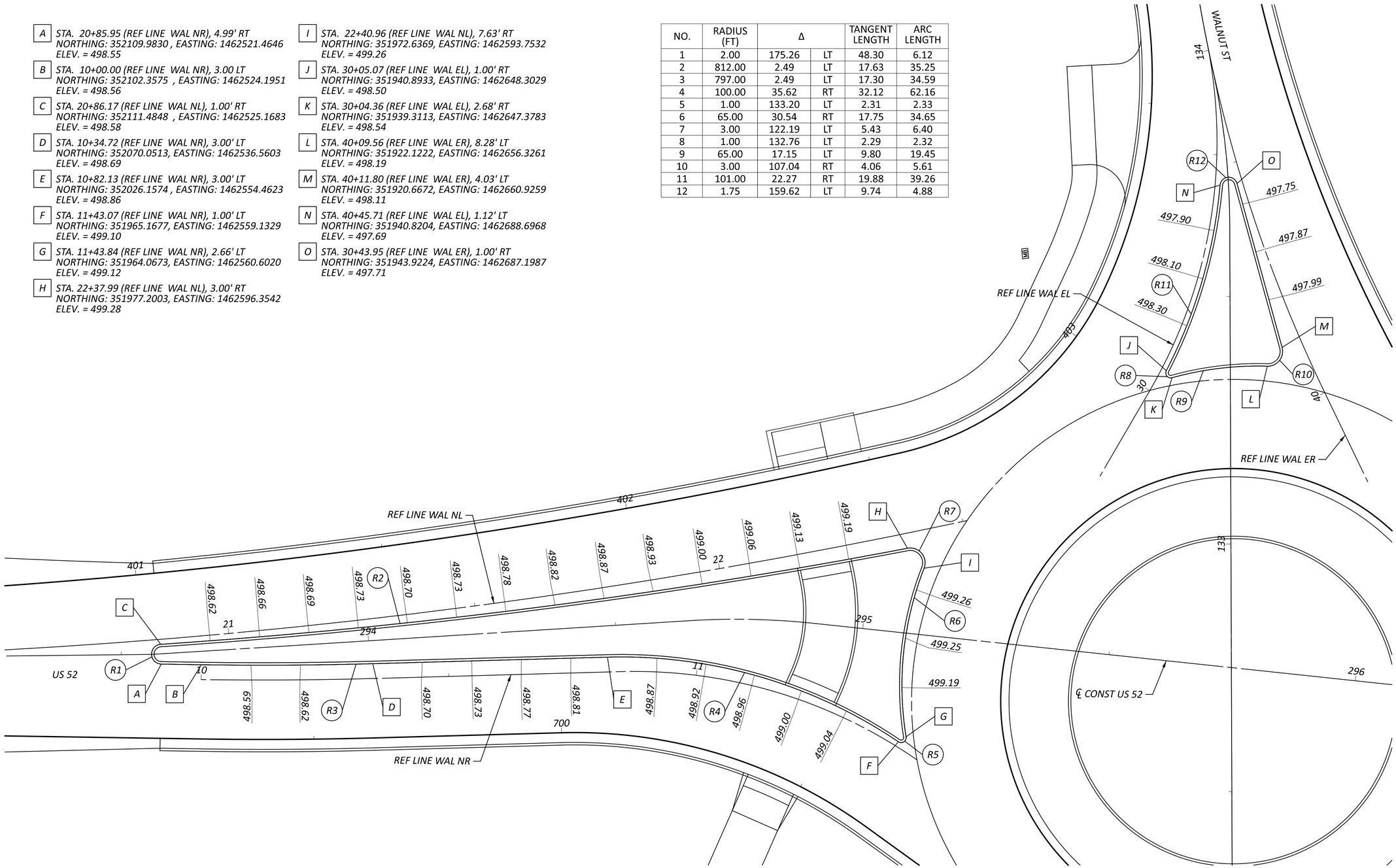
L STA. 40+09.56 (REF LINE WAL ER), 8.28' LT
NORTHING: 351922.1222, EASTING: 1462656.3261
ELEV. = 498.19

M STA. 40+11.80 (REF LINE WAL ER), 4.03' LT
NORTHING: 351920.6672, EASTING: 1462660.9259
ELEV. = 498.11

N STA. 40+45.71 (REF LINE WAL EL), 1.12' LT
NORTHING: 351940.8204, EASTING: 1462688.6968
ELEV. = 497.69

O STA. 30+43.95 (REF LINE WAL ER), 1.00' RT
NORTHING: 351943.9224, EASTING: 1462687.1987
ELEV. = 497.71

NO.	RADIUS (FT)	Δ		TANGENT LENGTH	ARC LENGTH
1	2.00	175.26	LT	48.30	6.12
2	812.00	2.49	LT	17.63	35.25
3	797.00	2.49	LT	17.30	34.59
4	100.00	35.62	RT	32.12	62.16
5	1.00	133.20	LT	2.31	2.33
6	65.00	30.54	RT	17.75	34.65
7	3.00	122.19	LT	5.43	6.40
8	1.00	132.76	LT	2.29	2.32
9	65.00	17.15	LT	9.80	19.45
10	3.00	107.04	RT	4.06	5.61
11	101.00	22.27	RT	19.88	39.26
12	1.75	159.62	LT	9.74	4.88



HORIZONTAL SCALE IN FEET
0 5 10 20

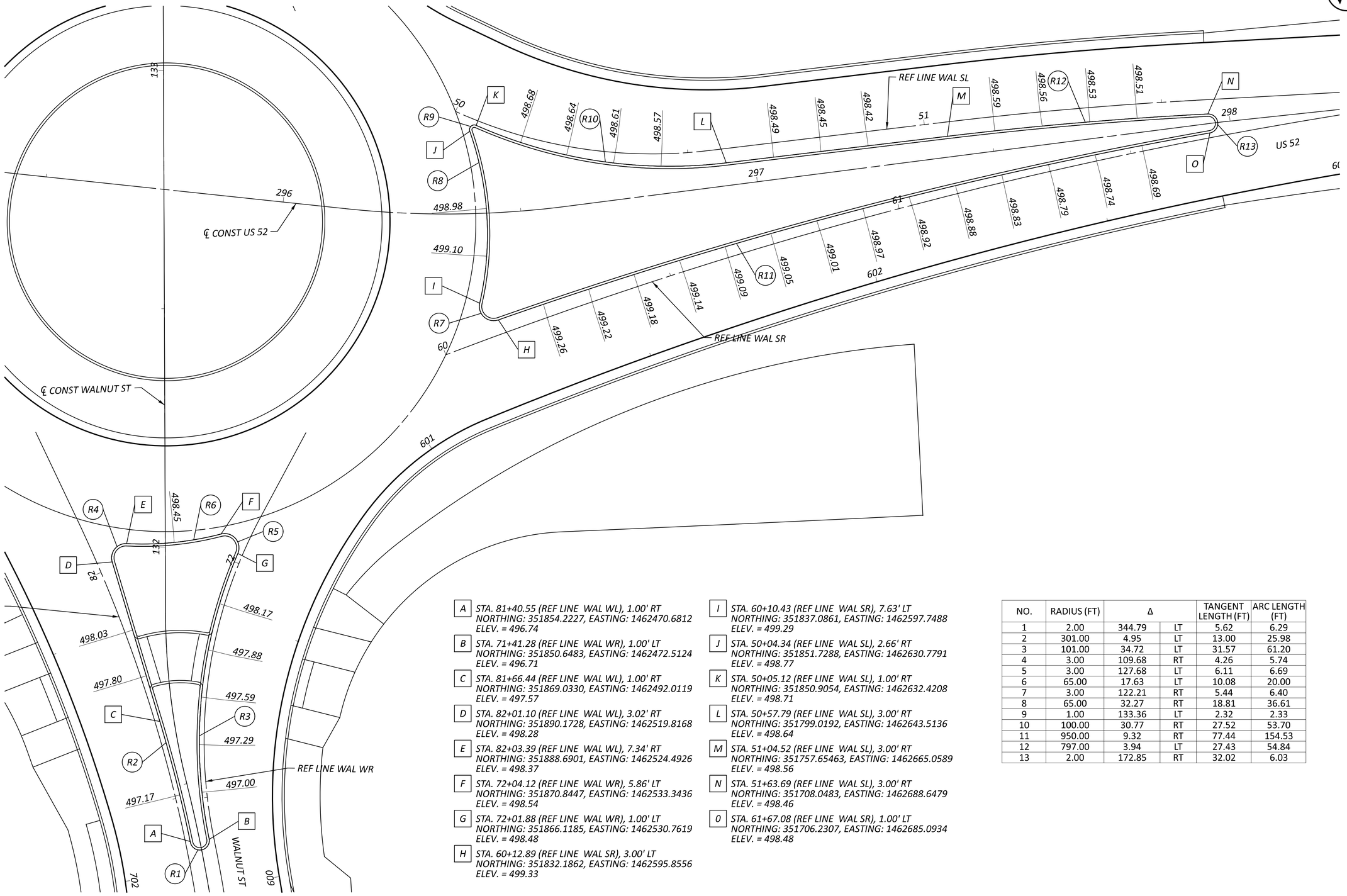
SPLITTER ISLAND DETAILS WALNUT NORTH AND EAST

CLE-US52-4.67

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DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.108 TOTAL P.163



A STA. 81+40.55 (REF LINE WAL WL), 1.00' RT
NORTHING: 351854.2227, EASTING: 1462470.6812
ELEV. = 496.74

B STA. 71+41.28 (REF LINE WAL WR), 1.00' LT
NORTHING: 351850.6483, EASTING: 1462472.5124
ELEV. = 496.71

C STA. 81+66.44 (REF LINE WAL WL), 1.00' RT
NORTHING: 351869.0330, EASTING: 1462492.0119
ELEV. = 497.57

D STA. 82+01.10 (REF LINE WAL WL), 3.02' RT
NORTHING: 351890.1728, EASTING: 1462519.8168
ELEV. = 498.28

E STA. 82+03.39 (REF LINE WAL WL), 7.34' RT
NORTHING: 351888.6901, EASTING: 1462524.4926
ELEV. = 498.37

F STA. 72+04.12 (REF LINE WAL WR), 5.86' LT
NORTHING: 351870.8447, EASTING: 1462533.3436
ELEV. = 498.54

G STA. 72+01.88 (REF LINE WAL WR), 1.00' LT
NORTHING: 351866.1185, EASTING: 1462530.7619
ELEV. = 498.48

H STA. 60+12.89 (REF LINE WAL SR), 3.00' LT
NORTHING: 351832.1862, EASTING: 1462595.8556
ELEV. = 499.33

I STA. 60+10.43 (REF LINE WAL SR), 7.63' LT
NORTHING: 351837.0861, EASTING: 1462597.7488
ELEV. = 499.29

J STA. 50+04.34 (REF LINE WAL SL), 2.66' RT
NORTHING: 351851.7288, EASTING: 1462630.7791
ELEV. = 498.77

K STA. 50+05.12 (REF LINE WAL SL), 1.00' RT
NORTHING: 351850.9054, EASTING: 1462632.4208
ELEV. = 498.71

L STA. 50+57.79 (REF LINE WAL SL), 3.00' RT
NORTHING: 351799.0192, EASTING: 1462643.5136
ELEV. = 498.64

M STA. 51+04.52 (REF LINE WAL SL), 3.00' RT
NORTHING: 351757.65463, EASTING: 1462665.0589
ELEV. = 498.56

N STA. 51+63.69 (REF LINE WAL SL), 3.00' RT
NORTHING: 351708.0483, EASTING: 1462688.6479
ELEV. = 498.46

O STA. 61+67.08 (REF LINE WAL SR), 1.00' LT
NORTHING: 351706.2307, EASTING: 1462685.0934
ELEV. = 498.48

NO.	RADIUS (FT)	Δ		TANGENT LENGTH (FT)	ARC LENGTH (FT)
1	2.00	344.79	LT	5.62	6.29
2	301.00	4.95	LT	13.00	25.98
3	101.00	34.72	LT	31.57	61.20
4	3.00	109.68	RT	4.26	5.74
5	3.00	127.68	LT	6.11	6.69
6	65.00	17.63	LT	10.08	20.00
7	3.00	122.21	RT	5.44	6.40
8	65.00	32.27	RT	18.81	36.61
9	1.00	133.36	LT	2.32	2.33
10	100.00	30.77	RT	27.52	53.70
11	950.00	9.32	RT	77.44	154.53
12	797.00	3.94	LT	27.43	54.84
13	2.00	172.85	RT	32.02	6.03

HORIZONTAL SCALE IN FEET
0 5 10 20

SPLITTER ISLAND DETAILS WALNUT SOUTH AND WEST

CLE-US52-4.67

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 8:59:34 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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DESIGN AGENCY
MORPHEN STRUCTUREPOINT INC.

DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.109 TOTAL P.163

A STA. 10+94.78 (REF LINE AUG NR), 3.00' LT
NORTHING: 350246.2475, EASTING: 1463453.6136
ELEV. = 498.08

B STA. 20+94.72 (REF LINE AUG NL), 1.00' RT
NORTHING: 350248.3325, EASTING: 1463457.0272
ELEV. = 497.98

C STA. 21+46.04 (REF LINE AUG NL), 1.14' RT
NORTHING: 350204.5750, EASTING: 1463483.8796
ELEV. = 497.96

D STA. 11+80.77 (REF LINE AUG NR), 3.00' LT
NORTHING: 350173.0437, EASTING: 1463498.6786
ELEV. = 497.93

E STA. 12+52.78 (REF LINE AUG NR), 1.00' LT
NORTHING: 350102.4504, EASTING: 1463512.0961
ELEV. = 498.17

F STA. 12+53.52 (REF LINE AUG NL), 2.71' LT
NORTHING: 350101.4661, EASTING: 1463513.6725
ELEV. = 498.18

G STA. 22+54.10 (REF LINE AUG NR), 7.61' RT
NORTHING: 350113.4987, EASTING: 1463543.3377
ELEV. = 498.21

H STA. 22+51.65 (REF LINE AUG NL), 3.00' RT
NORTHING: 350118.3685, EASTING: 1463545.2528
ELEV. = 498.20

I STA. 30+05.85 (REF LINE AUG EL), 2.00' RT
NORTHING: 350094.2484, EASTING: 1463598.0069
ELEV. = 497.81

J STA. 30+05.12 (REF LINE AUG EL), 3.66' RT
NORTHING: 350092.5026, EASTING: 1463597.4874
ELEV. = 497.79

K STA. 40+08.78 (REF LINE AUG ER), 7.30' LT
NORTHING: 350076.7187, EASTING: 1463610.6977
ELEV. = 497.58

L STA. 40+11.04 (REF LINE AUG ER), 3.02' LT
NORTHING: 350076.2881, EASTING: 1463615.5389
ELEV. = 497.54

M STA. 30+28.68 (REF LINE AUG EL), 2.00' RT
NORTHING: 350100.0107, EASTING: 1463620.5116
ELEV. = 498.03

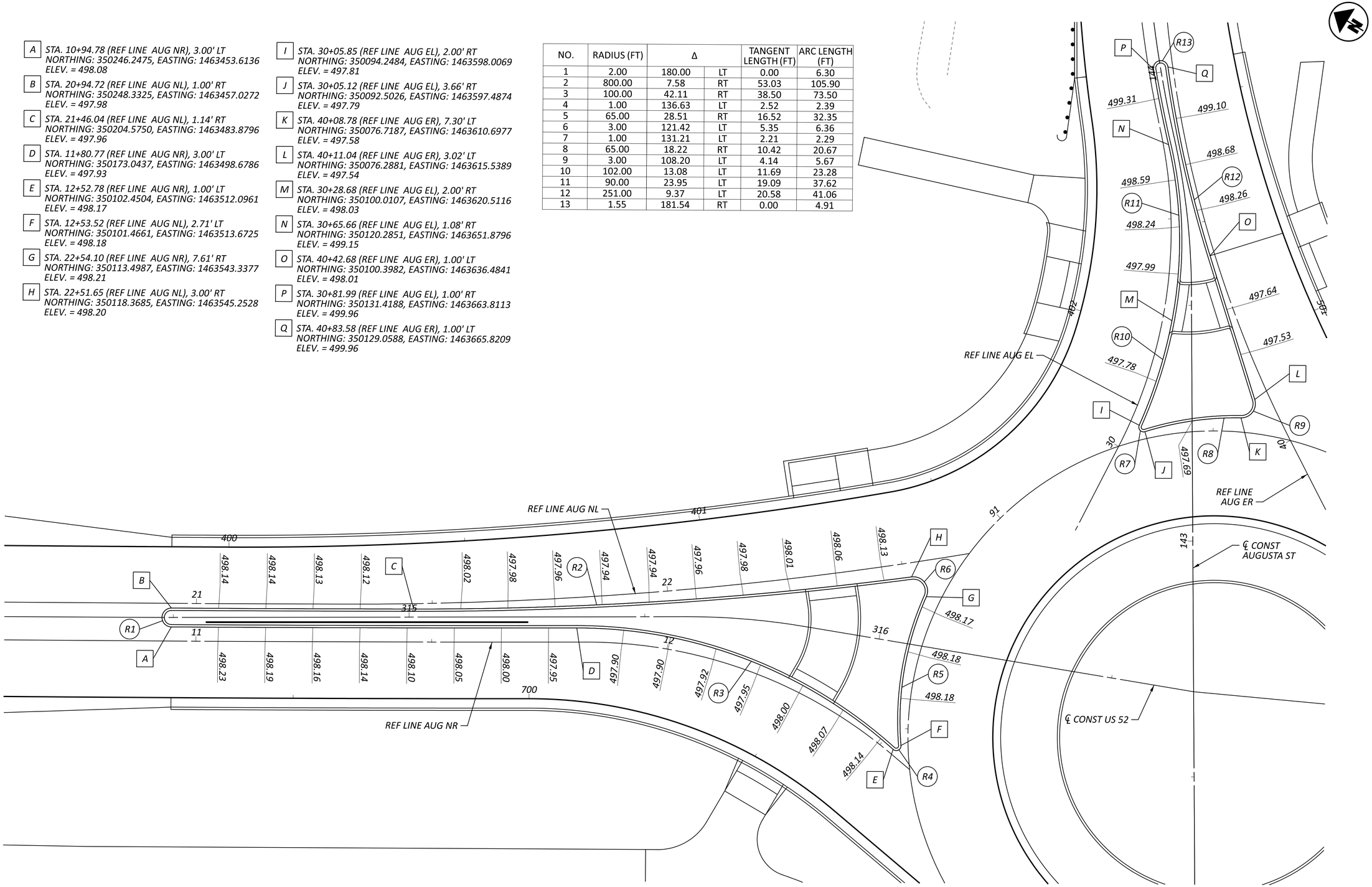
N STA. 30+65.66 (REF LINE AUG EL), 1.08' RT
NORTHING: 350120.2851, EASTING: 1463651.8796
ELEV. = 499.15

O STA. 40+42.68 (REF LINE AUG ER), 1.00' LT
NORTHING: 350100.3982, EASTING: 1463636.4841
ELEV. = 498.01

P STA. 30+81.99 (REF LINE AUG EL), 1.00' RT
NORTHING: 350131.4188, EASTING: 1463663.8113
ELEV. = 499.96

Q STA. 40+83.58 (REF LINE AUG ER), 1.00' LT
NORTHING: 350129.0588, EASTING: 1463665.8209
ELEV. = 499.96

NO.	RADIUS (FT)	Δ		TANGENT LENGTH (FT)	ARC LENGTH (FT)
1	2.00	180.00	LT	0.00	6.30
2	800.00	7.58	RT	53.03	105.90
3	100.00	42.11	RT	38.50	73.50
4	1.00	136.63	LT	2.52	2.39
5	65.00	28.51	RT	16.52	32.35
6	3.00	121.42	LT	5.35	6.36
7	1.00	131.21	LT	2.21	2.29
8	65.00	18.22	RT	10.42	20.67
9	3.00	108.20	LT	4.14	5.67
10	102.00	13.08	LT	11.69	23.28
11	90.00	23.95	LT	19.09	37.62
12	251.00	9.37	LT	20.58	41.06
13	1.55	181.54	RT	0.00	4.91



HORIZONTAL SCALE IN FEET
0 5 10 20

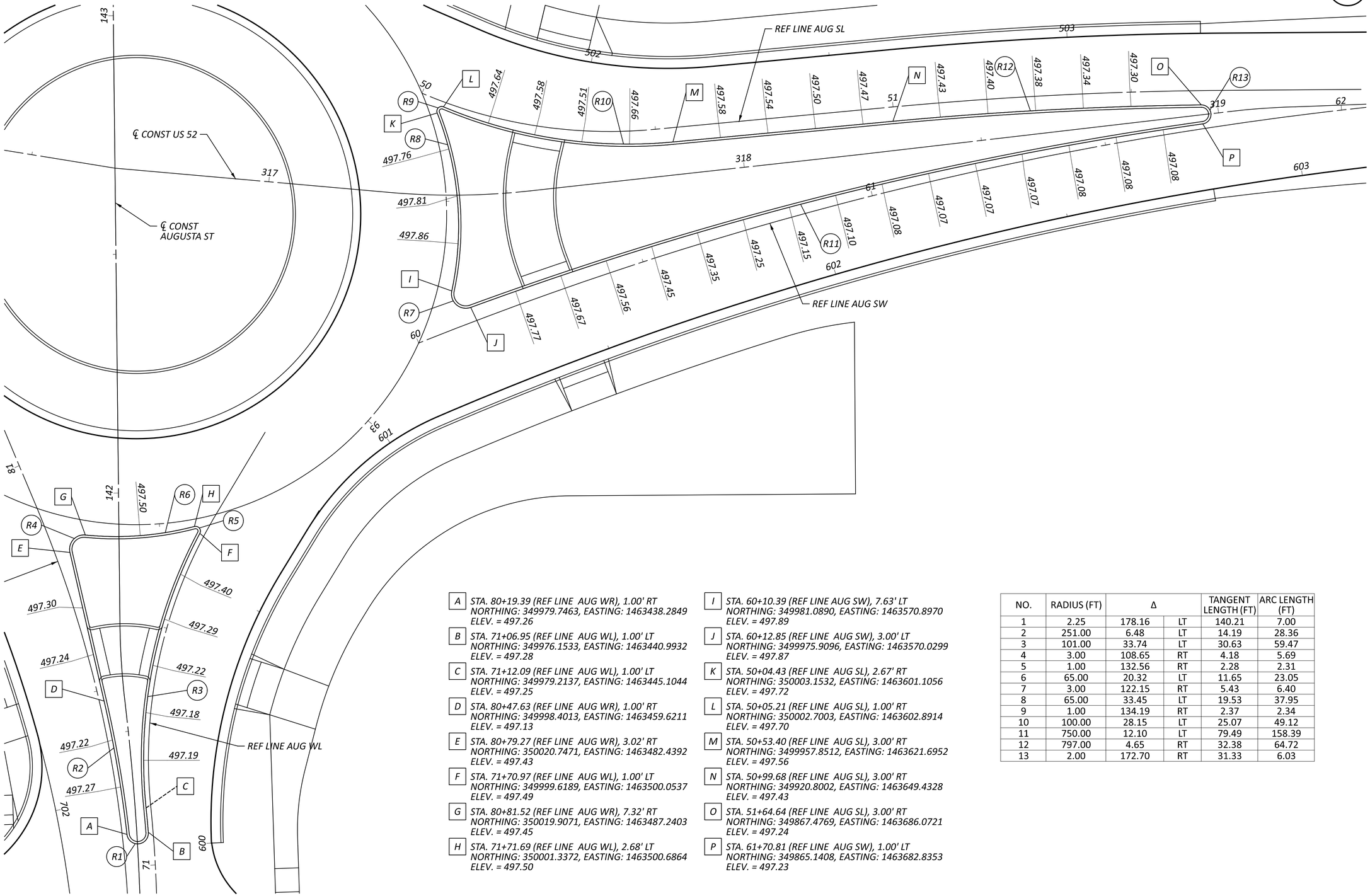
SPLITTER ISLAND DETAILS AUGUSTA NORTH AND EAST

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER	PK
REVIEWER	MTL 03/10/26
PROJECT ID	114042
SHEET	P.110
TOTAL	P.163

CLE-US52-4.67

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O:\2019\02459\C_Design\114042\400-Engineering\Roadway\Sheets\114042_GI605.dgn



A	STA. 80+19.39 (REF LINE AUG WR), 1.00' RT NORTHING: 349979.7463, EASTING: 1463438.2849 ELEV. = 497.26
B	STA. 71+06.95 (REF LINE AUG WL), 1.00' LT NORTHING: 349976.1533, EASTING: 1463440.9932 ELEV. = 497.28
C	STA. 71+12.09 (REF LINE AUG WL), 1.00' LT NORTHING: 349979.2137, EASTING: 1463445.1044 ELEV. = 497.25
D	STA. 80+47.63 (REF LINE AUG WR), 1.00' RT NORTHING: 349998.4013, EASTING: 1463459.6211 ELEV. = 497.13
E	STA. 80+79.27 (REF LINE AUG WR), 3.02' RT NORTHING: 350020.7471, EASTING: 1463482.4392 ELEV. = 497.43
F	STA. 71+70.97 (REF LINE AUG WL), 1.00' LT NORTHING: 349999.6189, EASTING: 1463500.0537 ELEV. = 497.49
G	STA. 80+81.52 (REF LINE AUG WR), 7.32' RT NORTHING: 350019.9071, EASTING: 1463487.2403 ELEV. = 497.45
H	STA. 71+71.69 (REF LINE AUG WL), 2.68' LT NORTHING: 350001.3372, EASTING: 1463500.6864 ELEV. = 497.50
I	STA. 60+10.39 (REF LINE AUG SW), 7.63' LT NORTHING: 349981.0890, EASTING: 1463570.8970 ELEV. = 497.89
J	STA. 60+12.85 (REF LINE AUG SW), 3.00' LT NORTHING: 3499975.9096, EASTING: 1463570.0299 ELEV. = 497.87
K	STA. 50+04.43 (REF LINE AUG SL), 2.67' RT NORTHING: 350003.1532, EASTING: 1463601.1056 ELEV. = 497.72
L	STA. 50+05.21 (REF LINE AUG SL), 1.00' RT NORTHING: 350002.7003, EASTING: 1463602.8914 ELEV. = 497.70
M	STA. 50+53.40 (REF LINE AUG SL), 3.00' RT NORTHING: 3499957.8512, EASTING: 1463621.6952 ELEV. = 497.56
N	STA. 50+99.68 (REF LINE AUG SL), 3.00' RT NORTHING: 349920.8002, EASTING: 1463649.4328 ELEV. = 497.43
O	STA. 51+64.64 (REF LINE AUG SL), 3.00' RT NORTHING: 349867.4769, EASTING: 1463686.0721 ELEV. = 497.24
P	STA. 61+70.81 (REF LINE AUG SW), 1.00' LT NORTHING: 349865.1408, EASTING: 1463682.8353 ELEV. = 497.23

NO.	RADIUS (FT)	Δ		TANGENT LENGTH (FT)	ARC LENGTH (FT)
1	2.25	178.16	LT	140.21	7.00
2	251.00	6.48	LT	14.19	28.36
3	101.00	33.74	LT	30.63	59.47
4	3.00	108.65	RT	4.18	5.69
5	1.00	132.56	RT	2.28	2.31
6	65.00	20.32	LT	11.65	23.05
7	3.00	122.15	RT	5.43	6.40
8	65.00	33.45	LT	19.53	37.95
9	1.00	134.19	RT	2.37	2.34
10	100.00	28.15	LT	25.07	49.12
11	750.00	12.10	LT	79.49	158.39
12	797.00	4.65	RT	32.38	64.72
13	2.00	172.70	RT	31.33	6.03

HORIZONTAL SCALE IN FEET
0 5 10 20

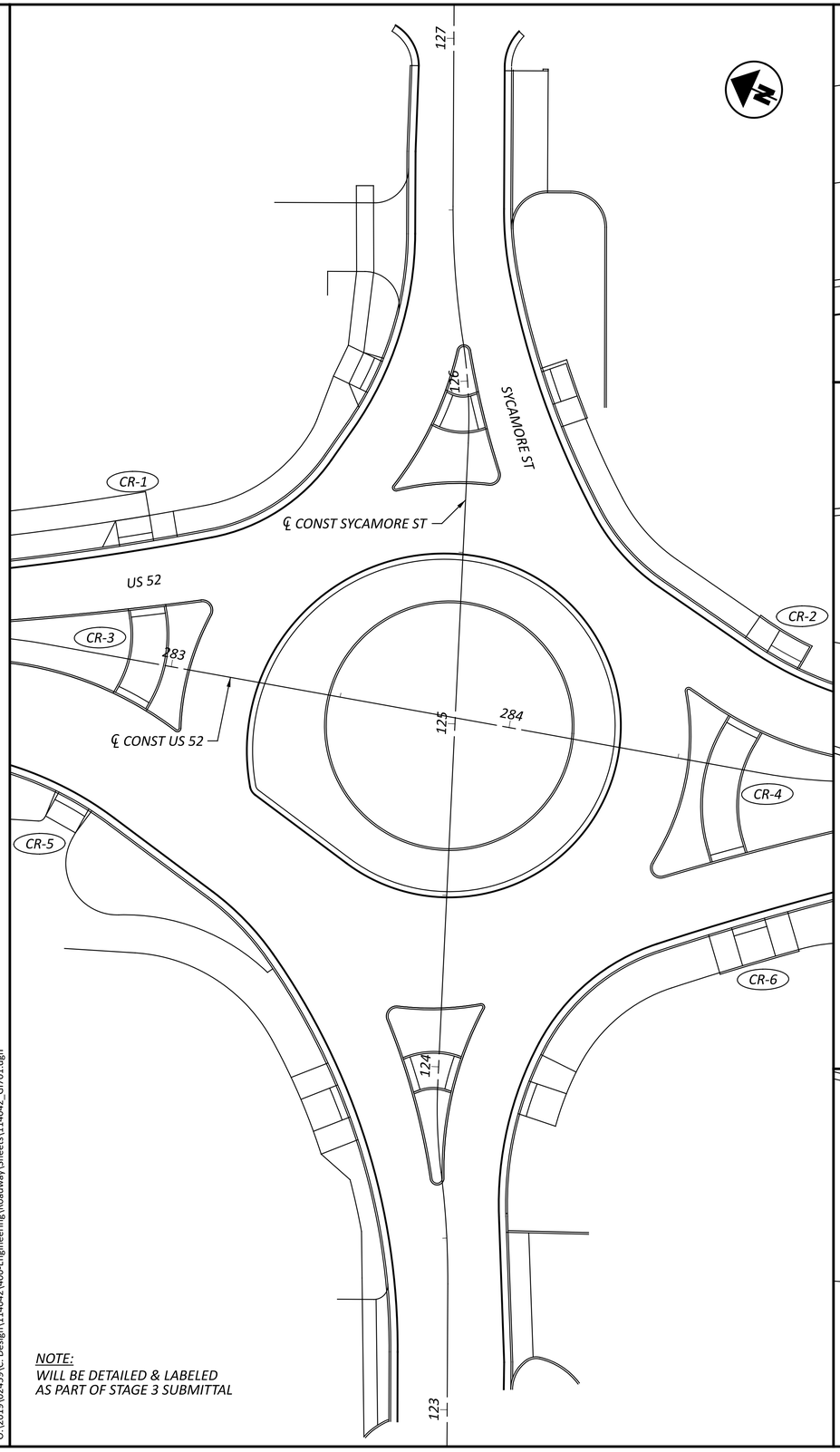
SPLITTER ISLAND DETAILS AUGUSTA SOUTH AND WEST

CLE-US52-4.67

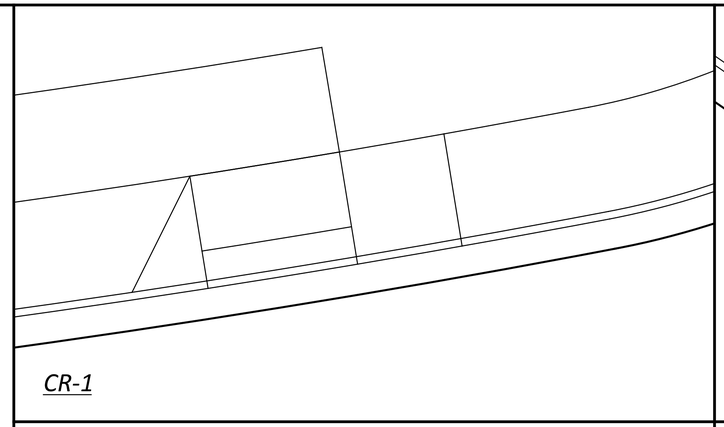
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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

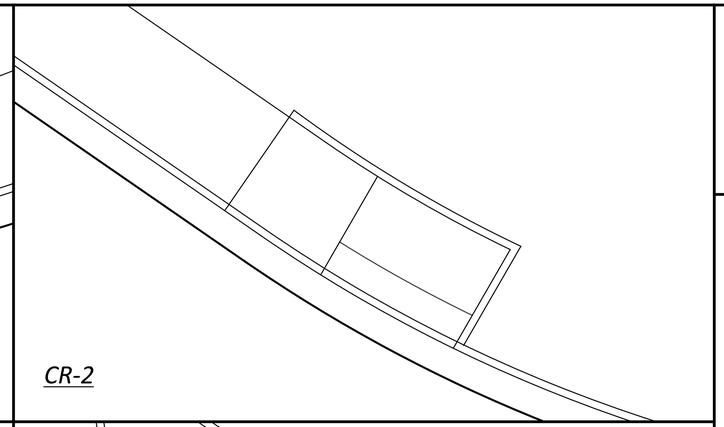
DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.111 TOTAL P.163



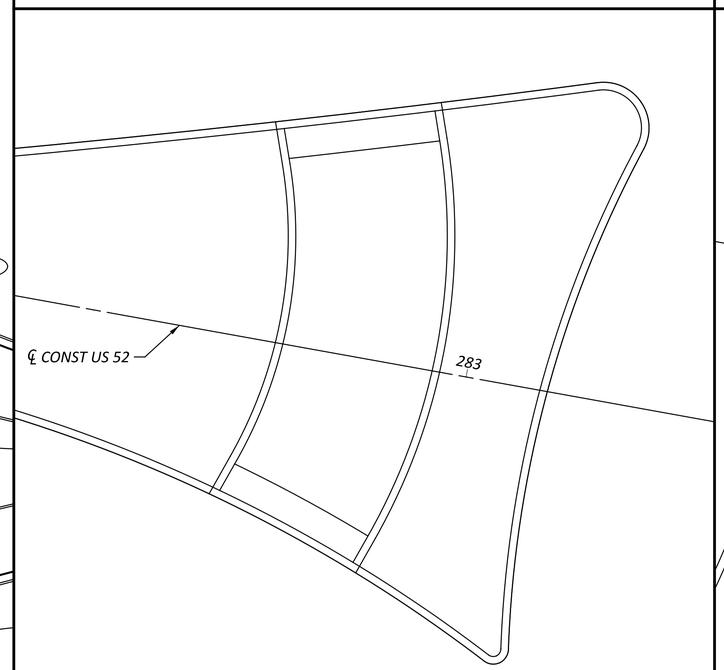
NOTE:
WILL BE DETAILED & LABELED AS PART OF STAGE 3 SUBMITTAL



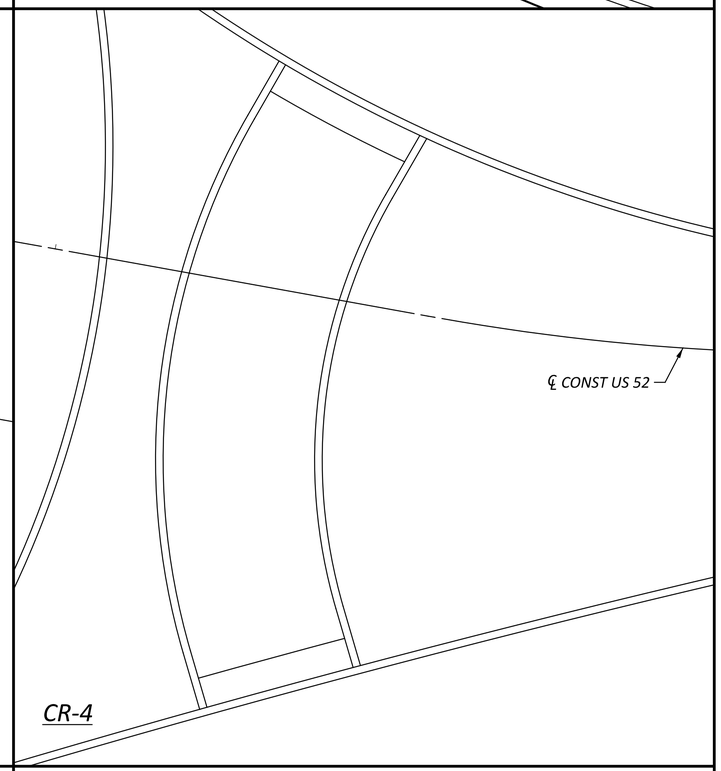
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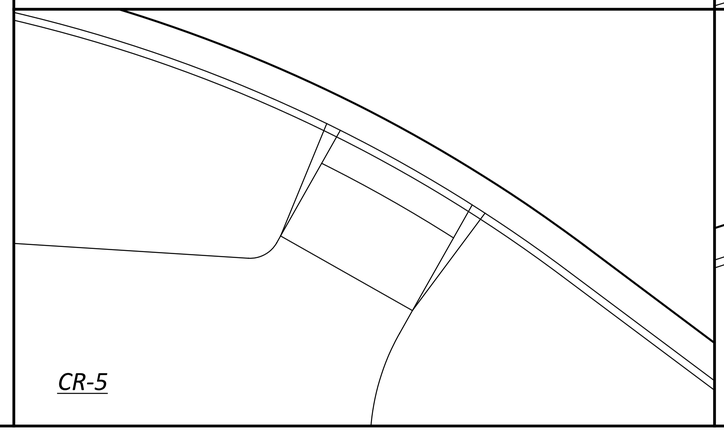
CR-2



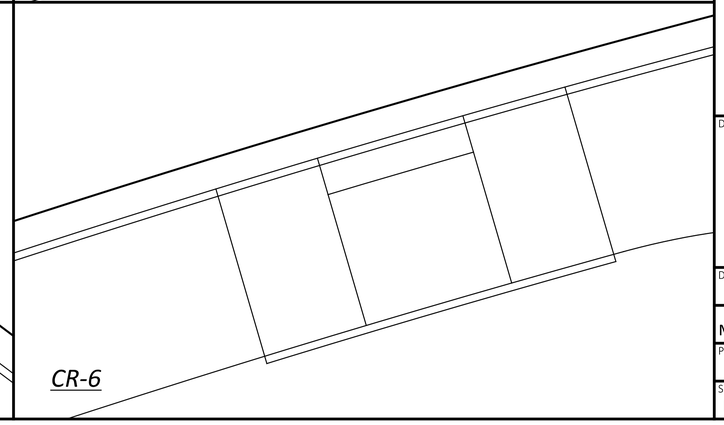
CR-3



CR-4



CR-5



CR-6

HORIZONTAL SCALE IN FEET
0 5 5 10

CURB RAMP DETAILS SYCAMORE ST

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
PK

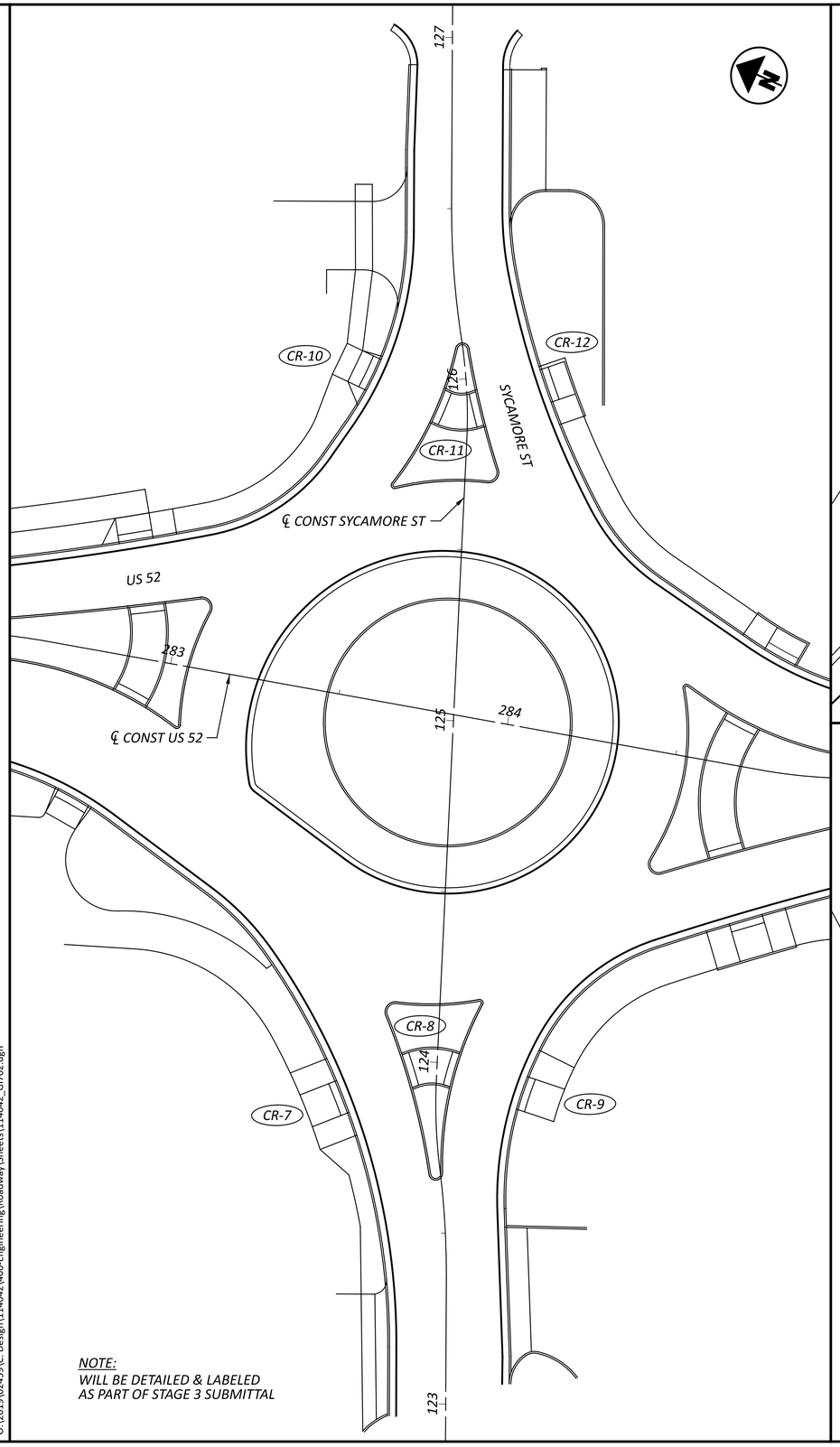
REVIEWER
MTL 03/10/26

PROJECT ID
114042

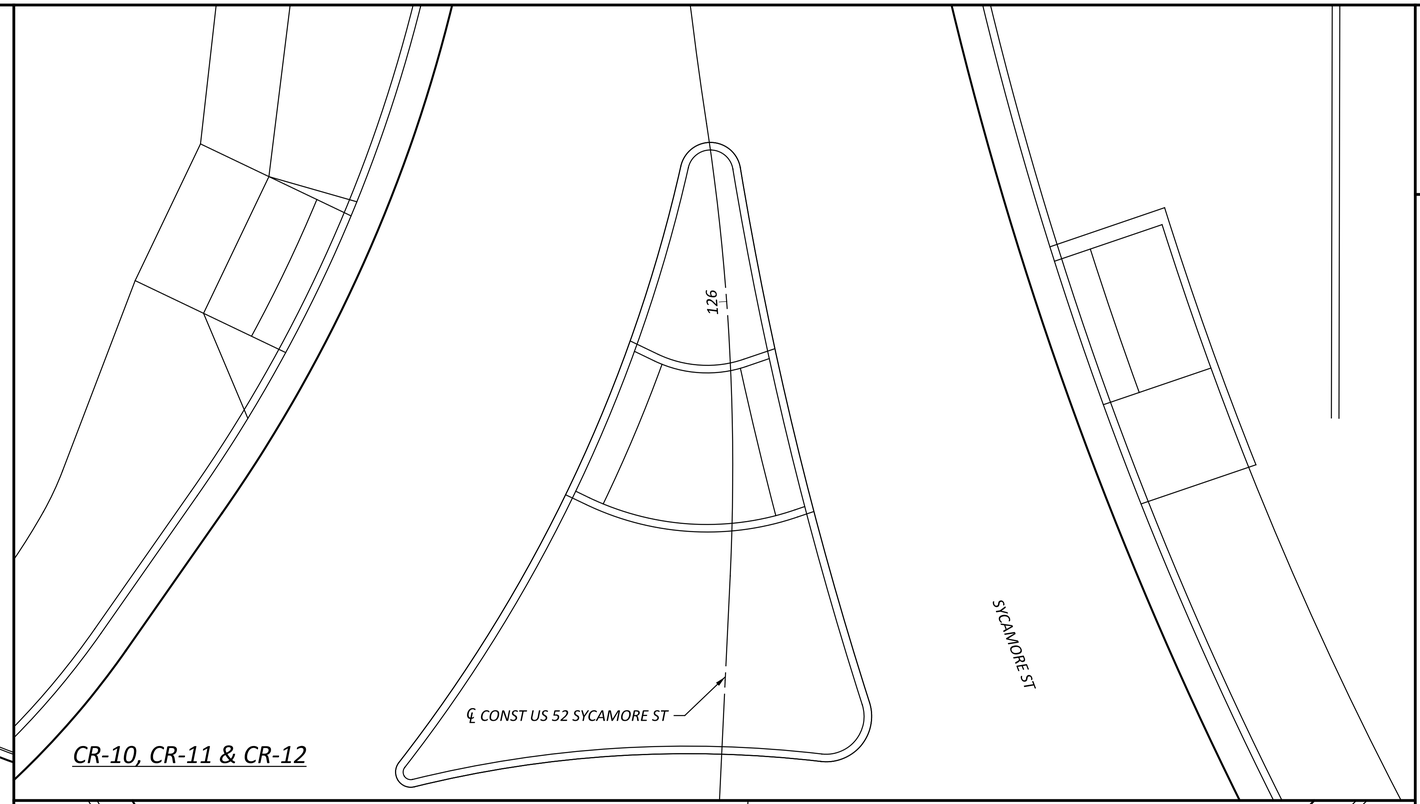
SHEET P.112 | TOTAL P.163

CLE-US52-4.67

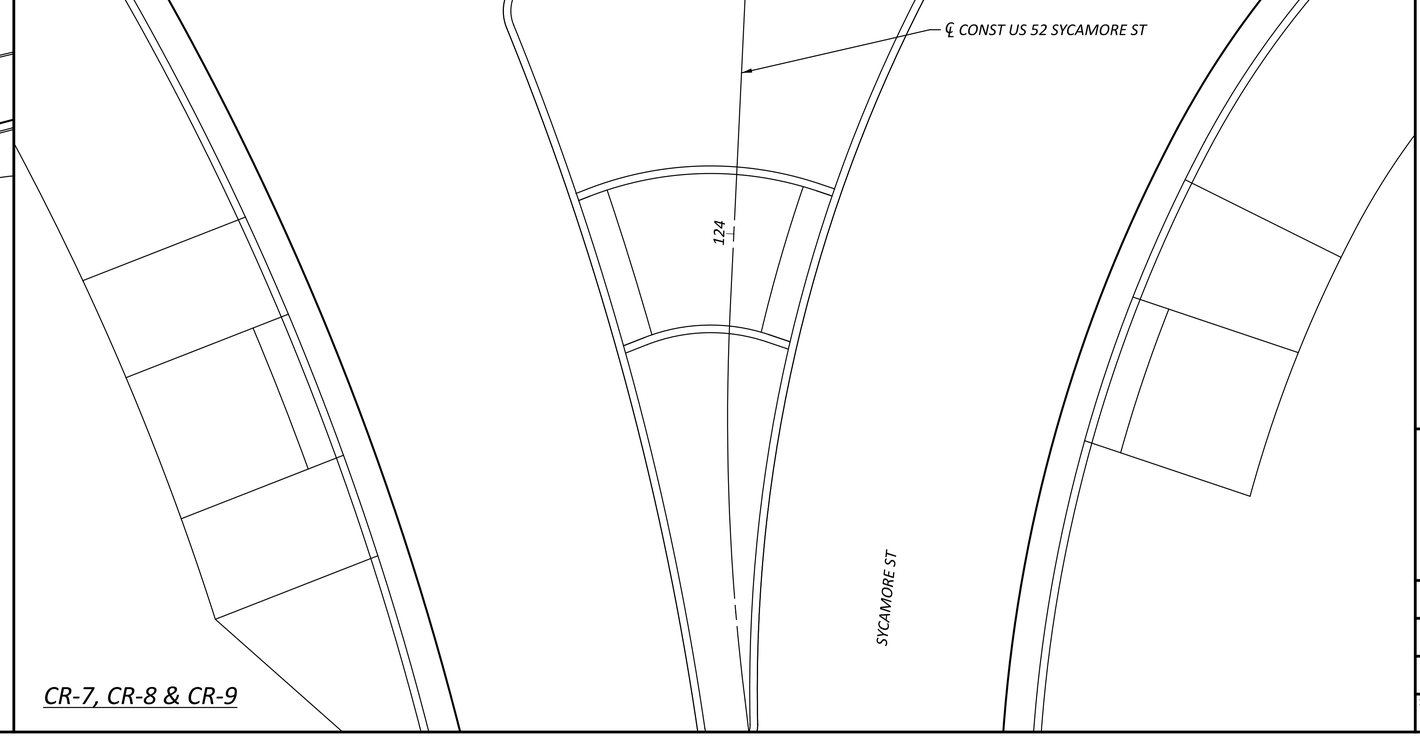
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CR-10, CR-11 & CR-12



CR-7, CR-8 & CR-9



HORIZONTAL SCALE IN FEET
0 5 5 10

CURB RAMP DETAILS SYCAMORE ST

CLE-US52-4.67

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 9:01:52 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER:
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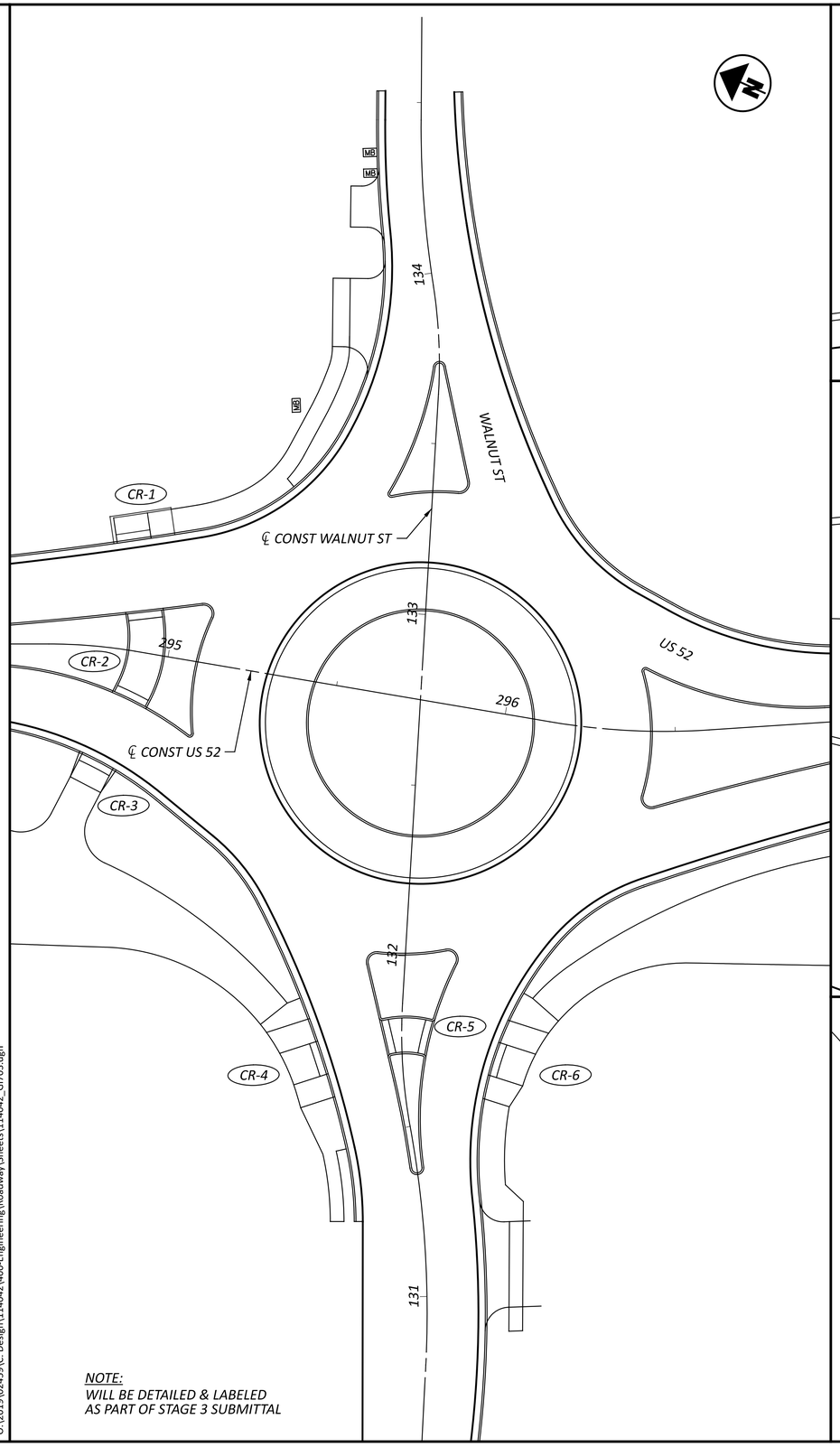
DESIGN AGENCY
STRUCTUREPOINT LLC

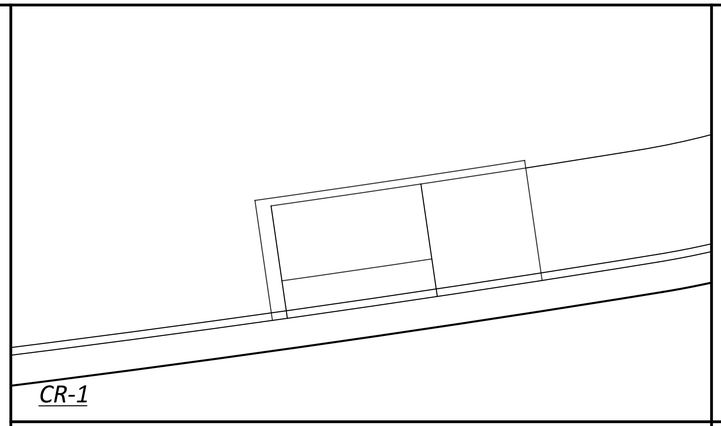
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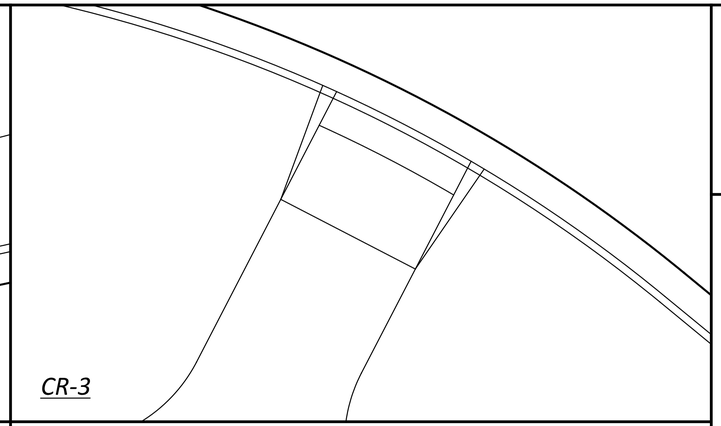
REVIEWER MTL 03/10/26

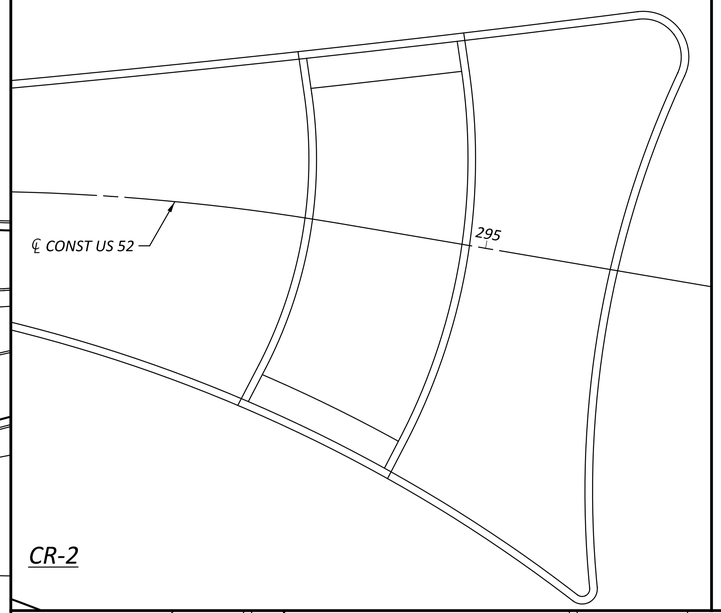
PROJECT ID 114042

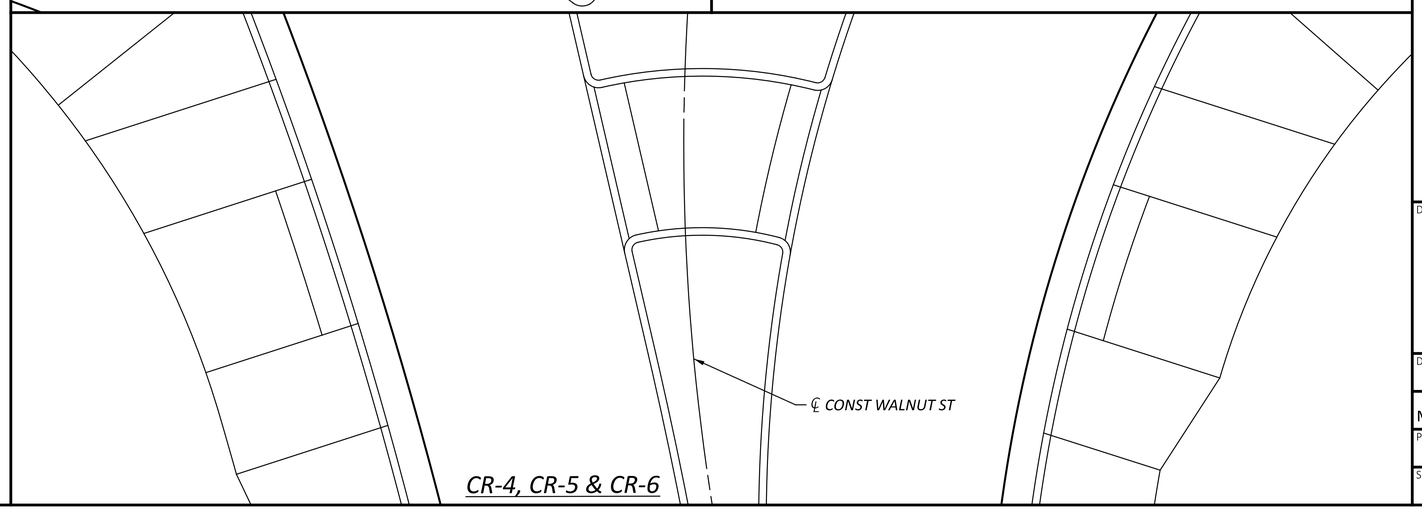
SHEET P.113 TOTAL P.163











HORIZONTAL
SCALE IN FEET
0 5 5 10

CURB RAMP DETAILS
WALNUT ST

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
PK

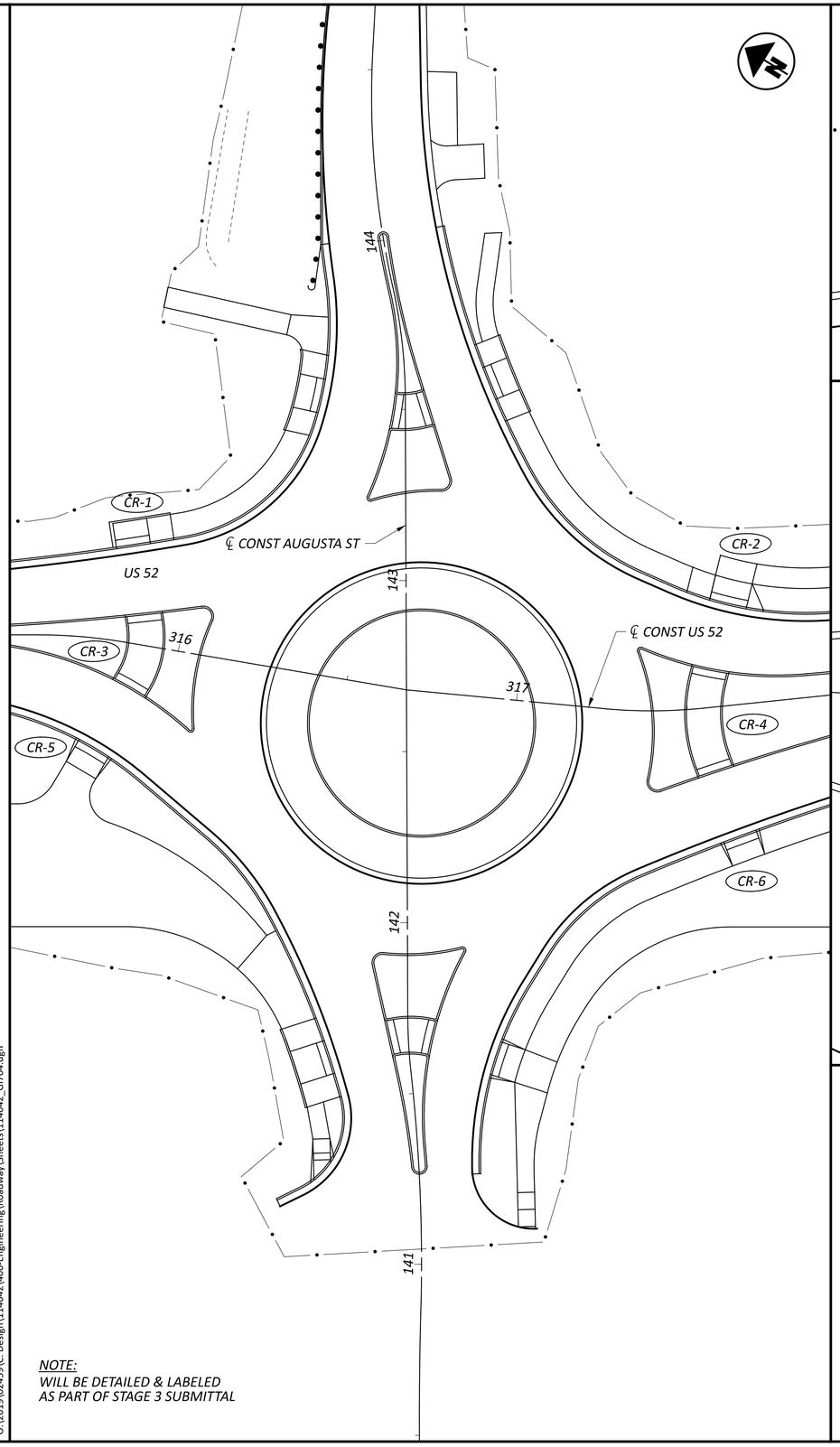
REVIEWER
MTL 03/10/26

PROJECT ID
114042

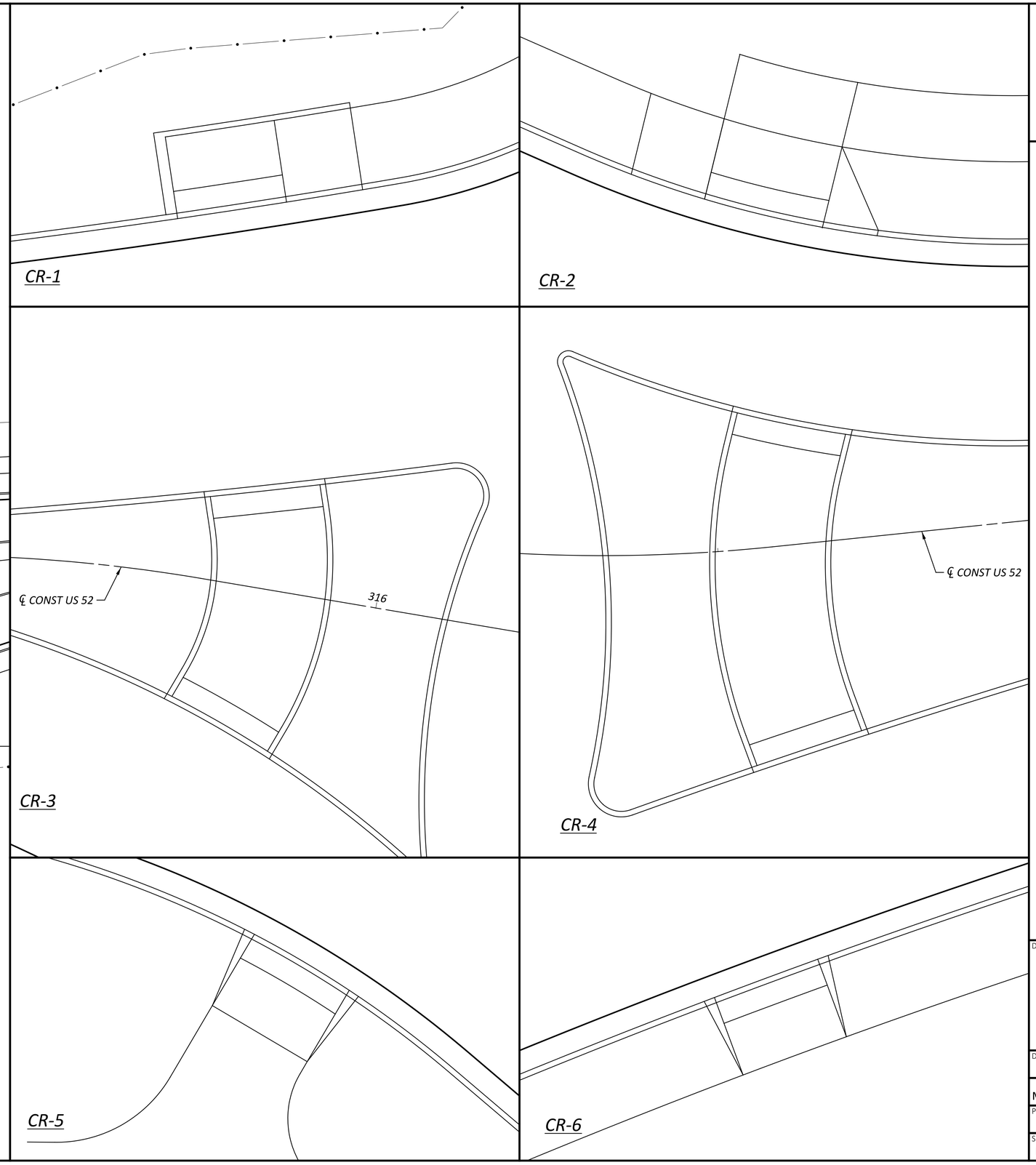
SHEET P.114 | TOTAL P.163

CLE-US52-4.67

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NOTE:
WILL BE DETAILED & LABELED AS PART OF STAGE 3 SUBMITTAL



HORIZONTAL SCALE IN FEET
0 5 5 10

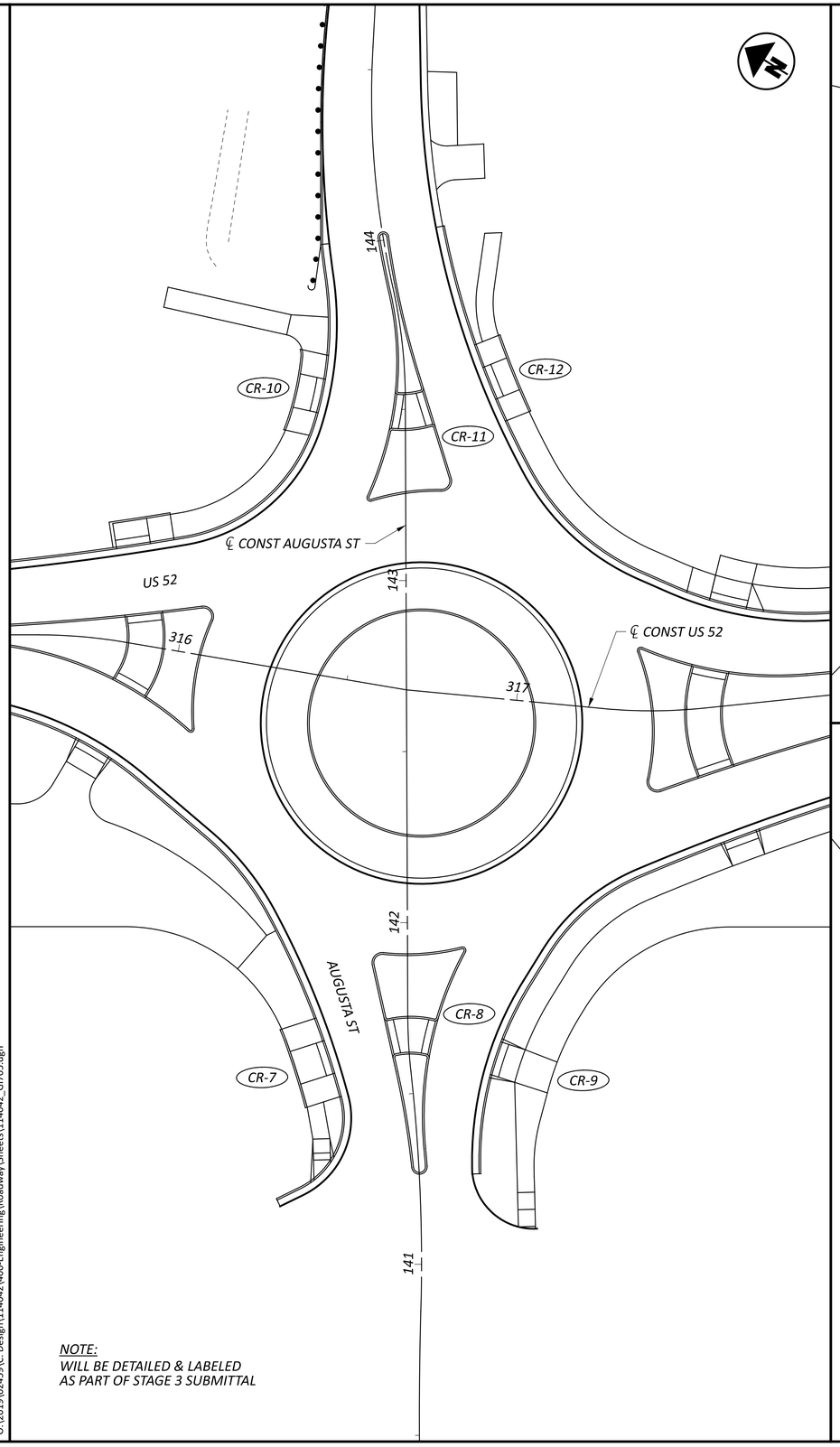
CURB RAMP DETAILS AUGUSTA ST

DESIGN AGENCY
STRUCTUREPOINT LLC

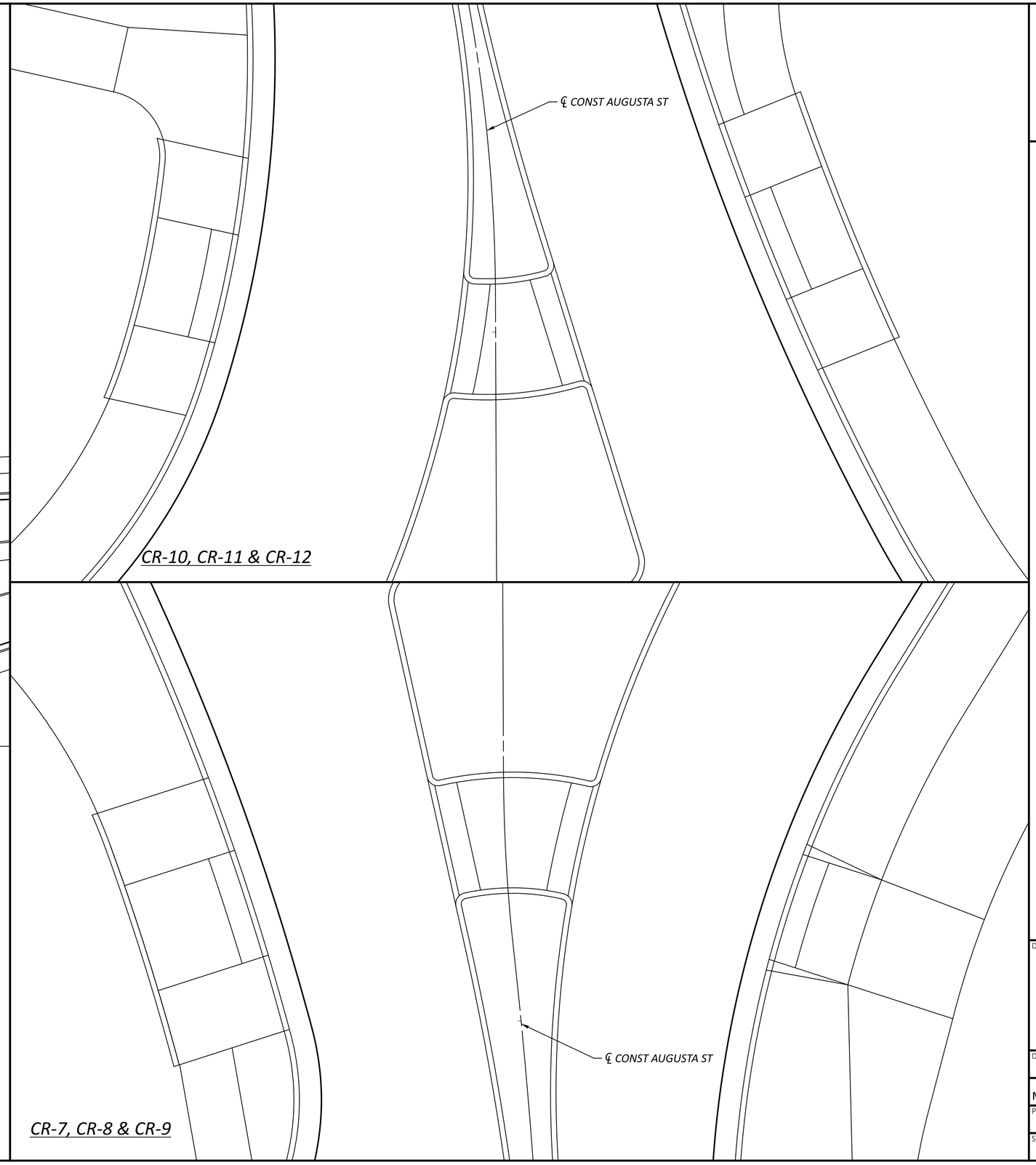
DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.115 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 9:03:08 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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NOTE:
WILL BE DETAILED & LABELED
AS PART OF STAGE 3 SUBMITTAL



CR-10, CR-11 & CR-12

CR-7, CR-8 & CR-9

HORIZONTAL
SCALE IN FEET
0 5 5 10

CURB RAMP DETAILS
AUGUSTA ST

DESIGN AGENCY
STRUCTUREPOINT

DESIGNER PK
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.116 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - Plan 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 9:03:39 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 201902459-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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LEGEND

(DC) ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT

(DA) ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22
ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (446)
ITEM 304 - 8" AGGREGATE BASE

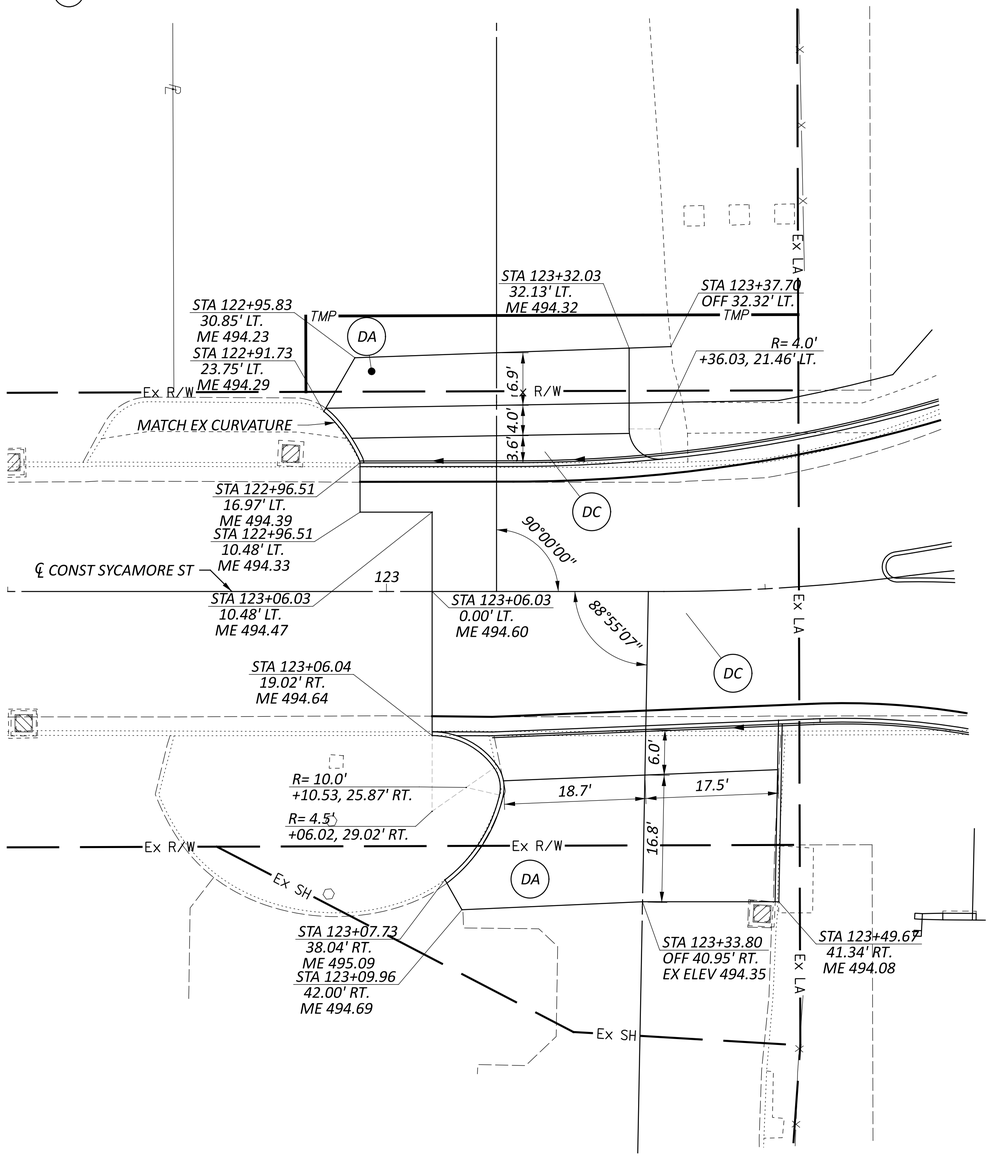
(DG) ITEM 304 - 8" AGGREGATE BASE

NOTES

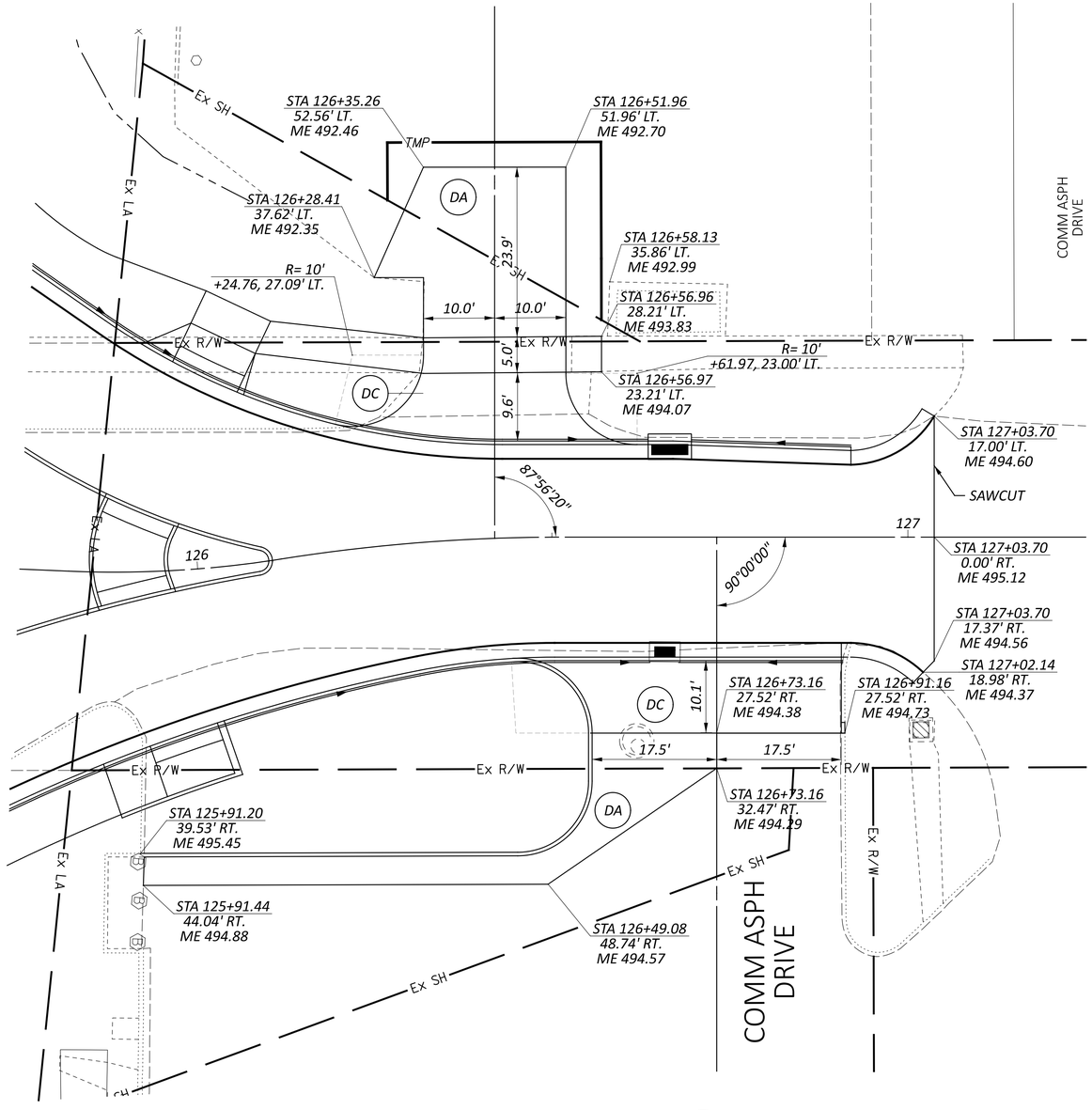
ALL ELEVATIONS ARE PAVEMENT ELEVATIONS UNLESS NOTED OTHERWISE

* DENOTES BACK OF CURB ELEVATION

ME MEET EXISTING



SYCAMORE ST - WEST



SYCAMORE ST - EAST

HORIZONTAL SCALE IN FEET
0 5 10 20

PAVEMENT DETAILS SYCAMORE ST

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER WTM

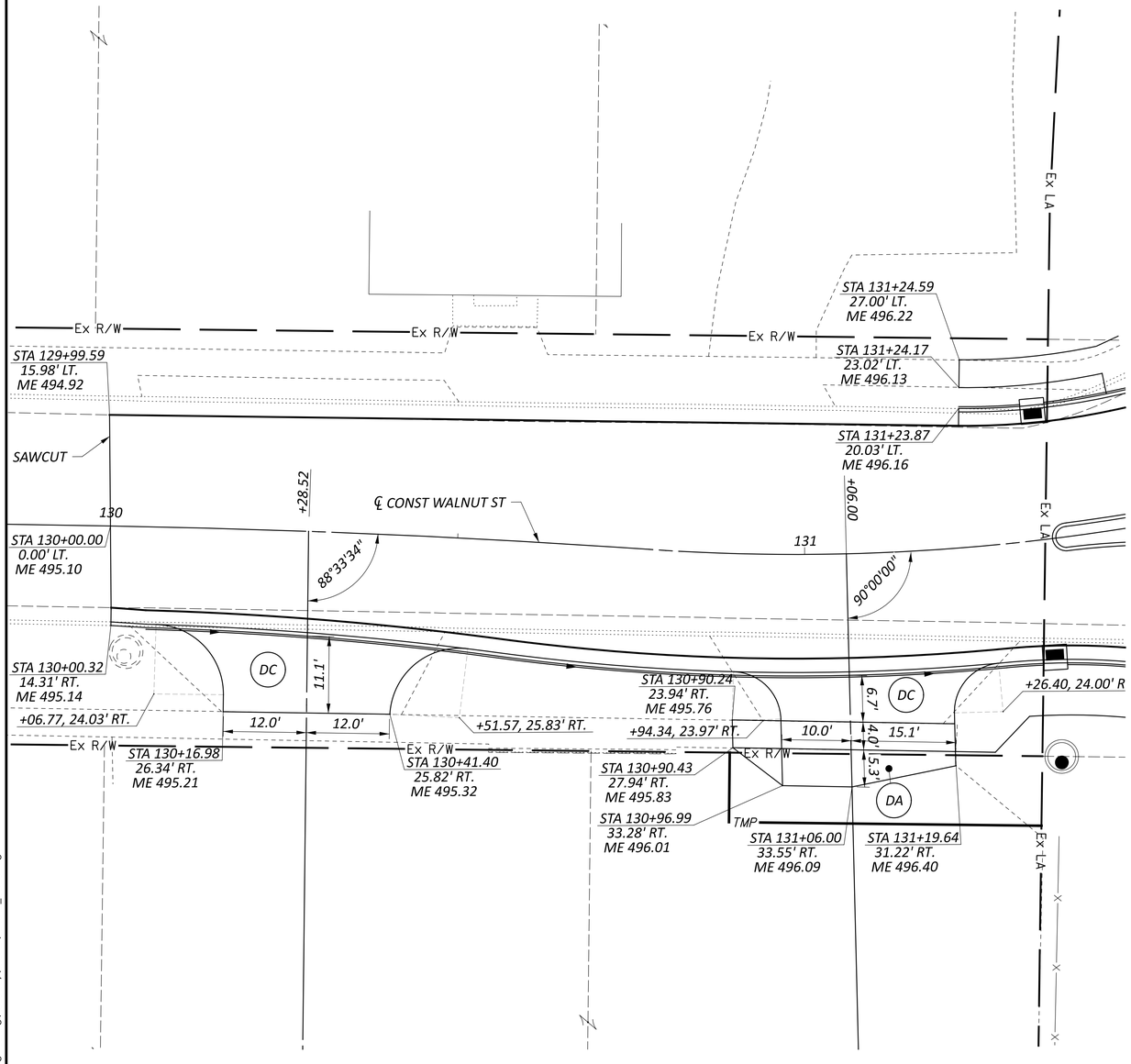
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PROJECT ID 114042

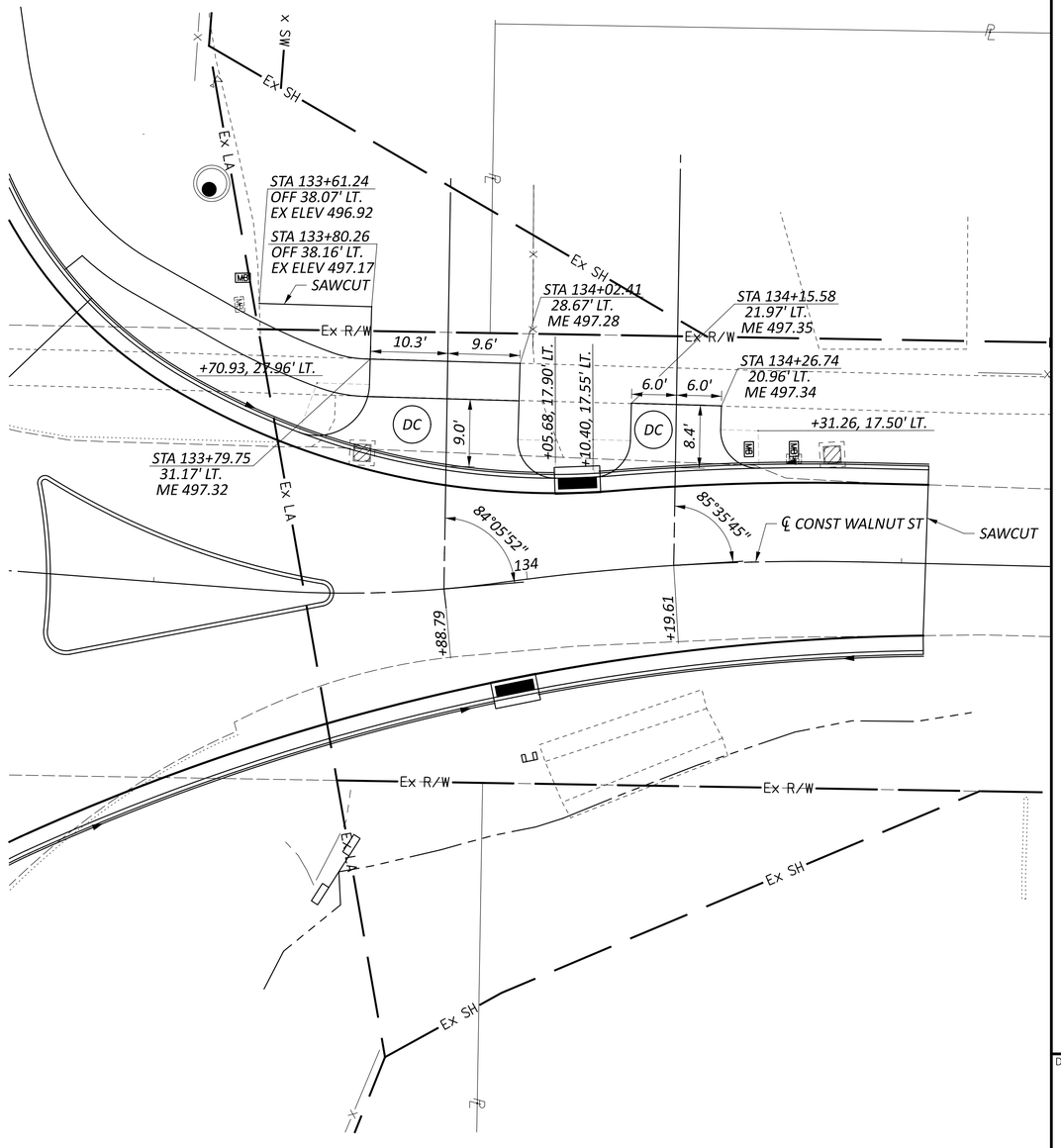
SHEET P.117 TOTAL P.163

CLE-US52-4.67

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WALNUT ST - WEST



WALNUT ST - EAST

HORIZONTAL SCALE IN FEET
0 5 10 20

PAVEMENT DETAILS WALNUT ST

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
WTM

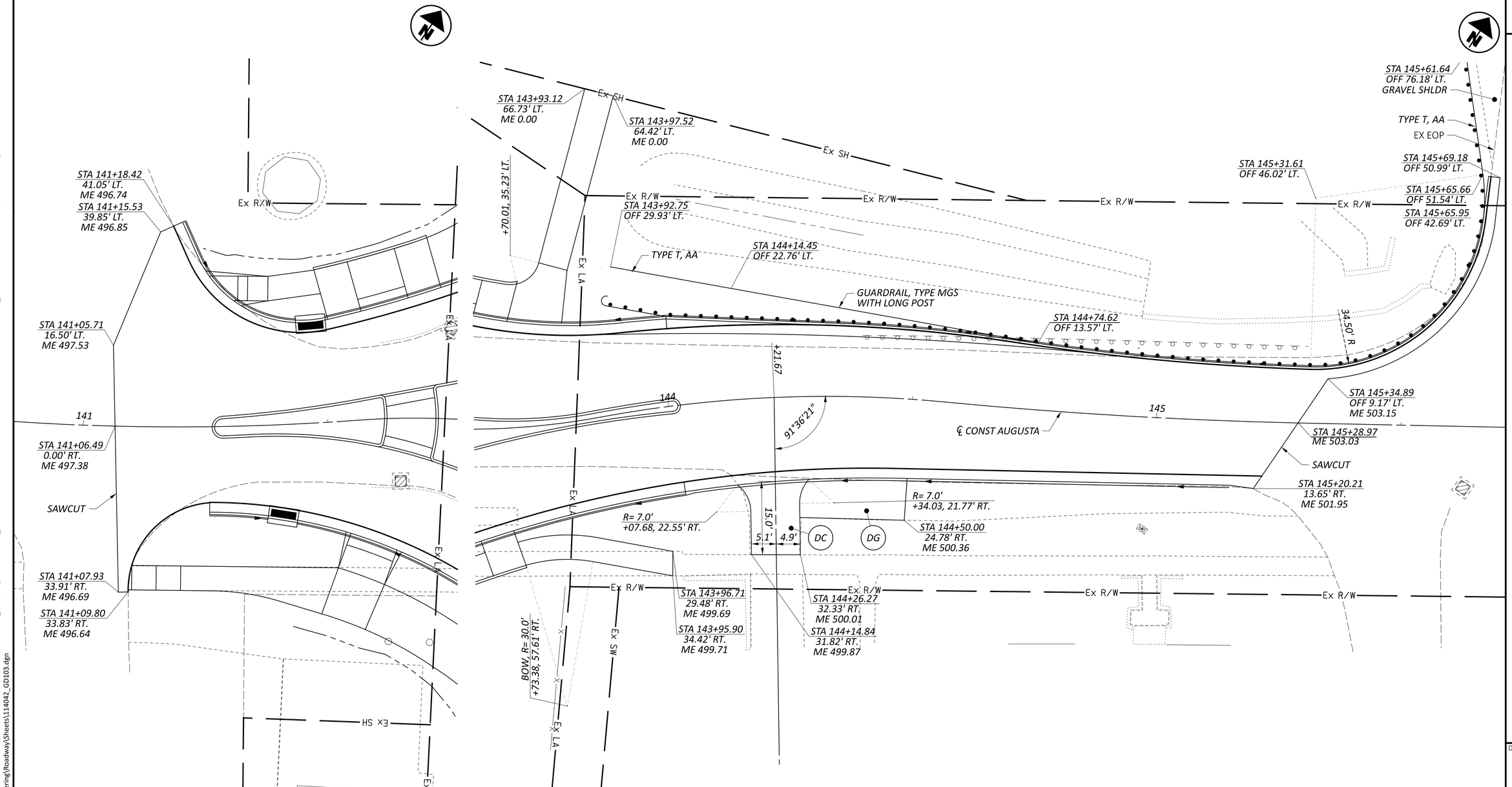
REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.118 TOTAL P.163

CLE-US52-4.67

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HORIZONTAL SCALE IN FEET
0 5 10 20

PAVEMENT DETAILS AUGUSTA ST

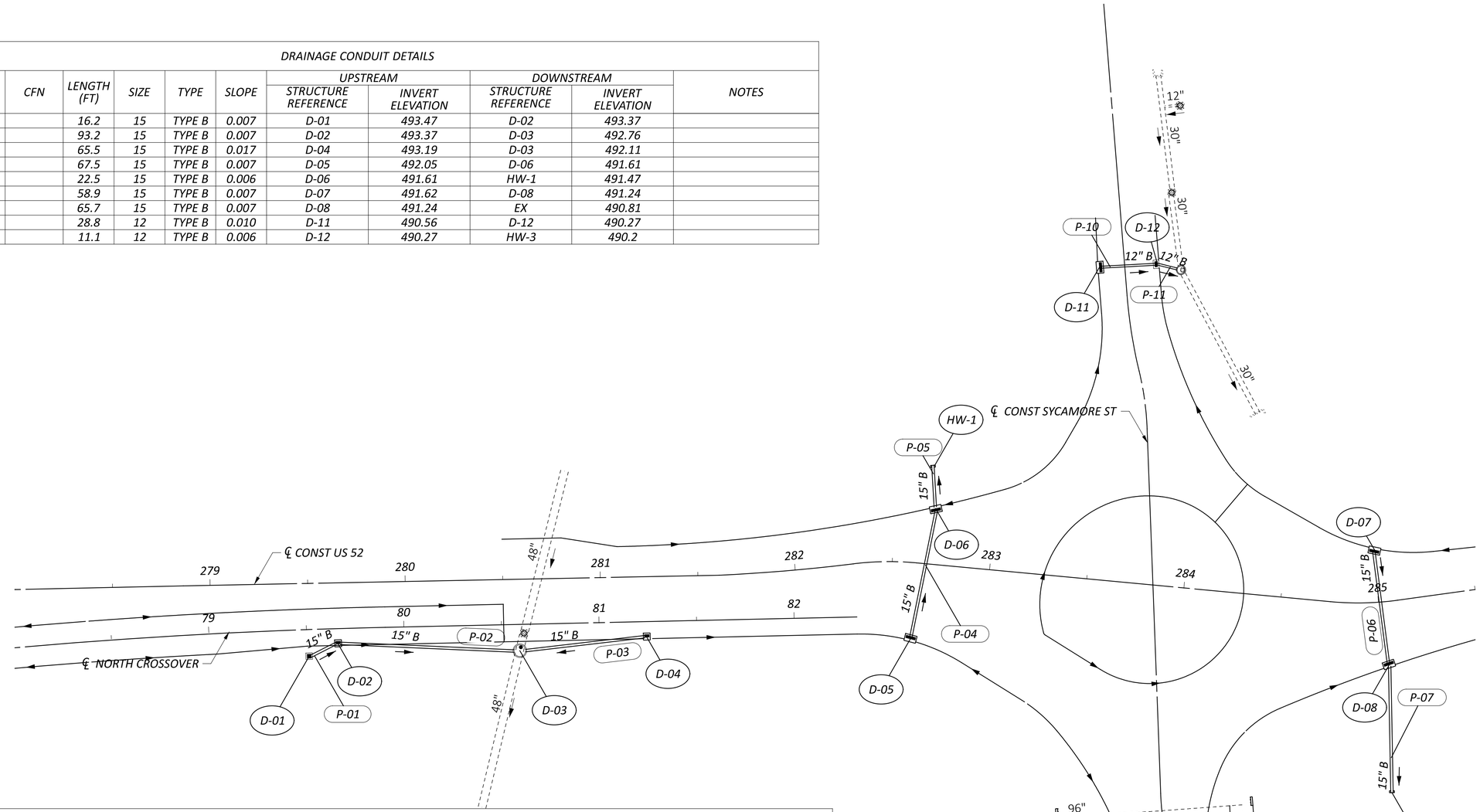
CLE-US52-4.67

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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER WTM
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.119 TOTAL P.163

DRAINAGE CONDUIT DETAILS										
REFERENCE NUMBER	CFN	LENGTH (FT)	SIZE	TYPE	SLOPE	UPSTREAM		DOWNSTREAM		NOTES
						STRUCTURE REFERENCE	INVERT ELEVATION	STRUCTURE REFERENCE	INVERT ELEVATION	
P-01		16.2	15	TYPE B	0.007	D-01	493.47	D-02	493.37	
P-02		93.2	15	TYPE B	0.007	D-02	493.37	D-03	492.76	
P-03		65.5	15	TYPE B	0.017	D-04	493.19	D-03	492.11	
P-04		67.5	15	TYPE B	0.007	D-05	492.05	D-06	491.61	
P-05		22.5	15	TYPE B	0.006	D-06	491.61	HW-1	491.47	
P-06		58.9	15	TYPE B	0.007	D-07	491.62	D-08	491.24	
P-07		65.7	15	TYPE B	0.007	D-08	491.24	EX	490.81	
P-10		28.8	12	TYPE B	0.010	D-11	490.56	D-12	490.27	
P-11		11.1	12	TYPE B	0.006	D-12	490.27	HW-3	490.2	



DRAINAGE STRUCTURE DETAILS												
REFERENCE NUMBER	REFERENCE ALIGNMENT	STATION	OFFSET	SIDE	TYPE	GRATE/RIM ELEVATION	INVERT ELEVATION	CONNECTED PIPES				NOTES
								FLOW DIRECTION	REFERENCE NUMBER	SIZE (IN)	INVERT ELEVATION	
D-01	CLX_RW_1	279+50	5.4	RIGHT	CB-8	497.47	493.47	OUT	P-01	15	493.47	
D-02	CLP_U052_SYC	279+65	31.3	RIGHT	CB-3A	497.8	493.37	OUT	P-02	15	493.37	
								IN	P-01	15	493.37	
D-03	CLP_U052_SYC	280+58	36.6	RIGHT	MH-3	497.94	484.72	OUT	EX	48	484.72	
								IN	P-02	15	492.76	
								IN	P-03	15	492.11	
								IN	EX	48	484.72	
D-04	CLP_U052_SYC	281+23	31	RIGHT	CB-3A	497.19	493.19	OUT	P-03	15	493.19	
D-05	CLP_U052_SYC	282+50	34.2	RIGHT	CB-3	496.23	492.05	OUT	P-04	15	492.05	
D-06	CLP_U052_SYC	282+69	21.9	LEFT	CB-3	496.54	491.61	OUT	P-05	15	491.61	
								IN	P-04	15	491.61	
D-07	CLP_U052_SYC	285+06	22.8	LEFT	CB-3	495.62	491.62	OUT	P-06	15	491.62	
D-08	CLP_U052_SYC	284+97	31.4	RIGHT	CB-3	495.35	491.24	OUT	P-07	15	491.24	
								IN	P-06	15	491.24	
D-11	CLP_SYC	126+67	13	LEFT	CB-3	494.31	490.56	OUT	P-10	12	490.56	
D-12	CLP_SYC	126+66	16.8	RIGHT	CB-6	494.52	490.27	OUT	P-11	12	490.27	
								IN	P-10	12	490.27	
HW-1	CLP_U052_SYC	282+69	39.5	LEFT	HW-2.1/ 2.2	N/A	489.76	IN	P-05	15	491.47	
HW-2	CLP_SYC	126+63	26.7	RIGHT	HW-2.1/ 2.2	N/A	490.2	IN	P-11	12	490.2	

HORIZONTAL SCALE IN FEET
0 15 30 60

STORM PROFILES

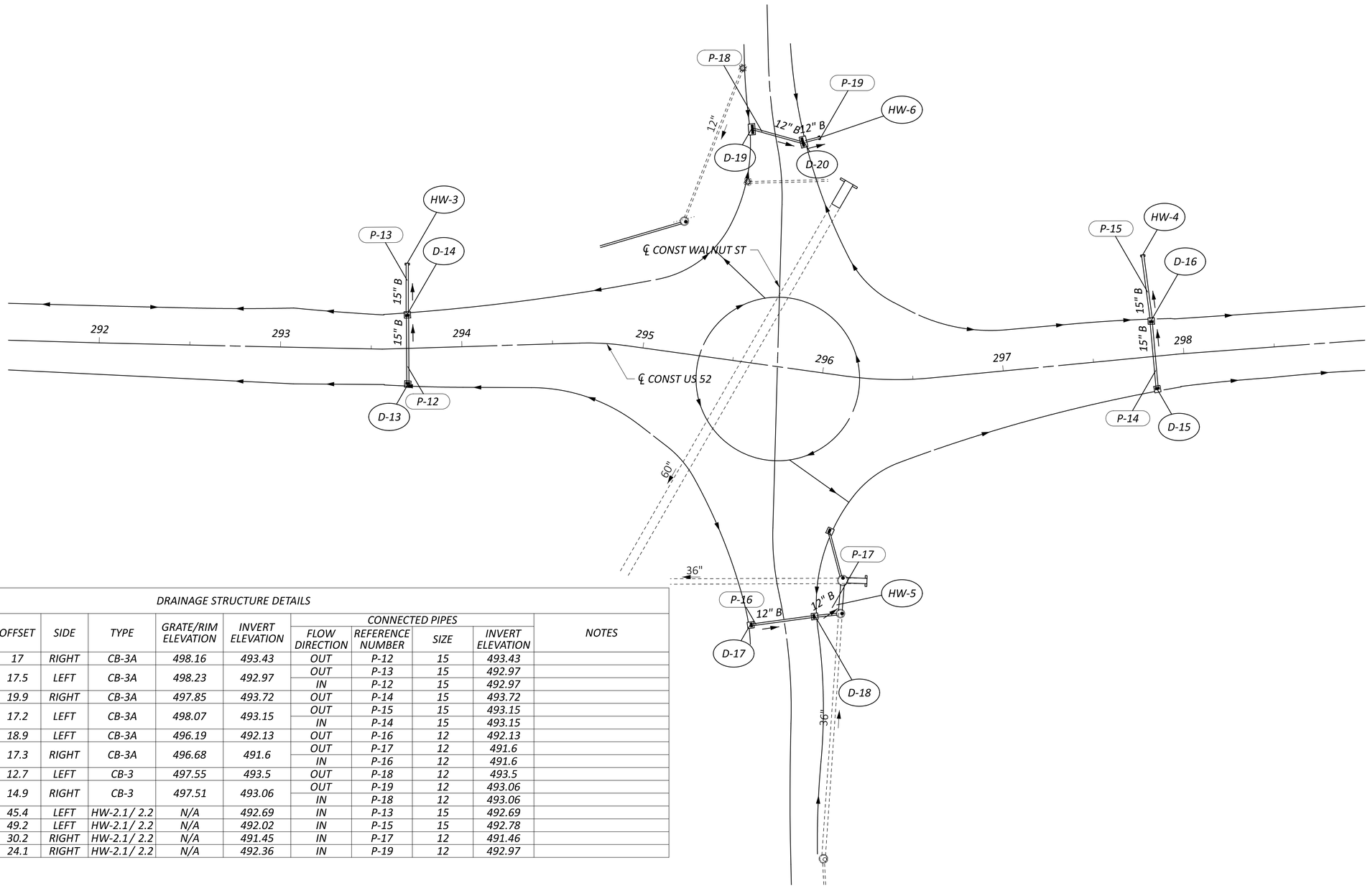
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.120 TOTAL P.163

CLE-US52-4.67

MODEL: CLP_U052_SYC - SYC-RAB [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 9:05:26 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OH
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DRAINAGE CONDUIT DETAILS										
REFERENCE NUMBER	CFN	LENGTH (FT)	SIZE	TYPE	SLOPE	UPSTREAM		DOWNSTREAM		NOTES
						STRUCTURE REFERENCE	INVERT ELEVATION	STRUCTURE REFERENCE	INVERT ELEVATION	
P-12		38.3	15	TYPE B	0.012	D-13	493.43	D-14	492.97	
P-13		28.4	15	TYPE B	0.01	D-14	492.97	HW-3	492.69	
P-14		37.7	15	TYPE B	0.015	D-15	493.72	D-16	493.15	
P-15		36.7	15	TYPE B	0.01	D-16	493.15	HW-4	492.78	
P-16		35.7	12	TYPE B	0.015	D-17	492.13	D-18	491.6	
P-17		13.8	12	TYPE B	0.01	D-18	491.6	HW-5	491.46	
P-18		29.3	12	TYPE B	0.015	D-19	493.5	D-20	493.06	
P-19		9.5	12	TYPE B	0.01	D-20	493.06	HW-6	492.97	



DRAINAGE STRUCTURE DETAILS												
REFERENCE NUMBER	REFERENCE ALIGNMENT	STATION	OFFSET	SIDE	TYPE	GRATE/RIM ELEVATION	INVERT ELEVATION	CONNECTED PIPES				NOTES
								FLOW DIRECTION	REFERENCE NUMBER	SIZE	INVERT ELEVATION	
D-13	CLP_U052_WAL	294+10	17	RIGHT	CB-3A	498.16	493.43	OUT	P-12	15	493.43	
D-14	CLP_U052_WAL	294+10	17.5	LEFT	CB-3A	498.23	492.97	OUT	P-13	15	492.97	
								IN	P-12	15	492.97	
D-15	CLP_U052_WAL	297+35	19.9	RIGHT	CB-3A	497.85	493.72	OUT	P-14	15	493.72	
D-16	CLP_U052_WAL	297+35	17.2	LEFT	CB-3A	498.07	493.15	OUT	P-15	15	493.15	
								IN	P-14	15	493.15	
D-17	CLP_WAL	131+35	18.9	LEFT	CB-3A	496.19	492.13	OUT	P-16	12	492.13	
D-18	CLP_WAL	131+34	17.3	RIGHT	CB-3A	496.68	491.6	OUT	P-17	12	491.6	
								IN	P-16	12	491.6	
D-19	CLP_WAL	134+08	12.7	LEFT	CB-3	497.55	493.5	OUT	P-18	12	493.5	
D-20	CLP_WAL	133+96	14.9	RIGHT	CB-3	497.51	493.06	OUT	P-19	12	493.06	
								IN	P-18	12	493.06	
HW-3	CLP_U052_WAL	294+10	45.4	LEFT	HW-2.1/ 2.2	N/A	492.69	IN	P-13	15	492.69	
HW-4	CLP_U052_WAL	297+37	49.2	LEFT	HW-2.1/ 2.2	N/A	492.02	IN	P-15	15	492.78	
HW-5	CLP_WAL	131+38	30.2	RIGHT	HW-2.1/ 2.2	N/A	491.45	IN	P-17	12	491.46	
HW-6	CLP_WAL	133+97	24.1	RIGHT	HW-2.1/ 2.2	N/A	492.36	IN	P-19	12	492.97	

HORIZONTAL SCALE IN FEET
0 15 30 60

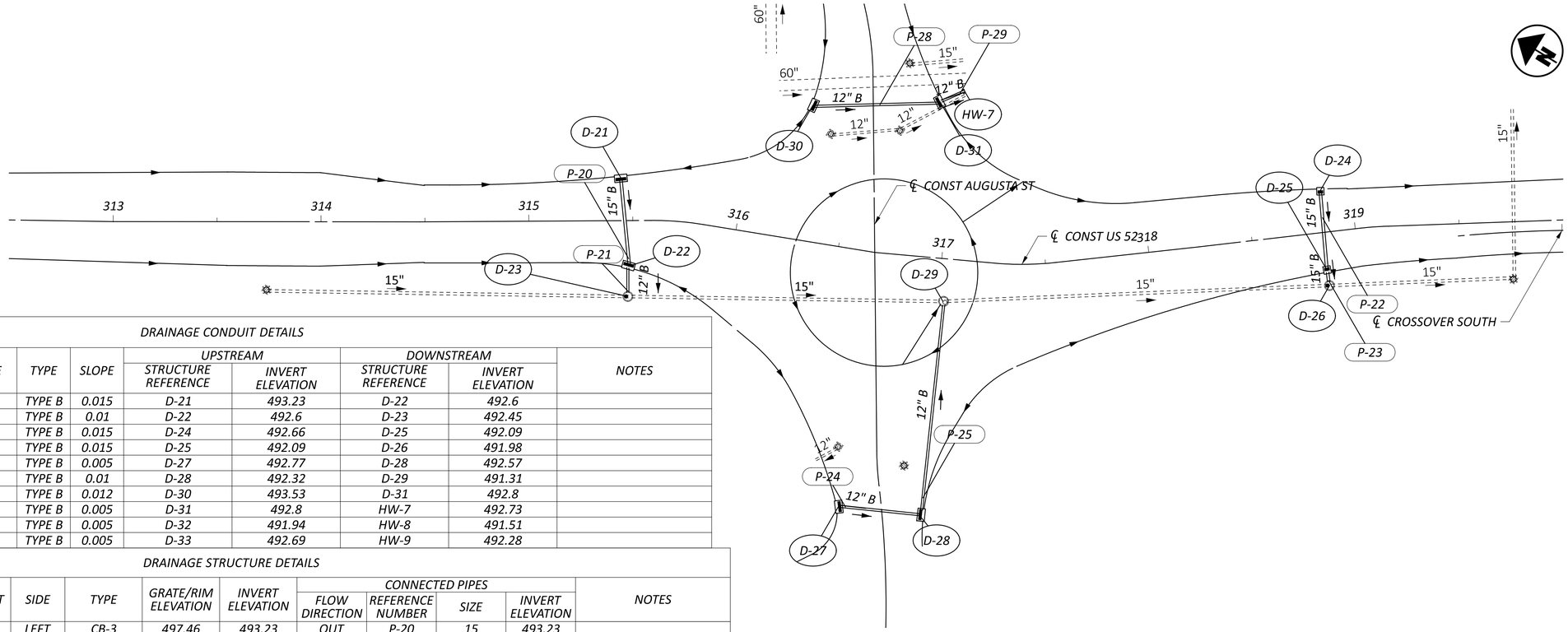
STORM PROFILES

CLE-US52-4.67

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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.121 TOTAL P.163

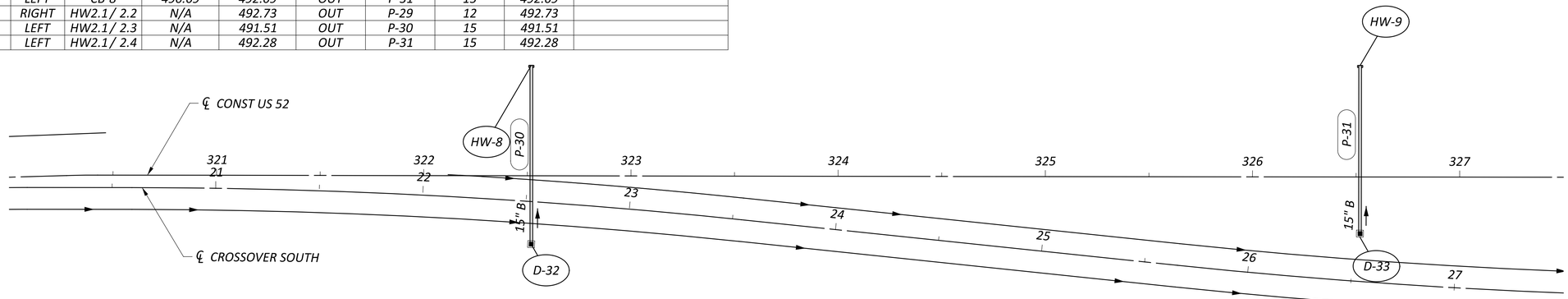


DRAINAGE CONDUIT DETAILS

REFERENCE NUMBER	CFN	LENGTH (FT)	SIZE	TYPE	SLOPE	UPSTREAM		DOWNSTREAM		NOTES
						STRUCTURE REFERENCE	INVERT ELEVATION	STRUCTURE REFERENCE	INVERT ELEVATION	
P-20		42.2	15	TYPE B	0.015	D-21	493.23	D-22	492.6	
P-21		14.9	15	TYPE B	0.01	D-22	492.6	D-23	492.45	
P-22		38.1	15	TYPE B	0.015	D-24	492.66	D-25	492.09	
P-23		7.5	15	TYPE B	0.015	D-25	492.09	D-26	491.98	
P-24		39.8	12	TYPE B	0.005	D-27	492.77	D-28	492.57	
P-25		101.3	15	TYPE B	0.01	D-28	492.32	D-29	491.31	
P-28		60.7	12	TYPE B	0.012	D-30	493.53	D-31	492.8	
P-29		13.2	12	TYPE B	0.005	D-31	492.8	HW-7	492.73	
P-30		86.2	15	TYPE B	0.005	D-32	491.94	HW-8	491.51	
P-31		82.7	15	TYPE B	0.005	D-33	492.69	HW-9	492.28	

DRAINAGE STRUCTURE DETAILS

REFERENCE NUMBER	REFERENCE ALIGNMENT	STATION	OFFSET	SIDE	TYPE	GRATE/RIM ELEVATION	INVERT ELEVATION	CONNECTED PIPES				NOTES
								FLOW DIRECTION	REFERENCE NUMBER	SIZE	INVERT ELEVATION	
D-21	CLP_U052_AUG	315+44	25.6	LEFT	CB-3	497.46	493.23	OUT	P-20	15	493.23	
D-22	CLP_U052_AUG 2	315+49	16.9	RIGHT	CB-3	497.49	492.6	OUT	P-21	15	492.6	
								IN	P-20	15	492.6	
D-23	CLP_U052_AUG 2	315+49	31.5	RIGHT	MH-3	497.78	491.99	OUT	EX	15	491.99	
								IN	P-21	15	492.45	
								IN	EX	15	491.99	
D-24	CLP_U052_AUG	318+85	15.7	LEFT	CB-3A	496.91	492.66	OUT	P-22	15	492.66	
D-25	CLP_U052_AUG 2	318+85	23	RIGHT	CB-3A	496.69	492.09	OUT	P-23	15	492.09	
								IN	P-22	15	492.09	
D-26	CLP_U052_AUG	318+85	25.7	RIGHT	MH-3	496.35	490.58	OUT	EX	15	490.58	
								IN	P-23	15	491.98	
								IN	EX	15	490.58	
D-27	CLP_AUG	141+48	20.6	LEFT	CB-3	496.77	492.77	OUT	P-24	12	492.77	
D-28	CLP_AUG	141+40	19	RIGHT	CB-3	496.7	492.32	OUT	P-25	12	492.32	
								IN	P-24	12	492.57	
D-29	CLX_RW_1	317+00	8.4	RIGHT	MH-3	497.53	491.31	OUT	EX	15	491.31	
								IN	P-25	15	491.31	
								IN	EX	15	491.31	
D-30	CLP_AUG	143+39	29	LEFT	CB-3	497.59	493.53	OUT	P-28	12	493.53	
D-31	CLP_AUG	143+40	32.2	RIGHT	CB-3	497.1	492.8	OUT	P-29	12	492.8	
								IN	P-28	12	492.8	
D-32	CLX_RW_1	322+50	1	RIGHT	CB-8	495.94	491.94	OUT	P-30	15	491.94	
D-33	CLX_RW_1	326+50	2.9	LEFT	CB-8	496.69	492.69	OUT	P-31	15	492.69	
HW-7	CLP_AUG	143+45	44	RIGHT	HW2.1/ 2.2	N/A	492.73	OUT	P-29	12	492.73	
HW-8	CLX_RW_1	322+50	85.2	LEFT	HW2.1/ 2.3	N/A	491.51	OUT	P-30	15	491.51	
HW-9	CLX_RW_1	326+50	85.6	LEFT	HW2.1/ 2.4	N/A	492.28	OUT	P-31	15	492.28	



HORIZONTAL SCALE IN FEET
0 15 30 60

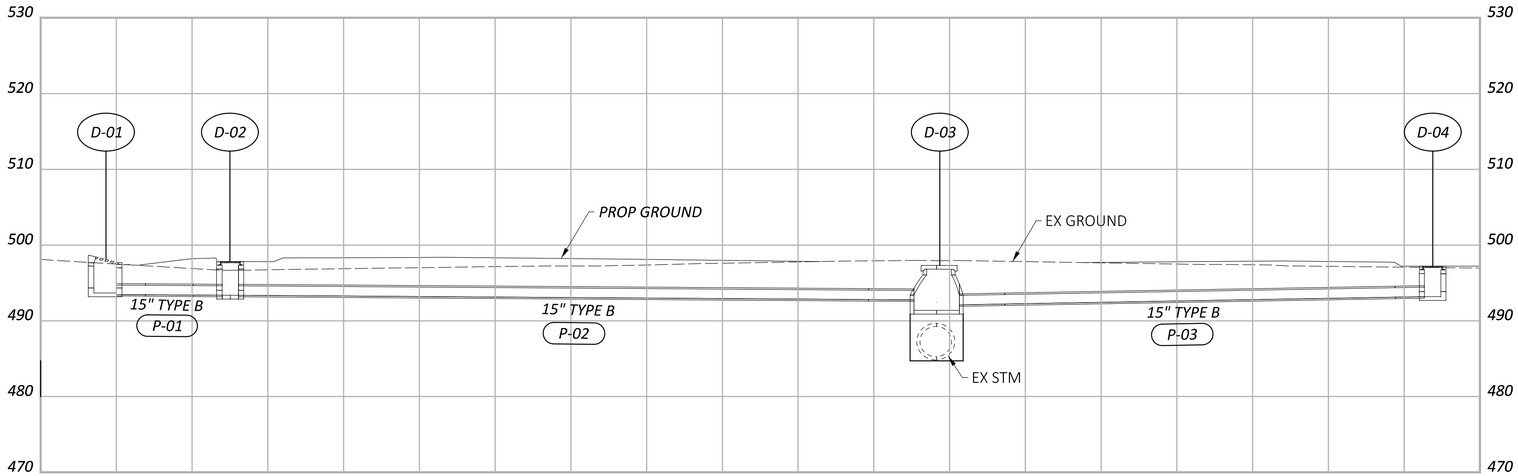
STORM PROFILES

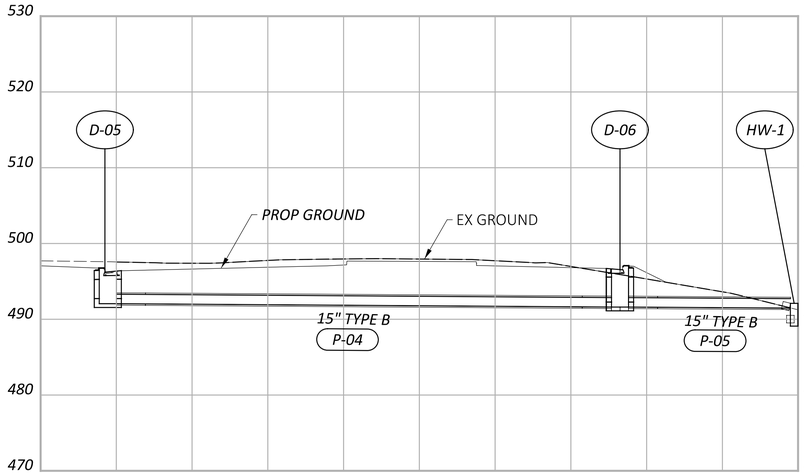
DESIGN AGENCY
WEPFER STRUCTUREPOINT INC.

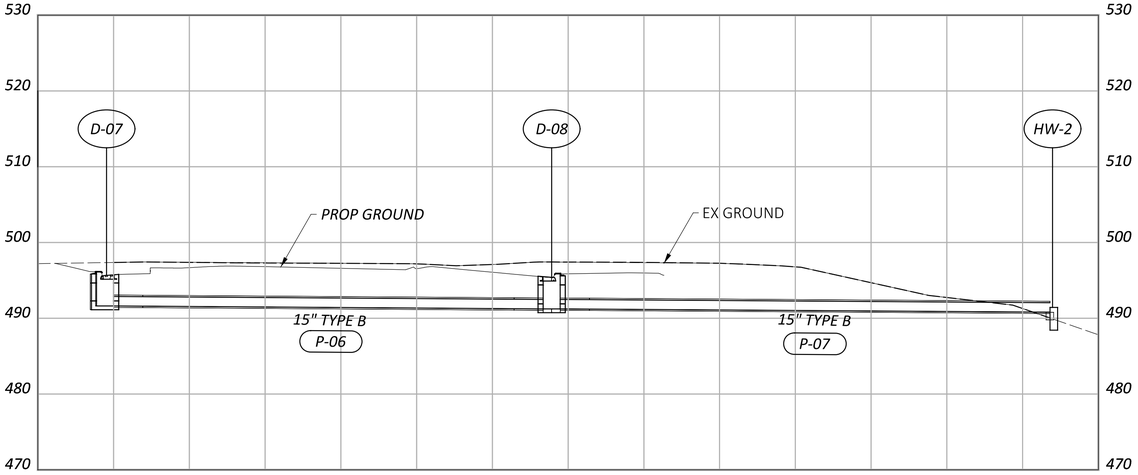
DESIGNER FGW
REVIEWER MTL 03/10/26
PROJECT ID 114042
SHEET P.122 TOTAL P.163

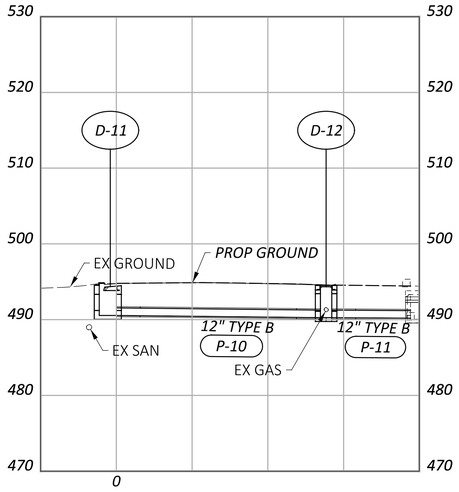
CLE-US52-4.67

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STORM PROFILES
US 52 AT SYCAMORE ST

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER
FGW

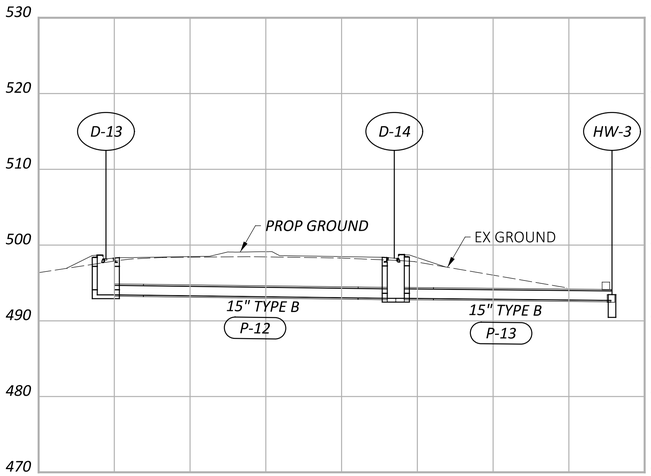
REVIEWER
MTL 03/10/26

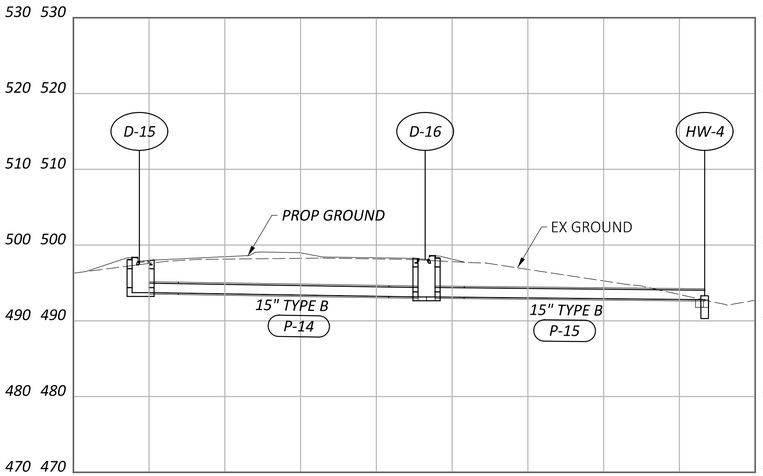
PROJECT ID
114042

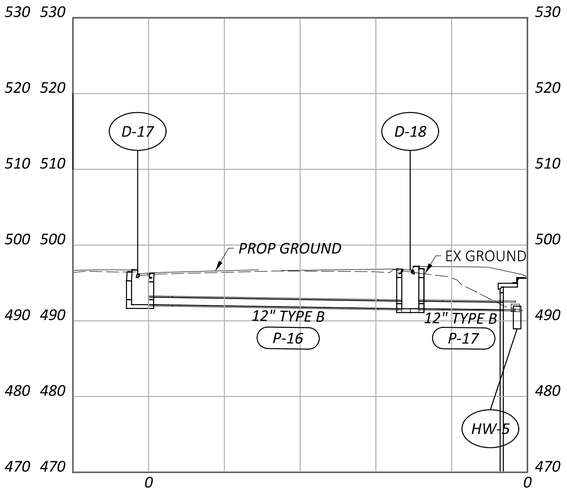
SHEET P.123 TOTAL P.163

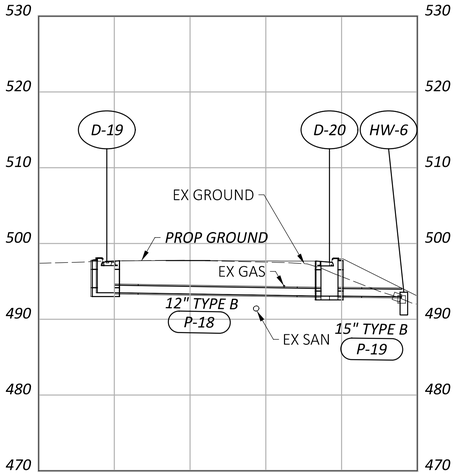
CLE-US52-4.67

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STORM PROFILES
US 52 AT WALNUT ST

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER
FGW

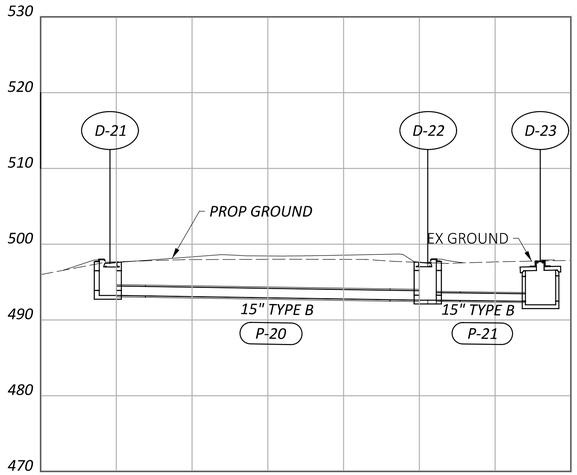
REVIEWER
MTL 03/10/26

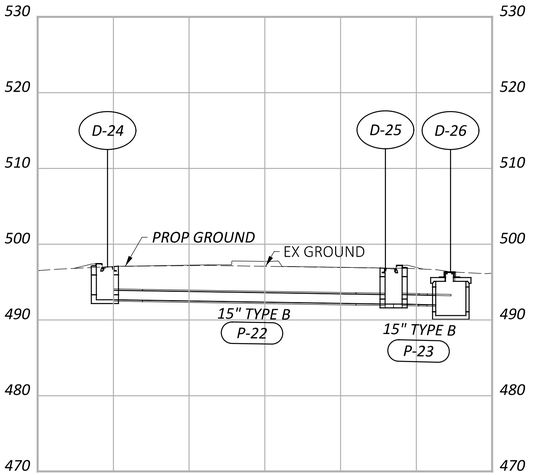
PROJECT ID
114042

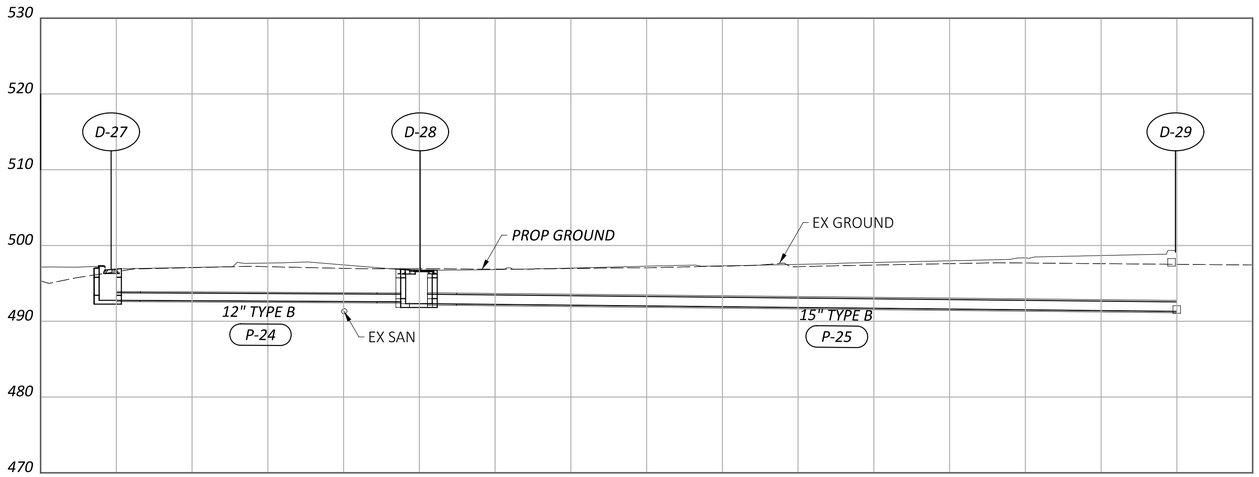
SHEET P.124 | TOTAL P.163

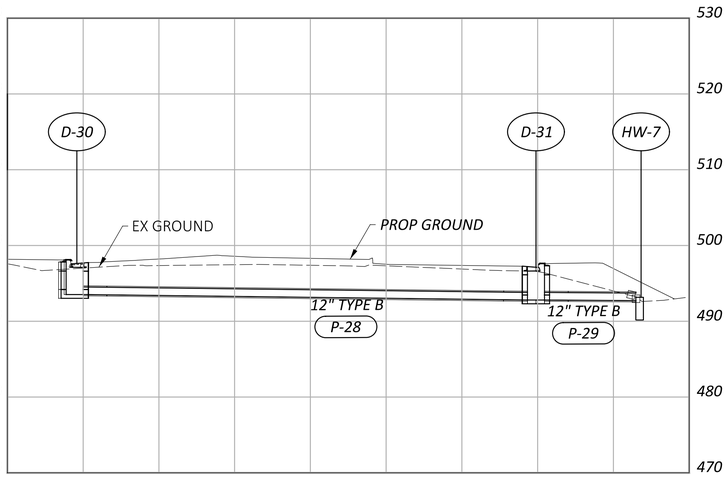
CLE-US52-4.67

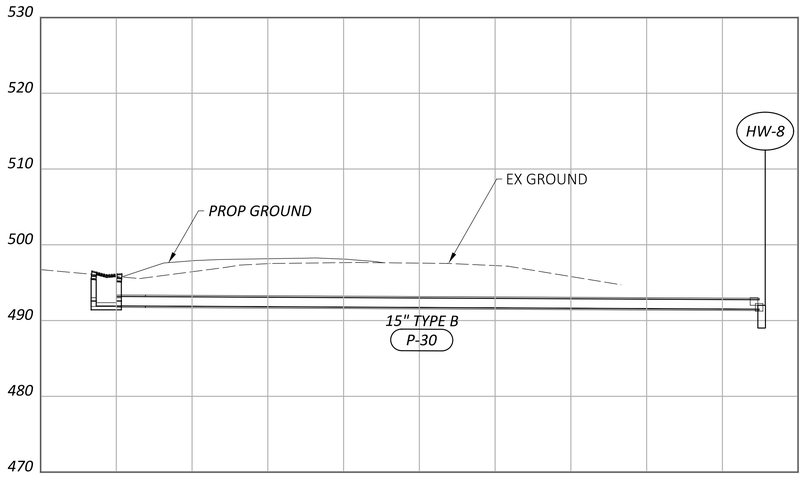
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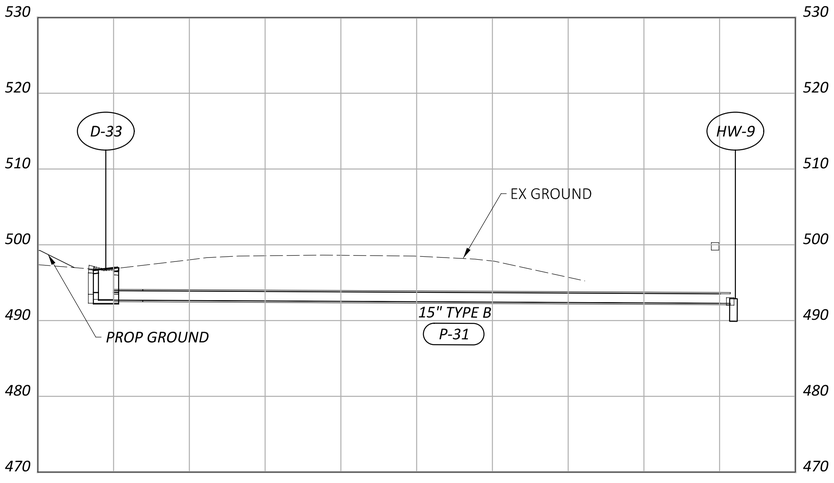












STORM PROFILES

CLE-US52-4.67

MODEL: Profile Run - D-24 TO D-26 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 3/10/2026 TIME: 9:09:54 PM PLTDRV: OHIO_PDF.pltcfg PENTBL: Ohio_Shade.tbl USER: WORKSPACE: OHDOTCEv2 WORKSET: 20190245\9-New_Richmond-US-52 PRODUCT: OpenRoadsDesigner 10.12.02.4
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DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

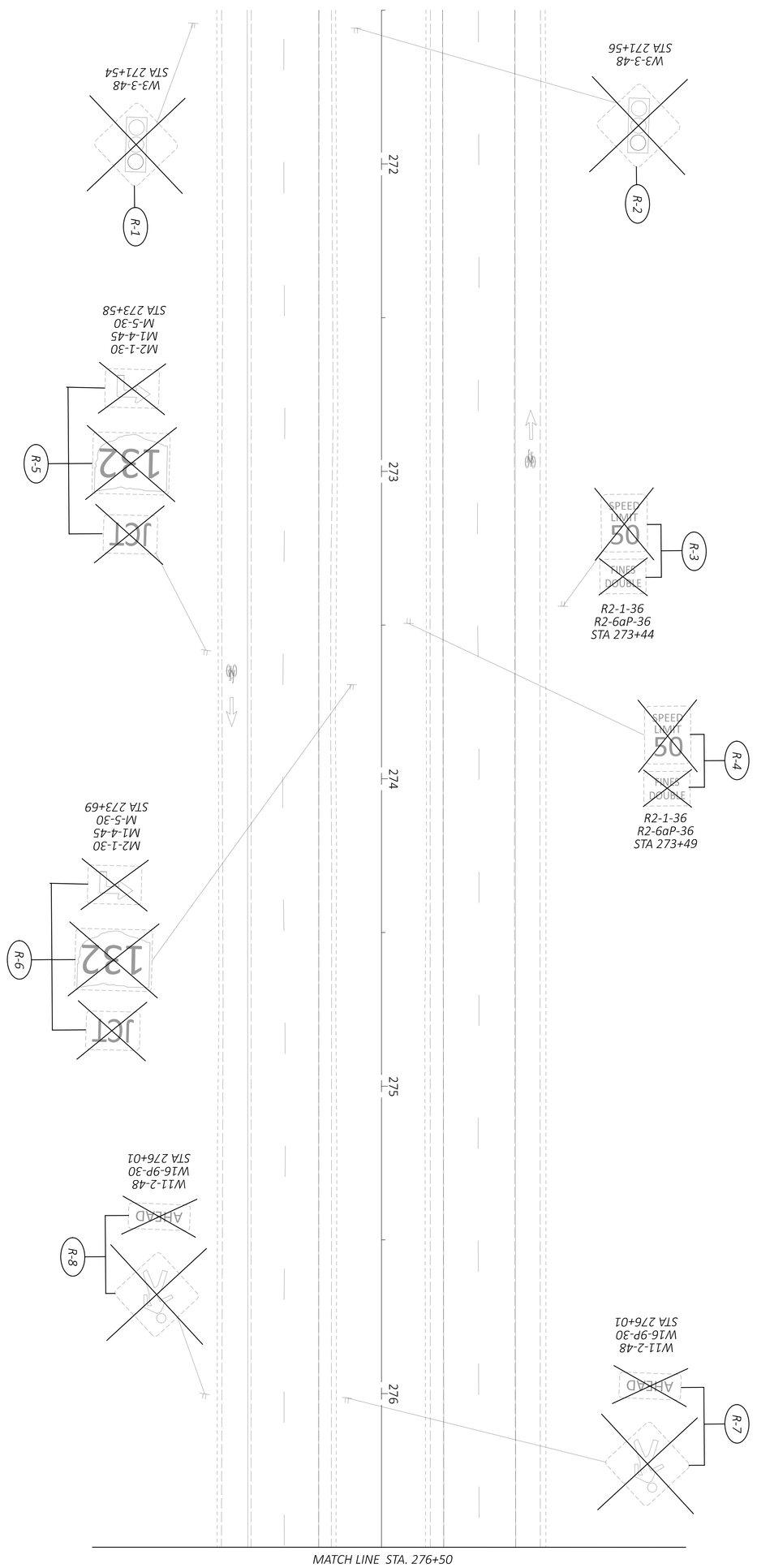
DESIGNER
FGW

REVIEWER
MTL 03/10/26

PROJECT ID
114042

SHEET P.125 TOTAL P.163

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LEGEND

R-XX — EXISTING SIGN TO BE REMOVED

RE-XX — EXISTING SIGN TO BE REMOVED AND REERECTED

EXISTING SIGN TO REMAIN (RELOCATIONS NOTED IN PLANS)

SIGNING REMOVAL PLAN
STA 271+50 TO 276+50

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY	143 Engineers
DESIGNER	CDS
REVIEWER	CFD 11-01-25
PROJECT ID	114042
SHEET	P.126
TOTAL	163

SIGNING REMOVAL PLAN
STA 276+50 TO 281+25

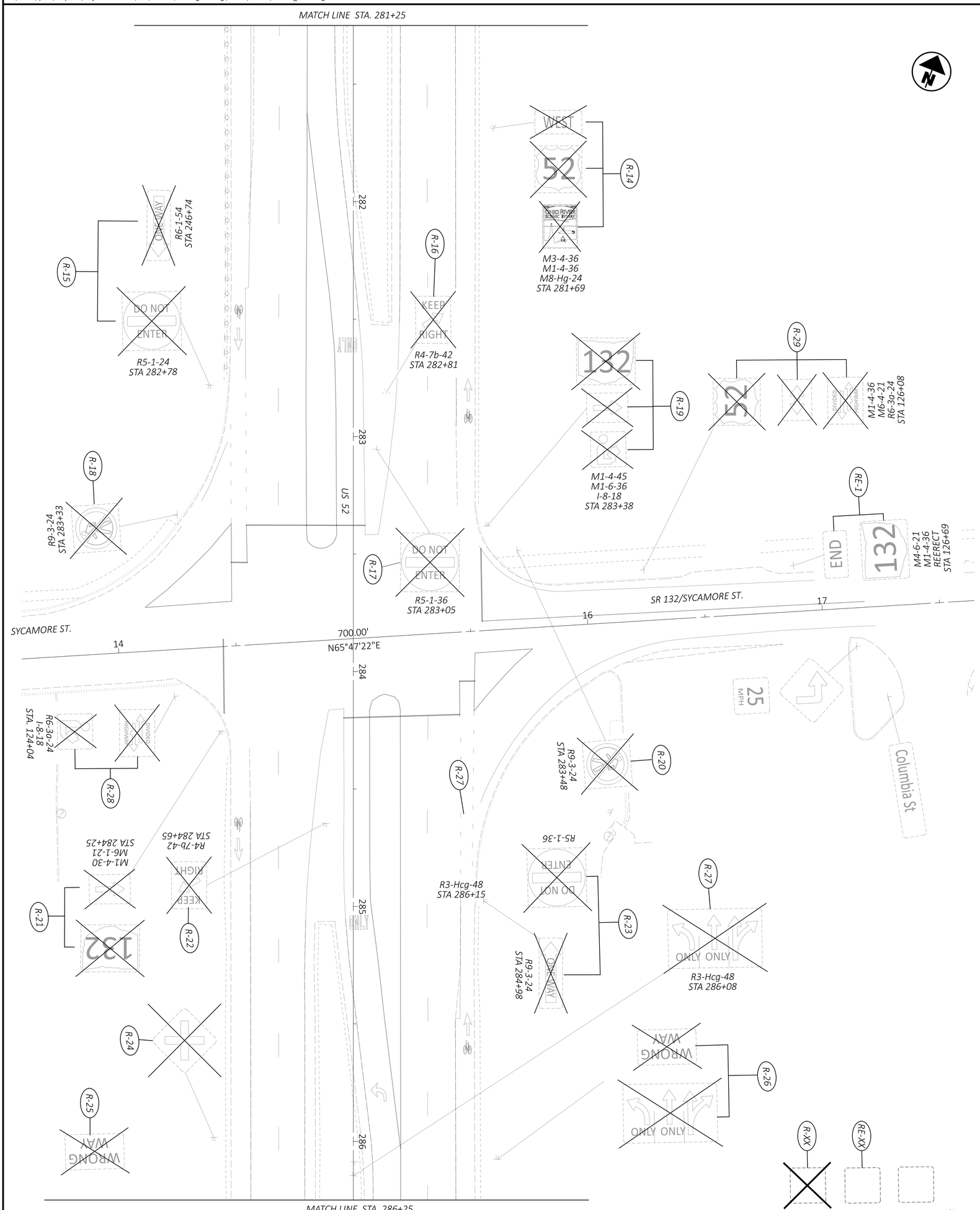
CLE-52-4.67

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DESIGN AGENCY
143 Engineers

DESIGNER	CDS
REVIEWER	CFD 11-01-25
PROJECT ID	114042
SHEET	P.127
TOTAL	163

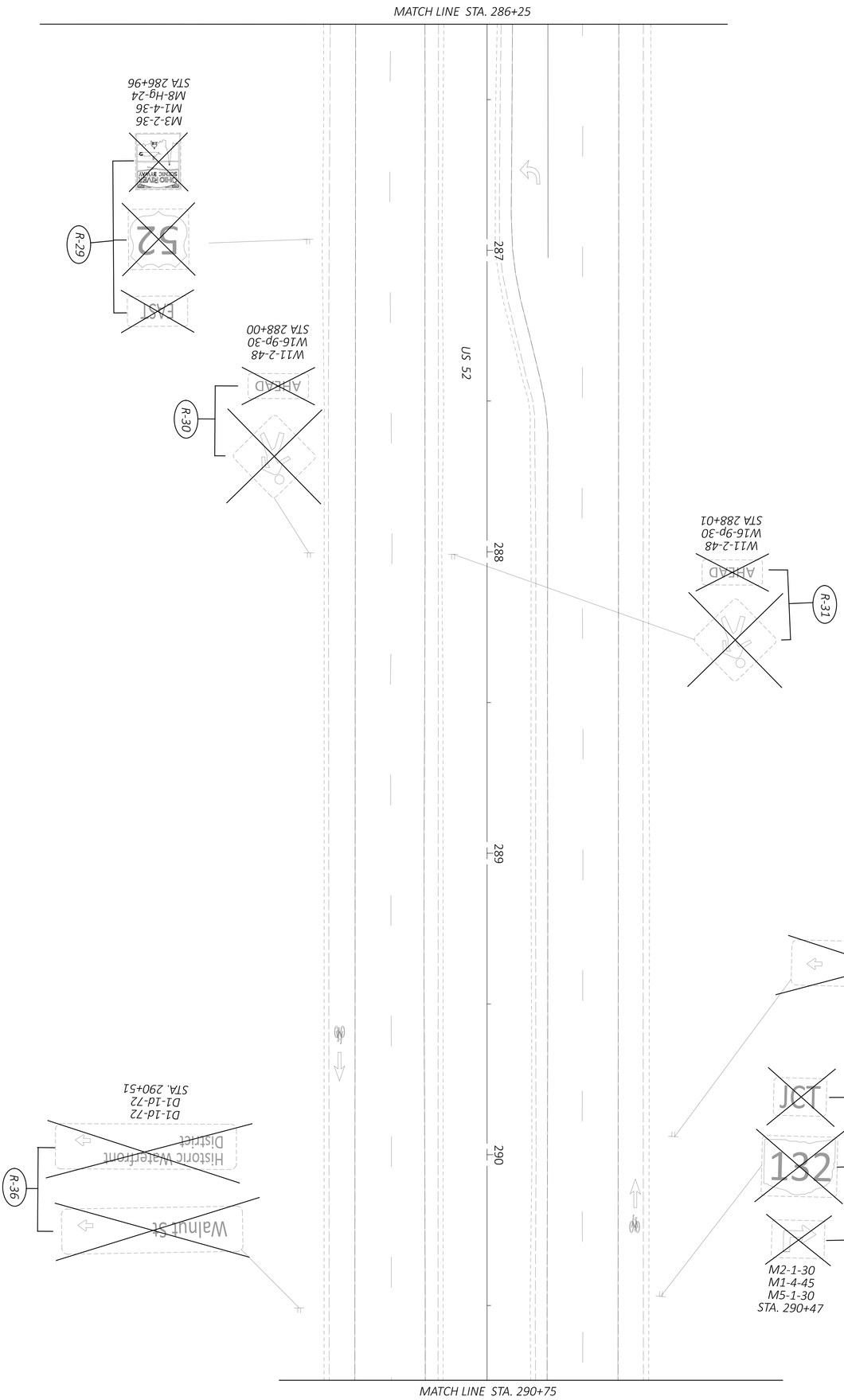
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SHEET P.128 TOTAL 163	PROJECT ID 114042	REVIEWER CFD 11-01-25	DESIGNER CDS	DESIGN AGENCY 143 Engineers

SIGNING REMOVAL PLAN
STA 281+25 TO 286+25

HORIZONTAL SCALE IN FEET
0 20
10 40



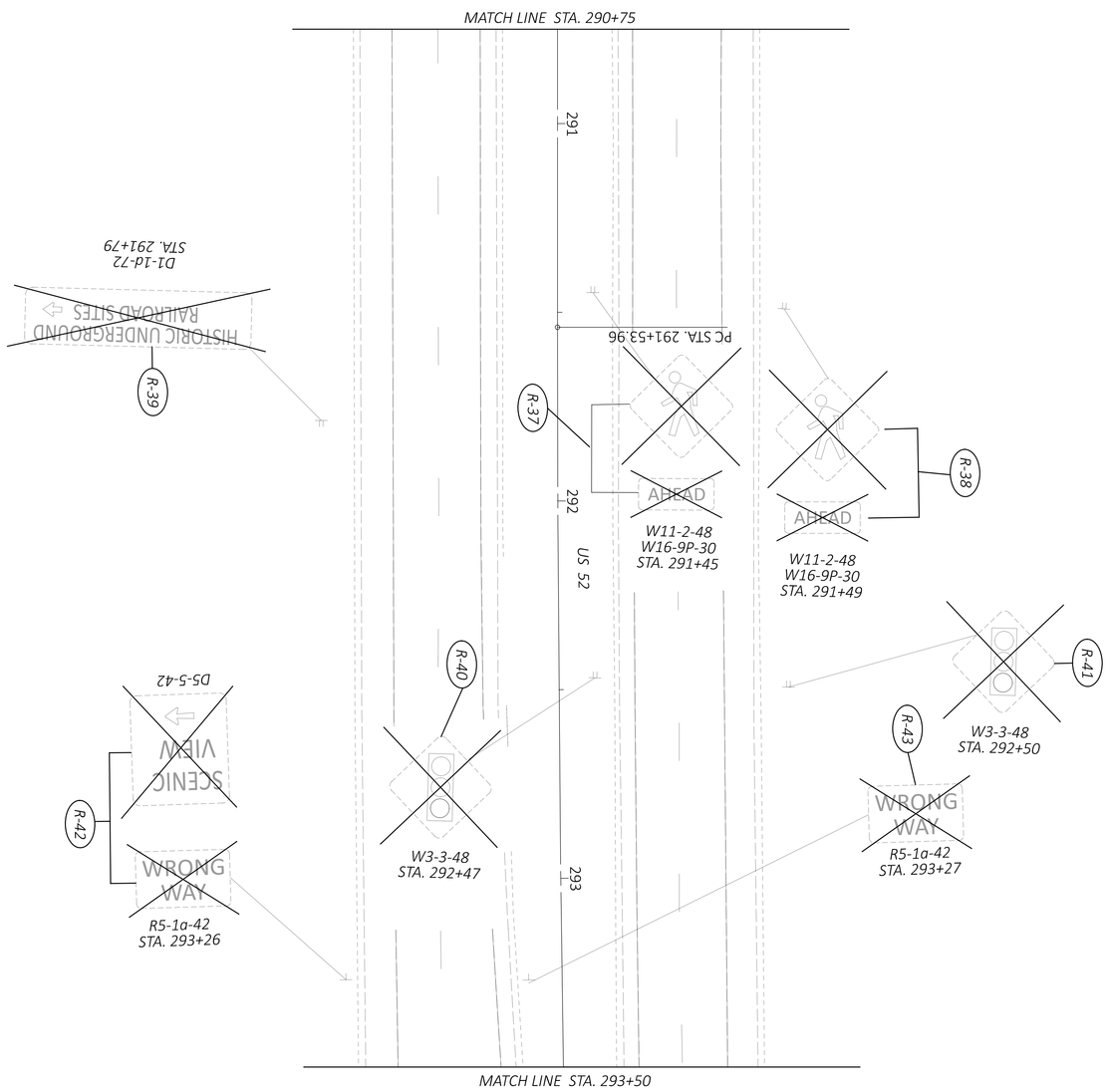
SIGNING REMOVAL PLAN
STA 286+25 TO 290+75

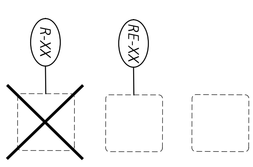
HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY
143 Engineers

DESIGNER CDS
REVIEWER CFD 11-01-25
PROJECT ID 114042
SHEET P.129 TOTAL 163

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:33:14 PM USER: spisa
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SHEET	TOTAL
P.130	163

PROJECT ID: 114042

REVIEWER: CFD 11-01-25

DESIGNER: CDS

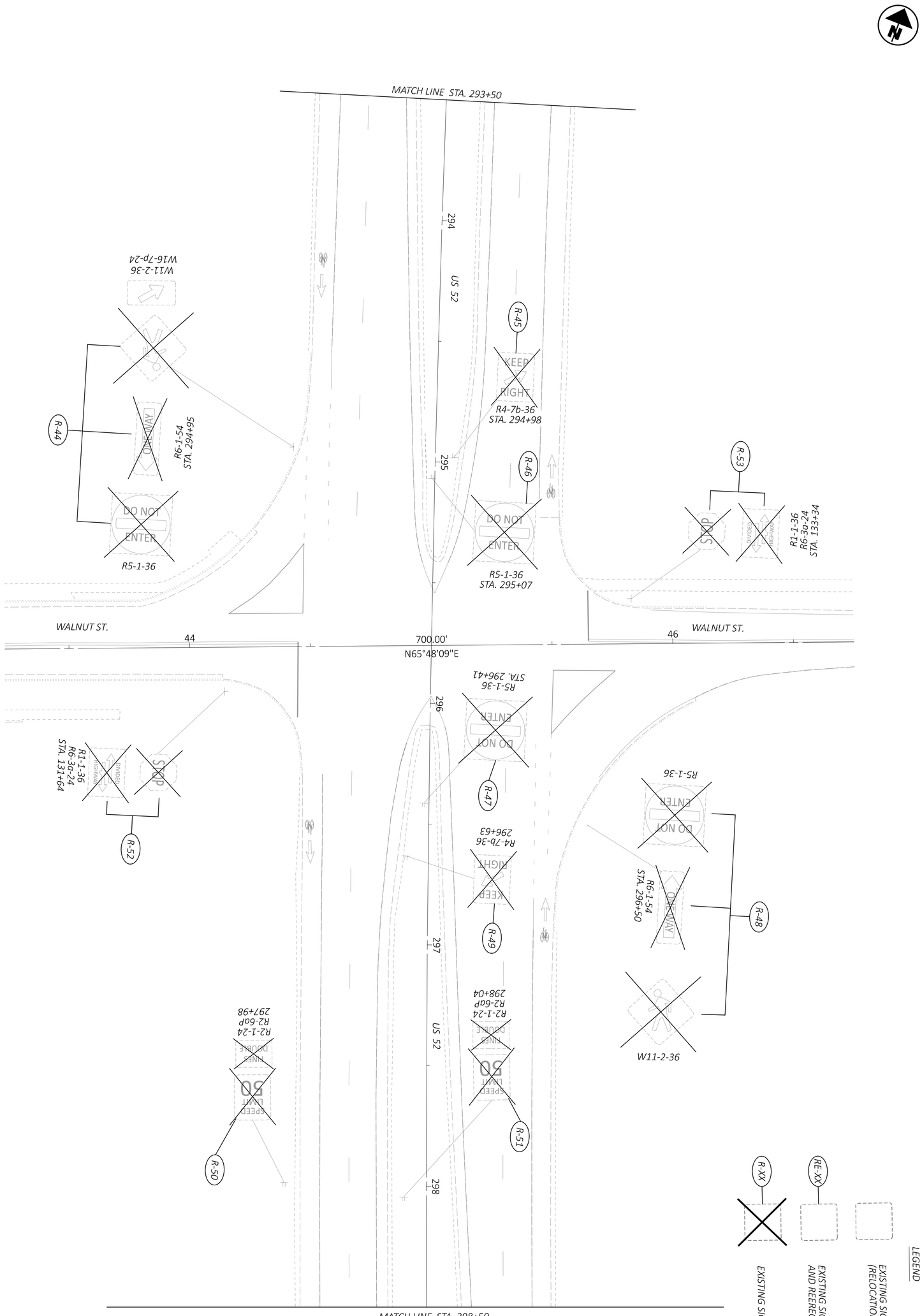
DESIGN AGENCY: 143 Engineers

SIGNING REMOVAL PLAN
STA 290+75 TO 293+50

HORIZONTAL SCALE IN FEET

0 20 10 40

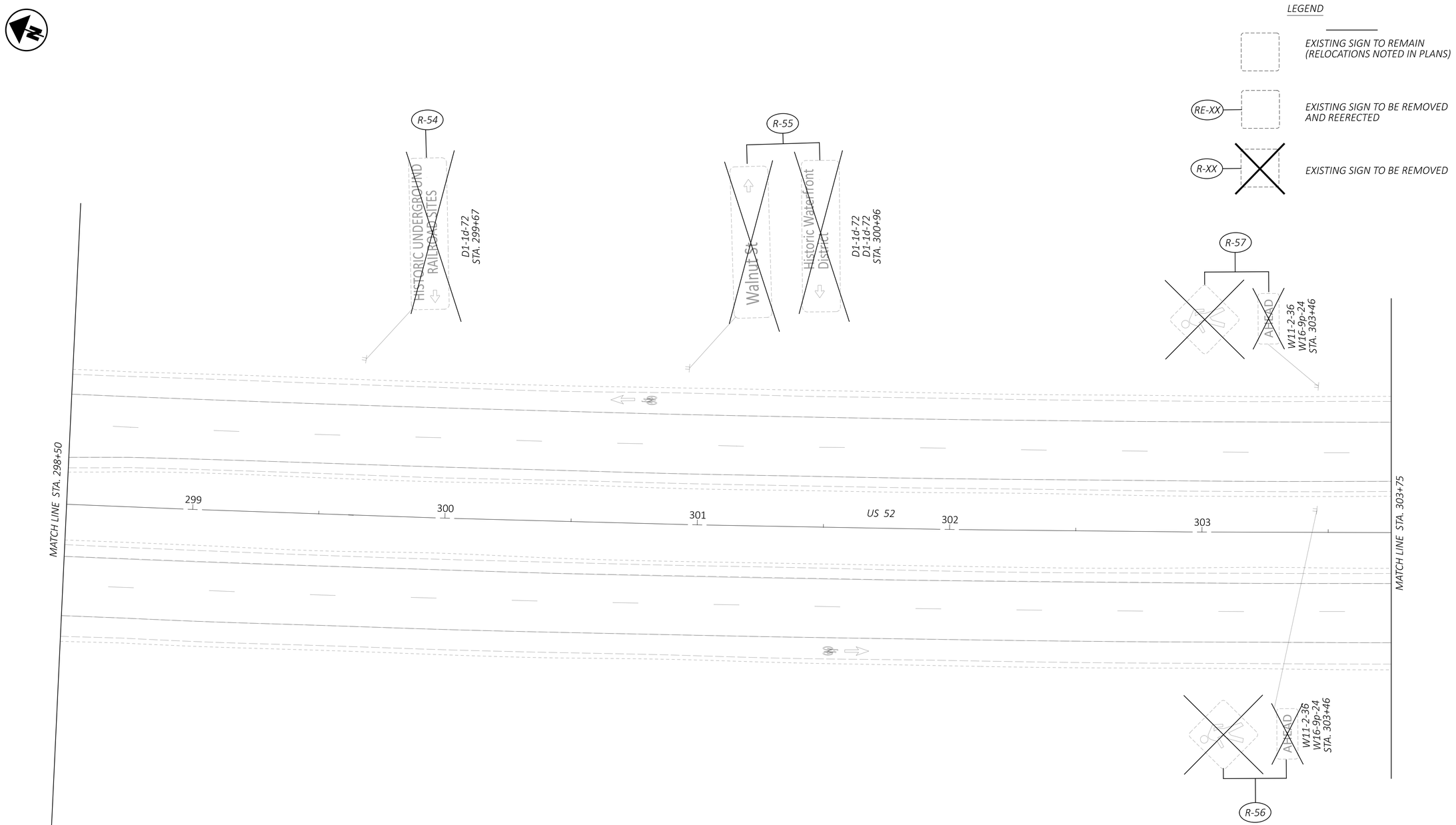
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SHEET P.131	TOTAL 163	PROJECT ID 114042	REVIEWER CFD 11-01-25	DESIGNER CDS	DESIGN AGENCY 143 Engineers

SIGNING REMOVAL PLAN
STA 293+50 TO 298+50

HORIZONTAL SCALE IN FEET
0 20
10 40



HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING REMOVAL PLAN
STA 298+50 TO 303+75

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:16:03 PM USER: spisa
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DESIGN AGENCY
143 Engineers

DESIGNER
CDS

REVIEWER
CFD 11-01-25

PROJECT ID
114042

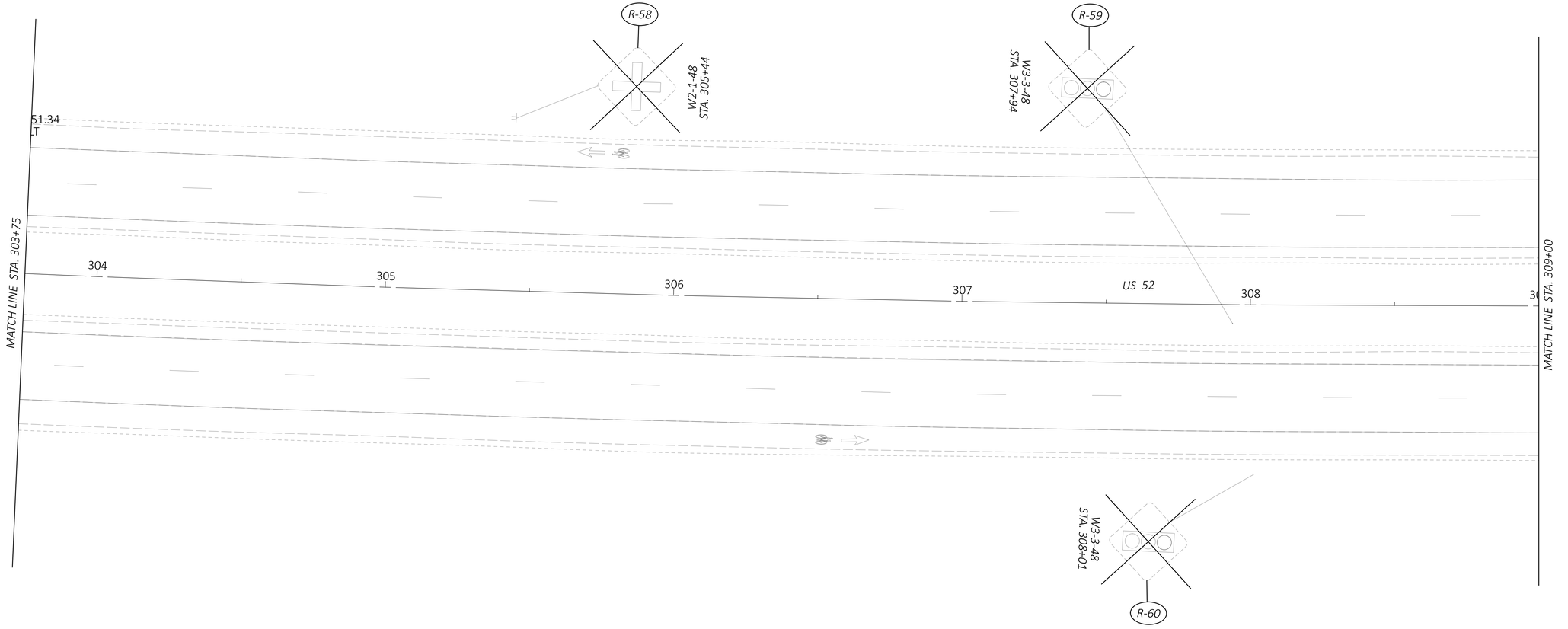
SHEET P.132 TOTAL 163

LEGEND

EXISTING SIGN TO REMAIN (RELOCATIONS NOTED IN PLANS)

RE-XX — EXISTING SIGN TO BE REMOVED AND REERECTED

R-XX — EXISTING SIGN TO BE REMOVED



HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING REMOVAL PLAN
STA 303+75 TO 309+00

DESIGN AGENCY
143 Engineers

DESIGNER CDS

REVIEWER CFD 11-01-25

PROJECT ID 114042

SHEET P.133 | TOTAL 163

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:18:21 PM USER: spisa
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LEGEND

EXISTING SIGN TO REMAIN (RELOCATIONS NOTED IN PLANS)

RE-XX — EXISTING SIGN TO BE REMOVED AND REERECTED

R-XX — EXISTING SIGN TO BE REMOVED

HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING REMOVAL PLAN
STA 309+00 TO 314+25

MATCH LINE STA. 309+00

MATCH LINE STA. 314+25

US 52

309 310 311 312 313 314

R-63
AHEAD
W11-2-48
W16-9p-24
STA. 312+24

R-64
SPEED LIMIT 50 ZONE DOUBLE
R2-1-24-36
R2--6gP-36
STA. 312+98

R-65
SPEED LIMIT 50 ZONE DOUBLE
R2-1-36
R2-6gP-36
STA. 313+00

R-67
ONLY ONLY
R3-H8cg-48
STA. 313+89

R-61
Augusta St
New Richmond RD
Bethel
D1-H1-72
D1-H1-72
STA. 311+26

R-62
AHEAD
W11-2-48
W16-9p-24
STA. 312+24

R-66
ONLY ONLY
R3-H8cg-48
STA. 313+60

R-68
WRONG WAY
R5-1a-42
STA. 314+23

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:20:26 PM USER: spisa
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DESIGN AGENCY
143 Engineers

DESIGNER	CDS
REVIEWER	CFD 11-01-25
PROJECT ID	114042
SHEET	P.134
TOTAL	163

LEGEND

EXISTING SIGN TO REMAIN (RELOCATIONS NOTED IN PLANS)

RE-XX — EXISTING SIGN TO BE REMOVED AND REERECTED

R-XX — EXISTING SIGN TO BE REMOVED

HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING REMOVAL PLAN
STA 314+25 TO 319+25

MATCH LINE STA. 314+25

MATCH LINE STA. 319+25

BETHEL NEW RICHMOND RD.

AUGUSTA ST.

US 52

315 316 317 318 319

R-69 — WRONG WAY — R5-1a-42 STA. 314+23

R-70 — KEEP RIGHT — R4-7b-36 STA. 315+73

R-71 — DO NOT ENTER — R5-1-36 STA. 315+97

R-72 — ONE WAY — R6-1-54 STA. 316+19

R-73 — R9-3-24 STA. 316+95

R-74 — R9-3-24 STA. 317+00

R-75 — DO NOT ENTER — R5-1-36; ONE WAY — R6-1-54 STA. 317+10; OBSOLETE SIGN

R-76 — OBSOLETE SIGN STA. 317+11

R-77 — DO NOT ENTER — R5-1-36 STA. 317+33

R-78 — KEEP RIGHT — R4-7b-36 STA. 317+52

R-79 — WRONG WAY — R5-1a-42 STA. 319+02

R-80 — WRONG WAY — R5-1a-42 STA. 319+24

R-81 — DIVIDED HIGHWAY — R6-3a-24 STA. 143+41

R-82 — BETHEL NEW RICHMOND RD — R3-1-24 STA. 143+25

DESIGN AGENCY
143 Engineers

DESIGNER
CDS

REVIEWER
CFD 11-01-25

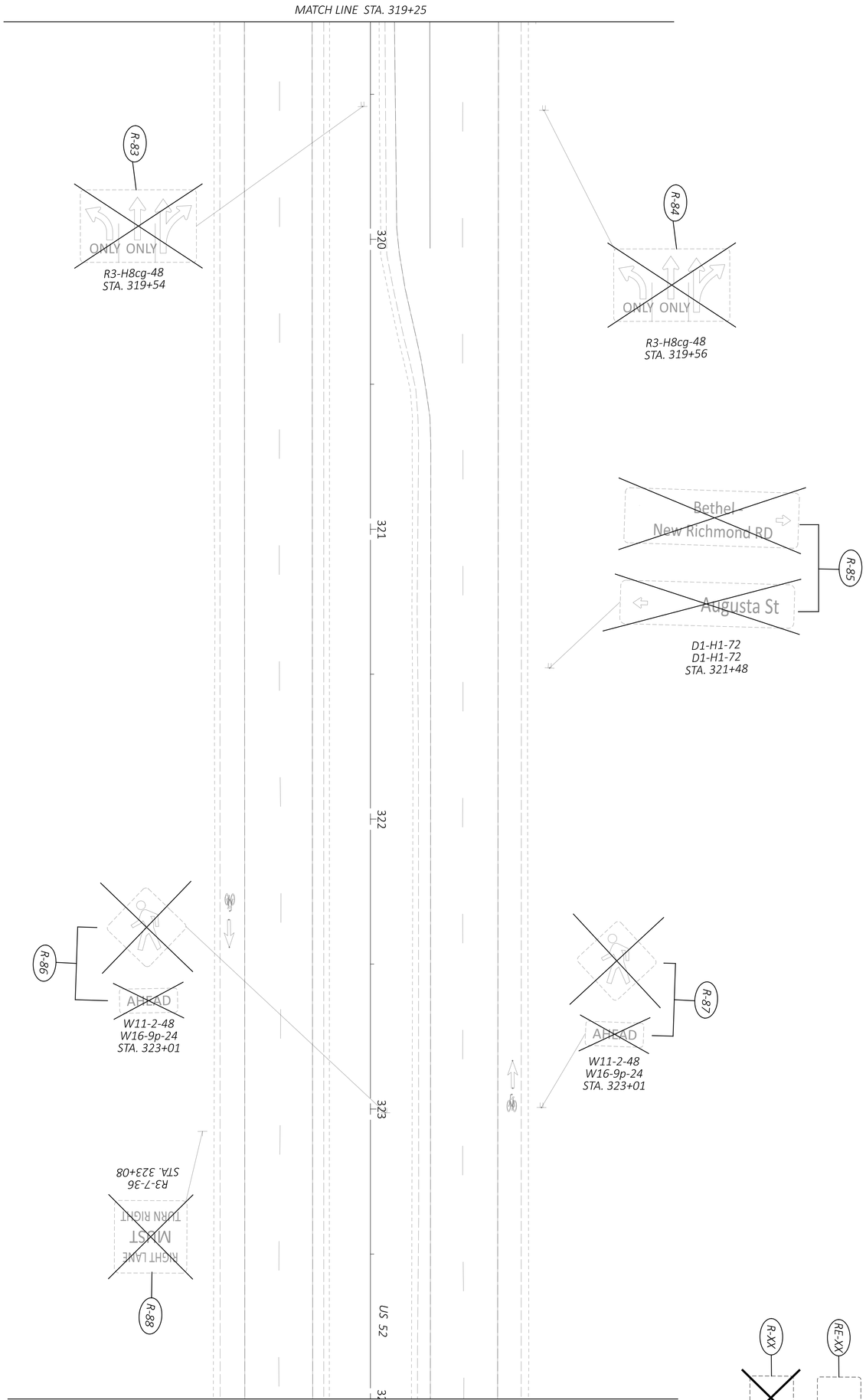
PROJECT ID
114042

SHEET P.135 | TOTAL 163

CLE-52-4.67

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SIGNING REMOVAL PLAN
STA 319+25 TO 324+00

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.136	163

PROJECT ID 114042

REVIEWER CFD 11-01-25

DESIGNER CDS

DESIGN AGENCY 143 Engineers

LEGEND

EXISTING SIGN TO REMAIN (RELOCATIONS NOTED IN PLANS)

RE-XX — EXISTING SIGN TO BE REMOVED AND REERECTED

R-XX — EXISTING SIGN TO BE REMOVED

HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING REMOVAL PLAN
STA 324+00 TO 329+00

DESIGN AGENCY
143 Engineers

DESIGNER: CDS
REVIEWER: CFD 11-01-25
PROJECT ID: 114042
SHEET: P.137 TOTAL: 163

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:27:36 PM USER: spisa
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PAVEMENT MARKING LEGEND

WEL-XX	NORMAL WIDTH WHITE EDGE LINE
YEL-XX	NORMAL WIDTH YELLOW EDGE LINE
LL-1	NORMAL WIDTH LANE LINE
CL-XX	NORMAL WIDTH YELLOW DOUBLE CENTER LINE
BNC-X	NORMAL WIDTH BROKEN YELLOW SHARED-USE PATH CENTER LINE
CH-X	NORMAL WIDTH WHITE CHANNEL LINE
CW-XX	24" WIDE BY 10' LONG WHITE LONGITUDINAL BAR CROSSWALK LINE
YTL-XX	YELLOW 24" WIDE DIAGONAL CROSS HATCH LINE
WTL-XX	WHITE 24" WIDE DIAGONAL CROSS HATCH LINE
WVL-X	WHITE 24" WIDE CHEVRON LINE
LA-X	LANE ARROW
RA-X	LANE REDUCTION ARROW
WCD-X	WHITE NORMAL WIDTH CHANNEL LINE DOTTED LINE
WND-X	WHITE WIDE WIDTH DOTTED LINE
BL-XX	BIKE LANE ARROW AND BIKE SYMBOL MARKING
YL-6	YIELD LINE
WD-XX	DELINEATOR, POST SURFACE MOUNTED, WHITE 80' SPACING

SIGN LEGEND

S-50 — PROPOSED SIGN

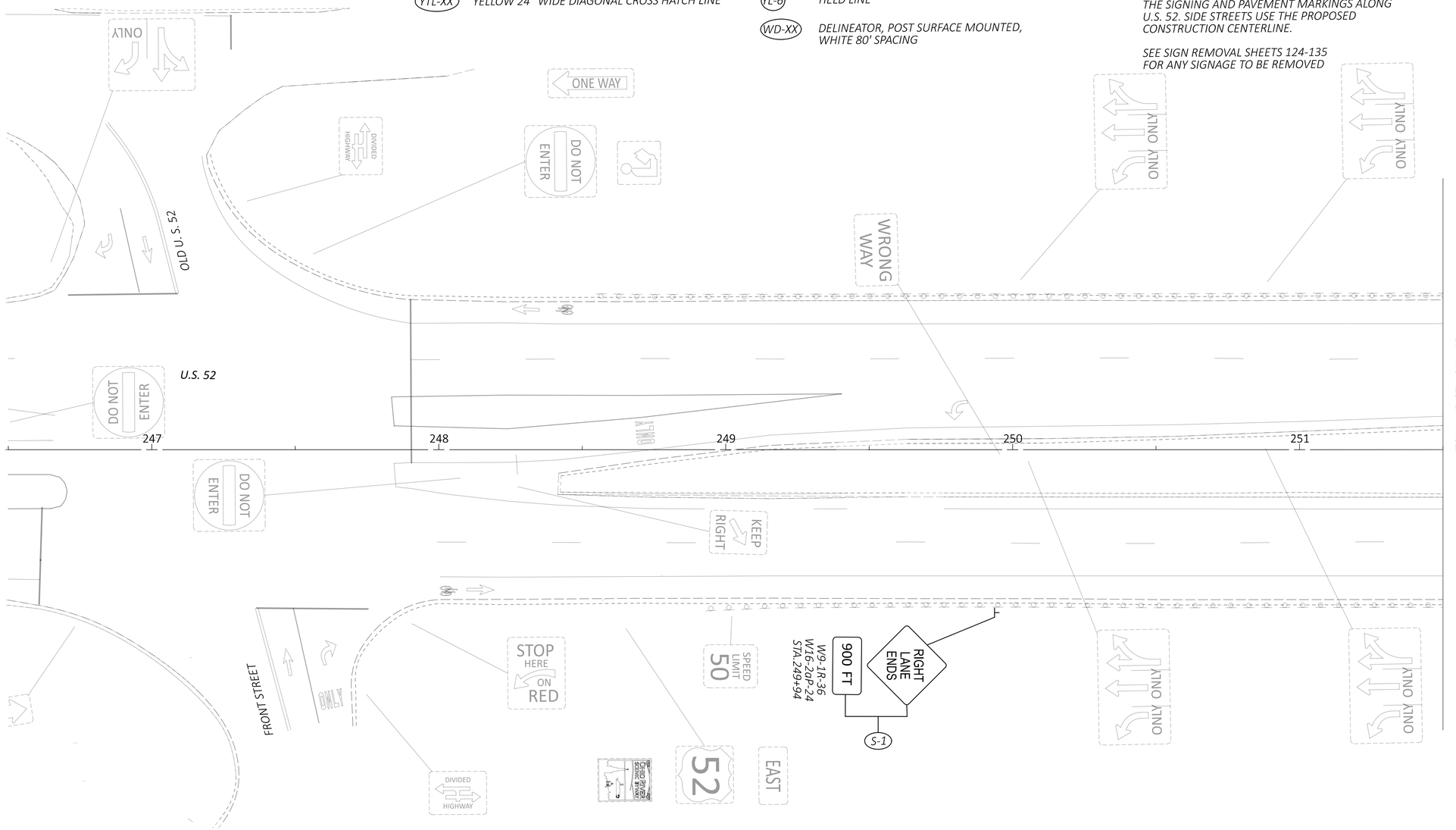
EXISTING SIGN TO REMAIN

PAVEMENT MARKING TO BE REMOVED

NOTE:

THE R/W CENTERLINE IS USED FOR REFERENCING THE SIGNING AND PAVEMENT MARKINGS ALONG U.S. 52. SIDE STREETS USE THE PROPOSED CONSTRUCTION CENTERLINE.

SEE SIGN REMOVAL SHEETS 124-135 FOR ANY SIGNAGE TO BE REMOVED



HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING AND PAVEMENT MARKING PLAN STA. 246+50 TO STA. 251+50

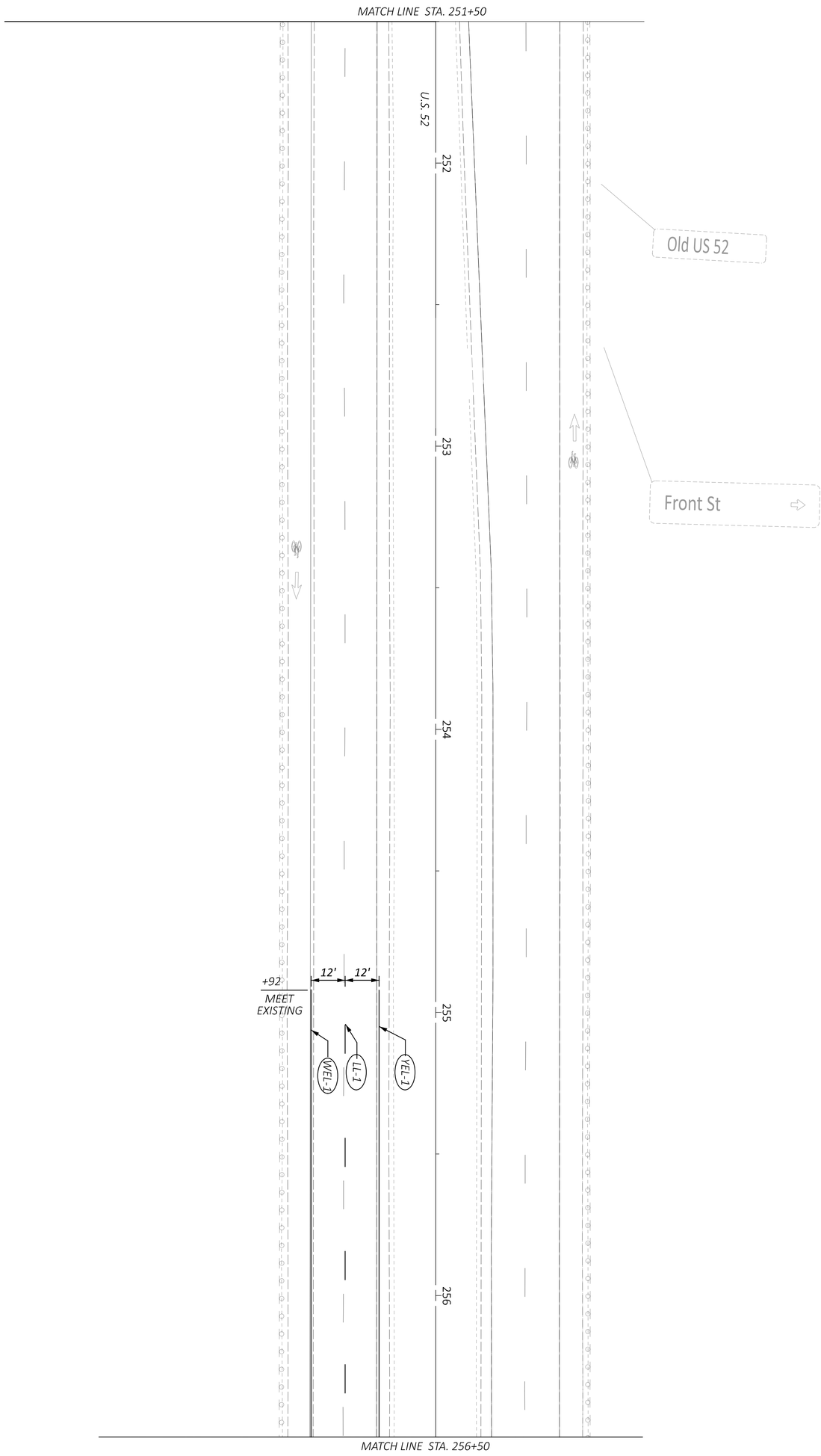
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DESIGN AGENCY
143 Engineers

DESIGNER	CDS
REVIEWER	CFD 11-01-25
PROJECT ID	114042
SHEET	P.138
TOTAL	163

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:42:55 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SIGNING AND PAVEMENT MARKING PLAN
STA. 251+50 TO STA. 256+50

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P. 139	163

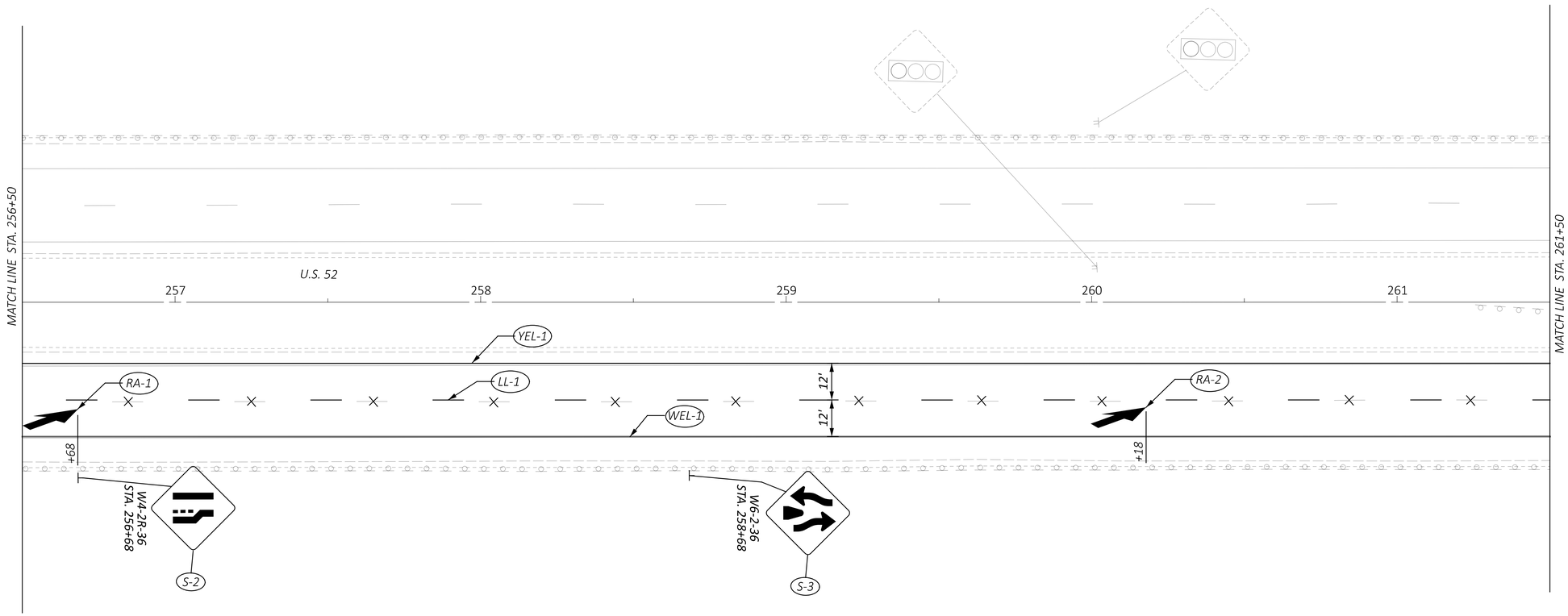
PROJECT ID 114042

REVIEWER CFD 11-01-25

DESIGNER CDS

DESIGN AGENCY 143 Engineers

SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND



HORIZONTAL SCALE IN FEET
0 10 20 40

SIGNING AND PAVEMENT MARKING PLAN STA. 256+50 TO STA. 261+50

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:45:10 PM USER: spisa
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DESIGN AGENCY
143 Engineers

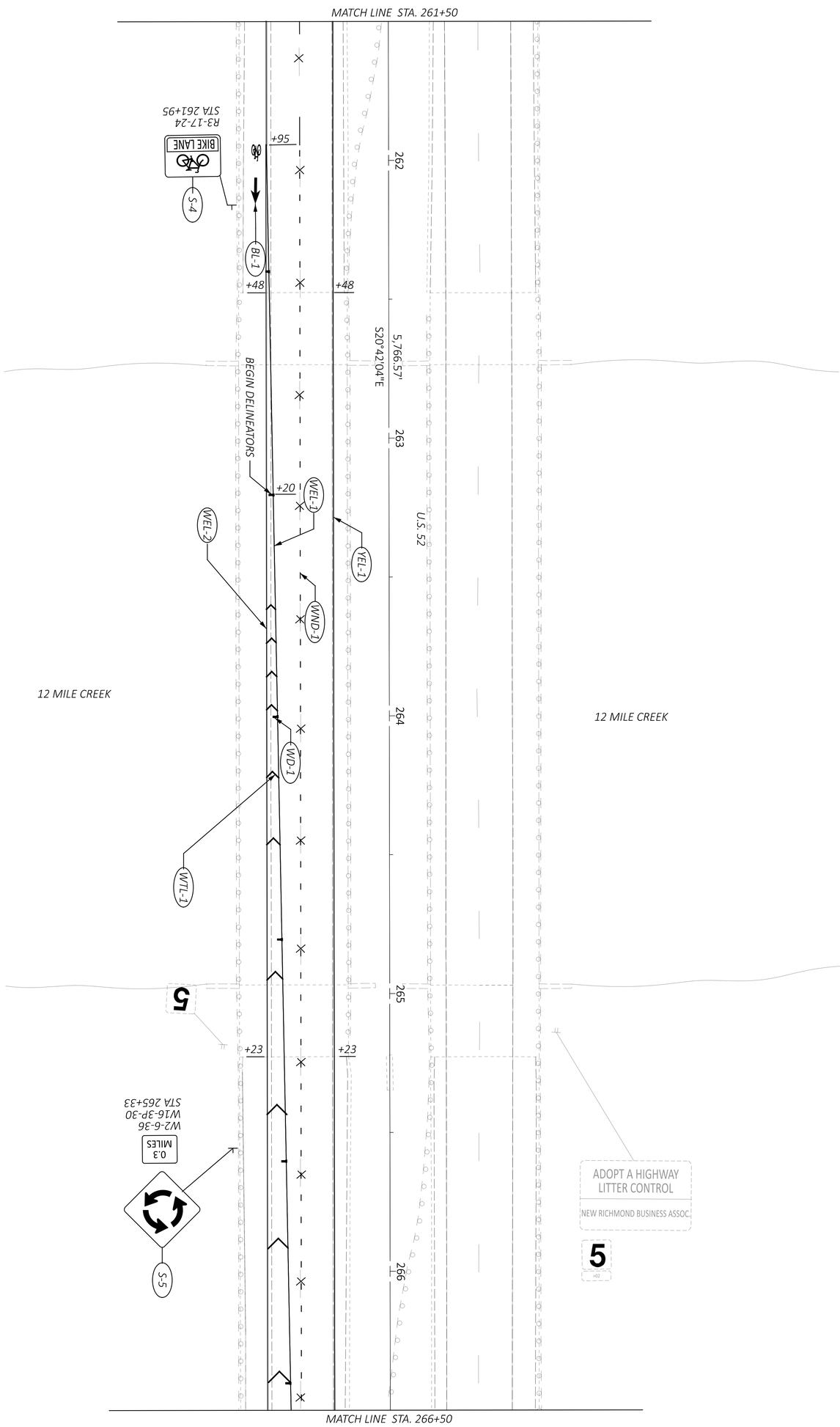
DESIGNER
CDS

REVIEWER
CFD 11-01-25

PROJECT ID
114042

SHEET P.140 TOTAL 163

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:49:04 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	TOTAL
P.141	163

PROJECT ID 114042

REVIEWER CFD 11-01-25

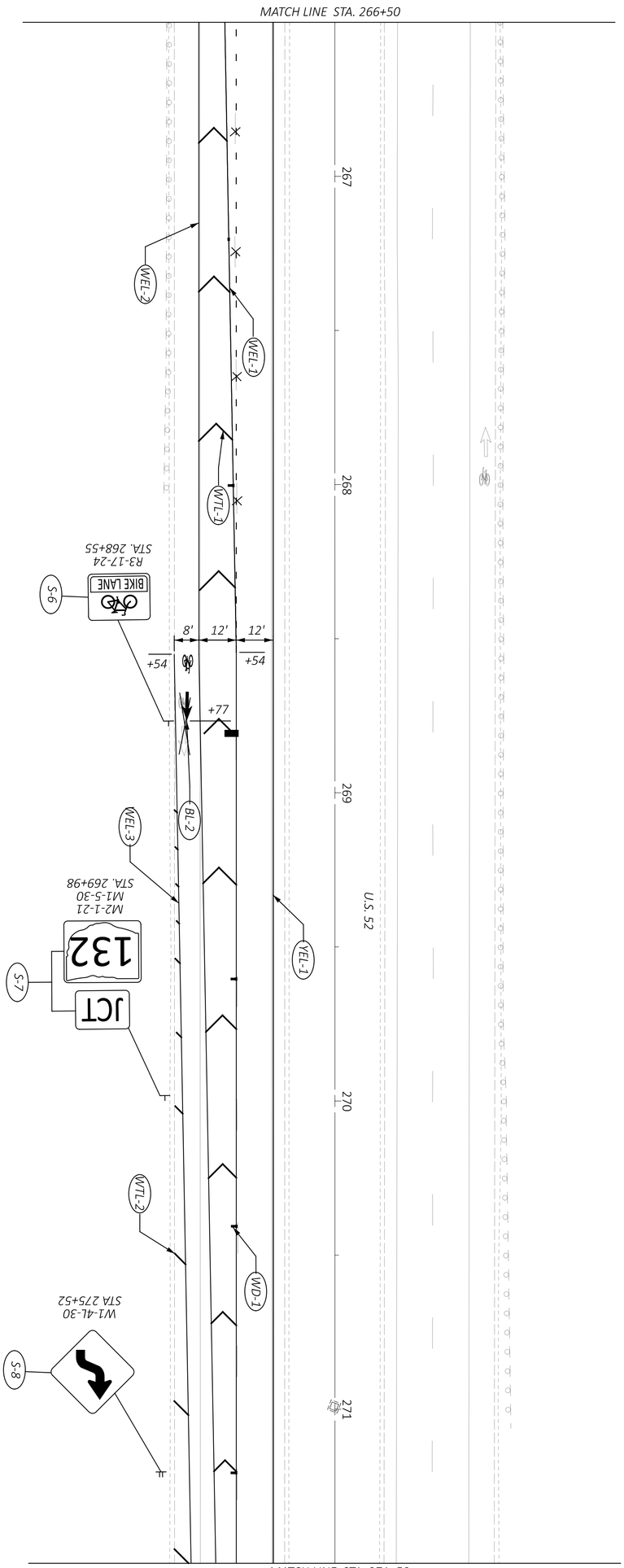
DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 261+50 TO STA. 266+50

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:22:25 PM USER: spisa
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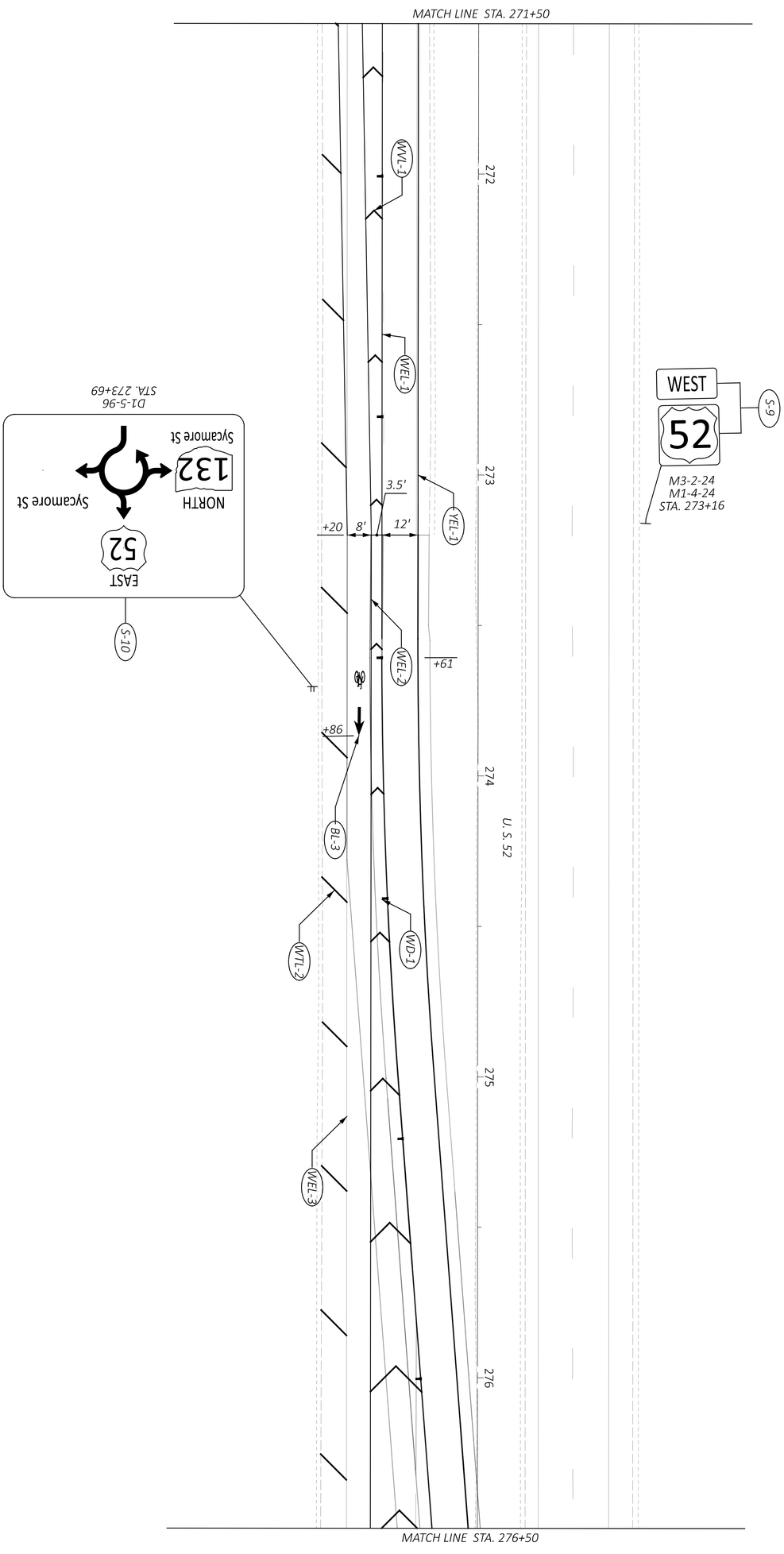
SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SIGNING AND PAVEMENT MARKING PLAN
STA. 266+50 TO STA. 271+50

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY: 143 Engineers
DESIGNER: CDS
REVIEWER: CFD 11-01-25
PROJECT ID: 114042
SHEET: P.142 | TOTAL: 163

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:04:12 PM USER: spisa
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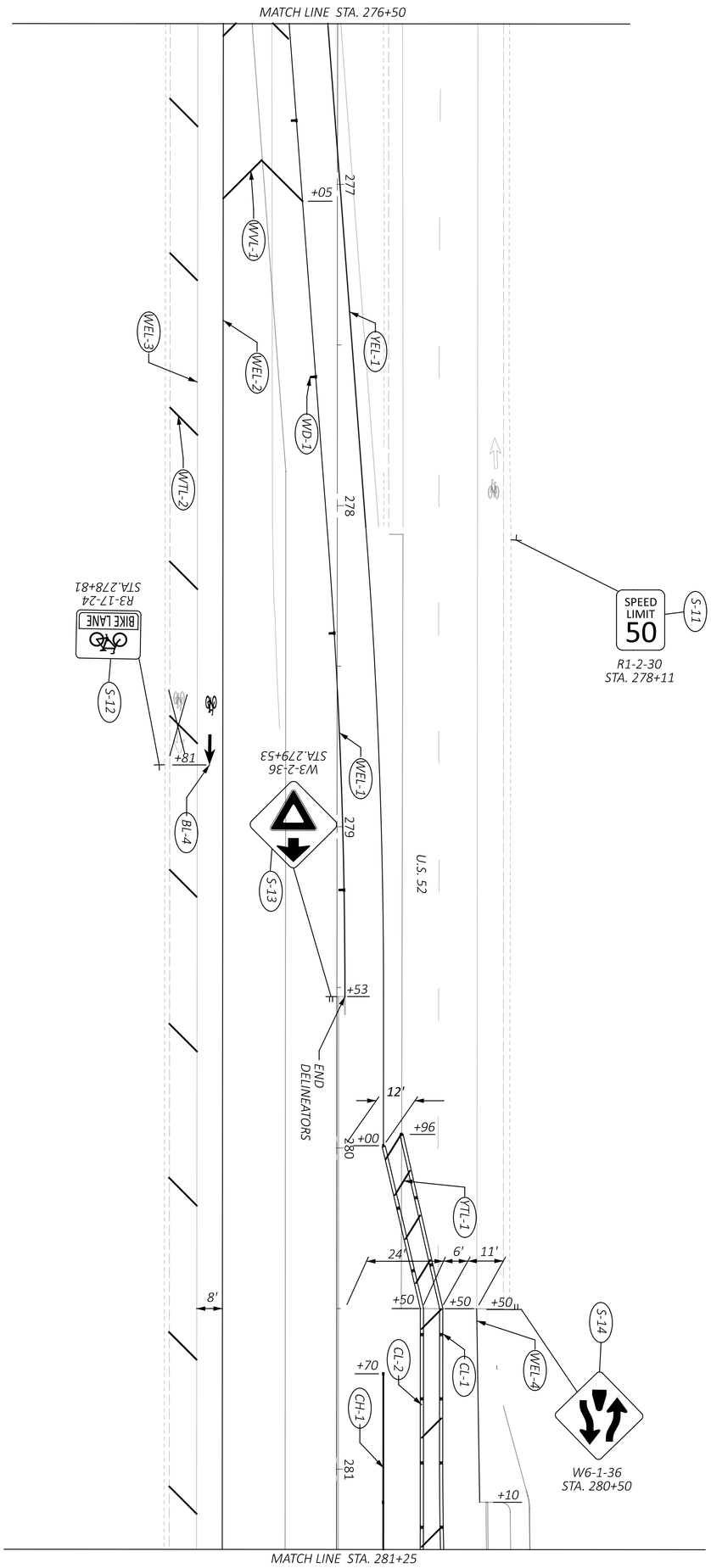
SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	P.143
TOTAL	163
PROJECT ID	114042
REVIEWER	CFD 11-01-25
DESIGNER	CDS
DESIGN AGENCY	143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 271+50 TO STA. 276+50

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:03:08 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET P.144 | TOTAL 163

PROJECT ID 114042

REVIEWER CFD 11-01-25

DESIGNER CDS

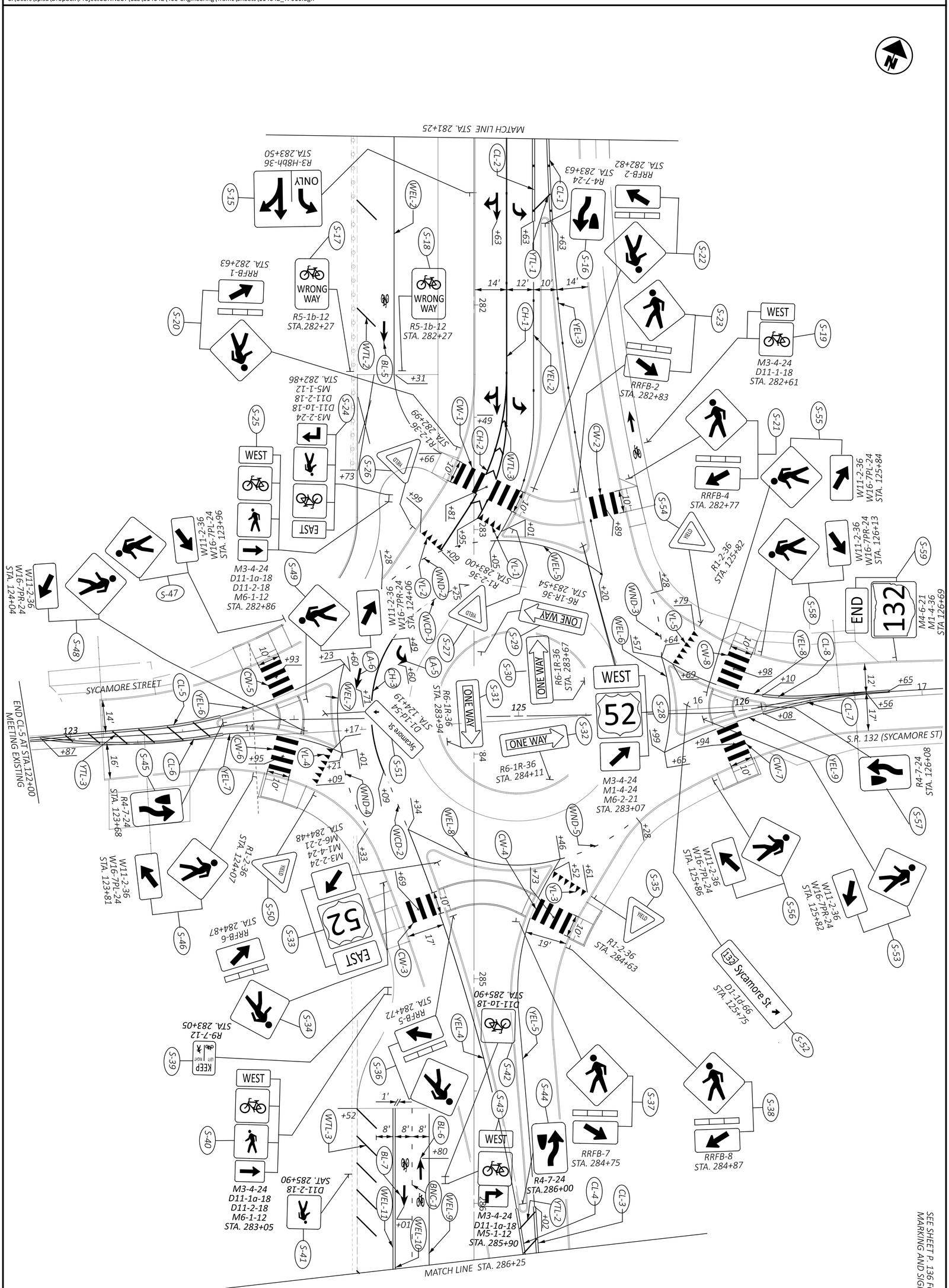
DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 276+50 TO STA. 281+25

HORIZONTAL SCALE IN FEET
0 20
10 40

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:08:40 PM USER: spisa
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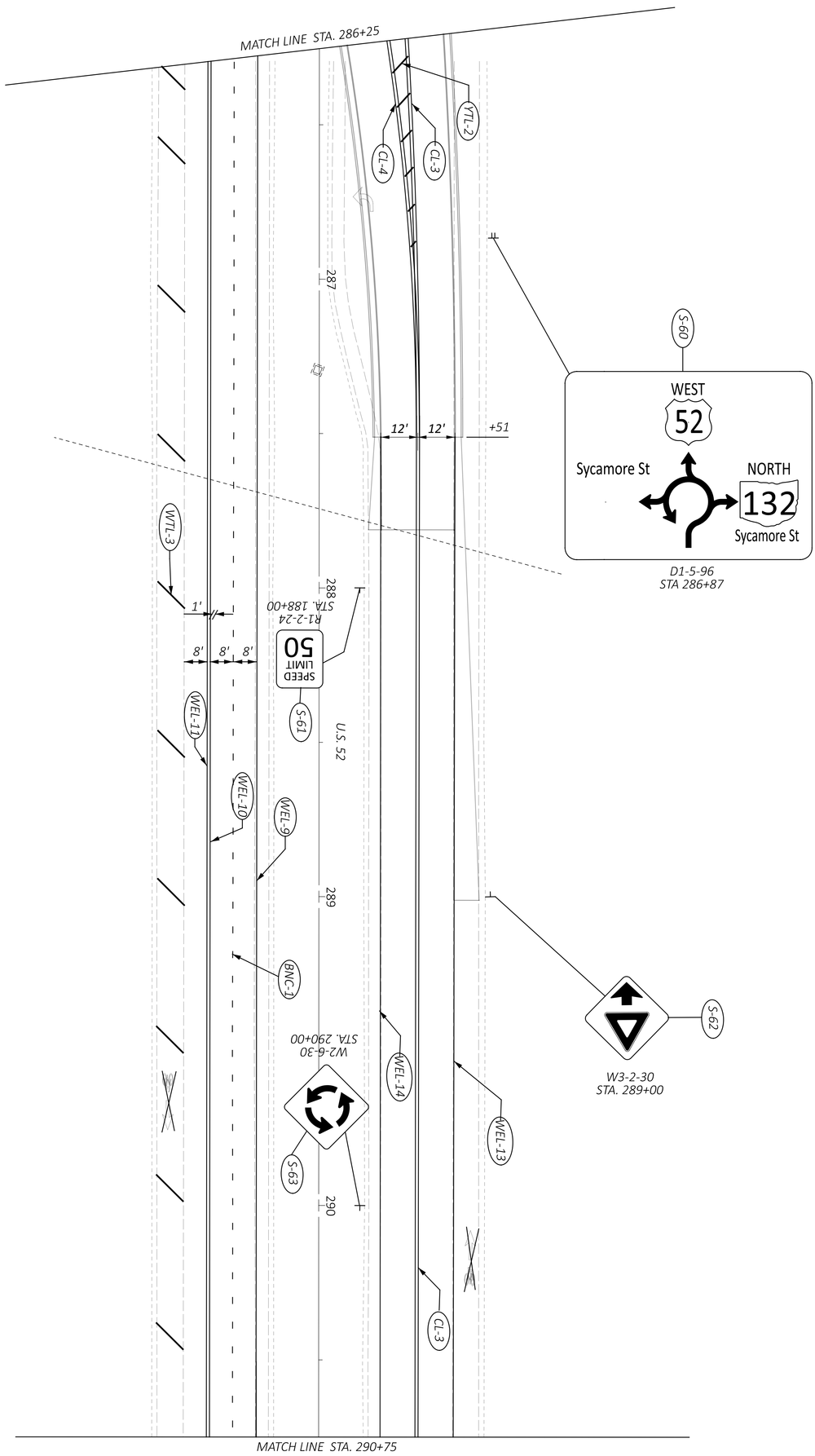
SIGNING AND PAVEMENT MARKING PLAN
SYCAMORE STREET ROUNDABOUT
STA. 281+25 TO STA. 286+25

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.145	163

PROJECT ID: 114042
REVIEWER: CFD 11-01-2023
DESIGNER: CDS
DESIGN AGENCY: 143 Engineers

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:09:10 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	TOTAL
P.146	163

PROJECT ID 114042

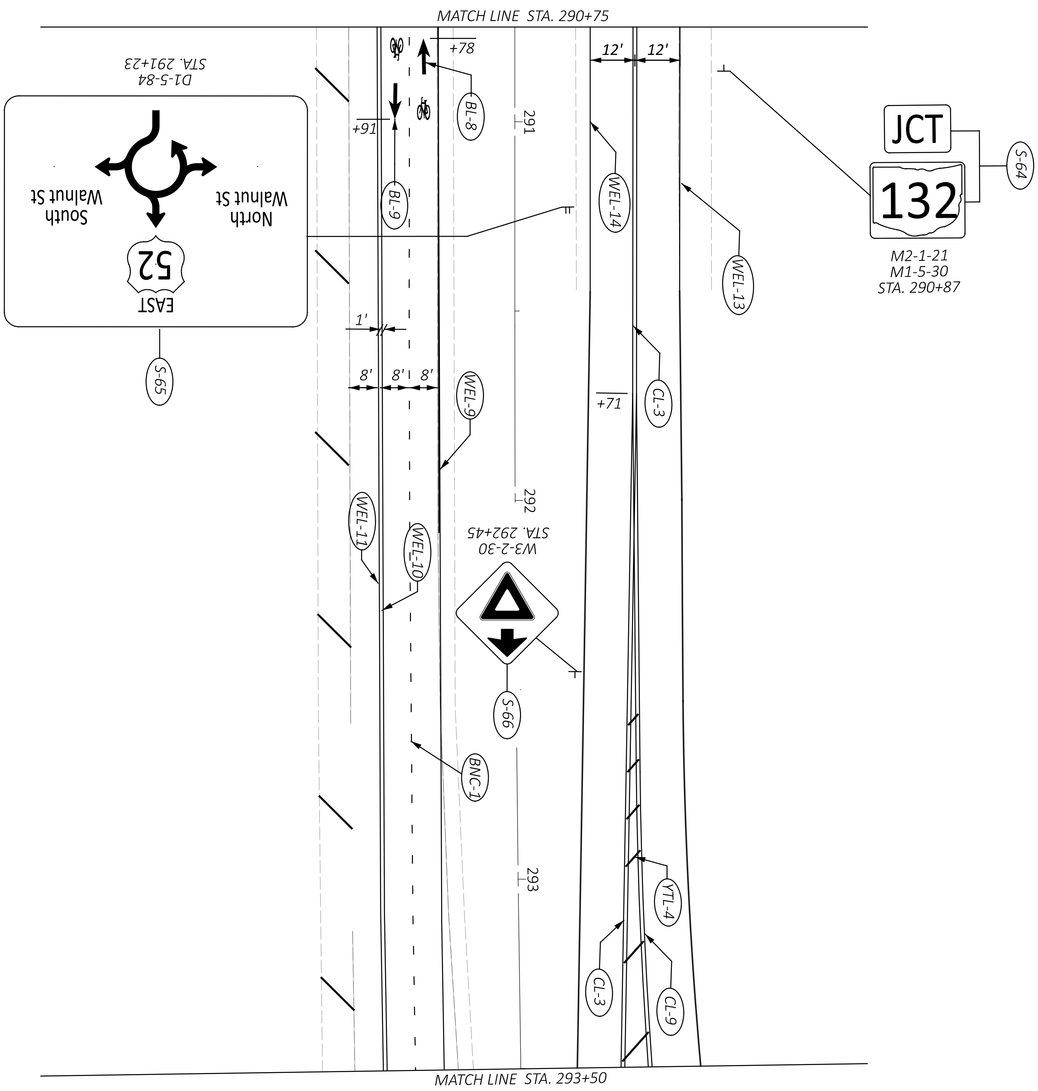
REVIEWER CFD 11-01-25

DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 286+25 TO STA. 290+75

HORIZONTAL SCALE IN FEET
0 20
10 40



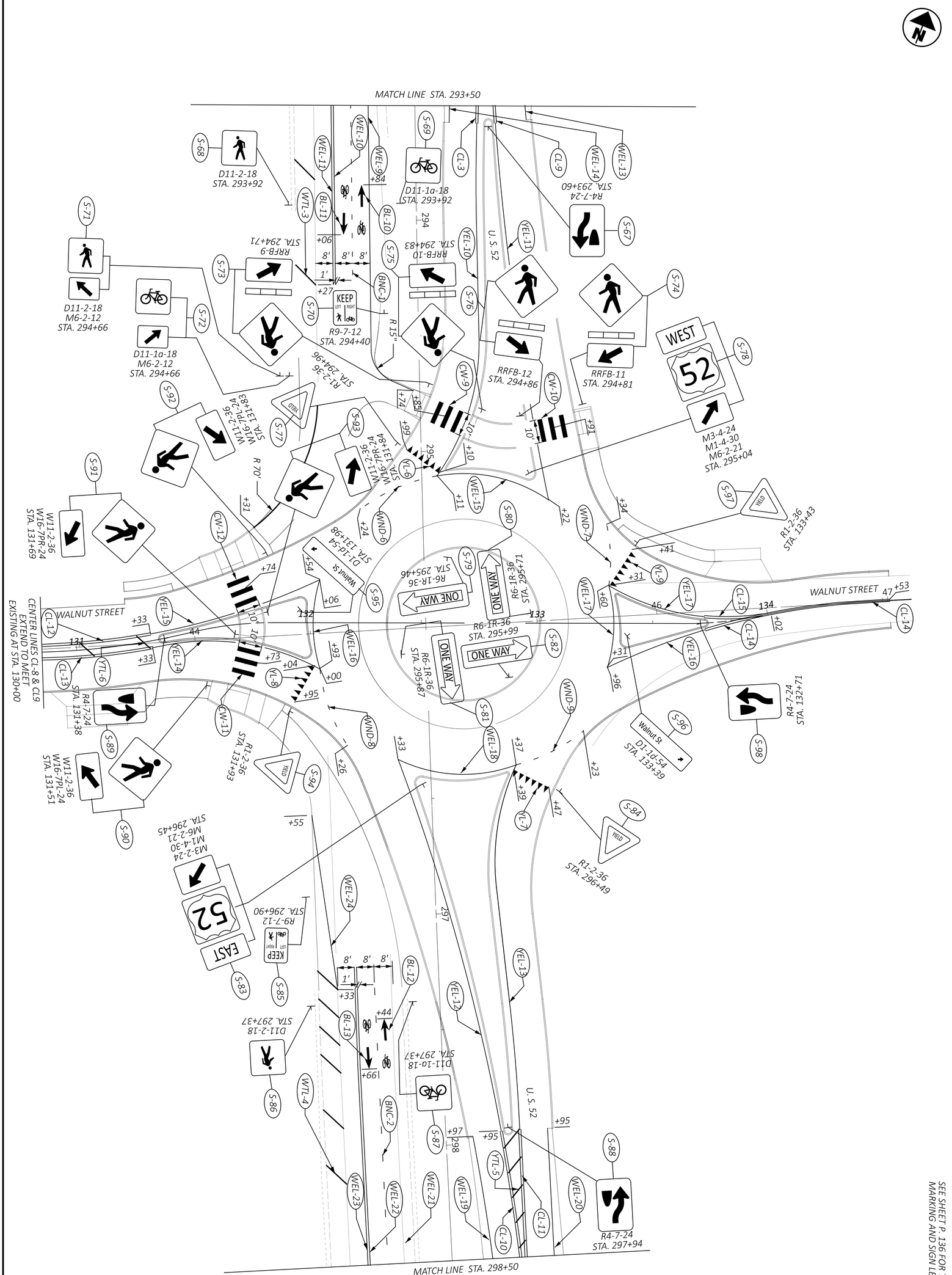
SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SIGNING AND PAVEMENT MARKING PLAN
STA. 290+75 TO STA. 293+50

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.147	163

PROJECT ID 114042
REVIEWER CFD 11-01-25
DESIGNER CDS
DESIGN AGENCY JT 143 Engineers



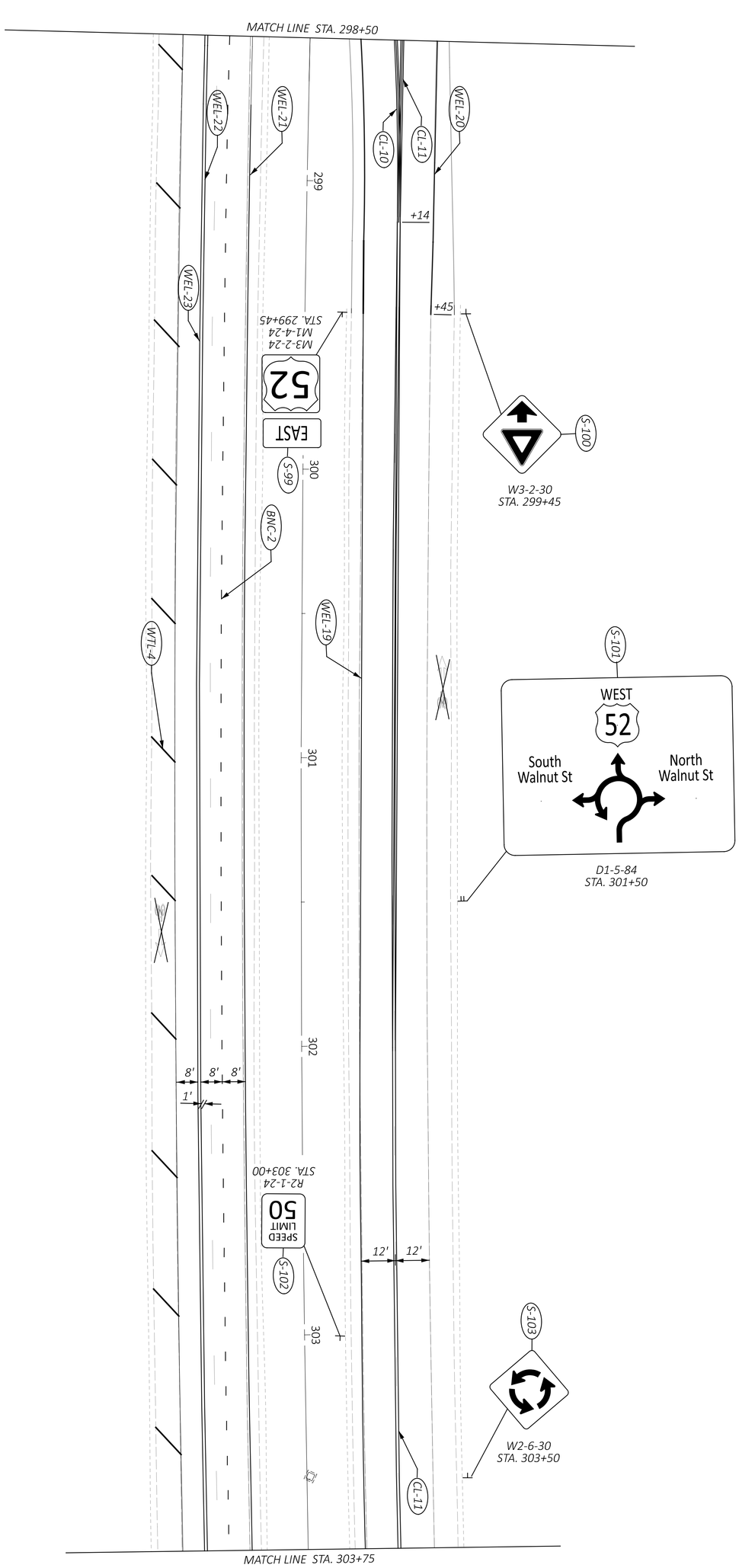
SIGNING AND PAVEMENT MARKING PLAN
WALNUT STREET ROUNDABOUT
STA. 293+50 TO STA. 298+50

HORIZONTAL SCALE IN FEET
0 20
10 40

SHEET	TOTAL
P.148	163

PROJECT ID: 114042
REVIEWER: CFD 11-01-2023
DESIGNER: CDS
DESIGN AGENCY: JJR Engineers

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:20:49 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	TOTAL
P.149	163

PROJECT ID 114042

REVIEWER CFD 11-01-25

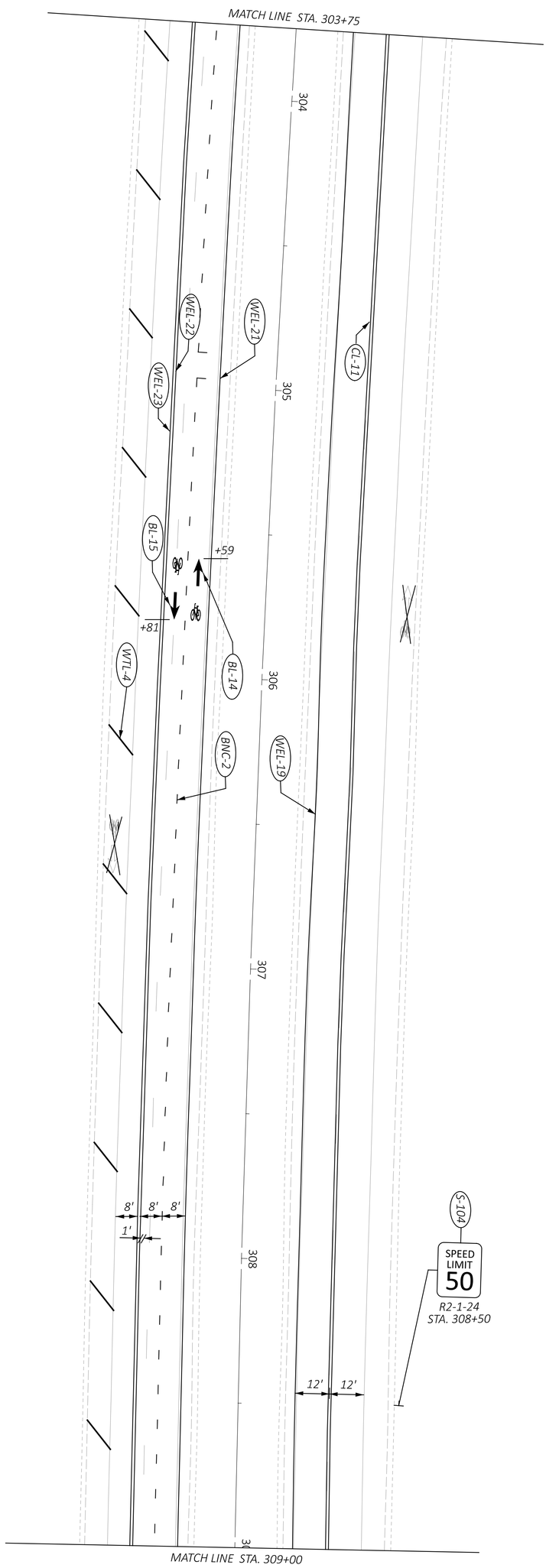
DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA.298+50 TO STA. 303+75

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 2:16:00 PM USER: spisa
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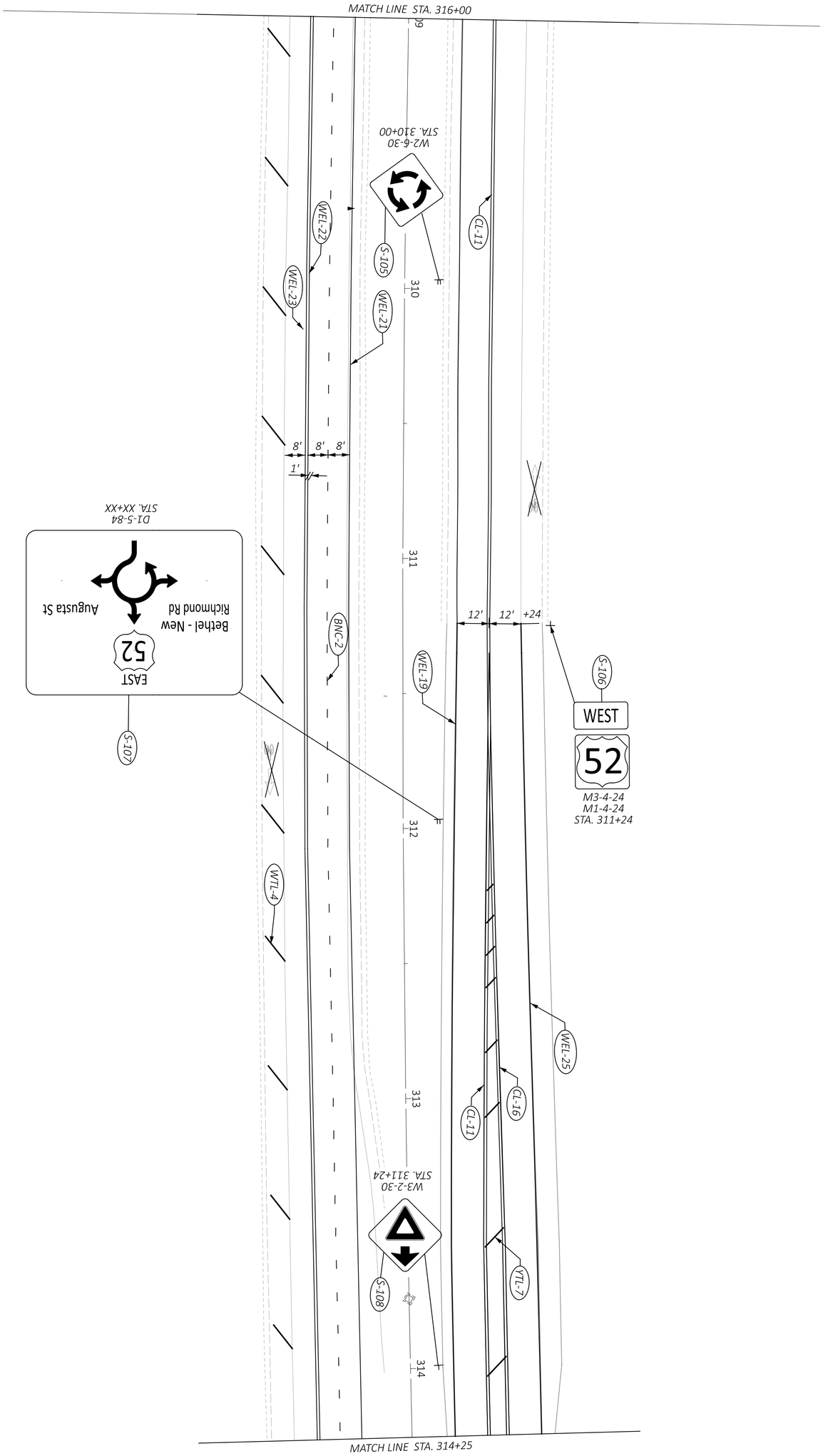
SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	P.150
TOTAL	163
PROJECT ID	114042
REVIEWER	CFD 11-01-25
DESIGNER	CDS
DESIGN AGENCY	143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA.303+75 TO STA. 309+00

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:28:20 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET	TOTAL
P.151	163

PROJECT ID 114042

REVIEWER CFD 11-01-25

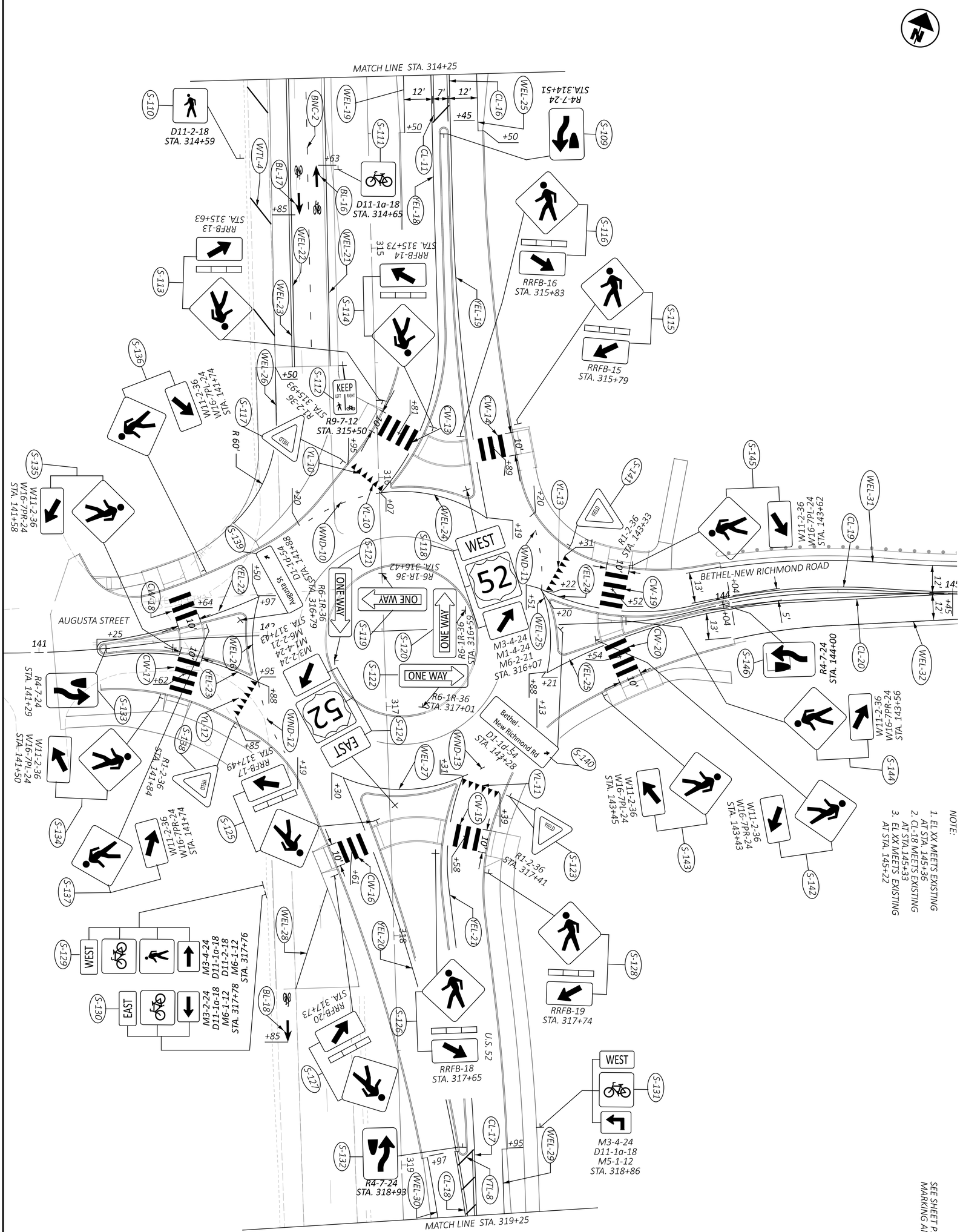
DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 309+00 TO STA. 314+25

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:31:03 PM USER: spisa
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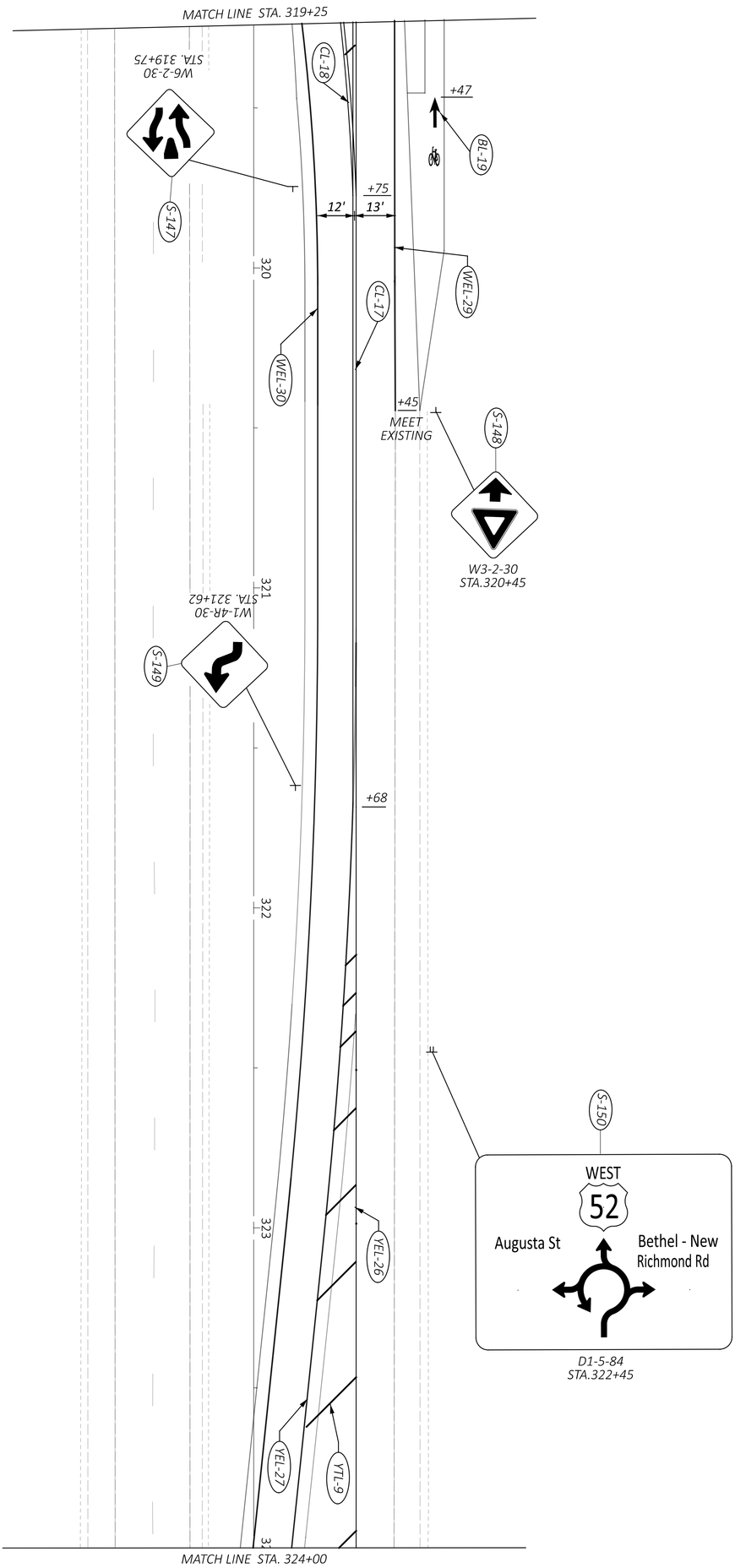


SIGNING AND PAVEMENT MARKING PLAN
BETHEL-NEW RICHMOND ROAD ROUNDABOUT
STA. 314+25 TO STA. 319+25

HORIZONTAL SCALE IN FEET
0 20
10 40

DESIGN AGENCY: 143 Engineers
DESIGNER: CDS
REVIEWER: CFD 11-01-2023
PROJECT ID: 114042
SHEET: P.152 | TOTAL: 163

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:34:11 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET P.153 | TOTAL 163

PROJECT ID 114042

REVIEWER CFD 11-01-25

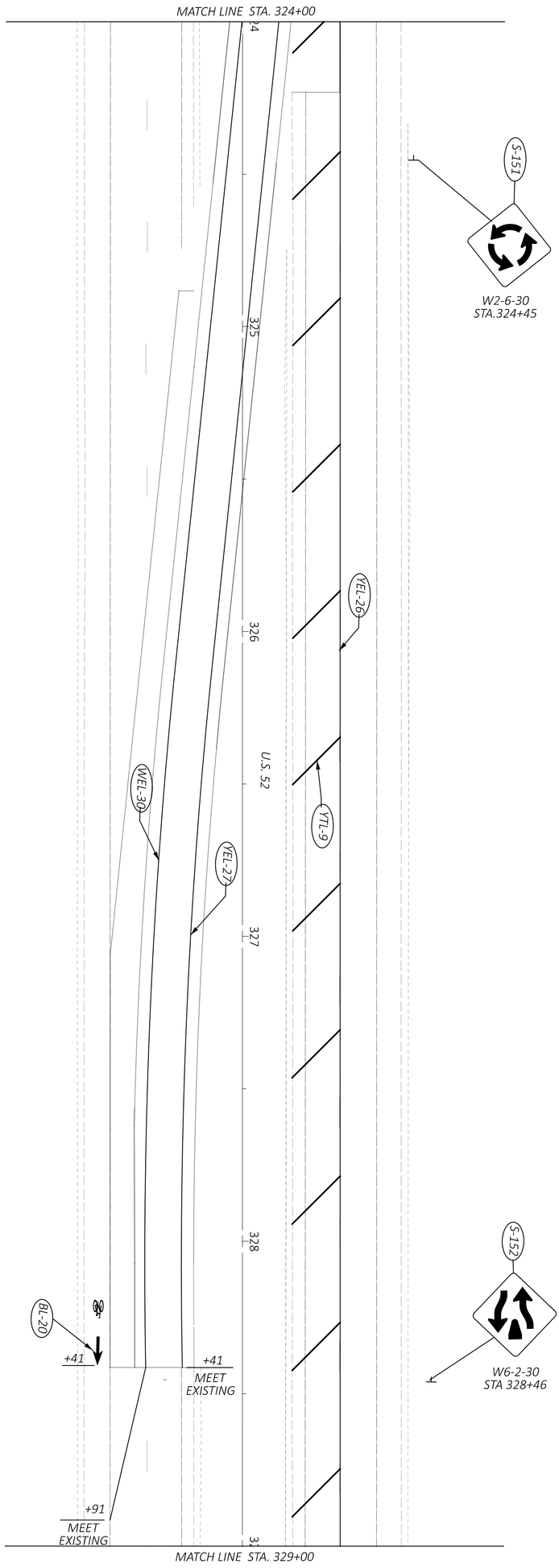
DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 319+25 TO STA. 324+00

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:36:19 PM USER: spisa
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SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET P.154 | TOTAL 163

PROJECT ID 114042

REVIEWER CFD 11-01-25

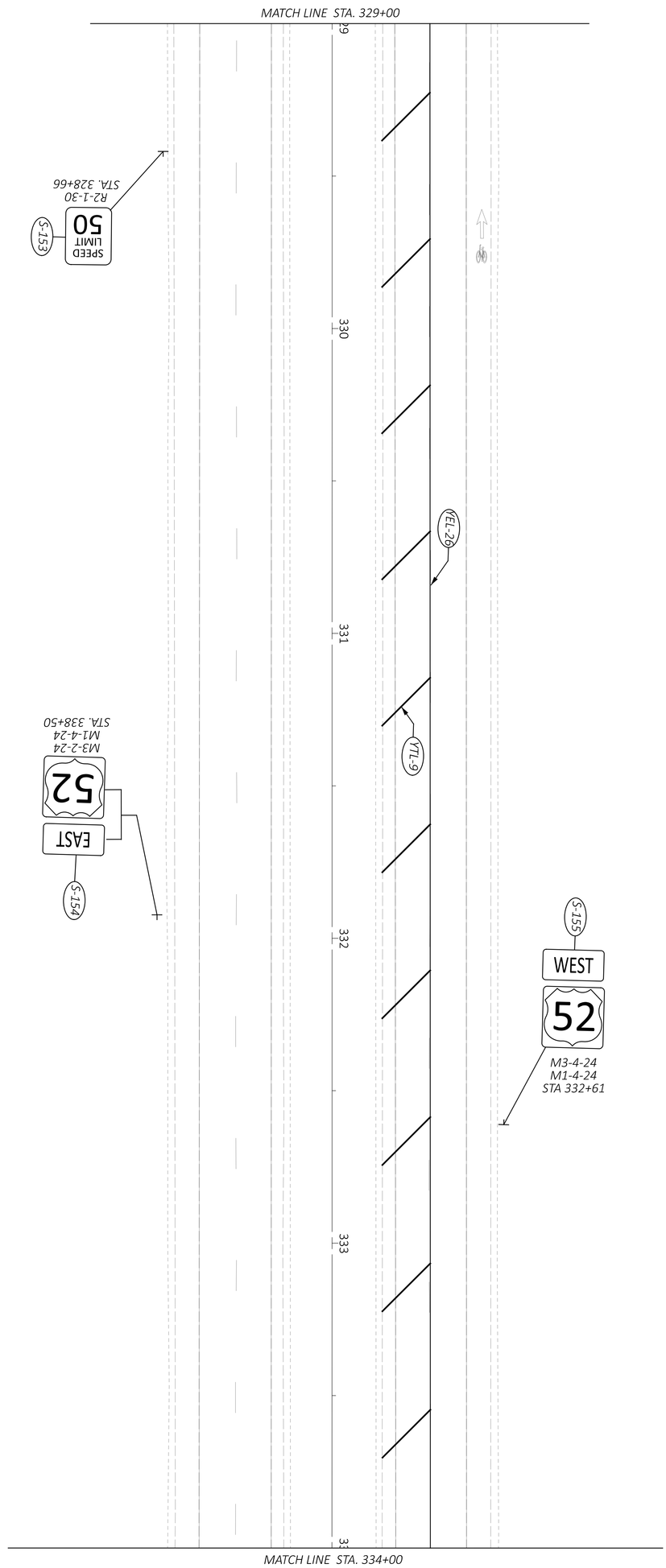
DESIGNER CDS

DESIGN AGENCY 143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 324+00 TO STA. 329+00

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:38:20 PM USER: spisa
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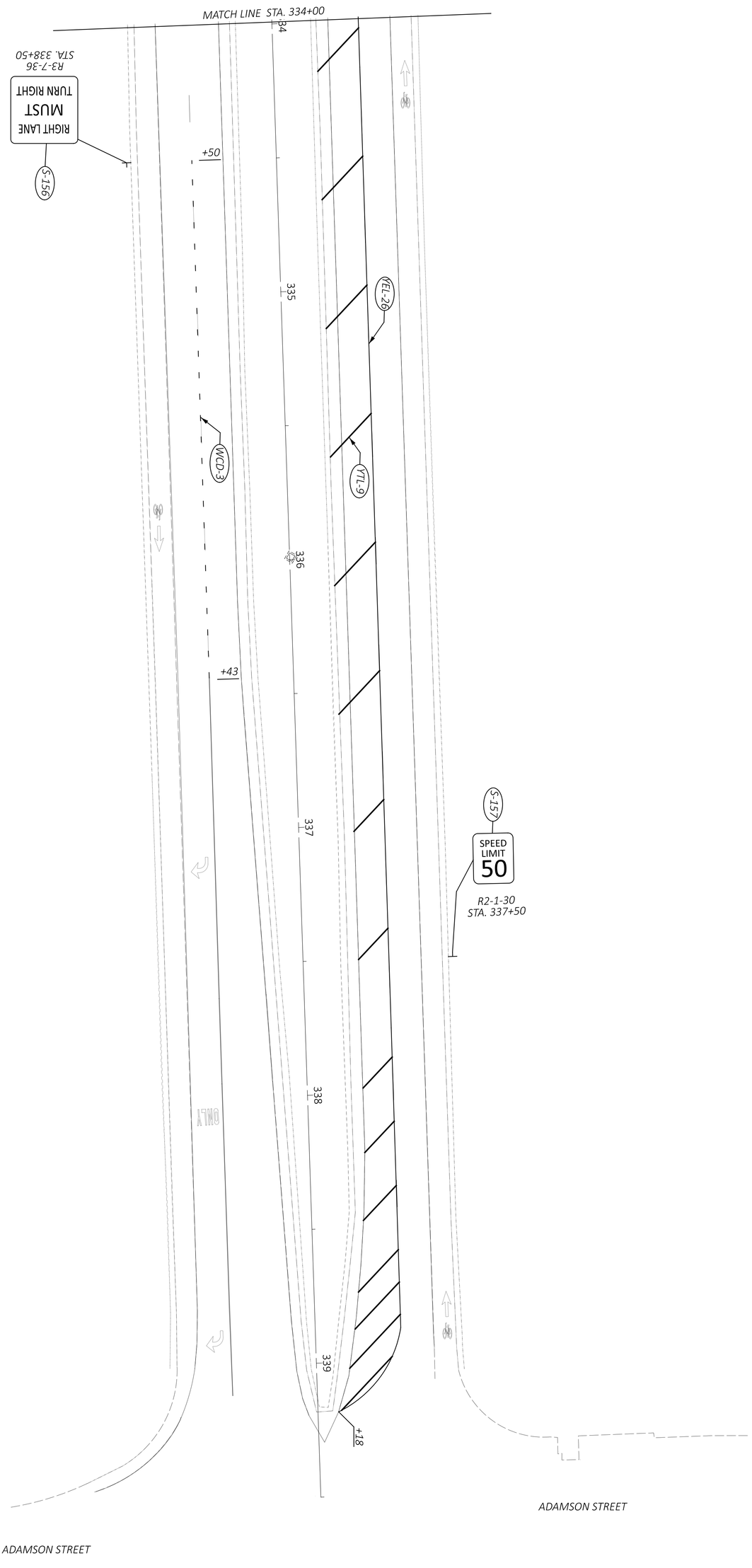


SEE SHEET P. 136 FOR THE PAVEMENT MARKING AND SIGN LEGEND

SHEET P.155 | TOTAL 163	PROJECT ID 114042	REVIEWER CFD 11-01-25	DESIGNER CDS	DESIGN AGENCY 143 Engineers	SIGNING AND PAVEMENT MARKING PLAN STA. 329+00 TO STA. 334+00

HORIZONTAL SCALE IN FEET
0 20
10 40

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 1:40:45 PM USER: spisa
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SHEET	P.156
TOTAL	163
PROJECT ID	114042
REVIEWER	CFD MM-DD-YY
DESIGNER	CDS
DESIGN AGENCY	143 Engineers

SIGNING AND PAVEMENT MARKING PLAN
STA. 334+00 TO STA. 339+50

HORIZONTAL SCALE IN FEET
0 20
10 40

UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C. SEE PAGE XX FOR CONTACT INFORMATION.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

ITEM 625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY DUKE ENERGY OHIO

EMAIL TROY.DITTMER@DUKE-ENERGY.COM

PHONE # (513) 504-0082

CONTACT NAME TROY DITTMER, LEAD ENGINEERING TECHNOLOGIST

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGN-MENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

INCLUDES A 24" PULL BOX 725.08 INCIDENTAL TO POWER SERVICE

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625, LUMINAIRE, CONVENTIONAL, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625, THIS ITEM OF WORK CONSISTS OF FURNISHING AND INSTALLING COMPLETE ARM MOUNTED LED CONVENTIONAL STYLE LUMINAIRES FOR ROADWAY AND CROSSWALK ILLUMINATION.

HL-10.11 SHOWS A CONVENTIONAL LUMINAIRE WITH A STANDARD TRUSS ARM ON A TRANSFORMER BASE SCHEMATICALLY.

TYPE A- WALNUT STREET

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE COOPER LIGHTING SOLUTIONS "VERD-G-CA2-100-730-U-T3-HSS" WITH ROADWAY CLASS: SHORT TYPE III, GE LIGHTING "ERL1_14C530_ELSHS-ERL1-BLCK" WITH ROADWAY CLASS: MEDIUM TYPE III, OR EQUAL AS APPROVED BY THE ENGINEER.

TYPE B - SYCAMORE STREET AND AUGUSTA STREET

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE COOPER LIGHTING SOLUTIONS "VERD-G-CA2-110-730-U-T3-HSS" WITH ROADWAY CLASS: SHORT TYPE III, GE LIGHTING "ERL1_16C530_ELSHS-ERL1-BLCK" WITH ROADWAY CLASS: MEDIUM TYPE III, OR EQUAL AS APPROVED BY THE ENGINEER.

LUMINAIRES ARE TO INCLUDE HOUSE SIDE SHIELD.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625:

"LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, A, TYPE III, 120V"
"LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN, B, TYPE III, 120V"

FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ARC FLASH CALCULATIONS AND LABEL

LOCATION OF THE ARC FLASH LABEL SHALL BE AT THE GROUND MOUNTED CONTROL CENTER LCC-1 AT STA. 123+62.83, 34.98' LT., CONTROL CENTER LCC-2 AT STA. 131+42.72, 32.48' LT., AND CONTROL CENTER LCC-3 AT STA. 141+35.01, 38.00' LT.

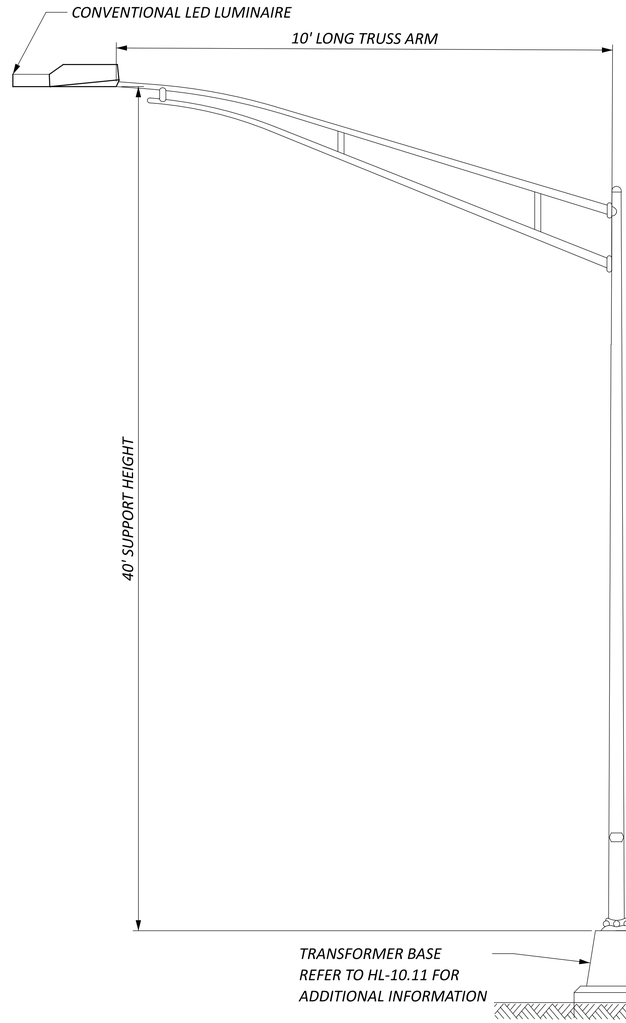
POWER COMPANY DUKE ENERGY OHIO
EMAIL TROY.DITTMER@DUKE-ENERGY.COM
PHONE # (513) 504-0082
CONTACT NAME TROY DITTMER, LEAD ENGINEERING TECHNOLOGIST

SAMPLE LABEL

WARNING!

ARC FLASH AND SHOCK HAZARD

240 VAC	Nominal System Voltage
19 inches	Arc Flash Boundary
Cat. 1	Arc-Flash PPE Category [from NFPA 70E Table 130.7(C)(15)(a)]
4cal/cm^2	Min. Arc Rating of Clothing
CC-A	Equipment ID
CLE-52-4.67	Location
ODOT District 08	Maintaining Agency
6/17/2017	Arc Flash Study Date
ZAP Engineering	Arc Flash Study Author
	ADDITIONAL INFORMATION:



TYPICAL MOUNTING DETAIL - LED CONVENTIONAL LUMINAIRE, STANDARD TRUSS ARM
SCALE: NTS

ROUNDABOUT LIGHTING NOTES

DESIGN AGENCY
143Engineers

DESIGNER MLF
REVIEWER CFD 03/06/26
PROJECT ID 114042
SHEET P.157 | TOTAL 163

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:44:14 PM PLTDRV: OHDOT_PDF.pltdg PENTBL: OHDOT_PenC.tbl USER: mllox3951@outlook.com WORKSPACE: OHDOTCEv02 WORKSET: 114042 PRODUCT: MicroStation 25.00.01.62
C:\Users\mllox\Dropbox\Project\CONNECT\CLE\114042\400-Engineering\Lighting\Sheets\114042_LN001.dgn

	LEGEND
LT	LIGHTING PULL BOX
▲	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, B, TYPE III, 120V

Base Type
AT = Aluminum Transformer

Bracket Arm(s)
"B" = Single Arm

AT15B40

Support Height

Arm Length

LIGHT POLE DESIGN NUMBER

STA. 126+52, 27 RT. AT10B40 — L-12
STA. 126+25, 33 LT. AT12B40 — L-13
STA. 125+84, 41 RT. — PB-5
STA. 125+81, 54 LT. — PB-6
STA. 125+77, 44 RT. AT10B40 — L-11
STA. 284+49, 56 LT. AT10B40 — L-10
STA. 284+91, 40 LT. — PB-4
STA. 285+50, 31 LT. AT10B40 — L-8
STA. 285+07, 35 LT. AT10B40 — L-9
STA. 286+02, 29 LT. AT10B40 — L-7
STA. 281+51, 32 LT. AT12B40 — L-16
STA. 282+42, 37 LT. AT12B40 — L-15
STA. 283+04, 53 LT. AT10B40 — L-14
STA. 281+54, 41 RT. AT10B40 — L-1
STA. 282+42, 48 RT. AT10B40 — L-2
STA. 283+15, 71 RT. AT10B40 — L-3
STA. 123+99, 46 LT. AT12B40 — L-4
STA. 284+07, 69 RT. AT12B40 — L-6
STA. 284+95, 50 RT. — PB-3
STA. 123+73, 35 LT. — PB-1
STA. 123+67, 32 RT. — PB-2
STA. 123+72, 39 LT. POLE MOUNTED — LCC-1
STA. 123+06, 29 RT. AT10B40 — L-5

SERVICE CABLE

SR132 SYCAMORE STREET

US-52

Ex R/W · Ex LA · Ex SH · TMP · OH-E · OH-T · SAN · 6" SAN

HORIZONTAL SCALE IN FEET
0 10 20 40

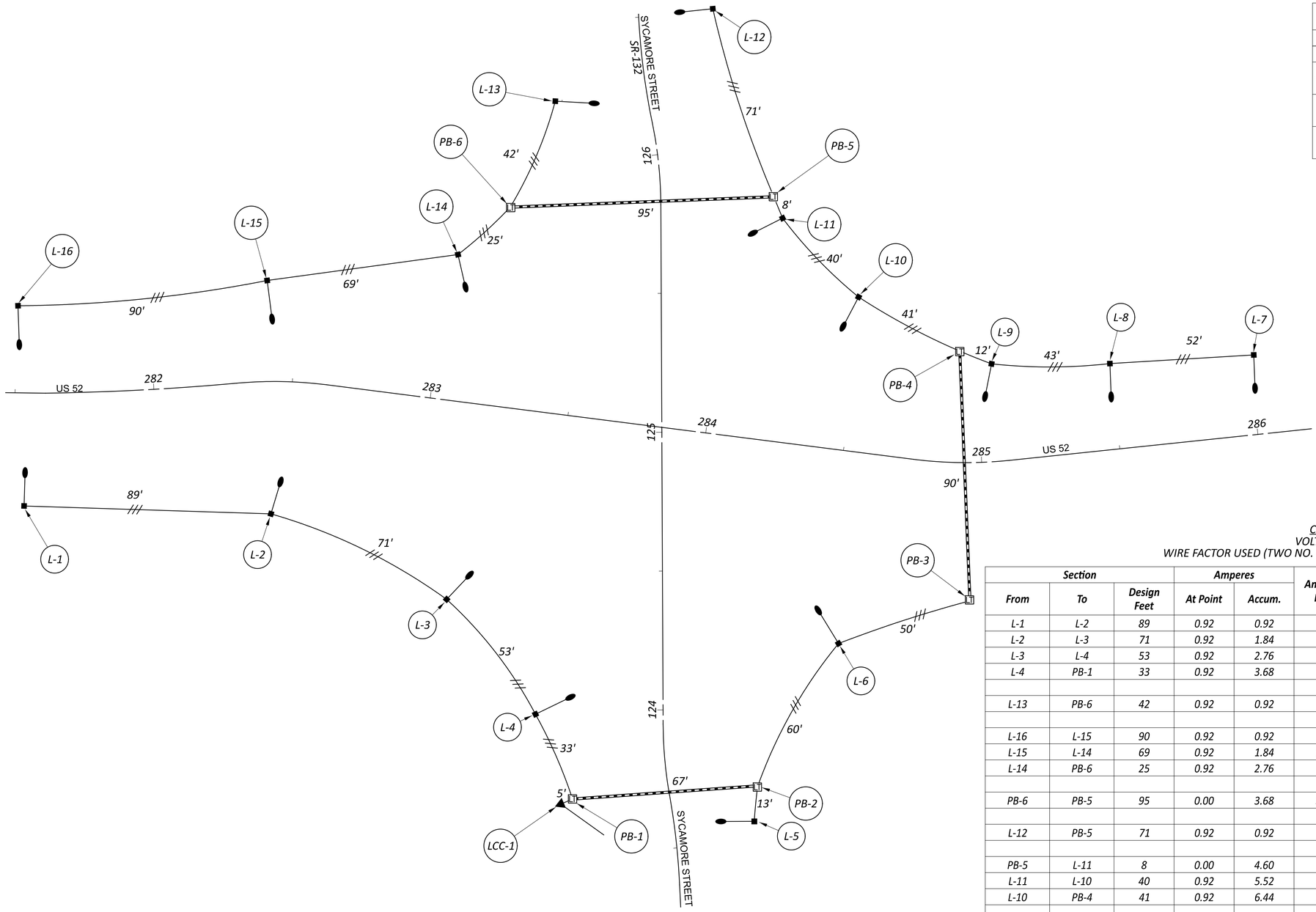
US-52 ROUNDABOUT PLAN
SYCAMORE STREET - OHIO RIVER SCENIC BYWAY

DESIGN AGENCY
143Engineers

DESIGNER	MLF
REVIEWER	CFD 03/06/26
PROJECT ID	114042
SHEET	P.158
TOTAL	163

CLE-52-4.67

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LEGEND	
	LIGHTING PULL BOX
	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, B, TYPE III, 120V

HORIZONTAL SCALE IN FEET
0 10 20 40

CIRCUIT SCHEMATIC & CONTROL CENTER DATA
SYCAMORE STREET - OHIO RIVER SCENIC BYWAY

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:44:18 PM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT_Pen.tbl USER: mflox3951@outlook.com WORKSPACE: OHDOTCEv02 WORKSET: 114042 PRODUCT: MicroStation 25.00.01.62
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CIRCUIT L1
VOLTAGE: 120V
WIRE FACTOR USED (TWO NO. 4 AWG WIRES) 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
L-1	L-2	89	0.92	0.92	82	4	0.05	0.81	0.68	L-1
L-2	L-3	71	0.92	1.84	131	4	0.08	0.76	0.63	L-2
L-3	L-4	53	0.92	2.76	146	4	0.09	0.68	0.57	L-3
L-4	PB-1	33	0.92	3.68	121	4	0.08	0.59	0.49	L-4
L-13	PB-6	42	0.92	0.92	39	4	0.02	2.25	1.88	L-13
L-16	L-15	90	0.92	0.92	83	4	0.05	2.40	2.00	L-16
L-15	L-14	69	0.92	1.84	127	4	0.08	2.35	1.96	L-15
L-14	PB-6	25	0.92	2.76	69	4	0.04	2.27	1.89	L-14
PB-6	PB-5	95	0.00	3.68	350	4	0.22	2.23	1.86	PB-6
L-12	PB-5	71	0.92	0.92	65	4	0.04	2.05	1.71	L-12
PB-5	L-11	8	0.00	4.60	37	4	0.02	2.01	1.68	PB-5
L-11	L-10	40	0.92	5.52	221	4	0.14	1.99	1.66	L-11
L-10	PB-4	41	0.92	6.44	264	4	0.16	1.85	1.54	L-10
L-7	L-8	52	0.92	0.92	48	4	0.03	1.79	1.49	L-7
L-8	L-9	43	0.92	1.84	79	4	0.05	1.76	1.47	L-8
L-9	PB-4	12	0.92	2.76	33	4	0.02	1.71	1.43	L-9
PB-4	PB-3	90	0.00	9.20	828	4	0.51	1.69	1.41	PB-4
PB-3	L-6	50	0.00	9.20	460	4	0.29	1.18	0.98	PB-3
L-6	PB-2	60	0.92	10.12	607	4	0.38	0.89	0.74	L-6
L-5	PB-2	13	0.92	0.92	12	4	0.01	0.52	0.43	L-5
PB-2	PB-1	67	0.00	11.04	740	4	0.46	0.51	0.43	PB-2
PB-1	LCC-1	5	0.00	14.72	74	4	0.05	0.05	0.04	PB-1

CONTROL CENTER DATA

CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
LCC-1	120	1.8	4	60	LI	14.72	20	4	NEW RICHMOND
					-	-	-	-	
					-	-	-	-	

DESIGN AGENCY
143Engineers

DESIGNER MLF
REVIEWER CFD 03/06/26
PROJECT ID 114042
SHEET P.159 TOTAL 163

	LEGEND
	LIGHTING PULL BOX
	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, A, TYPE III, 120V

Base Type
AT = Aluminum Transformer

Bracket Arm(s)
"B" = Single Arm

AT15B40

Support Height

Arm Length

LIGHT POLE DESIGN NUMBER

STA. 134+37, 37 LT. AT12B40 L-24

STA. 133+50, 45 LT. PB-12

PB-11 STA. 133+52, 36 RT.

L-23 STA. 133+44, 27 RT. AT10B40

L-22 STA. 297+10, 32 LT. AT10B40

PB-10 STA. 297+21, 27 LT.

L-21 STA. 297+99, 27 RT. AT10B40

STA. 293+60, 29 LT. AT10B40 L-26

STA. 295+06, 51 LT. AT10B40 L-25

STA. 294+31, 32 RT. AT10B40 L-17

STA. 131+99, 47 LT. AT8B40 L-18

STA. 131+55, 37 LT. POLE MOUNTED LCC-2

STA. 131+53, 32 LT. PB-7

L-20 STA. 296+40, 55 RT. AT6B40

PB-9 STA. 297+18, 34 RT.

PB-8 STA. 131+43, 32 RT.

L-19 STA. 131+35, 29 RT. AT10B40

SERVICE CABLE

WALNUT STREET

US-52

Ex SW

Ex LA

Ex R/W

Ex SH

8" VCP

293 294 295 296 297 298

131 132 133 134

HORIZONTAL SCALE IN FEET
0 10 20 40

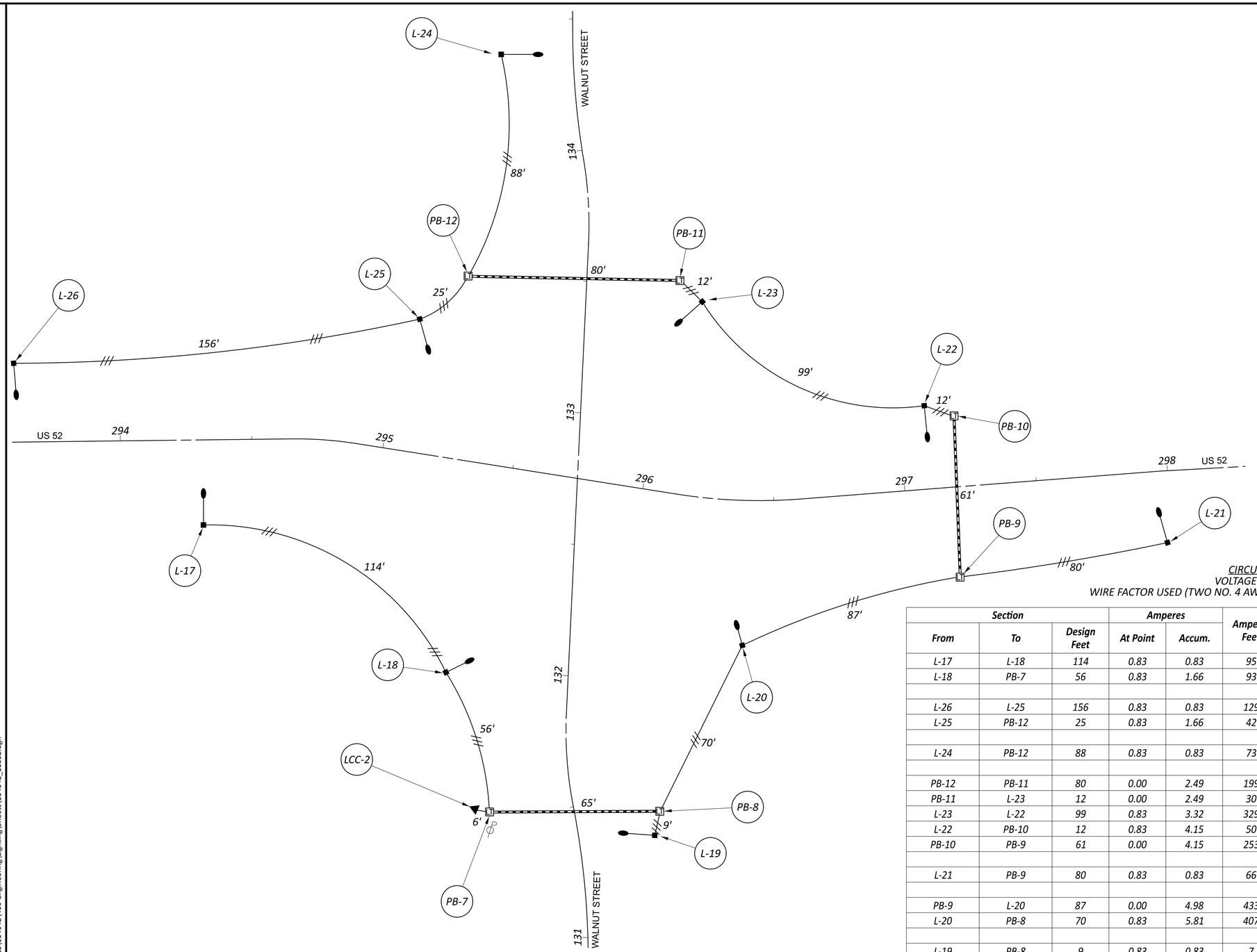
US-52 ROUNDABOUT PLAN
WALNUT STREET - OHIO RIVER SCENIC BYWAY

DESIGN AGENCY
143Engineers

DESIGNER	MLF
REVIEWER	CFD 03/06/26
PROJECT ID	114042
SHEET	P.160
TOTAL	163

CLE-52-4.67

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 3/9/2026 TIME: 12:44:19 PM PLTDRV: OHDOT_PDF.pltcfg PENTBL: OHDOT_Pen.tbl USER: mlfox3951@outlook.com WORKSPACE: OHDOTCivil WORKSET: 114042
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LEGEND

	LIGHTING PULL BOX
	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, A, TYPE III, 120V

HORIZONTAL SCALE IN FEET
0 10 20 40

<u>CIRCUIT L2</u>
VOLTAGE: 120V
WIRE FACTOR USED (TWO NO. 4 AWG WIRES) 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
L-17	L-18	114	0.83	0.83	95	4	0.06	0.15	0.13	L-17
L-18	PB-7	56	0.83	1.66	93	4	0.06	0.09	0.08	L-18
L-26	L-25	156	0.83	0.83	129	4	0.08	1.46	1.22	L-26
L-25	PB-12	25	0.83	1.66	42	4	0.03	1.38	1.15	L-25
L-24	PB-12	88	0.83	0.83	73	4	0.05	1.40	1.17	L-24
PB-12	PB-11	80	0.00	2.49	199	4	0.12	1.35	1.13	PB-12
PB-11	L-23	12	0.00	2.49	30	4	0.02	1.23	1.03	PB-11
L-23	L-22	99	0.83	3.32	329	4	0.20	1.21	1.01	L-23
L-22	PB-10	12	0.83	4.15	50	4	0.03	1.01	0.84	L-22
PB-10	PB-9	61	0.00	4.15	253	4	0.16	0.98	0.82	PB-10
L-21	PB-9	80	0.83	0.83	66	4	0.04	0.86	0.72	L-21
PB-9	L-20	87	0.00	4.98	433	4	0.27	0.82	0.68	PB-9
L-20	PB-8	70	0.83	5.81	407	4	0.25	0.55	0.46	L-20
L-19	PB-8	9	0.83	0.83	7	4	0.00	0.30	0.25	L-19
PB-8	PB-7	65	0.00	6.64	432	4	0.27	0.30	0.25	PB-8
PB-7	LCC-2	6	0.00	8.30	50	4	0.03	0.03	0.03	PB-7

CONTROL CENTER DATA

CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
LCC-2	120	1.0	4	60	L2	8.30	20	4	NEW RICHMOND
					-	-	-	-	
					-	-	-	-	

CIRCUIT SCHEMATIC & CONTROL CENTER DATA
WALNUT STREET - OHIO RIVER SCENIC BYWAY

DESIGN AGENCY
143Engineers

DESIGNER MLF
REVIEWER CFD 03/06/26
PROJECT ID 114042
SHEET P.161 TOTAL 163

CLE-52-4.67

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	LEGEND
	LIGHTING PULL BOX
	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, B, TYPE III, 120V

STA. 143+97, 29 LT. AT10B40 — L-38

STA. 143+45, 42 LT. — PB-18

STA. 316+02, 47 LT. AT10B40 — L-39

PB-17 — STA. 143+46, 41 RT.

L-37 — STA. 143+36, 45 RT. AT10B40

PB-16 — STA. 318+46, 38 LT.

L-36 — STA. 317+97, 39 LT. AT15B40

L-35 — STA. 318+72, 37 Lt. AT15B40

STA. 314+56, 29 RT. AT10B40 — L-27

STA. 315+22, 30 RT. AT10B40 — L-28

L-34 — STA. 318+69, 31 RT. AT10B40

PB-15 — STA. 318+39, 30 RT.

STA. 315+95, 51 RT. AT10B40 — L-29

L-32 — STA. 317+32, 58 RT. AT6B40

L-33 — STA. 317+93, 37 RT. AT6B40

STA. 141+81, 46 LT. AT12B40 — L-30

PB-14 — STA. 141+34, 24 RT.

STA. 141+41, 34 LT. — PB-13

STA. 141+35, 38 LT. POLE MOUNTED — LCC-3

L-31 — STA. 141+26, 27 RT. AT8B40

SERVICE CABLE

AUGUSTA STREET

US-52

144 143 142 141

Ex SH · Ex LA · Ex R/W · Ex SW · SAN · OH E — OH CTV · NYS

Base Type
AT = Aluminum Transformer

Bracket Arm(s)
"B" = Single Arm

AT15B40

Support Height

Arm Length

LIGHT POLE DESIGN NUMBER

HORIZONTAL SCALE IN FEET
0 10 20 40

US-52 ROUNDABOUT PLAN
AUGUSTA STREET - OHIO RIVER SCENIC BYWAY

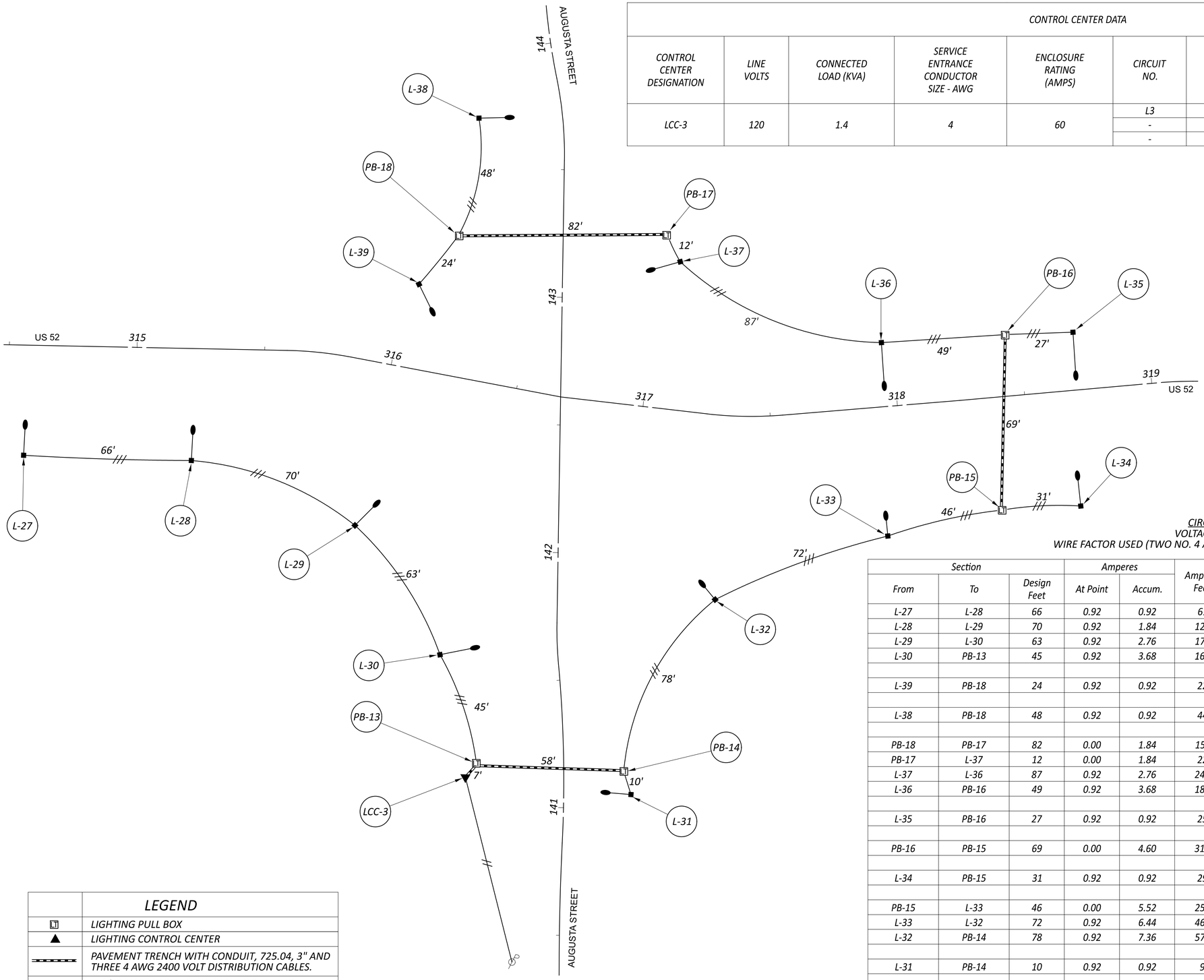
DESIGN AGENCY
143Engineers

DESIGNER	MLF
REVIEWER	CFD 03/06/26
PROJECT ID	114042
SHEET	P.162
TOTAL	163

CLE-52-4.67

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CONTROL CENTER DATA									
CONTROL CENTER DESIGNATION	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE - AWG	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD AMPS	CIRCUIT FUSE SIZE AMPS	CIRCUIT CABLE SIZE AWG	MAINTAINING AGENCY
LCC-3	120	1.4	4	60	L3	11.96	20	4	NEW RICHMOND
					-	-	-	-	
					-	-	-	-	



LEGEND	
	LIGHTING PULL BOX
	LIGHTING CONTROL CENTER
	PAVEMENT TRENCH WITH CONDUIT, 725.04, 3" AND THREE 4 AWG 2400 VOLT DISTRIBUTION CABLES.
	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLE
	LIGHT POLE CONVENTIONAL WITH LUMINAIRE SOLID STATE (LED), AS PER PLAN, B, TYPE III, 120V

CIRCUIT L3
VOLTAGE: 120V
WIRE FACTOR USED (TWO NO. 4 AWG WIRES) 0.62 OHMS/MFT/1000

Section			Amperes		Ampere-Feet	AWG	Voltage Drop		% Drop	At Point
From	To	Design Feet	At Point	Accum.			In Section	Accum.		
L-27	L-28	66	0.92	0.92	61	4	0.04	0.38	0.32	L-27
L-28	L-29	70	0.92	1.84	129	4	0.08	0.34	0.28	L-28
L-29	L-30	63	0.92	2.76	174	4	0.11	0.26	0.22	L-29
L-30	PB-13	45	0.92	3.68	166	4	0.10	0.15	0.13	L-30
L-39	PB-18	24	0.92	0.92	22	4	0.01	1.73	1.44	L-39
L-38	PB-18	48	0.92	0.92	44	4	0.03	1.75	1.46	L-38
PB-18	PB-17	82	0.00	1.84	151	4	0.09	1.72	1.43	PB-18
PB-17	L-37	12	0.00	1.84	22	4	0.01	1.63	1.36	PB-17
L-37	L-36	87	0.92	2.76	240	4	0.15	1.62	1.35	L-37
L-36	PB-16	49	0.92	3.68	180	4	0.11	1.47	1.23	L-36
L-35	PB-16	27	0.92	0.92	25	4	0.02	1.38	1.15	L-35
PB-16	PB-15	69	0.00	4.60	317	4	0.20	1.36	1.13	PB-16
L-34	PB-15	31	0.92	0.92	29	4	0.02	1.18	0.98	L-34
PB-15	L-33	46	0.00	5.52	254	4	0.16	1.16	0.97	PB-15
L-33	L-32	72	0.92	6.44	464	4	0.29	1.00	0.83	L-33
L-32	PB-14	78	0.92	7.36	574	4	0.36	0.71	0.59	L-32
L-31	PB-14	10	0.92	0.92	9	4	0.01	0.36	0.30	L-31
PB-14	PB-13	58	0.00	8.28	480	4	0.30	0.35	0.29	PB-14
PB-13	LCC-3	7	0.00	11.96	84	4	0.05	0.05	0.04	PB-13

HORIZONTAL SCALE IN FEET
0 10 20 40

CIRCUIT SCHEMATIC & CONTROL CENTER DATA
AUGUSTA STREET - OHIO RIVER SCENIC BYWAY

DESIGN AGENCY
143Engineers

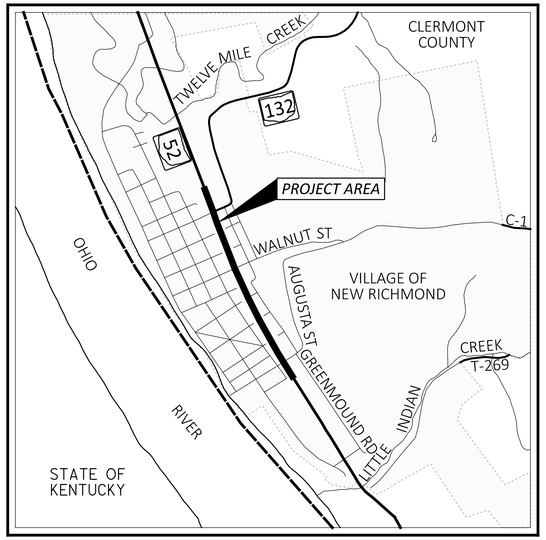
DESIGNER MLF
REVIEWER CFD 03/06/26
PROJECT ID 114042
SHEET P.163 TOTAL 163

CLE-52-4.67

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STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CLE-52-4.67
CLERMONT COUNTY
OHIO TOWNSHIP
VIRGINIA MILITARY SURVEY 1539
VILLAGE OF NEW RICHMOND



LOCATION MAP

LATITUDE: 38°57'08" N LONGITUDE: 84°16'40" W

INDEX OF SHEETS:

R/W LEGEND SHEET	RW.1
PROPERTY MAP	RW.2
SUMMARY OF ADDITIONAL R/W	RW.3 - RW.4
R/W DETAIL SHEETS	RW.5 - RW.6

PROJECT DESCRIPTION

CONVERT THE EXISTING FOUR LANE DIVIDED SECTION OF US 52 TO ONE LANE OF TRAFFIC IN EACH DIRECTION USING EXISTING NORTHBOUND LANES OF US 52, AND CONVERT THE EXISTING SOUTHBOUND LANES TO A SHARED USE PATH. CONVERT THREE EXISTING INTERSECTIONS (SYCAMORE, WALNUT, AUGUSTA) TO ROUNDABOUTS.

PLANS PREPARED BY:

FIRM NAME : AMERICAN STRUCTUREPOINT, INC
R/W DESIGNER: BENJAMIN R. BLACK
R/W REVIEWER: CHRISTOPHER M. COOK
FIELD REVIEWER: N/A
PRELIMINARY FIELD REVIEW DATE: N/A
OWNERSHIP UPDATED BY: BENJAMIN R. BLACK
DATE COMPLETED: 10/21/2025
FIELD REVIEWER:
FINAL FIELD REVIEW DATE:
FINAL R/W PLAN DATE:

TAG LEGEND

XX ℄ R/W INTERSECTION STATIONING

XX EX. R/W PARCEL INFORMATION

SURVEY CONTROL/MONUMENT (SEE COORDINATE TABLE)

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

TYPES OF TITLE LEGEND:
SH = STANDARD HIGHWAY EASEMENT
LA = LIMITED ACCESS EASEMENT
T = TEMPORARY EASEMENT
CH = CHANNEL EASEMENT
SW = SEWER EASEMENT

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Limited Access Ease. (Ex) Ex LA
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
Channel Ease. (Ex) Ex CH
Sewer Ease. (Ex) Ex SW
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)

Edge of Shoulder (Ex)
Edge of Shoulder (Pr)
Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) Tree (Ex) Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex), Telephone Marker (Ex)
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex)

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

CHARTER COMMUNICATIONS
10920 KENWOOD ROAD
BLUE ASH, OH 45242
ATTN: KENT RIEGER
kent.rieger@charter.com
PHONE: 513-386-5499

ODOT DISTRICT 8
TRAFFIC/SIGNALS/LIGHTING
ATTN: MARK GRAKE
marc.grake@dot.ohio.gov
513-933-6607

CINCINNATI BELL
209 W. 7TH ST., BLDG 121-900
CINCINNATI, OH 45202
ATTN: JASON BURNS
jason.burns@cinbell.com
PHONE: 513-397-0548

TATE MONROE WATER ASSN, INC.
ATTN: JEFF SMITH
jsmith@tatemonroe.com
PHONE: 513-734-9613

DUKE ENERGY - ELECTRIC
2010 DANA AVE., RM 410
CINCINNATI, OH 45207
ATTN: CHRIS TEPE
chirs.tepe@duke-energy.com
513-458-3855

DUKE ENERGY - GAS
139 E. 4TH ST.
CINCINNATI, OH 45202
ATTN: KEVIN KUISTI
kevin.kuisi@duke-energy.com
513-287-4407

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD 83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE (SOUTH ZONE)
COMBINED SCALE FACTOR: 1.000054573
ORIGIN OF COORDINATE SYSTEM
(POINT TO SCALE ABOUT): CP 1105 (SEE COORDINATE TABLE)

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD '88
GEOID: 18

SURVEY PARAMETERS

POSITIONING METHOD: GNSS SURVEY
MONUMENT TYPE: TYPE B
UNITS ARE IN U.S. SURVEY FEET.

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. BEARINGS SHOWN HEREON ARE MEASURED FROM GRID NORTH, REFERENCED TO THE OHIO STATE PLANE COORDINATE SYSTEM (SOUTH ZONE) AND THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT), AS ESTABLISHED UTILIZING A GNSS SURVEY & AN NGS OPUS SOLUTION.

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

I, Christopher M. Cook, P.S., have conducted a survey of the existing conditions for the Village of New Richmond, Ohio and the Ohio Department of Transportation in June 2021. The results of that survey are contained herein. See the Survey Parameters note affixed to these plans for the horizontal and vertical survey parameters used for this project. As a part of this project, I have reestablished the locations of the existing boundary lines, the existing centerline of Right of Way and the existing Right of Way limits as necessary for the property takes contained herein. As a part of this project I have established the proposed boundary lines, calculated the Gross Takes, present road occupied (PRO) and Net Takes herein. As a part of this work, right of way monuments will be set at the locations shown herein per the Memorandum of Understanding between the Board of Registration for Engineers and Surveyors and the Ohio Department of Transportation dated 9-22-2010. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys, unless so noted. The words "I and my" as used herein are to mean that either myself or someone working under my direct supervision.

Christopher M. Cook Date
Registered Professional Land Surveyor No. 8424

AMERICAN STRUCTUREPOINT INC.
2550 CORPORATE EXCHANGE DR, STE 300
COLUMBUS, OH 43231
TEL 614.901.2235 FAX 614.901.2236
www.structurepoint.com

SURVEYORS SEAL

RIGHT-OF-WAY LEGEND SHEET

DESIGN AGENCY: AMERICAN STRUCTUREPOINT INC.
DESIGNER: BRB
REVIEWER: CMC 10-31-2025
PROJECT ID: 114042
SHEET: RW. 1 | TOTAL: RW. 6

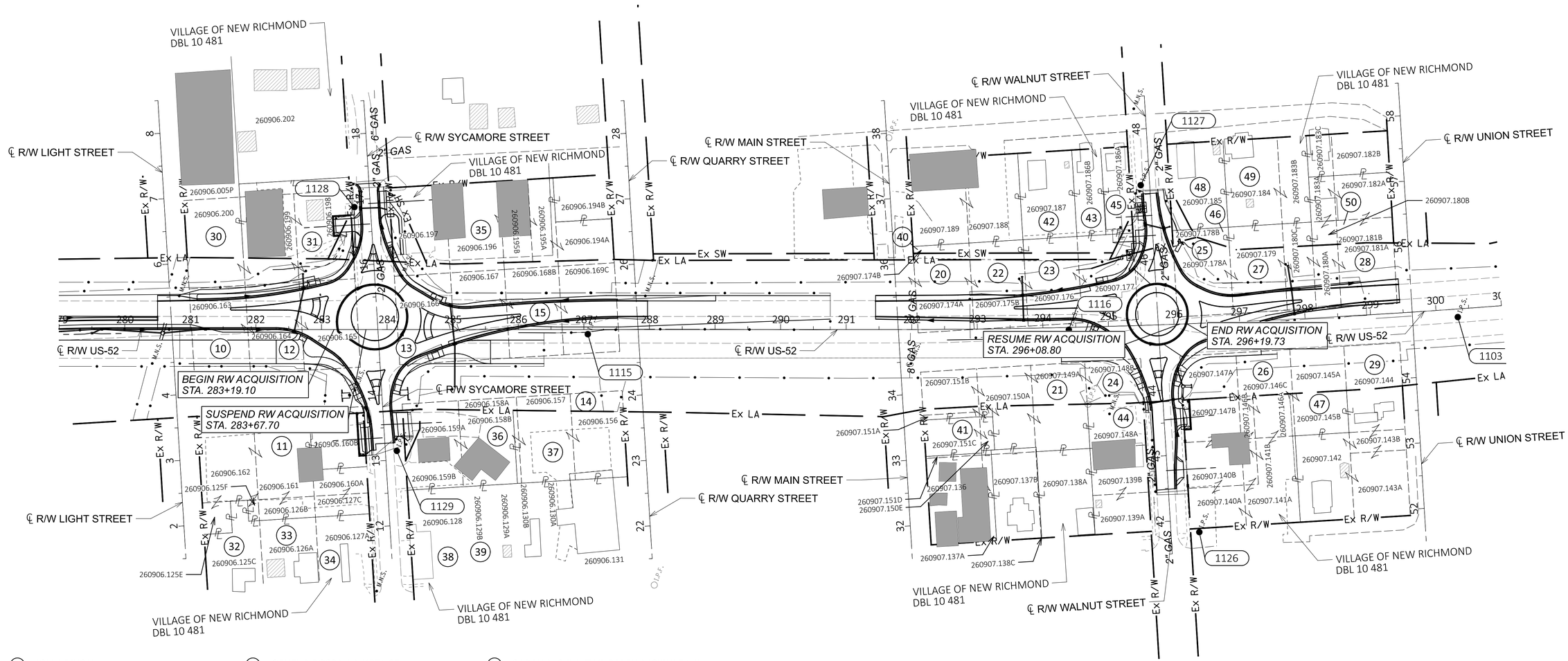
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STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING
- ** NO ADDITIONAL R/W NEEDED

CLERMONT COUNTY
OHIO TOWNSHIP
VIRGINIA MILITARY SURVEY 1539
VILLAGE OF NEW RICHMOND



- ** (10) JOHN DIXON
- (11) GABBY PROPERTIES LLC
- ** (12) MARY E. DONHAM
- ** (13) ALEY A. MOORE & WANNIE J. MOORE
- ** (14) WILLIAM FRYE
- ** (15) GEORGE E. MCGILL
- ** (20) ADRIAN NICHOLS & MARY J. NICHOLS
- ** (21) ALEATHIA M. BOWMAN
- ** (22) CLIFF X IETHA PANCHER
- ** (23) J.F. LOCKWOOD & W.J. TRUSTEES
- ** (24) LUTHERAN CHURCH OF NEW RICHMOND
- ** (25) WILLIAM R. FRYE
- ** (26) ROBERT CORWIN
- ** (27) AMGS PROPERTIES LLC
- ** (28) GENEVA ROSS X LAWRENCE
- ** (29) ROBERT CATRON & DONNA CATRON
- ** (30) J & H CLASGENS
- (31) NARENDRA PATEL & DAXA PATEL
- ** (32) VILLAGE OF NEW RICHMOND
- ** (33) WILLIAM R. STILES
- ** (34) PATRICK O. BLAIR & JENNIFER A. BLAIR
- ** (35) SPEEDWAY SUPERAMERICA LLC
- ** (36) NEW RICHMOND FUEL INC
- ** (37) NEW RICHMOND CHURCH OF GOD
- ** (38) TNKN PROPERTIES LLC
- ** (39) AGNES X M WILLIS
- ** (40) MARGARET LIGHT
- ** (41) GO OHIO 2 LLC
- ** (42) SARAH MCKINLEY & RALPH MCKINLEY III
- ** (43) LOUPEE RENTAL LLC
- ** (44) WIDESPREAD PROPERTIES LLC
- ** (45) JOSEPH VOGEL
- ** (46) JOSEPH VOGEL
- (47) EZ AUTO RIDE LLC
- ** (48) CRAIG B. CHILDERS
- ** (49) MARK R. GILBERT
- ** (50) DAREN SCHAFER & ANNETTE SCHAEFER

COORDINATE TABLE (GROUND)

POINT #	CL OF R/W	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
1105				354997.502	1461396.772	3/4" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1103	U.S.52	300+32.53	12.28' RT	351474.531	1462748.555	3/4" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1115	U.S.52	287+06.08	6.95' RT	352706.230	1462255.189	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1116	U.S.52	294+39.49	3.56' RT	352022.493	1462520.736	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1126	WALNUT STREET	296+26.38	318.23 RT	351727.267	1462302.327	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1127	WALNUT STREET	295+56.23	213.86' LT	351997.928	1462765.812	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1128	SYCAMORE STREET	283+50.22	186.85' LT	353107.666	1462310.703	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP
1129	SYCAMORE STREET	284+14.87	184.96' RT	352915.715	1461985.732	5/8" IRON PIN SET W/ "ASI CONTROL POINT" CAP

CP 1105 POINT TO SCALE ABOUT

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

HORIZONTAL SCALE IN FEET
0 40 80 160

PROPERTY MAP

DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER BRB
REVIEWER CMC 10-31-2025
PROJECT ID 114042
SHEET RW. 2 TOTAL RW. 6

CLE-US52-4.67

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TOTAL NUMBER OF :

3 OWNERSHIPS
3 PARCELS
0 TOTAL TAKES
0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE
ALL AREAS ARE IN ACRES (UNLESS OTHERWISE NOTED)

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
CITY OF NEW RICHMOND, OHIO

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS
1-9	NOT USED													
10	JOHN DIXON			260906.163										*NO ADDITIONAL R/W REQUIRED*
11	GABBY PROPERTIES LLC	5	OR 2997, PG 3414	260906.161	0.259 (c)	0.019								+9.52 FT. ASPH PARKING LOT*, +10.14 FT. ASPH PARKING LOT
	AN OHIO LIMITED LIABILITY COMPANY			260906.162	0.260 (c)	0.010								
				260906.160A	0.064	0.000								
11-T				260906.160B	0.150	0.018	0.135	0.000	0.135					*TO CONSTRUCT A DRIVE AND COMPLETE GRADING*
				260906.160C	0.003 (c)	0.001								
				260906.127C	0.051	0.000								
				260906.126B	0.063 (c)	0.000								
				260906.125E	0.047 (c)	0.000								
				260906.125F	0.019	0.000								
12	MARY E. DONHAM	5	DB 398, PG 321	260906.164	0.256 (c)	0.256								*NO ADDITIONAL R/W REQUIRED*
				260906.165	0.265 (c)	0.265								
13	ALEY A. MOORE & WANNIE J. MOORE	5	OR 2967, PG 5145	260906.166	0.265 (c)	0.265								*NO ADDITIONAL R/W REQUIRED*
14	WILLIAM FRYE	5	DB 315, PG 459	260906.159A	0.259 (c)	0.053								*NO ADDITIONAL R/W REQUIRED*
				260906.158A	0.252 (c)	0.035								
15	GEORGE E. MCGILL	5	DB 604, PG 618	260906.167	0.256 (c)	0.256								*NO ADDITIONAL R/W REQUIRED*
				260906.168B	0.240 (c)	0.240								
				260906.169C	0.128 (c)	0.128								
16-19	NOT USED													
20	ADRIAN NICHOLS & MARY J. NICHOLS			260907.174A										*NO ADDITIONAL R/W REQUIRED*
21	ALEATHIA M. BOWMAN	6	OR 2067, PG 1387	260907.149A	0.250 (c)	0.119								*NO ADDITIONAL R/W REQUIRED*
				260907.150A	0.206 (c)	0.112								
				260907.150C	0.007 (c)	0.000								
				260907.151A	0.015 (c)	0.000								
				260907.151B	0.017 (c)	0.000								
22	CLIFF X IETHA PANCHER			260907.175A										*NO ADDITIONAL R/W REQUIRED*
23	J. F. LOCKWOOD & W. J. LOCKWOOD TRUSTEES	6	OR 1036, PG 890	260907.176	0.250 (c)	0.062								+55.07 FT 4' CHAIN LINK FENCE*, +1 FLAGPOLE*, *NO ADDITIONAL R/W REQUIRED*
				260907.177	0.259 (c)	0.070								
24	LUTHERIAN CHURCH OF NEW RICHMOND	6	DB 80, PG 426	260907.148B	0.132	0.132								*NO ADDITIONAL R/W REQUIRED*
25	WILLIAM R. FRYE	6	DB 248, PG 181	260907.178A	0.221 (c)	0.221								*NO ADDITIONAL R/W REQUIRED*
26	ROBERT CORWIN	6	DB 338, PG 67	260907.145A	0.120	0.120								*NO ADDITIONAL R/W REQUIRED*
				260907.146C	0.090	0.090								
			DB 316, PG 437	260907.147A	0.117	0.117								
27	AMGS PROPERTIES LLC,	6	OR 2943, PG 331	260907.179	0.250 (c)	0.184								*NO ADDITIONAL R/W REQUIRED*
	AN OHIO LIMITED LIABILITY COMPANY			260907.180C	0.134 (c)	0.098								
28	GENEVA ROSS X LAWRENCE			260907.180A										*NO ADDITIONAL R/W REQUIRED*
				260907.181A										
29	ROBERT CATRON & DONNA CATRON		OR 2914, PG 1133	260907.144	0.206	0.131								*NO ADDITIONAL R/W REQUIRED*
				260907.143A	0.215	0.000								
				260907.143B	0.059	0.000								
30	J & H CLASGENS			260906.201	0.254	0.000								*NO ADDITIONAL R/W REQUIRED*
31-T	NARENDRA PATEL & DAXA PATEL	5	OR 1797, PG 800	260906.198	0.265 (c)	0.097	0.012	0.000	0.012					+65.03 FT. 4' CHAINLINK FENCE*, +295.65 SQ. FT. ASPH PARKING LOT,
				260906.199	0.256 (c)	0.074								+11.86 SQ. FT. ASPH PARKING LOT, +3.14 SQ. FT. ASPH PARKING LOT
														TO CONSTRUCT A DRIVE AND COMPLETE GRADING
32	VILLAGE OF NEW RICHMOND			260906.125C	0.068	0.000								*NO ADDITIONAL R/W REQUIRED*
33	WILLIAM R. STILES	5	DB 708, PG 345	260906.126A	0.163	0.000								+38.73 SQ. FT. CONC PAD*, *NO ADDITIONAL R/W REQUIRED*
34	PATRICK O. BLAIR & JENNIFER A. BLAIR		OR 1868, PG 2430	260906.127A	0.137	0.000								*NO ADDITIONAL R/W REQUIRED*
35	SPEEDWAY SUPERAMERICA LLC,	5	DB 1011, PG 591	260906.195A	0.112	0.008								*NO ADDITIONAL R/W REQUIRED*
	A DELAWARE LIMITED LIABILITY COMPANY			260906.195B	0.110	0.010								
				260906.196	0.256 (c)	0.023								
				260906.197	0.265 (c)	0.107								
			OR 2285, PG 405	260906.194A	0.110	0.012								

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

\+ DENOTES REMOVAL ITEMS SEE CORRESPONDING RIGHT OF WAY PLAN SHEET FOR DESCRIPTION

** DENOTES RIGHT OF WAY ENCROACHMENT*

TYPES OF TITLE LEGEND:
T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY N/A DATE: N/A
OWNERSHIP VERIFIED BY B.R. BLACK DATE: 10/21/2025
DATE COMPLETED

SUMMARY OF ADDITIONAL RIGHT-OF-WAY (PARCELS 10-35)

DESIGN AGENCY
AMERICAN STRUCTUREPOINT INC.

DESIGNER BRB
REVIEWER CMC 10-31-2025
PROJECT ID 114042
SHEET RW. 3 TOTAL RW. 6

CTY-RTE-SECTION

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS ARE IN ACRES (UNLESS OTHERWISE NOTED)

PARCEL NO.	OWNER	SHEET NO.	OWNER'S RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS
36	NEW RICHMOND FUEL, INC.		OR 2608, PG 365	260906.159B	0.227	0.031								*NO ADDITIONAL R/W REQUIRED*
				260906.158B	0.225	0.000								
37	NEW RICHMOND CHURCH OF GOD		OR 2260, PG 309	260906.159B	0.227	0.031								*NO ADDITIONAL R/W REQUIRED*
				260906.156	0.240 (c)	0.053								
38	TNKN PROPERTIES LLC		OR 2823, PG 3345	260906.128	0.253	0.000								*NO ADDITIONAL R/W REQUIRED*
39	AGNES X M WILLIS			260906.129A	0.119	0.000								*NO ADDITIONAL R/W REQUIRED*
				260906.129B	0.134	0.000								
40	MARGARET LIGHT			260907.174B	0.016	0.000								*NO ADDITIONAL R/W REQUIRED*
41	GO OHIO 2 LLC		OR 2998, PG 3206	260907.151C	0.110	0.000								*NO ADDITIONAL R/W REQUIRED*
				260907.150D		0.000								
42	SARAH MCKINLEY & RALPH MCKINLEY III	6	OR 2898, PG 1247	260907.187	0.253	0.000								*NO ADDITIONAL R/W REQUIRED*
43	LOUPEE RENTAL LLC	6	OR 2866, PG 1501	260907.186B	0.134	0.000								*NO ADDITIONAL R/W REQUIRED*
44	WIDESPREAD PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY	6	OR 2823, PG 1889	260907.148A	0.132	0.000								+46.16 SQ. FT. ASPH DRIVE, *NO ADDITIONAL R/W REQUIRED*
				260907.139B	0.136	0.000								
				260907.139A	0.114	0.000								
45	JOSEPH VOGEL	6	OR 1733, PG 191	260907.186A	0.103	0.005								*NO ADDITIONAL R/W REQUIRED*
46	JOSEPH VOGEL	6	OR 1733, PG 191	260907.178B	0.039	0.000								+40.46 FT. 5' CHAIN LINK FENCE, *NO ADDITIONAL R/W REQUIRED*
47	EZ AUTO RIDE LLC.	6	OR 2866, PG 5618	260907.140A	0.126	0.000								+58.13 FT. 5' CHAIN LINK FENCE*
				260907.140B	0.126	0.000								+425.04 SQ. FT. CONC DRIVE*
				260907.141A	0.201	0.000								+45.67 SQ. FT. PARKING LOT
				260907.141B	0.036 (c)	0.000								
				260907.145B	0.122 (c)	0.000								
				260907.146A	0.090 (c)	0.000								
				260907.146B	0.032 (c)	0.000								
47-T				260907.147B	0.136	0.000	0.010	0.000	0.010					*TO CONSTRUCT A DRIVE AND COMPLETE GRADING*
48	B. CRAIG CHILDERS	6	OR 2330, PG 860	260907.185	0.221	0.022								*NO ADDITIONAL R/W REQUIRED*
49	MARK R. GILBERT	6	OR 2408, PG 889	260907.183B	0.113	0.000								*NO ADDITIONAL R/W REQUIRED*
			OR 1585, PG 2358	260907.184	0.113	0.000								
50	DAREN SCHAFER & ANNETTE SCHAFER		OR 2522, PG 2473	260907.180B	0.036	0.000								*NO ADDITIONAL R/W REQUIRED*
				260907.181B	0.076	0.000								
				260907.182A	0.062	0.000								
				260907.183A										

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

\+ DENOTES REMOVAL ITEMS SEE CORRESPONDING RIGHT OF WAY PLAN SHEET FOR DESCRIPTION

** DENOTES RIGHT OF WAY ENCROACHMENT*

TYPES OF TITLE LEGEND:

T = TEMPORARY EASEMENT

(c) = CALCULATED AREA

REV. BY	DATE	DESCRIPTION

FIELD REVIEW BY DATE:

OWNERSHIP VERIFIED BY B.R. BLACK DATE: 10/21/2025

DATE COMPLETED

SUMMARY OF ADDITIONAL RIGHT-OF-WAY (PARCELS 36-50)

CTY-RTE-SECTION

DESIGN AGENCY
STRUCTUREPOINT INC.

DESIGNER BRB

REVIEWER CMC 10-31-2025

PROJECT ID 114042

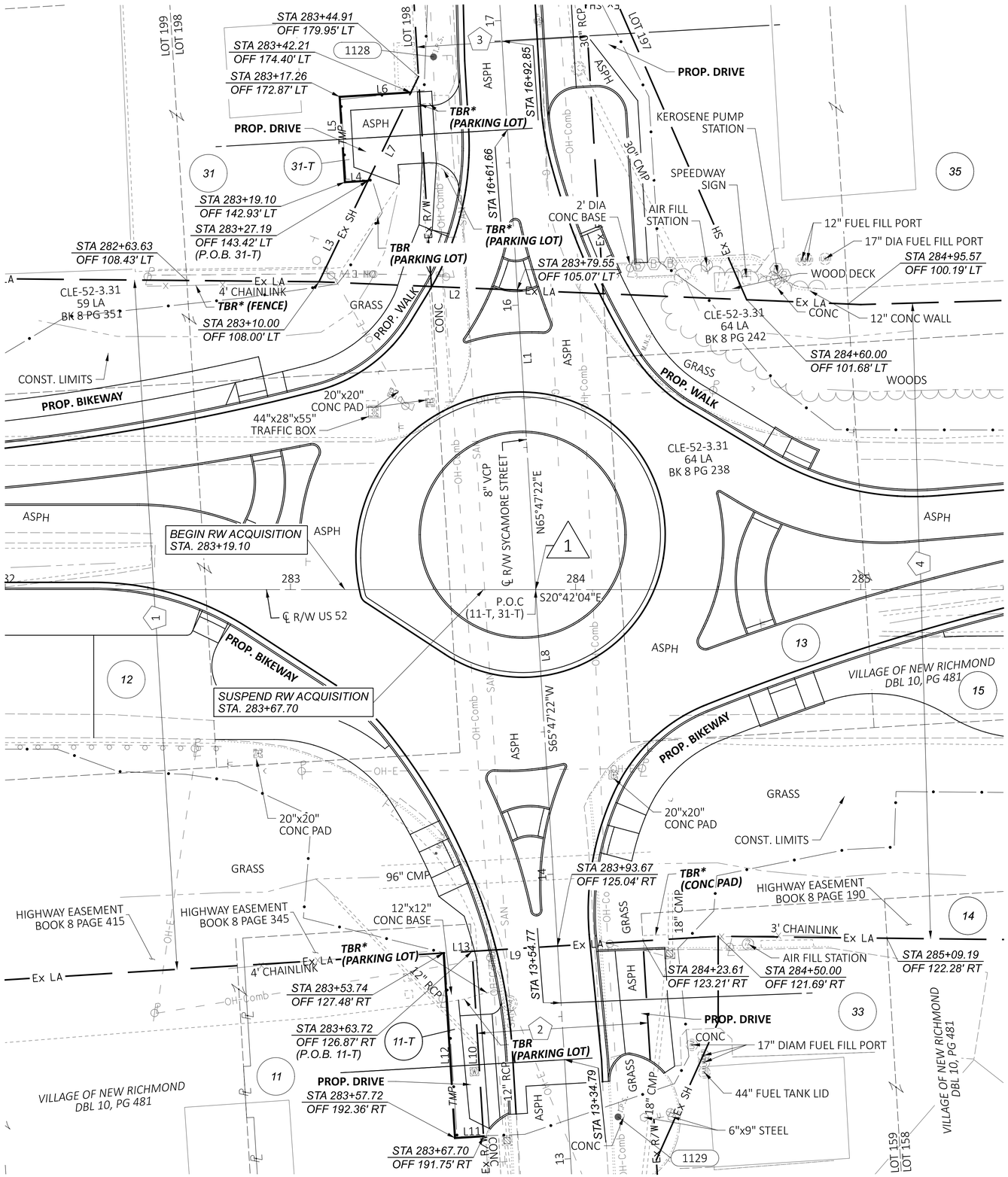
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CLERMONT COUNTY
OHIO TOWNSHIP
VIRGINIA MILITARY SURVEY 1539
VILLAGE OF NEW RICHMOND

HORIZONTAL SCALE IN FEET
0 10 20 40

RIGHT-OF-WAY DETAIL SHEET
STA. 282+00.00 TO STA. 285+50.00



11	PID: 260906.161 GABBY PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY OR 2997 PG 3414 415 SYCAMORE STREET COMMERCIAL	15 PID: 260906.167 GEORGE E. MCGILL DB 604 PG 618 US ROUTE 52 RESIDENTIAL
12	PID: 260906.164 MARY E. DONHAM DB 398 PG 321 US ROUTE 52 RESIDENTIAL	31 PID: 260906.198 NARENDRA PATEL & DAXA PATEL OR 1797 PG 800 SYCAMORE STREET COMMERCIAL
13	PID: 260906.166 ALEY A. MOORE & WANNIE J. MOORE OR 2967 PG 5145 US ROUTE 52 RESIDENTIAL	33 PID: 260906.126A WILLIAM R. STILES DB 708 PG 345 506 CENTER STREET RESIDENTIAL
14	PID: 260906.159A WILLIAM FRYE DB 315 PG 459 SYCAMORE STREET COMMERCIAL	35 PID: 260906.195A SPEEDWAY SUPERAMERICA LLC, A DELAWARE LIMITED LIABILITY COMPANY DB 1011 PG 591 OR 2285 PG 405 409 COLUMBIA STREET COMMERCIAL

L1: N65°47'22"E - 105.32'	L8: S65°47'22"W - 125.27'	
L2: N18°17'24"W - 69.62'	L9: N24°12'17"W - 30.00'	
L3: S84°49'16"E - 39.37'	L10: S65°47'22"W - 65.00'	
L4: N24°12'38"W - 8.10'	L11: N24°12'38"W - 10.00'	
L5: N65°47'22"E - 30.00'	L12: N65°47'22"E - 65.00'	
L6: S24°12'38"E - 25.00'	L13: S24°12'17"E - 10.00'	
L7: N84°49'16"W - 34.43'		

1 242' R/W (P.B. 10, PG. 481) CLE- 3.31
2 60' R/W (P.B. 10, PG. 481) CLE-52 3.31
3 60' R/W (P.B. 10, PG. 481) CLE- 3.31
4 223' R/W (P.B. 10, PG. 481) CLE- 3.31

1 *STA. 283+86.00 (℄ R/W STATE ROUTE 52)*
STA. 15+00.00 (℄ R/W STREET)

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

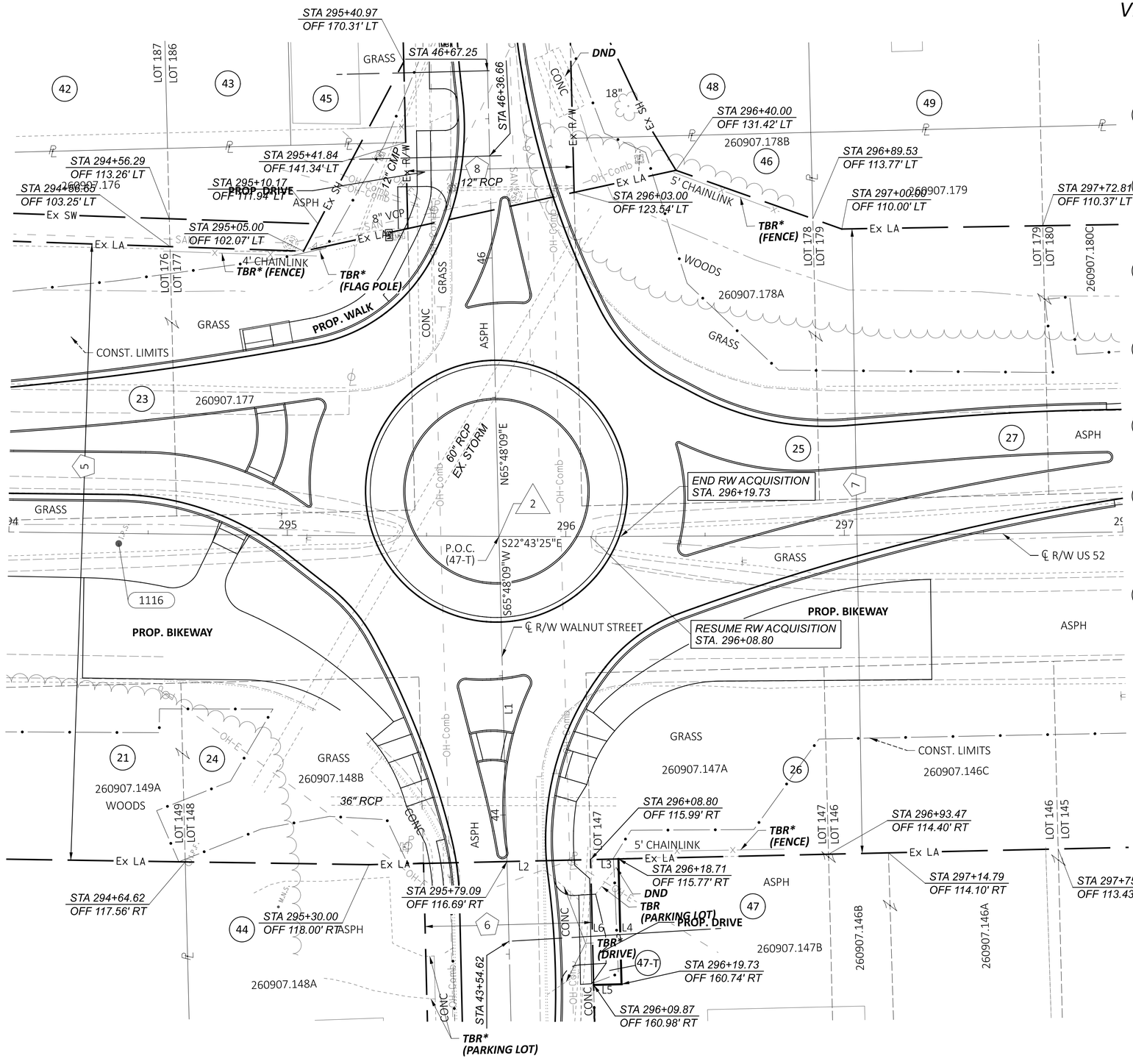
DESIGN AGENCY
STRUCTUREPOINT LLC

DESIGNER BRB
REVIEWER CMC 10-31-2025
PROJECT ID 114042
SHEET RW. 5 TOTAL RW. 6

CLE-US52-4.67

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CLERMONT COUNTY
OHIO TOWNSHIP
VIRGINIA MILITARY SURVEY 1539
VILLAGE OF NEW RICHMOND



L1: S65°48'09"W - 116.73'	5 221' R/W (P.B. 10, PG 481) CLE-52 3.31
L2: S24°05'36"E - 30.00'	6 60' R/W (P.B. 10, PG 481) CLE-52 3.31
L3: S24°03'52"E - 10.00'	7 224' R/W (P.B. 10, PG 481) CLE-52 3.31
L4: S65°48'09"W - 44.98'	8 60' R/W (P.B. 10, PG 481) CLE-52 3.31
L5: N24°11'51"W - 10.00'	
L6: N65°48'09"E - 45.00'	

2 STA. 295+76.00 (℄ R/W STATE ROUTE 52)
STA. 45+00.00 (℄ R/W WALNUT STREET)

21	PID: 260907.149A ALEATHIA M. BOWMAN OR 2067 PG 1387 412 MAIN STREET RESIDENTIAL
23	PID: 260907.176 J.F. LOCKWOOD & W.J. LOCKWOOD TRUSTEES OR 1036 PG 890 515 WALNUT STREET COMMERCIAL
24	PID: 260907.148B LUTHERIAN CHURCH OF NEW RICHMOND DB 80 PG 426 US ROUTE 52 EXEMPT
25	PID: 260907.178A WILLIAM R. FRYE DB 248 PG 181 US ROUTE 52 RESIDENTIAL
26	PID: 260907.145A ROBERT CORWIN DB 338 PG 67 DB 316 PG 437 US ROUTE 52 RESIDENTIAL
27	PID: 260907.179 AMGS PROPERTIES LLC, AN OHIO LIMITED LIABILITY COMPANY OR 2943 PG 331 US ROUTE 52 RESIDENTIAL
42	PID: 260907.187 SARAH MCKINLEY & RALPH MCKINLEY III OR 2898 PG 1247 207 COLUMBIA STREET RESIDENTIAL
43	PID: 260907.186B LOUPEE RENTAL LLC OR 2866 PG 1501 205 COLUMBIA STREET RESIDENTIAL
44	PID: 260907.148A WIDESPREAD PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY OR 2823 PG 1889 411 WALNUT STREET COMMERCIAL
45	PID: 260907.186A JOSEPH VOGEL OR 1733 PG 191 519 WALNUT STREET RESIDENTIAL
46	PID: 260907.178B JOSEPH VOGEL OR 1733 PG 191 WALNUT STREET RESIDENTIAL
47	PID: 260907.140A EZ AUTO RIDE LLC. OR 2866 PG 5618 110 CENTER STREET COMMERCIAL
48	PID: 260907.185 B. CRAIG CHILDERS OR 2330 PG 860 121 COLUMBIA STREET RESIDENTIAL
49	PID: 260907.184 MARK R. GILBERT OR 2408 PG 889 OR 1585 PG 2358 123 COLUMBIA STREET RESIDENTIAL

HORIZONTAL SCALE IN FEET
0 10 20 40

RIGHT-OF-WAY DETAIL SHEET
STA. 294+00.00 TO STA. 298+00.00

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

DESIGN AGENCY: STRUCTUREPOINT LLC
DESIGNER: BRB
REVIEWER: CMC 10-31-2025
PROJECT ID: 114042
SHEET: RW. 6 TOTAL: RW. 6

CLE-US52-4.67

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PROJECT DESCRIPTION

CONSTRUCTION OF ROUNDABOUT INTERSECTIONS ON U.S. ROUTE 52 AT SYCAMORE, WALNUT AND AUGUSTA STREETS, AND RELATED ROADWAY WORK, IN NEW RICHMOND, OHIO.

GEOLOGY

REVIEW OF THE "SURFICIAL GEOLOGY MAP OF THE OHIO PORTIONS OF THE CINCINNATI AND FALMOUTH 1:100,000-SCALE QUADRANGLES" PREPARED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR), DIVISION OF GEOLOGIC SURVEY, DATED AUGUST 1998, INDICATES THE NATURAL SITE SOILS AS BEING APPROXIMATELY 20 FEET OF HOLOCENE-AGE ALLUVIUM THAT IS GENERALLY FINE-GRAINED, BUT SOMETIMES CONTAINING SAND AND GRAVEL, UNDERLAIN BY AS MUCH AS APPROXIMATELY 70 FEET OF WISCONSINAN-AGE GLACIAL OUTWASH CONSISTING MOSTLY OF SAND AND GRAVEL, BUT WITH THIN DISCONTINUOUS LAYERS OF SILT AND CLAY. THE U.S. SOIL CONSERVATION SERVICE'S "SOIL SURVEY OF CLERMONT COUNTY" ALSO IDENTIFIES THE UPPER NATURAL SOILS AS ALLUVIUM, BEING OF THE NEWARK AND HUNTINGTON SOIL SERIES (OHIO RIVER-DEPOSITED SOIL) AND THE EEL SOIL SERIES (VALLEY SIDESLOPE WASH). ODNR'S MAP TITLED "BEDROCK TOPOGRAPHY OF THE OHIO PORTION OF THE NEW RICHMOND OHIO-KENTUCKY 7.5-MINUTE QUADRANGLE, LAST REVISION DATE JUNE 1998", INDICATES BEDROCK AT THE SITE TO BE AT DEPTHS OF APPROXIMATELY 30 TO 80 FEET. ODNR'S "BEDROCK GEOLOGY MAP OF THE OHIO PORTION" OF THE SAME QUADRANGLE IDENTIFIES THE BEDROCK AS SEDIMENTARY ROCK OF THE ORDOVICIAN GEOLOGIC SYSTEM, SPECIFICALLY POINT PLEASANT FORMATION INTERBEDDED LIMESTONE AND SHALE, WITH THE LIMESTONE COMPRISING APPROXIMATELY 50 TO 60 PERCENT OF THE FORMATION.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS PERFORMED BY ATLAS GEOTECHNICAL ENGINEERING PERSONNEL ON OR ABOUT SEPTEMBER 1, 2021. THIS PHASE OF THE PROJECT, PHASE 1, INCLUDES THE THREE (3) INTERSECTIONS WITH U.S. ROUTE 52 MENTIONED IN THE ABOVE PROJECT DESCRIPTION. THE CURRENT INTERSECTIONS ARE AT-GRADE 4-WAY ONES. EXISTING PAVEMENTS ARE GENERALLY OF ASPHALTIC OVERLAYS OVER CONCRETE. THERE ARE SOME MOWN GRASS MEDIAN AREAS AND ADJACENT MOWN RIGHTS-OF-WAY ALONG THE DIVIDED U.S. 52 HIGHWAY. PROPERTIES NEAR TO THE SUBJECT INTERSECTIONS ARE LARGELY COMMERICIAL, WITH SOME GREENSPACE/PARKLAND AND RESIDENTIAL LOTS NEARBY. THE TOPOGRAPHY IS GENERALLY LEVEL, OR NEARLY SO.

SUBSURFACE EXPLORATION

FIFTEEN (15) SOIL BORINGS, B-006-0-21 THROUGH B-020-0-20 WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION BETWEEN SEPTEMBER 13 AND 15, 2021. (NOTE THE ORIGINAL PROJECT HAS BEEN DIVIDED INTO TWO (2) PHASE SINCE THE 2021 BORINGS WERE PERFORMED, AND BORINGS BEFORE AND AFTER IN THE INTERVAL OF THE BORING NUMBERS GIVEN ABOVE ARE PART OF A SEPARATE AND LATER PROJECT PHASE OR PHASES.) THE BORINGS WERE PERFORMED WITH A TRUCK-MOUNTED CME-55 ROTARY DRILL RIG USING 2.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORING THROUGH THE SOIL. CONTINUOUS STANDARD PENETRATION TESTING (AASHTO T-206) WITH SPLT-SPOON SAMPLING WAS PERFORMED CONTINUOUSLY FROM THE BOTTOM OF THE PAVEMENT SECTION FOR BORINGS DRILLED IN THE ROADWAY, AND AT 2.5-FOOT INTERVALS FOR BORINGS DRILLED IN GRASSED AREAS. THE HAMMER SYSTEM OF THE DRILL RIG WAS CALIBRATED ON DECEMBER 3, 2019, WITH AND AVERAGE DRILL ROD ENERGY RATIO OF 84%.

EXPLORATION FINDINGS

TWELVE (12) OF THE FIFTEEN (15) BORINGS COMPLETED FOR THIS PROJECT PHASE WERE LOCATED ON EXISTING PAVEMENT THAT WAS CORE-SAMPLED. APPROXIMATELY 2 TO 4.5 INCHES OF VARIOUS ASPHALTIC PAVEMENT TYPES AND COURSES WERE ENCOUNTERED IN THOSE BORINGS. THE ASPHALTIC PAVEMENT WAS FOUND TO OVERLIE 8.75 TO 11 INCHES OF PORTLAND CEMENT CONCRETE PAVEMENT. AGGREGATE BASE MATERIAL WAS ONLY NOTED IN BORINGS B-015, B-016 AND B-017, WITH THICKNESSES OF APPROXIMATELY 2 TO 5 INCHES. DETAILED DESCRIPTIONS OF THE ASPHALTIC AND CONCRETE PAVEMENT LAYERS ARE GIVEN IN THE ATTACHED LOG OF PAVEMENT CORES, WITH THE VISUAL APPEARANCES OF THE CORES BEING PRESENTED IN THE PHOTOGRAPHS THAT ACCOMPANY THAT LOG. THE THREE (3) TEST BORINGS THAT WERE LOCATED OFF OF THE EXISTING PAVEMENT (B-007, B-013 AND B-018) ENCOUNTERED APPROXIMATELY 2.5 TO 3 INCHES OF ORGANIC TOPSOIL.

BENEATH THE SURFICIAL MATERIALS, THE TEST BORINGS ENCOUNTERED COHESIONLESS MATERIALS CONSISTING OF: GRAVEL AND/OR STONE FRAGMENTS WITH SAND (ODOT CLASSIFICATION A-1-B), GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT (A-2-4) GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT AND CLAY (A-2-6) AND FINE SAND (A-3). STANDARD PENETRATION TEST (SPT) N_{60}-VALUES IN THE COHESIONLESS SOILS RANGED FROM 7 TO 63 BLOWS PER FOOT (BPF), INDICATING LOOSE TO VERY DENSE RELATIVE DENSITIES, WITH MOST TESTS RESULTING IN AT LEAST MEDIUM DENSE RELATIVE DENSITIES. ALSO ENCOUNTERED WERE COHESIVE SOILS CONSISTING OF: SILTY CLAY (A-6B) AND CLAY (A-7-6). STANDARD PENETRATION TEST (SPT) N_{60}-VALUES IN THE COHESIVE SOILS RANGED FROM 6 TO 20 BPF, INDICATING MEDIUM STIFF TO VERY STIFF CONSISTENCIES.

NO GROUNDWATER WAS NOTED EITHER DURING OR UPON COMPLETION OF THE TEST BORINGS.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	8 5
GRAVEL AND/OR STONE FRAGMENTS WITH SAND AND SILT	A-2-4	1 0
GRAVEL AND/OR STONE FRAGMENTS WITH SAND, SILT, AND CLAY	A-2-6	2 0
FINE SAND	A-3	1 1
SILTY CLAY	A-6b	7 3
CLAY	A-7-6	16 16
	TOTAL	35 25

CONCRETE

TOPSOIL = X = APPROXIMATE THICKNESS

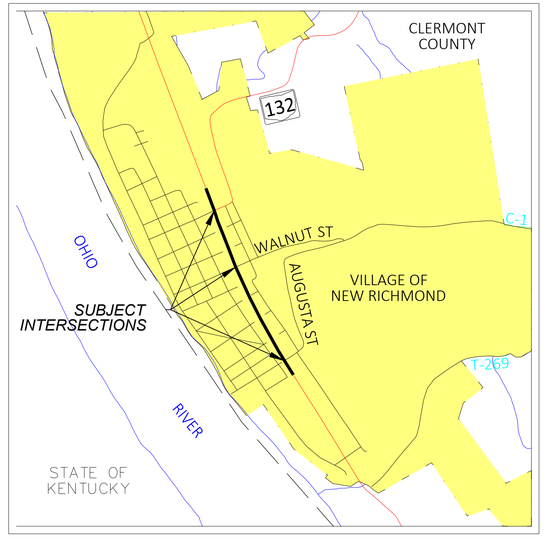
PAVEMENT OR BASE

PROJECT BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRPHY

WC — INDICATES WATER CONTENT IN PERCENT.

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.



PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

INDEX OF SHEETS

EXPLORATION NOTES. SHEET 2
SUMMARY OF SOIL TEST DATA. SHEET 3

FEATURE	LOCATION FROM STATION	LOCATION TO STATION	PLAN VIEW SHEET	PROFILE SHEET
SYCAMORE ROUNDABOUT	281+25	286+25	3	4
WALNUT ROUNDABOUT	293+50	298+50	5	6
AUGUSTA ROUNDABOUT	314+25	319+25	7	8

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY, 2021.

AVAILABLE INFORMATION

THE SOIL AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE SOIL PROFILE SHEETS HAS BEEN PRESENTED. THE GEOTECHNICAL REPORT IS AVAILABLE FOR REVIEW ON ODOT'S OFFICE OF CONTRACT SALES WEBSITE.

RECON. -	JAK	9/1/21
DRILLING -	DMJ	9/13-15/21
DRAWN -	DSH	11/4/25
REVIEWED -	JAK	11/4/25

GEOTECHNICAL PROFILE - ROADWAY

DESIGN AGENCY ATLAS

DESIGNER DSH

REVIEWER JAK 11-03-25

PROJECT ID 114042

SHEET 1 TOTAL 8

CLE-US52-4.67

SUMMARY OF SOIL TEST DATA
CLE-52-4.67

EXPLORATION NO.	DEPTH, FT	SAMPLE		%	HP	%	%	%	%	%				%	ODOT	ppm
STATION, OFFSET & ELEV.	FROM - TO	ID	N_{60}	REC	tsf	GR	CS	FS	SILT	CLAY	LL	PL	PI	WC	CLASS (GI)	SO_4
B-0006-0-21																
Sta. 283+14, 32' Rt	1.1 - 2.6	SS-1	10	11					SAME AS SS-2					8	A-7-6 (VISUAL)	2400
Lat. 38.9556532	2.6 - 4.1	SS-2	11	44	3.00	2	4	4	59	31	41	23	18	22	A-7-6 (11)	
Long. -84.2810819	4.1 - 5.6	SS-3	39	100					SAME AS SS-4					3	A-3 (VISUAL)	
Elev. 497.49	5.6 - 7.1	SS-4	20	100		2	37	56	4	1	NP	NP	NP	18	A-3 (0)	
B-007-0-21																
Sta. 283+40, 55' Lt	1.0 - 2.5	SS-1	7	78		28	23	16	16	17	27	16	11	13	A-2-6 (0)	2300
Lat. 38.9556452	3.5 - 5.0	SS-2	13	78	4.25	0	1	3	40	56	48	25	23	24	A-7-6 (15)	
Long. -84.2807613	6.0 - 7.5	SS-3	6	100	1.50	0	3	5	42	50	46	23	23	29	A-7-6 (14)	
Elev. 496.14	8.5 - 10.0	SS-4	11	100	2.00	0	0	7	44	49	41	23	18	25	A-7-6 (11)	
B-008-0-21																
Sta. 283+52, 17' Rt	1.3 - 2.8	SS-1	38	78		20	41	31	7	1	NP	NP	NP	9	A-1-b (0)	1900
Lat. 38.9555630	2.8 - 4.3	SS-2	24	78					SAME AS SS-1					5	A-1-b (VISUAL)	
Long. -84.2809943	4.3 - 5.8	SS-3	8	100	2.50	0	0	10	55	45	40	21	19	22	A-6b (12)	
Elev. 497.56	5.8 - 7.3	SS-4	7	100	1.75				SAME AS SS-3					22	A-6b (VISUAL)	
B-009-0-21																
Sta. 283+97, 69' Rt	1.1 - 2.6	SS-1	38	100		18	45	31	5	1	NP	NP	NP	3	A-1-b (0)	2300
Lat. 38.9555044	2.6 - 4.1	SS-2	18	89					SAME AS SS-1					15	A-1-b (VISUAL)	
Long. -84.2806627	4.1 - 5.6	SS-3	13	78	1.00	20	12	10	33	25	37	19	18	16	A-6b (8)	
Elev. 496.45	5.6 - 7.1	SS-4	7	33	1.00				SAME AS SS-3					22	A-6b (VISUAL)	
B-010-0-21																
Sta. 284+24, 74' Rt	1.0 - 2.5	SS-1	39	78		23	40	30	6	1	NP	NP	NP	4	A-1-b (0)	2500
Lat. 38.9553292	2.5 - 4.0	SS-2	31	100					SAME AS SS-1					12	A-1-b (VISUAL)	
Long. -84.2811240	4.0 - 5.5	SS-3	20	100	4.50	0	1	3	50	46	50	23	27	23	A-7-6 (17)	
Elev. 497.20	5.5 - 7.0	SS-4	63	100		44	15	14	21	6	28	18	10	14	A-2-4 (0)	
B-011-0-21																
Sta. 295+33, 50' Rt	1.1 - 2.6	SS-1	27	100		13	46	35	5	1	NP	NP	NP	5	A-1-b (0)	2800
Lat. 38.9525353	2.6 - 4.1	SS-2	13	100					SAME AS SS-1					10	A-1-b (VISUAL)	
Long. -84.2795334	4.1 - 5.6	SS-3	13	100	1.50	3	5	4	52	36	47	23	24	20	A-7-6 (15)	
Elev. 498.71	5.6 - 7.1	SS-4	11	100		20	42	34	3	1	NP	NP	NP	5	A-1-b (0)	
B-012-0-21																
Sta. 295+36, 37' Lt	1.2 - 2.7	SS-1	29	89		12	41	40	6	1	NP	NP	NP	8	A-1-b (0)	2500
Lat. 38.9525503	2.7 - 4.2	SS-2	10	100	2.75				SAME AS SS-3					20	A-7-6 (VISUAL)	
Long. -84.2793779	4.2 - 5.7	SS-3	8	78	2.25	12	8	6	43	31	43	23	20	26	A-7-6 (12)	
Elev. 498.81	5.7 - 7.2	SS-4	7	100	2.00				SAME AS SS-3					32	A-7-6 (VISUAL)	
B-013-0-21																
Sta. 295+40, 6' Rt	1.0 - 2.5	SS-1	15	44		20	18	17	21	24	37	20	17	8	A-6b (4)	1700
Lat. 38.9525940	3.5 - 5.0	SS-2	11	33	2.5				SAME AS SS-3					13	A-7-6 (VISUAL)	
Long. -84.2792357	6.0 - 7.5	SS-3	7	100	1.25	5	3	4	45	43	50	25	25	33	A-7-6 (16)	
Elev. 498.21	8.5 - 10.0	SS-4	14	78	3.00				SAME AS SS-3					24	A-7-6 (VISUAL)	
B-014-0-21																
Sta. 296+02, 95' Rt	1.0 - 2.5	SS-1	34	78		17	40	36	6	1	NP	NP	NP	5	A-1-b (0)	2200
Lat. 38.9523201	2.5 - 4.0	SS-2	15	78					SAME AS SS-1					14	A-1-b (VISUAL)	
Long. -84.2796203	4.0 - 5.5	SS-3	11	100	2.00	7	6	7	51	29	38	20	18	22	A-6b (11)	
Elev. 497.62	5.5 - 7.0	SS-4	8	100	3.50				SAME AS SS-3					21	A-6b (VISUAL)	
B-015-0-21																
Sta. 295+96, 63' Lt	1.1 - 2.6	SS-1	11	67	3.25	19	12	12	35	22	37	19	18	15	A-6b (8)	2900
Lat. 38.9524536	2.6 - 4.1	SS-2	6	89	1.25				SAME AS SS-3					31	A-7-6 (VISUAL)	
Long. -84.2790891	4.1 - 5.6	SS-3	6	100	1.25	3	3	4	53	37	45	22	23	29	A-7-6 (14)	
Elev. 497.88	5.6 - 7.1	SS-4	10	100	2.00				SAME AS SS-3					31	A-7-6 (VISUAL)	
B-016-0-21																
Sta. 315+73, 48' Rt	1.1 - 2.6	SS-1	6	44	2.25	1	2	9	49	39	38	20	18	21	A-6b (11)	2200
Lat. 38.9476060	2.6 - 4.1	SS-2	13	100	4.00				SAME AS SS-3					23	A-7-6 (VISUAL)	
Long. -84.2761043	4.1 - 5.6	SS-3	13	100	2.75	0	1	3	41	55	60	26	34	27	A-7-6 (20)	
Elev. 498.02	5.6 - 7.1	SS-4	11	100	2.75				SAME AS SS-3					25	A-7-6 (VISUAL)	
B-017-0-21																
Sta. 316+01, 5' Rt	1.0 - 2.5	SS-1	6	44	2.25	0	2	5	49	44	40	21	19	21	A-6b (12)	2600
Lat. 38.947591	2.5 - 4.0	SS-2	18	89	3.25				SAME AS SS-3					27	A-7-6 (VISUAL)	
Long. 84.2759319	4.0 - 5.5	SS-3	15	100	2.75	0	0	2	47	51	47	21	26	24	A-7-6 (16)	
Elev. 497.95	5.5 - 7.0	SS-4	10	89	2.25				SAME AS SS-3					27	A-7-6 (VISUAL)	
B-018-0-21																
Sta. 316+26, 43' Lt	1.0 - 2.5	SS-1	15	44		20	23	22	18	17	32	17	15	6	A-2-6 (1)	2400
Lat. 38.9475807	3.5 - 5.0	SS-2	14	100	3.25				SAME AS SS-3					25	A-7-6 (VISUAL)	
Long. -84.2757409	6.0 - 7.5	SS-3	13	100	3.25	0	3	4	42	51	48	22	26	24	A-7-6 (16)	
Elev. 497.63	8.5 - 10.0	SS-4	11	100	2.25				SAME AS SS-3					26	A-7-6 (VISUAL)	
B-019-0-21																
Sta. 316+74, 53' Lt	1.0 - 2.5	SS-1	7	67	3.00	0	0	1	50	49	49	34	25	27	A-7-6 (16)	2500
Lat. 38.9474811	2.5 - 4.0	SS-2	15	67	3.50				SAME AS SS-3					23	A-7-6 (VISUAL)	
Long. -84.2756473	4.0 - 5.5	SS-3	11	100	3.75	0	1	1	52	46	46	21	25	24	A-7-6 (15)	
Elev. 497.18	5.5 - 7.0	SS-4	14	100	3.00				SAME AS SS-3					23	A-7-6 (VISUAL)	
B-020-0-21																
Sta. 316+85, 55' Rt	1.0 - 2.5	SS-1	11	67		13	40	36	9	2	NP	NP	NP	13	A-1-b (0)	2300
Lat. 38.9473166	2.5 - 4.0	SS-2	8	89	1.75				SAME AS SS-3					28	A-7-6 (VISUAL)	
Long. -84.2759663	4.0 - 5.5	SS-3	10	100	0.75	29	4	2	35	30	50	22	28	30	A-7-6 (15)	
Elev. 497.66	5.5 - 7.0	SS-4	11	100	2.25				SAME AS SS-3					25	A-7-6 (VISUAL)	

MATCH LINE STA. 127+00
SEE SHEET P.0

CLASGENS J & H CO
HIGH STREET

NARENDRA PATEL
AND DAXA PATEL
523 SYCAMORE STREET

SPEEDWAY
SUPERAMERICA LLC
520 SYCAMORE ST

SYCAMORE ST
60' R/W

PT STA. 126+51.05

PRC STA 126+11.82
BEGIN WALK
STA 126+03.39
29.33' RT

STA 126+15.11
33.24' LT

C-5 126

C-6

PC STA 125+81.88

PCSTA. 281+60.97

PRCSTA. 282+29.95

PT STA 282+62.44

STA 282+76.50
38.91' LT.

B-007-0-21

B-009-0-21

STA 284+85.28
38.78' LT.

6" GAS

8" VCP

S14°05'56"E

125

24'44"E

B-008-0-21

B-006-0-21

C-7

S27°17'42"E

MATCH LINE STA. 281+25

MATCH LINE STA. 286+25

282

283

284

285

286

82

A

B-010-0-21

STA 282+22.96
87.47' RT

STA 123+95.09
42.31' LT.

96"

12"

SAWCUT
STA 285+51.90
68.40' RT

PT STA 123+94.91

18"

PC STA. 123+36.63

STA 123+09.96
42.00' RT.

123

12"

18"

SYCAMORE
ST (SR-132)
60' R/W

GABBY PROPERTIES LLC
R SYCAMORE STREET

GABBY PROPERTIES LLC
415 SYCAMORE STREET

NEW RICHMOND FUEL, INC
SYCAMORE STREET

NEW RICHMOND
CHURCH OF GOD
CENTER STREET

A POT STA 82+32.15

1 STA 283+84.01, ☐ CONST US 52=
STA 125+01.76, ☐ CONST SCYAMORE ST

HORIZONTAL
SCALE IN FEET
0 10 20 40

PLAN AND PROFILE-US 52
STA 281+25 TO STA 286+25

DESIGN AGENCY
ATLAS

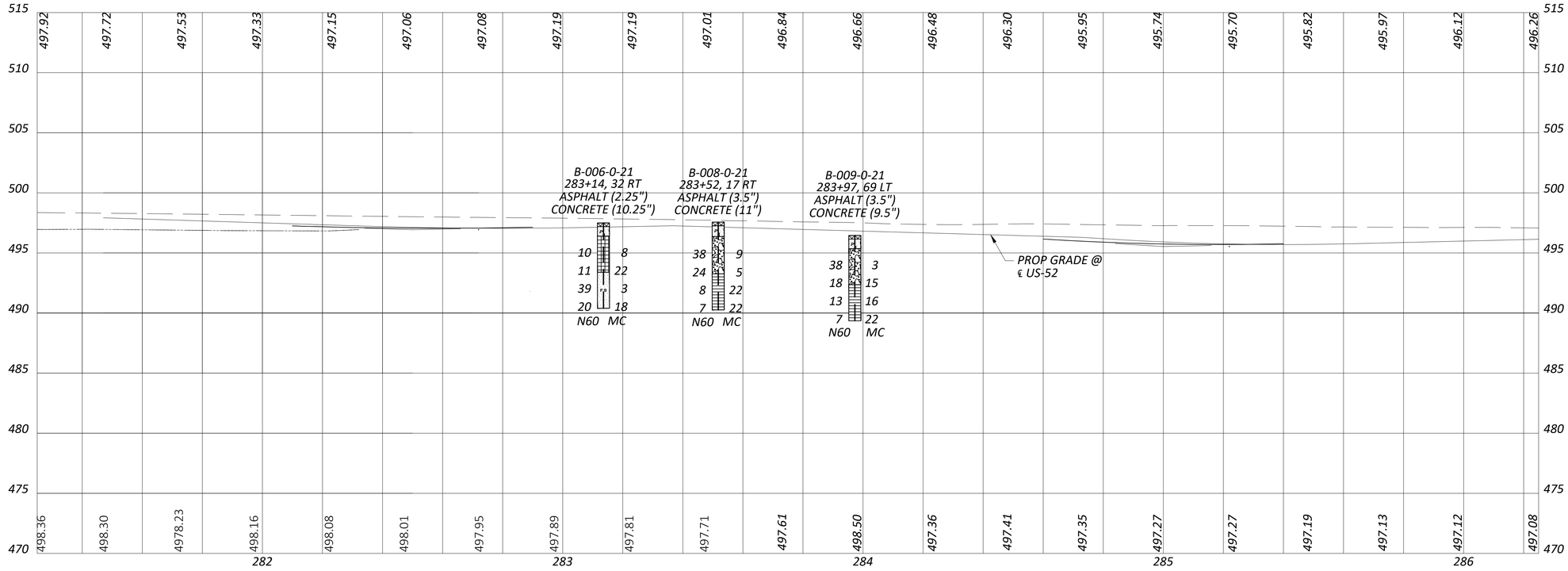
DESIGNER
DSH

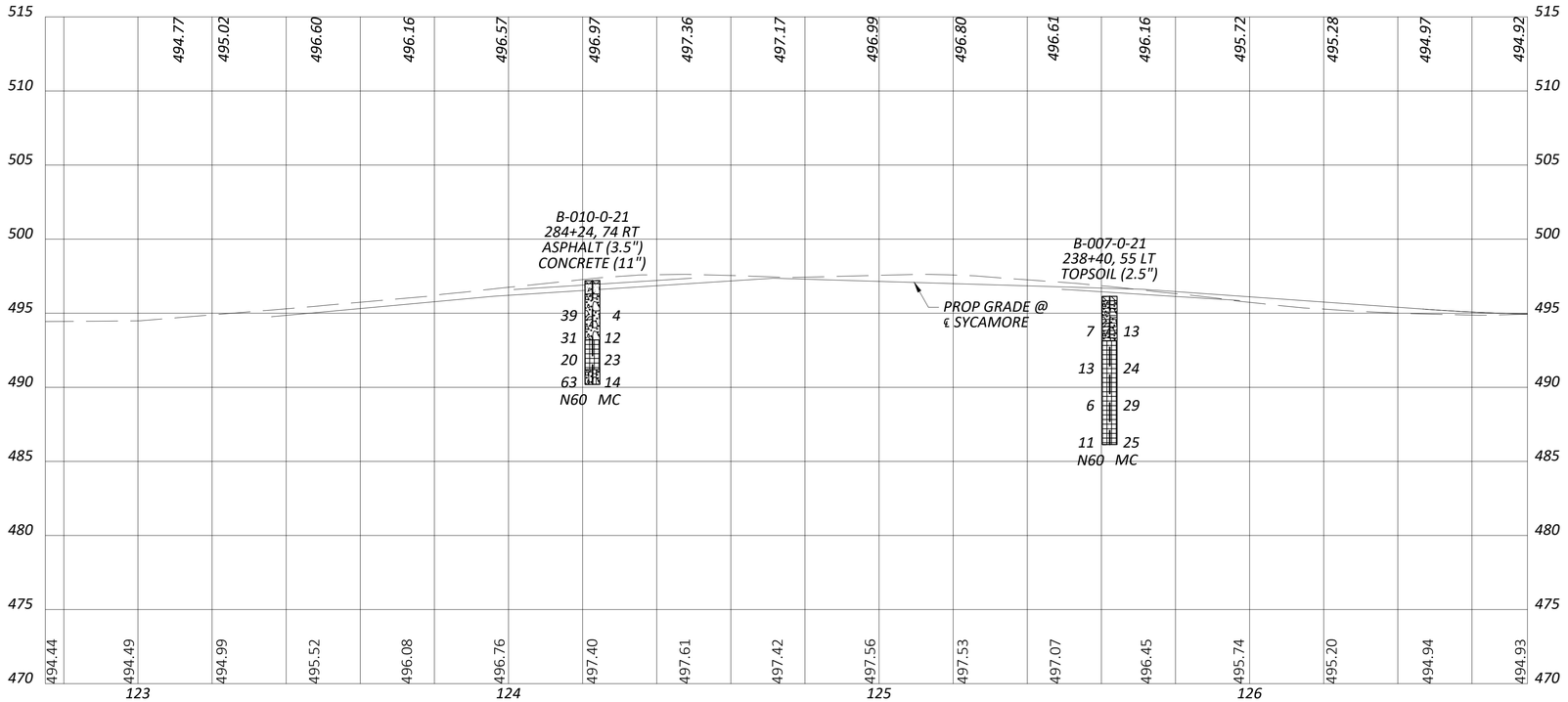
REVIEWER
JAK 11-03-25

PROJECT ID
114042

SHEET 3 TOTAL 8

CLE-US52-4.67





PLAN AND PROFILE-US 52
SYCAMORE ROUNDABOUT PROFILES

CLE-US52-4.67

DESIGN AGENCY

DESIGNER
DSH

REVIEWER
JAK 11-03-25

PROJECT ID
114042

SHEET 4 TOTAL 8

LOUPEE RENTAL LLC,
AN OHIO LIMITED
LIABILITY COMPANY
205 COLUMBIA ST

POT STA 134+74.87

DND

5' WALK

BLDG

CRJD LLC, AN OHIO
LIMITED LIABILITY COMPANY
COLUMBIA ST

SARAH MCKINLEY AND
RALPH MCKINLEY III
207 COLUMBIA STREET

JOSEPH VOGEL
519 WALNUT ST

PT STA 134+44.87

B. CRAIG CHILDER
121 COLUMBIA STREET

MARK R. GILBERT
123 COLUMBIA STREET

DAREN SCHAFER AND
ANNETTE SCHAFER
449 UNION STREET

C-5

PRC STA 133+96.45

134

47

JOSEPH VOGEL
WALNUT STREET

J.F. LOCKWOOD AND
W.J. LOCKWOOD...
515 WALNUT STREET

AMGS PROPERTIES LLC
US ROUTE 52

8" VCP

12" SAN

8" VCP

PC STA 133+64.47

REF LINE WAL ER

19.7

STA 294+79.18
38.07' LT

B-015-0-21

B-013-0-21

MATCH LINE STA. 293+50

C-1

133

N69°11'23"E

MATCH LINE STA. 298+50

296

C-6

PT STA
296+59.93

C-7

B-012-0-21

EX SOUTHBOUND US-52

B-011-0-21

60"

19.2

132

EX SOUTHBOUND US-52

B-014-0-21

CONST LIMITS

PT STA 131+86.13

STA 131+82.59
45.79' RT

WALK VARIES

C-3

PRC STA
131+50.06

STA 294+23.30
86.51' RT

36"

STA 131+79.40
41.11' LT

36"

MEET EX
STA 131+23.87

STA 130+90.43
27.94' RT.

C-2

COMM
ASP DRIVE

EZ AUTO RIDER LLC
410 WALNUT STREET

ALEATHIA M. BOWMAN
412 MAIN STREET

WIDESPREAD PROPERTIES
LLC, AN OHIO LIMITED
LIABILITY COMPANY
411 WALNUT STREET

DND
COMM
CONC DRIVE

DND 4' WALK

WALNUT ST
60' R/W
131

MATCH LINE STA. 130+80
SEE SHEET P.0

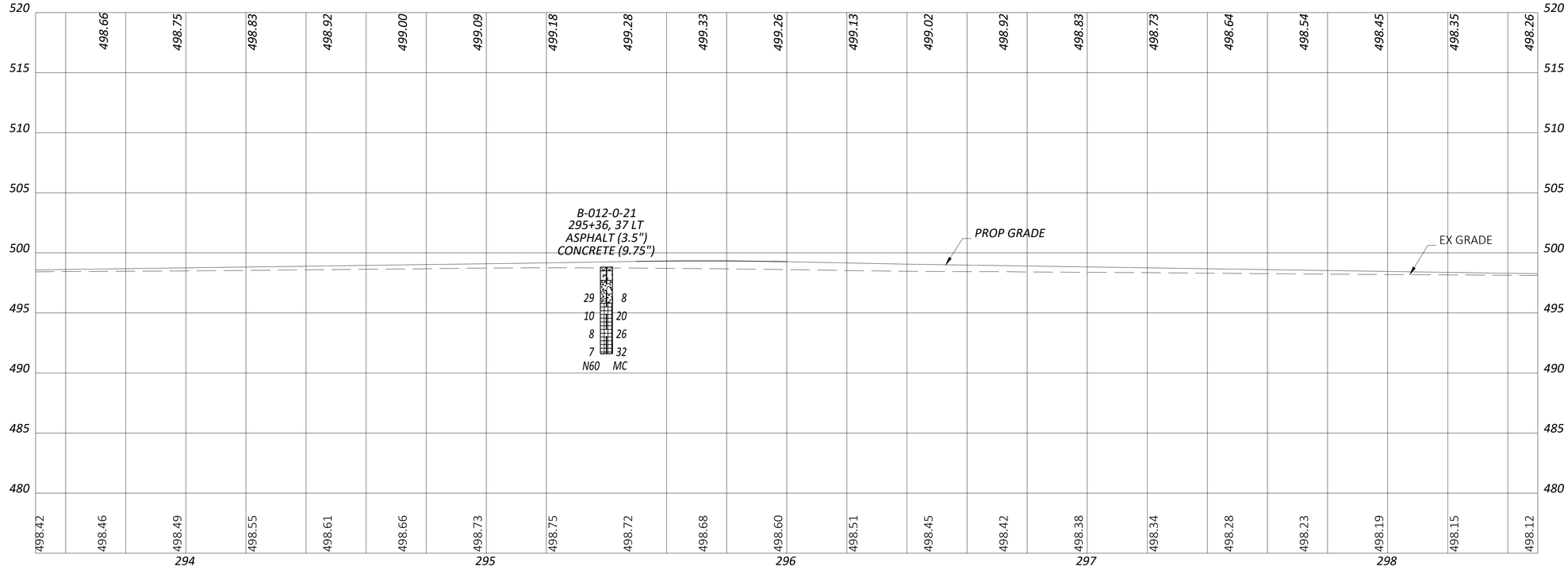
HORIZONTAL
SCALE IN FEET
0 10 20 40

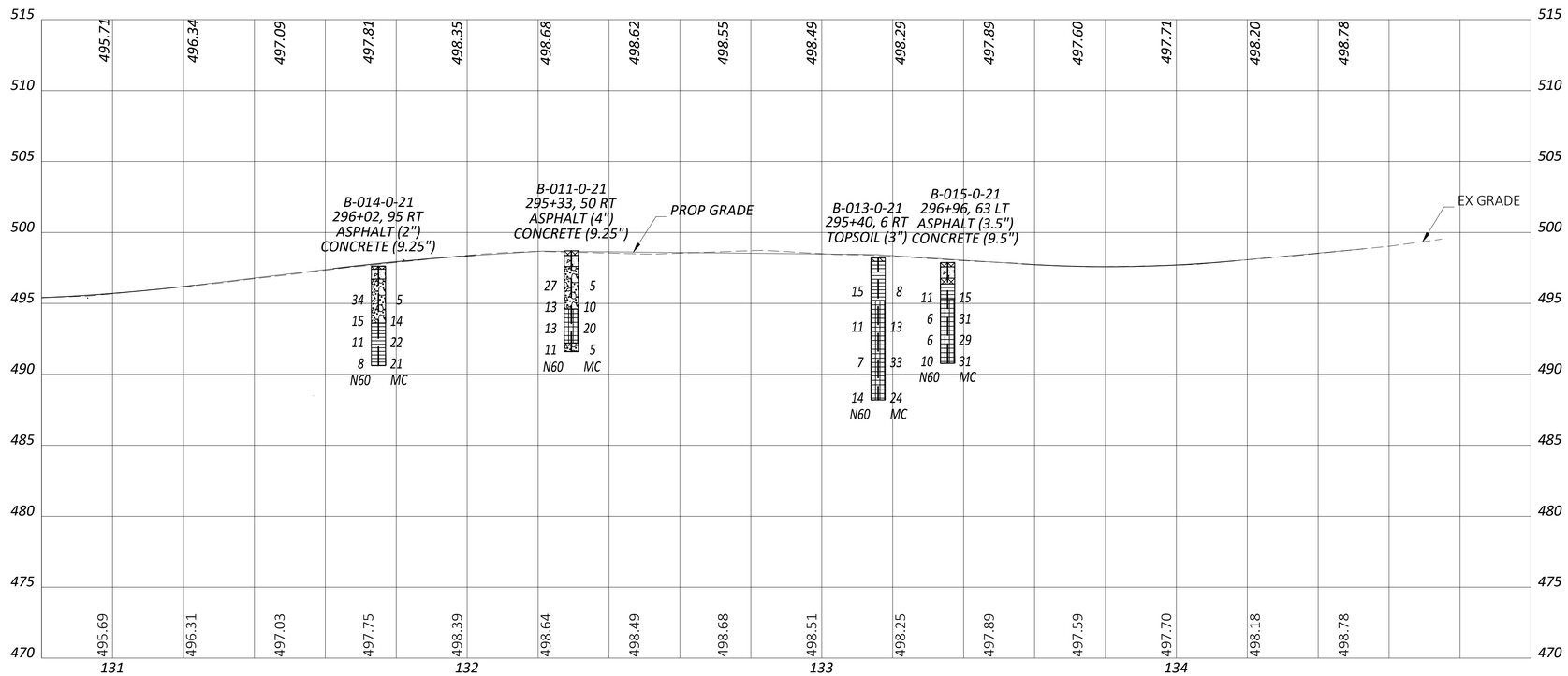
PLAN AND PROFILE-US 52
STA 293+50 TO STA 298+50

CLE-US52-4.67

DESIGN AGENCY
ATLAS

DESIGNER	DSH
REVIEWER	JAK 11-03-25
PROJECT ID	114042
SHEET	5
TOTAL	8





PLAN AND PROFILE-US 52
WALNUT ROUNDABOUT PROFILES

DESIGN AGENCY
ATLAS

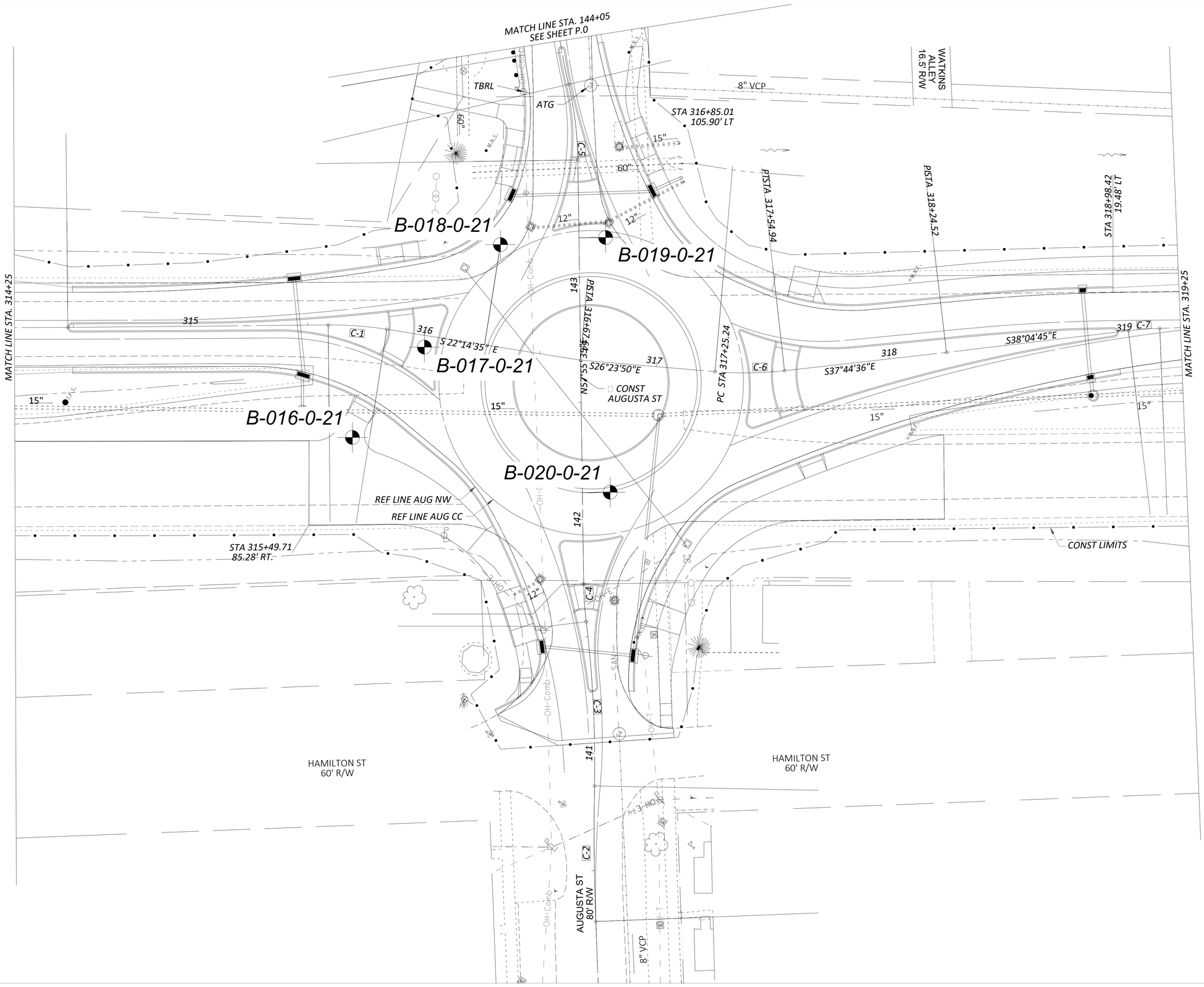
DESIGNER
DSH

REVIEWER
JAK 11-03-25

PROJECT ID
114042

SHEET 6 TOTAL 8

CLE-US52-4.67



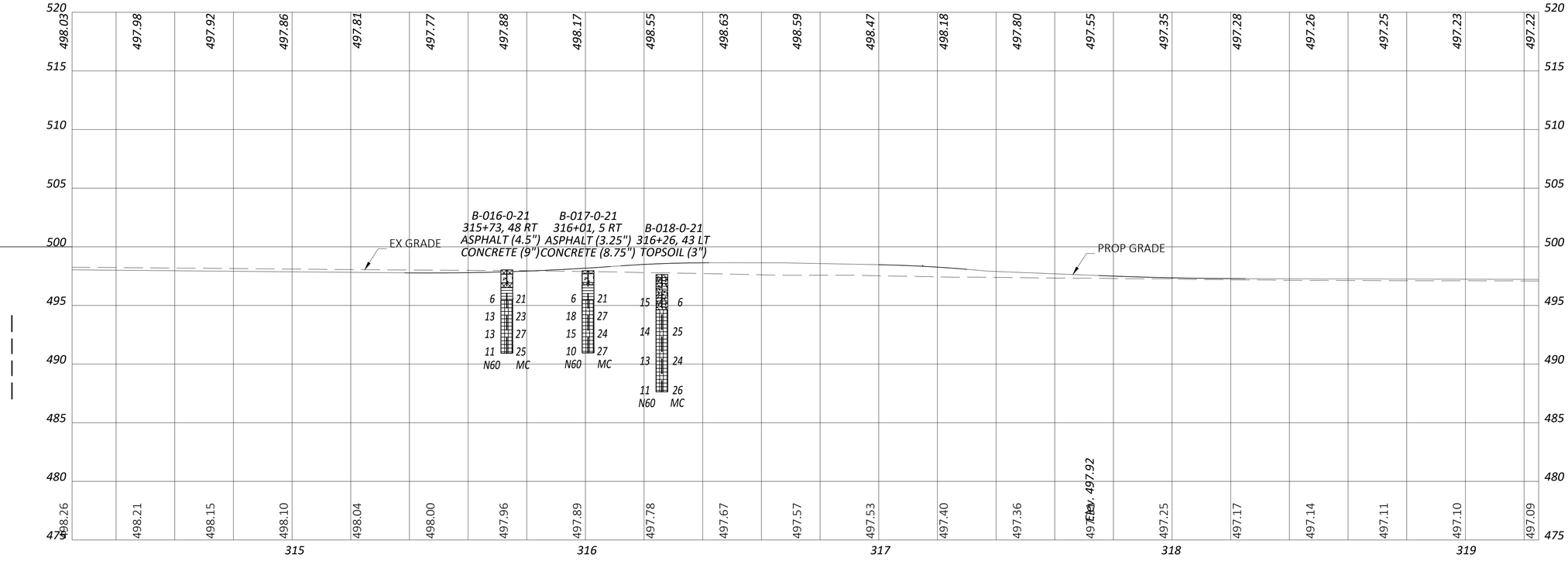
HORIZONTAL SCALE IN FEET
0 10 20 40

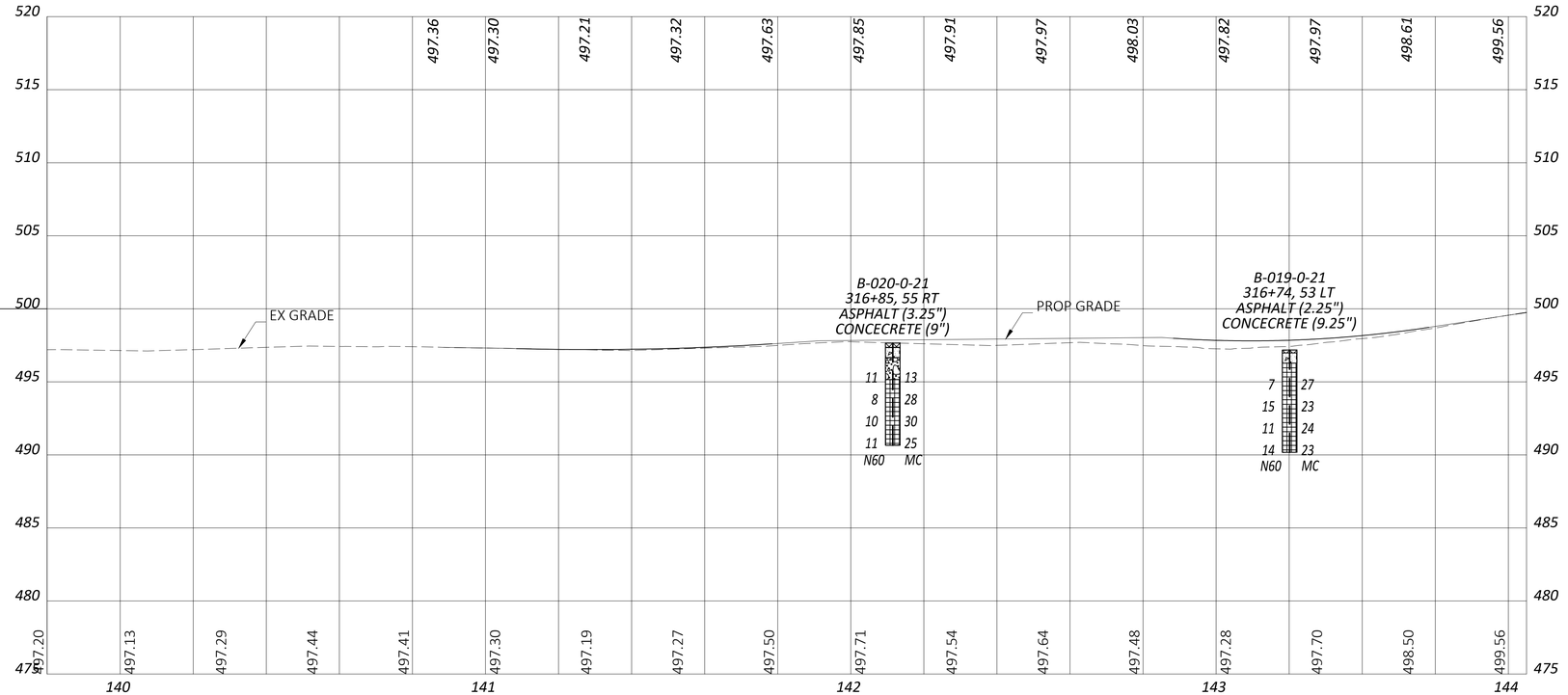
PLAN AND PROFILE-US 52
STA 314+25 TO STA 319+25

CLE-US52-4.67

DESIGN AGENCY
ATLAS

DESIGNER	DSH
REVIEWER	JAK 11-03-25
PROJECT ID	114042
SHEET	7
TOTAL	8





CLE-US52-4.67

PLAN AND PROFILE-US 52
AUGUSTA ROUNDABOUT PROFILES

DESIGN AGENCY
ATLAS

DESIGNER
DSH

REVIEWER
JAK 11-03-25

PROJECT ID
114042

SHEET 8 TOTAL 8

Appendix D – Traffic Report

APPENDIX D

CLE-US 52-4.67 Traffic Analysis

For

The Ohio Department of Transportation
District 8

Prepared for:

The Village of New Richmond, Ohio

Prepared by:

143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241
(513) 476-6271

Report Submitted: July 26, 2021
Report Updated: October 21, 2025

143 Engineers

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IV. Level of Service Analysis..... 3
V. Capacity Analysis..... 5
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APPENDICES

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Appendix B – Highway Capacity Analysis
Appendix C – Existing Turn Lane Lengths
Appendix D – Adamson Left Turn Lane Analysis

I. INTRODUCTION

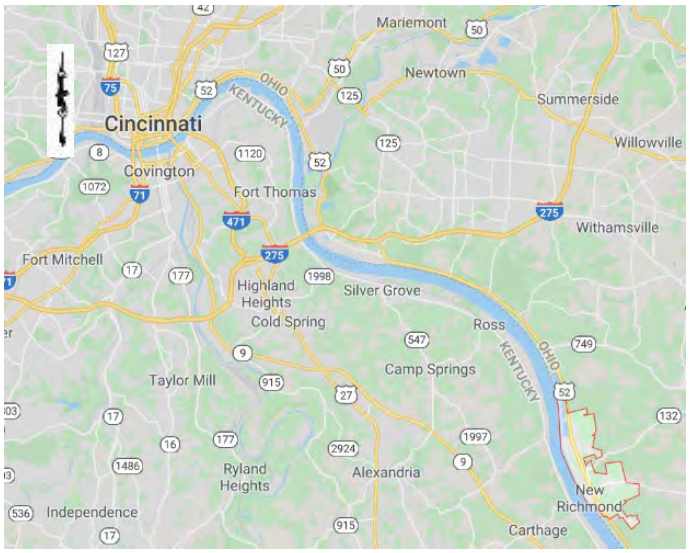


FIGURE 1 - Vicinity Map

The Village of New Richmond is located in Clermont County, Ohio, along the north side of the Ohio River, approximately 22 miles southeast of the City of Cincinnati. See Figure 1- Vicinity Map.

II. CERTIFIED TRAFFIC

Traffic counts were taken pre-COVID for five intersections along the U.S. 52 corridor in New Richmond, Ohio. These intersections are as follows:

1) Front Street;
2) S.R. 132/Sycamore Street;
3) Walnut Street/Short Hill Street;
4) Augusta Street; and
5) Adamson Street.

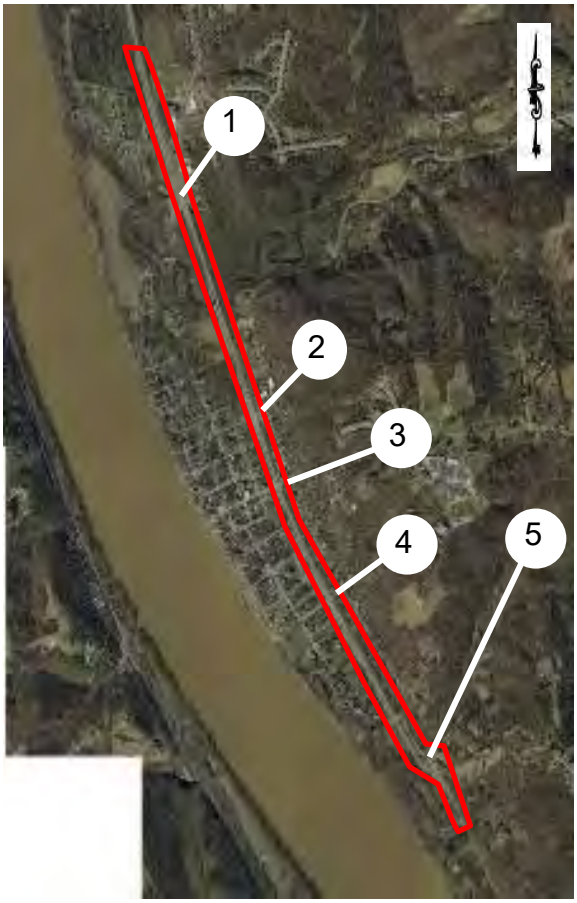


FIGURE 2 – Project Area

See Figure 2 – Project Area. The two-hour AM (6-8 AM) and two-hour PM (4-6 PM) counts were taken in 2018, except for the Short Hill/Walnut intersections, which were counted in 2019. These five locations were recounted in two four-hour increments in 2021 (6-10 AM and 2-6 PM). The common hours of 6-8 AM and 4-6 PM were compared to develop a COVID adjustment factor to apply to the 8-hour counts. ODOT used this information to develop certified traffic for the 2046 AM/PM Design Hour Balanced Traffic. This information is in Appendix A, and the intersection volumes are shown on the next page.

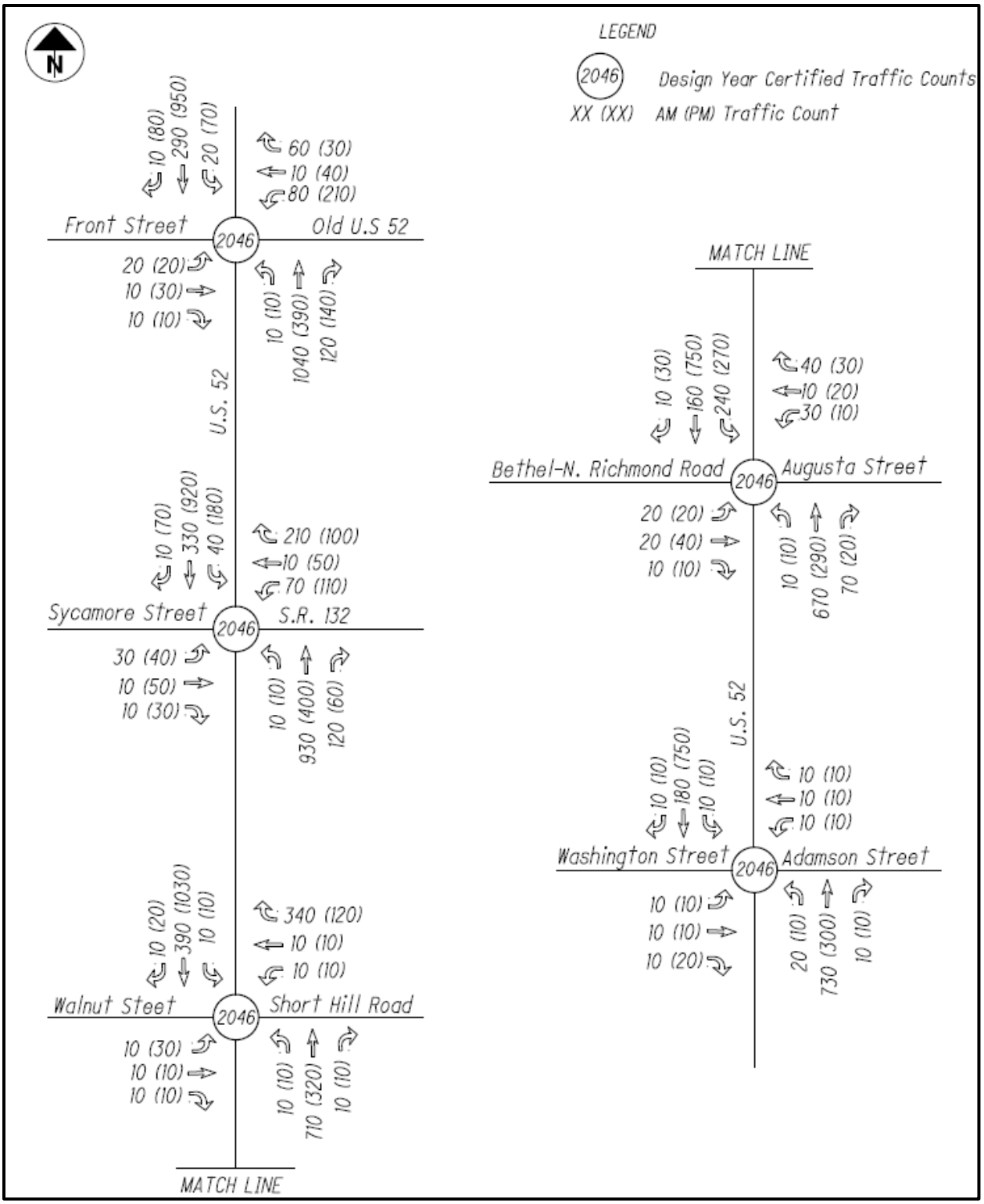


FIGURE 3 – Design Year 2046 Balanced Certified AM (PM) Design Hour Traffic

III. TRUCK PERCENTAGES

The certified traffic report also provides the following truck percentages for the 2046 AM and PM Peak Hours for each approach of the study intersections. See Table 1.

Front Street	2046 AM Truck %	2046 PM Truck %
East Leg	1.0%	1.1%
North Leg	5.6%	1.9%
West Leg	0.0%	0.0%
South Leg	1.8%	3.3%

Augusta Street	2046 AM Truck %	2046 PM Truck %
East Leg	3.1%	4.1%
North Leg	5.6%	2.3%
West Leg	2.5%	0.0%
South Leg	2.6%	4.1%

Sycamore Street	2046 AM Truck %	2046 PM Truck %
East Leg	5.9%	0.6%
North Leg	5.6%	1.8%
West Leg	0.0%	0.0%
South Leg	1.5%	4.4%

Adamson Street	2046 AM Truck %	2046 PM Truck %
East Leg	0.0%	0.0%
North Leg	11.4%	2.1%
West Leg	0.0%	0.0%
South Leg	2.6%	4.6%

Walnut Street	2046 AM Truck %	2046 PM Truck %
East Leg	0.0%	0.9%
North Leg	5.1%	2.0%
West Leg	0.0%	0.0%
South Leg	2.8%	4.7%

TABLE 1 – 2046 Build Truck Percentages AM and PM Peak Hour

IV. LEVEL OF SERVICE ANALYSIS

Level of Service (LOS), as defined in the Highway Capacity Manual, is a function of average delay encountered by the motorist. Delay is a measure of driver discomfort, frustration, fuel consumption, and the cost of lost travel time. The Levels of Service are measured for unsignalized, signalized, and roundabout intersections, with ratings from A to F, each paired with an average delay per vehicle measured in seconds. These tables are acceptable standards used by the American Association of State Highway and Transportation Officials (AASHTO), the Ohio Department of Transportation (ODOT), and numerous Municipal Engineering Departments, and are shown in Tables 2 and 3 on the next page.

Level of Service for Unsignalized and Roundabout Intersections	Avg. Delay/Vehicle (Sec)	Description
A	< 10	Most Vehicles do not stop at all.
B	> 10 to 15	More vehicles stop than at LOS A.
C	>15 to 25	The number of vehicles stopping is significant, although many pass through without stopping.
D	>25 to 35	Many vehicles stop. Individual cycle failures are noticeable.
E	>35 to 50	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	>50	Unacceptable delay.

TABLE 2 – Level of Service Criteria for Unsignalized and Roundabout Intersections

Level of Service for Signalized Intersections	Avg. Delay/Vehicle (Sec)	Description
A	< 10	Most Vehicles do not stop at all.
B	> 10 to 20	More vehicles stop than at LOS A.
C	>20 to 35	The number of vehicles stopping is significant, although many pass through without stopping.
D	>35 to 55	Many vehicles stop. Individual cycle failures are noticeable.
E	>55 to 80	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	>80	Unacceptable delay.

TABLE 3 – Level of Service Criteria for Signalized Intersections

According to the ODOT Analysis & Traffic Simulation Manual (OATS), Engineers consider intersection Levels of Service “C” and “D” as reasonable design criteria, while Level of Service “E” and “F” are viewed as unacceptable. Engineers require Approach and Control Levels of Service to meet Level of Service E or better. They prefer all Volume/Capacity ratios to exceed 0.93, though they will accept 1.00. They also require the Queue Storage Ratio value to remain below 1.0.

Result	Inside an MPO	Outside of an MPO
Intersection LOS	D or better[1]	C or better[1]
Approach LOS	E or better[1]	
Control LOS	E or better[1]	
v/c[2]	All movements < 1.0 with ≤ 0.93 preferred.	

TABLE 4 – ODOT OATS Manual of Acceptable Level of Service

V. CAPACITY ANALYSIS

The CLE-US 52-4.67 project includes using the Highway Capacity Software program to analyze five intersections in the study area: Front Street, Sycamore Street, Walnut Street, Augusta Street, and Adamson Street. Three options were analyzed at these intersections: Alternative 1- No Build, Alternative 2-Roundabout Intersection with Road Diet, and Alternative 3-Signalized Intersections with Road Diet. The Adamson Street intersection was analyzed using two options: Alternative 1-No Build and Alternative 3A-Unsignalized Intersections with Road Diet, since Adamson Street is currently not signalized. These analyses will determine the level of service, delay, V/C ratio, 95% queue length in feet, and the queue ratio for each approach at each intersection.

The 2046 certified traffic for both the AM and PM peak hours was used for each analysis. The Alternative 1-No Build used existing geometry in the analysis. See Appendix C for the existing turn lane lengths. The Alternative 2-Roundabout Intersection with Road Diet used proposed roundabout geometry in the analysis. The Alternative 3-Signalized Intersections with Road Diet used one left lane and one through-right lane at each approach on US 52. The side streets utilize the existing geometry. The Alternative-3A Unsignalized Intersection with a Road Diet was used at the Adamson Street intersection. A left-turn lane warrant was performed at the Adamson Street intersection using 2046 traffic, and it was found that the left-turn lanes on US 52 are not warranted. See Appendix D. The capacity analysis was performed utilizing the Highway Capacity Software Program for each alternative. See Appendix B.

The capacity analysis confirmed that US 52 can maintain an acceptable level of service in 2046 with only one through lane in each direction. The following comparison tables show that the proposed project meets the criteria in Section 5.9 of the ODOT OATS Manual. No colors in the following tables show an acceptable Level of Service. LOS D, which is an acceptable Level of Service, is highlighted in yellow per the ODOT OATS manual. No Level of Service E of F was found in any of the analyses.

At the US 52 and Front Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 7.1 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 2.3 seconds, compared to the Alternative 1-No Build Alternative.

At the US 52 and Front Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 1.7 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 3.4 seconds, compared to the Alternative 1-No Build Alternative.

U.S. 52 AND FRONT STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (FT)	QUEUE RATIO
EB THRU	B	12.7	0.066	8.8	0.00						C	21.2	0.091	16	0.08
EB RIGHT	B	12.6	0.031	2.9	0.00	A	4.1	0.05	2.5		C	21.0	0.041	5	0.03
EB APPROACH	B	12.7				A	4.1				C	28.3			
WB THRU	B	13.4	0.199	27.7	0.00						C	22.4	0.275	51.0	0.28
WB RIGHT	B	13.1	0.184	18.1	0.00	C	16.6	0.40	47.5		C	21.9	0.249	33	0.19
WB APPROACH	B	13.3				C	16.6				C	22.2			
NB LEFT	A	6.5	0.017	1.7	0.01	C	20.8	0.86	305.0		A	5.7	0.015	2	0.04
NB THRU	A	8.8	0.693	126.5	0.00						B	11.4	0.937	338	0.17
NB RIGHT	A	8.8	0.695	122.7	0.00	A	3.5	0.10	7.5		A	4.3	0.128	19	0.38
NB APPROACH	A	8.8				C	19				B	10.7			
SB LEFT	B	13.0	0.079	6.1	0.02	A	3.0	0.00	0.0		C	25.3	0.127	12	0.25
SB THRU	A	5.9	0.177	22.5	0.00						A	4.8	0.261	50.0	0.02
SB RIGHT	A	5.9	0.178	22.3	0.00	A	5.6	0.29	30.0		A	4.0	0.011	1	0.03
SB APPROACH	A	6.4				A	5.6				A	6.0			
TOTAL INTERSECTION	A	8.8				C	15.9				B	11.1			

U.S. 52 AND FRONT STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB THRU	B	12.6	0.102	14.8	0.00						B	19.4	0.120	26	0.12
EB RIGHT	B	12.3	0.028	2.9	0.00	B	10.2	0.15	12.5		B	18.9	0.031	5	0.02
EB APPROACH	B	12.5				B	10.2				B	19.3			
WB THRU	B	15.3	0.536	89.7	0.00						C	23.7	0.637	157	0.87
WB RIGHT	B	12.5	0.084	8.9	0.00	A	8.5	0.36	42.5		B	19.2	0.093	16	0.08
WB APPROACH	B	15.0				A	8.5				C	23.2			
NB LEFT	B	12.2	0.037	2.9	0.01	A	4.0	0.36	40.0		C	25.8	0.064	6	0.13
NB THRU	A	7.0	0.331	49.6	0.00						A	6.8	0.380	99	0.05
NB RIGHT	A	7.0	0.336	45.9	0.00	A	6.4	0.12	10.0		A	5.8	0.161	30	0.6
NB APPROACH	A	7.1				A	5.8				A	6.9			
SB LEFT	A	9.0	0.154	16.0	0.05	C	17.3	0.77	197.5		A	9.4	0.132	22	0.45
SB THRU	A	8.5	0.628	113.7	0.00						B	13.1	0.927	363	0.18
SB RIGHT	A	8.6	0.628	110.7	0.00	A	6.8	0.35	40.0		A	5.6	0.092	17	0.33
SB APPROACH	A	8.6				B	14.1				B	12.3			
TOTAL INTERSECTION	A	9.2				B	10.9				B	12.6			

TABLE 5 – Delay and Level of Service – U.S. 52 and Front Street

At the US 52 and Sycamore Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 13.7 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 3.7 seconds, compared to the Alternative 1-No Build Alternative.

At the US 52 and Sycamore Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 9.3 seconds, and the Alternative 3- Road Diet with Signalized Intersections increases delay by 2.9 seconds, compared to the Alternative 1-No Build Alternative.

U.S. 52 AND SR 132/SYCAMORE STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	12.5	0.112	14.8	0.00	A	4.4	0.06	5.0		B	19.2	0.147	26	0.06
EB APPROACH	B	12.5				A	4.4				B	19.2			
WB RIGHT	B	15.5	0.635	104.4	0.00	D	30.5	0.72	149.2		C	23.8	0.711	187	0.94
WB APPROACH	B	15.5				D	30.5				C	23.8			
NB LEFT	A	7.3	0.018	1.9	0.01						A	8.5	0.018	3	0.06
NB THRU	A	9.8	0.649	131.8	0.00						B	13.7	0.924	376	0.19
NB RIGHT	A	9.9	0.650	127.3	0.00	D	29.8	0.93	404.8		A	6.2	0.141	28	0.56
NB APPROACH	A	9.8				D	29.8				B	12.8			
SB LEFT	A	13.6	0.150	12.9	0.13	A	3.2	0.04	2.6		C	28.5	0.261	28	0.43
SB THRU	A	6.6	0.207	29.2	0.00						A	7.1	0.328	87	0.04
SB RIGHT	A	6.6	0.208	29.0	0.00	A	5.7	0.30	34.0		A	5.7	0.012	2	0.04
SB APPROACH	A	7.3				A	5.5				A	9.3			
TOTAL INTERSECTION	B	10.3				C	24.0				B	14.0			

U.S. 52 AND SR 132/SYCAMORE STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.3	0.256	37.3	0.00	B	12.4	0.29	30.0		B	19.0	0.300	59	0.14
EB APPROACH	B	13.3				B	12.4				B	19.0			
WB RIGHT	B	15.2	0.573	91.1	0.00	A	8.4	0.35	37.7		C	24.4	0.674	159	0.79
WB APPROACH	B	15.2				A	8.4				C	24.4			
NB LEFT	B	11.5	0.035	2.8	0.01						C	22.9	0.058	6	0.11
NB THRU	A	6.7	0.281	40.1	0.00						A	6.6	0.397	90	0.04
NB RIGHT	A	6.7	0.284	38.8	0.00	B	10.3	0.52	80.2		A	5.3	0.07	11	0.22
NB APPROACH	A	6.8				B	10.3				A	6.8			
SB LEFT	A	9.9	0.368	45.1	0.45	A	4.5	0.17	15.2		B	10.7	0.346	61	0.94
SB THRU	A	8.8	0.601	111.8	0.00						B	12.0	0.914	310	0.15
SB RIGHT	A	8.8	0.601	109.3	0.00	D	28.6	0.91	372.8		A	5.3	0.082	13	0.25
SB APPROACH	A	9.0				C	24.9				B	11.4			
TOTAL INTERSECTION	A	9.5				C	18.6				B	12.4			

TABLE 6 – Delay and Level of Service – U.S. 52 and Sycamore Street

At the US 52 and Walnut Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 0.8 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 7.0 seconds compared to the Alternative 1-No Build Alternative.

At the US 52 and Walnut Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 8.8 seconds, and the Alternative 3-Road Diet with Signalized Intersections increases delay by 2.9 seconds compared to the Alternative 1-No Build Alternative.

U.S. 52 AND WALNUT STREET/SHORT HILL	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	11.6	0.058	8.8	0.00	A	4.6	0.04	0.1		B	12.5	0.059	10	0.03
EB APPROACH	B	11.6				A	4.6				B	12.5			
WB RIGHT	B	15.6	0.706	138.8	0.00	C	19.8	0.65	4.8		B	16.7	0.701	157	0.63
WB APPROACH	B	15.6				C	19.8				B	16.7			
NB LEFT	A	9.1	0.021	2.4	0.05						B	11.6	0.024	3	0.06
NB THRU	A	9.0	0.467	88.4	0.00						C	22.5	0.884	321	0.16
NB RIGHT	A	9.0	0.467	87.9	0.00	B	10.1	0.61	4.4		A	7.3	0.015	2	0.00
NB APPROACH	A	9.0				B	10.1				C	22.2			
NB LEFT	B	11.4	0.030	2.9	0.04						C	20.8	0.052	5	0.10
NB THRU	A	8.0	0.259	44.0	0.00						A	9.5	0.485	109	0.05
SB RIGHT	A	8.0	0.260	43.7	0.00	A	6.1	0.35	1.6		A	7.3	0.015	2	0.00
SB APPROACH	A	8.1				A	6.1				A	9.7			
TOTAL INTERSECTION	B	10.4				B	11.2				B	17.4			

U.S. 52 AND WALNUT STREET/SHORT HILL	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	12.9	0.116	14.8	0.00	B	10.5	0.13	0.4		C	20.9	0.157	26	0.08
EB APPROACH	B	12.9				B	10.5				C	20.9			
WB RIGHT	B	13.9	0.335	44.7	0.00	A	5.6	0.17	0.6		C	22.6	0.451	80	0.32
WB APPROACH	B	13.9				A	5.6				C	22.6			
NB LEFT	B	11.3	0.035	2.7	0.05						C	24.5	0.063	6	0.12
NB THRU	A	6.0	0.194	25.0	0.00						A	5.0	0.292	56	0.03
NB RIGHT	A	6.0	0.195	24.8	0.00	A	5.6	0.30	1.2		A	4.1	0.011	1	0.03
NB APPROACH	A	6.2				A	5.6				A	5.5			
SB LEFT	A	6.7	0.017	1.7	0.02						A	6.1	0.016	2	0.04
SB THRU	A	8.3	0.619	108	0.00						B	11.6	0.939	332	0.17
SB RIGHT	A	8.3	0.619	107.3	0.00	C	22.9	0.88	13.2		A	4.1	0.022	3	0.06
SB APPROACH	A	8.3				C	22.9				B	11.4			
TOTAL INTERSECTION	A	8.5				C	17.3				B	11.4			

TABLE 7 – Delay and Level of Service – U.S. 52 and Walnut Street

At the US 52 and Augusta Street intersection in the AM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 8.0 seconds, and the Alternative 3- Road Diet with Signalized Intersections increases delay by 2.2 seconds compared to the Alternative 1-No Build Alternative.

At the US 52 and Augusta Street intersection in the PM Peak, the Alternative 2-Road Diet with Roundabout Intersections increases delay by 11.7 seconds, and the Alternative Road Diet with Signalized Intersections increases delay by 2.1 seconds compared to the Alternative 1-No Build Alternative.

U.S. 52 AND AUGUSTA/BETHEL N. RICHMOND STREET	AM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.3	0.119	14.8	0.00	A	5.1	0.07	0.2		B	16.3	0.133	19	0.10
EB APPROACH	B	13.3				A	5.1				B	16.3			
WB RIGHT	B	13.6	0.195	24.1	0.00	A	7.7	0.14	0.5		B	16.7	0.219	32	0.14
WB APPROACH	B	13.6				A	7.7				B	16.7			
NB LEFT	A	5.6	0.014	1.4	0.00						A	5.4	0.014	2	0.03
NB THRU	A	6.4	0.429	58.6	0.00						A	8.7	0.681	156	0.08
NB RIGHT	A	6.4	0.430	56.7	0.00	C	23.7	0.84	10.2		A	4.7	0.084	9	0.19
NB APPROACH	A	6.4				C	23.7				A	8.3			
SB LEFT	B	14.7	0.606	83.7	0.30						B	19.0	0.715	117	0.97
SB THRU	A	5.2	0.097	10.9	0.00						A	4.9	0.162	22	0.01
SB RIGHT	A	5.2	0.099	10.8	0.00	A	6.4	0.36	1.7		A	4.5	0.012	1	0.03
SB APPROACH	B	10.8				A	6.4				B	13.1			
TOTAL INTERSECTION	A	8.5				C	16.5				B	10.7			

U.S. 52 AND AUGUSTA/BETHEL N. RICHMOND STREET	PM														
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 2 - ROAD DIET ROUNDABOUT INTERSECTION 2046 BUILD					ALTERNATIVE 3 - ROAD DIET SIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE (ft)	QUEUE RATIO
EB RIGHT	B	13.4	0.164	20.9	0.00	B	11.1	0.18	0.6		B	13.6	0.165	21	0.11
EB APPROACH	B	13.4				B	11.1				B	13.6			
WB RIGHT	B	13.4	0.148	17.9	0.00	A	4.6	0.07	0.2		B	13.6	0.149	18	0.08
WB APPROACH	B	13.4				A	4.6				B	13.6			
NB LEFT	A	8.4	0.026	2.0	0.01	A	8.2	0.38	1.8		B	15.4	0.040	3	0.07
NB THRU	A	5.5	0.178	20.7	0.00						A	6.0	0.328	42	0.02
NB RIGHT	A	5.5	0.180	20.5	0.00						A	5.0	0.027	2	0.05
NB APPROACH	A	5.6				A	8.2				A	6.2			
SB LEFT	A	8.5	0.445	55.4	0.20	C	23.6	0.89	13.4		A	9.9	0.474	66	0.55
SB THRU	A	6.5	0.448	61.8	0.00						A	9.9	0.849	172	0.09
SB RIGHT	A	6.5	0.448	60.9	0.00						A	5.0	0.040	4	0.07
SB APPROACH	A	7.0				C	23.6				A	9.8			
TOTAL INTERSECTION	A	7.3				C	19.0				A	9.4			

TABLE 8 – Delay and Level of Service – U.S. 52 and Augusta Street

At the US 52 and Adamson Street intersection, the Alternative 3A-Road Diet with Unsignalized Intersections shows minimal delay difference compared to the Alternative 1-No Build Alternative.

U.S. 52 AND ADAMSON STREET	AM									
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 3A - ROAD DIET UNSIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO
EB RIGHT	C	16.0	0.09	25.0		C	15.9	0.02	2.6	
EB APPROACH	C	16.0				C	15.9			
WB THRU	C	17.6	0.10	25.0		B	15.0	0.03	2.6	
WB APPROACH	C	17.6				B	15.0			
NB LEFT	A	7.7	0.02	0.0		A	0.1	0.00	0.0	
NB APPROACH						A	0.1			
SB LEFT	A	9.5	0.01	0.0		A	0.1	0.00	0.0	
SB APPROACH						A	0.1			

U.S. 52 AND ADAMSON STREET	PM									
	ALTERNATIVE 1 NO BUILD 2046					ALTERNATIVE 3A - ROAD DIET UNSIGNALIZED INTERSECTION 2046 BUILD				
APPROACH LANES	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO	LOS	DELAY	V/C RATIO	95% QUEUE	QUEUE RATIO
EB RIGHT	C	18.1	0.14	25		C	18.2	0.14	12.8	
EB APPROACH	C	18.1				C	18.2			
EB RIGHT	C	17.1	0.10	25		C	17.2	0.10	7.7	
WB APPROACH	C	17.1				C	17.2			
NB RIGHT	A	9.5	0.01	0.0		A	9.6	0.01	0.0	
NB APPROACH						A	0.4			
SB RIGHT	A	8	0.01	0.0		A	8.0	0.01	0.0	
SB APPROACH						A	0.2			

TABLE 9 – Delay and Level of Service – U.S. 52 and Adamson Street

VI. GEOMETRIC LAYOUTS

The roundabout analysis utilized the following geometry, as shown on the following pages.



FIGURE 4 – Geometry – U.S. 52 and Front Street

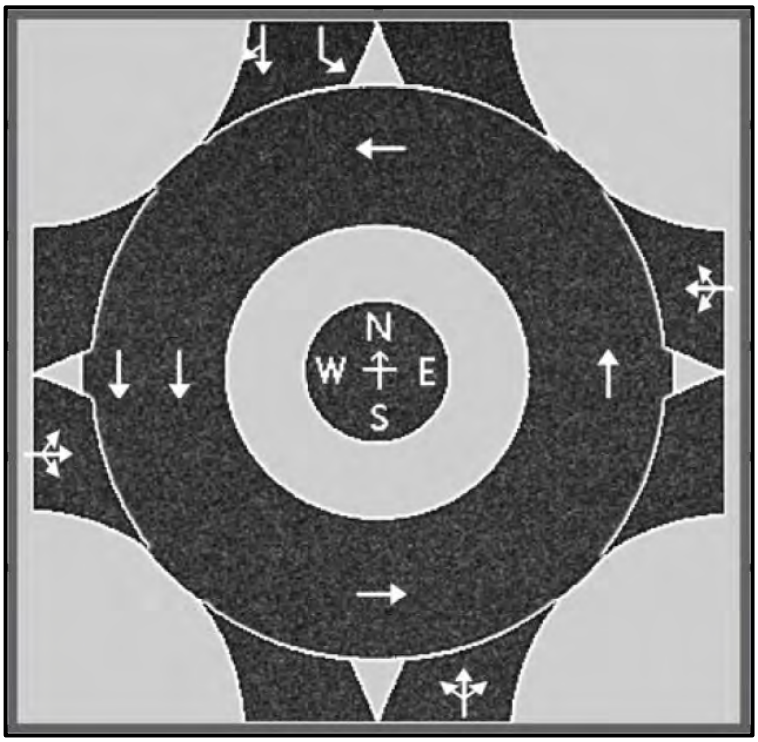


FIGURE 5 – Geometry – U.S. 52 and Sycamore Street



FIGURE 6 – Geometry – U.S. 52 and Walnut Street/Short Hill



FIGURE 7 – Geometry – U.S. 52 and Augusta Street

VII. CONCLUSION

The roundabout alternative provides an acceptable level of service at all four locations along US 52 in New Richmond, Ohio.

The road diet alternative provides an acceptable level of service at the Adamson Street intersection with US 52 in New Richmond, Ohio.

Appendix A

Certified Traffic

INTER-OFFICE COMMUNICATION

TO: **Alex Genbauffe, E.I., Traffic Studies Engineer, District 8**

FROM: Joshua Kieselbach, P.E., Transportation Engineer, Office of Statewide Planning & Research, Modeling & Forecasting Section

SUBJECT: **CLE-52-4.67, PID 114042**

DATE: June 11, 2021

In reply to a request dated May 21, 2021, the review of the design traffic for the subject project has been completed and is approved for use in this project. Attached for reference are the report and appendices submitted by Lanham Engineering. Balanced plates can be found in Appendix G.

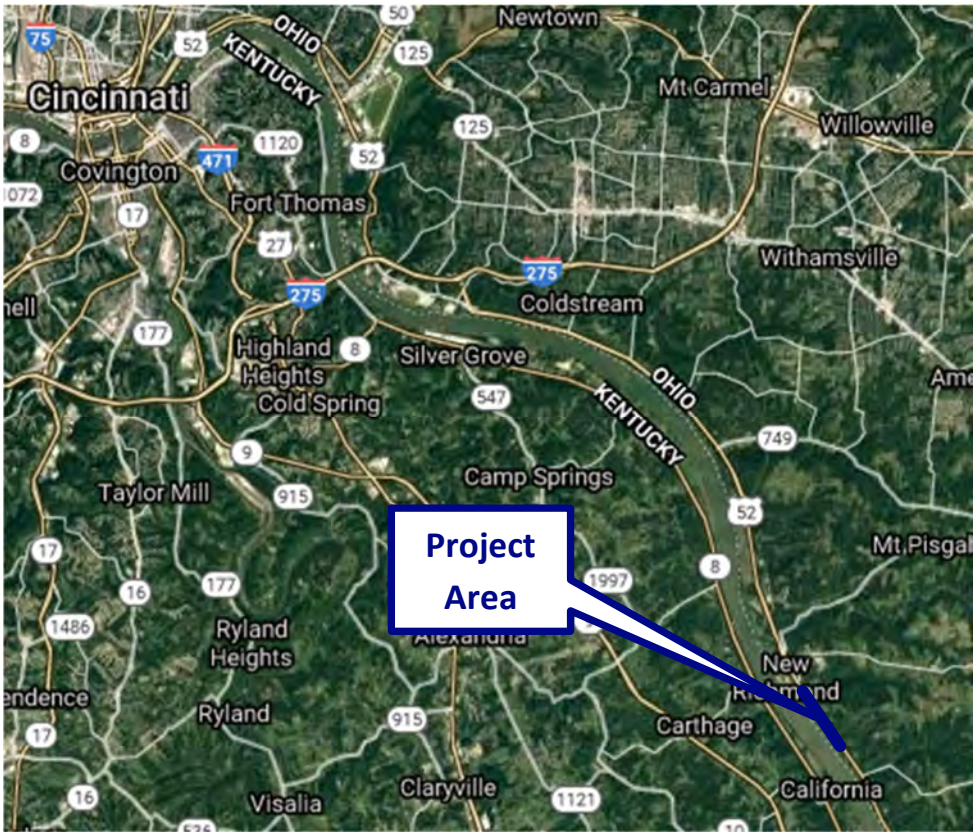
If you have any questions, please contact me at Joshua.Kieselbach@dot.ohio.gov or (614) 752-5747.

c: G. Giaimo, OSPR – File

DRAFT REPORT
May 2021

CLE-52-4.67

Design Traffic Technical Report PID 114042
US-52 between Front Street and Adamson Street
Clermont County |ODOT District 8



Prepared for:
ODOT Central Office
1980 West Broad Street
Columbus, Ohio 43222
614.466.7170

Prepared by:
Lanham Engineering, LLC
2421 Reginald Ct.
Powell, OH 43065
(614) 216-0448

1.0 Introduction

This project was initiated to determine the feasibility of reducing US-52 from four lanes to two lanes.

2.0 Project Description and Forecast Parameters

The following details the process used to prepare the design traffic for CLE-52-4.67. The project area falls within the Village of New Richmond in Clermont County and includes US-52 between Front Street and Adamson Street. The intersections analyzed are listed below:

US-52 at:

- Front Street
- Sycamore Street (SR-132)
- Walnut Street
- Augusta Street
- Adamson Street

The No Build and Build alternatives were analyzed for both the Opening Year 2026 and the Design Year 2046. AM Peak, PM Peak, and ADT volumes were calculated for each alternative. Truck percentage (T24 and TD) were determined for the Build alternative.

3.0 Data Sources

Count Data

Eight-hour COVID adjusted count data was provided by ODOT in a Traffic Count document dated April 29, 2021 and are included in **Appendix A**. The counts were taken on April 13, 2021. COVID adjustments were applied by others as noted in the attached document. The adjusted counts were used for the design traffic calculations.

The peak hours for the system were determined using the overall highest volume hours for the entire corridor. The AM Peak was 6:45-7:45 AM and the PM Peak was 4:30-5:30 PM.

The traffic counts memo provided by ODOT, the seasonal adjustment factors used, and the expansion spreadsheets for each intersection are in **Appendix A**.

Balancing of the counts was required due to the varied COVID factors used at each intersection. All balancing was performed in accordance with methodologies stated in the Ohio Traffic Forecasting Manual. Unbalanced and Balanced count plates are in **Appendix B**.

Model

Models for both the No Build and Build alternatives were provided by ODOT's Modeling and Forecasting. The intersection of Front Street, Walnut Street, and Adamson Street with US-52 do not appear on the model. Growth for those legs were estimated based on the Sycamore Street and Augusta Street intersections as noted below:

- Front Street – matched Sycamore Street west leg growth
- Walnut Street, Adamson Street, and Augusta Street (west leg) – matched Augusta Street east leg growth

4.0 Design Traffic Volumes

No Build and Build Alternatives

Design hour volume factors (DHV) used in the NCHRP sheets are included in **Appendix C**.

Adjustments made to the NCHRP sheets to reach convergence are listed below for each alternative:

- 2026 No Build
  - Link forcing on east and west legs of Adamson Street in AM Peak for convergence
- 2046 No Build
  - Link forcing on west leg of Adamson Street in AM Peak for convergence
- 2026 Build
  - Link forcing on east and west leg of Adamson Street in AM Peak for convergence
- 2046 Build

- Link forcing on west leg of Adamson Street in AM Peak for convergence

Volume balancing was required throughout the corridor. All balancing was completed using methodologies stated in the Ohio Traffic Forecasting Manual. Segments that were balanced are shown in **Appendix D**. Any movement that showed negative growth was increased to maintain a minimum zero growth since volumes are not expected to decrease in the region between the opening and design years.

Build Truck Percentages

Build truck percentages were calculated using the NCHRP Link tab using the truck count volumes and truck daily model values to determine the expected truck growth factor. This growth factor and the DHV noted in **Appendix C** was applied to the counted truck volumes to calculate the Build truck volumes. To determine the TD and T24 for the Build condition, the grown truck values were divided by the total 2046 Build volume for each approach. Truck calculations are in **Appendix E**.

5.0 Results

For the No Build and Build alternatives, design traffic plates were created for the AM Peak, PM Peak, and ADT. Daily and design hour truck plates were created for the Build alternative only. The unsmoothed design traffic plates for each alternative are provided in **Appendix F** and the smoothed design traffic plates are provided in **Appendix G**.

ODOT Design Traffic
CLE-52-4.67

Appendix A

Count and Expansion Factor Data

Traffic Counts

For

The Ohio Department of Transportation
District 8

Prepared for:
The Village of New Richmond, Ohio

Prepared by:

143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241
(513) 476-6271

Report submitted: April 29, 2021



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Appendix A – 2018 Existing traffic counts
Appendix B – 2021 Existing traffic counts
Appendix C – COVID Adjusted Counts

I. INTRODUCTION

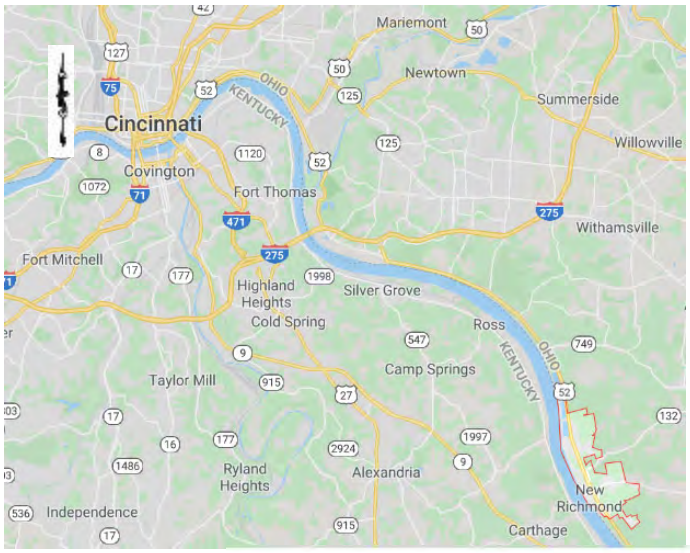


FIGURE 1 - Vicinity Map

The Village of New Richmond is located in Clermont County, Ohio, along the north side of the Ohio River, approximately 22 miles southeast of the City of Cincinnati. See Figure 1- Vicinity Map.

II. ANALYSIS

Traffic counts were taken pre-COVID for five intersections along the U.S. 52 corridor in New Richmond, Ohio. These intersections are as follows:

1) Front Street;
2) S.R. 132/Sycamore Street;
3) Walnut Street/Short Hill Street;
4) Augusta Street; and
5) Adamson Street.

See Figure 2 – Project Area.

The two-hour AM (6-8 AM) and two-hour PM (4-6 PM) counts were taken in 2018, with the exception of the Short Hill/Walnut intersections that was counted in 2019. See Appendix A. These five locations were recounted in two four-hour increments (6-10 AM and 2-6 PM) in 2021. See Appendix B. The common hours of 6-8 AM and 4-6 PM are being compared to develop a COVID adjustment factor to apply to the 8-hour counts. The following table shows the comparison between those hours at each intersection.

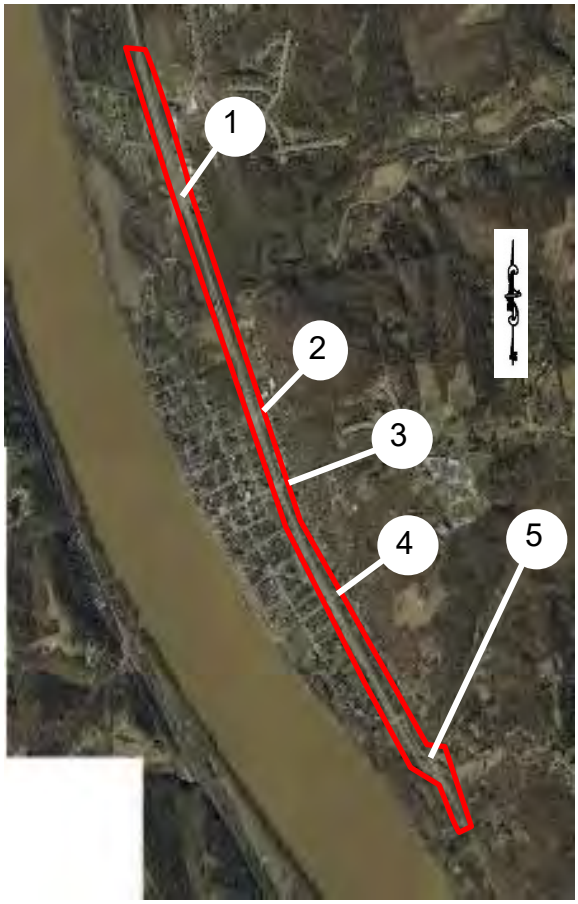


FIGURE 2 – Project Area

US 52 at Front Street	AM	PM
2021	1157	1415
2018	1312	1509
Difference	155	94
Adjustment Factor	11.81%	6.23%

US52 at SR 132/Sycamore Street	AM	PM
2021	1197	1349
2018	1411	1597
Difference	214	248
Adjustment Factor	15.17%	15.53%

US52 at Walnut and Short Hill	AM	PM
2021	1030	1124
2019	1110	1086
Difference	80	-38
Adjustment Factor	7.21%	-3.50%

US 52 at Augusta Street and Bethel/New Richmond Road		
	AM	PM
2021	871	1060
2019	961	1076
Difference	90	16
Adjustment Factor	9.37%	1.49%

US52 at Adamson Street	AM	PM
2021	643	791
2018	712	765
Difference	69	-26
Adjustment Factor	9.69%	-3.40%

TABLE 1 – Peak Hour COVID and Pre-COVID Volume Comparisons

III. CONCLUSION

The Front Street and the S.R. 132/Sycamore Street intersections have comparable individual intersection adjustment factors so the AM and PM Peak Hour intersection adjustment factors were averaged for the COVID adjustment factor. Walnut/Short Hill Street, Augusta Street, and the Adamson street intersections were averaged for the COVID adjustment factor.

Average AM % Front and SR 132/Sycamore Ints.	13.49%
Average PM % Front and SR 132/Sycamore Ints.	10.88%

Avg AM % Walnut/Short Hill, Augusta, Adamson Ints.	8.75%
Avg PM % Walnut/Short Hill, Augusta, Adamson Ints.	-1.80%

TABLE 2 – COVID Adjustment Factor

The adjusted traffic counts are located in Appendix C.

Appendix A

Existing 2018/2019 Traffic Counts

Intersection US52 at Old US 52/Front Street
Start Date 10/23/2018
Total Vehicles

	Front Street Eastbound			Old US 52 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	5	0	0	4	1	10	0	187	7	2	17	0
6:15 AM	3	0	0	8	0	11	2	204	11	4	33	0
6:30 AM	8	1	0	11	0	4	1	217	14	3	50	3
6:45 AM	4	1	2	9	1	9	3	186	18	3	43	4
7:00 AM	1	3	0	23	0	8	1	220	24	3	55	0
7:15 AM	3	0	0	20	0	15	2	218	31	6	67	1
7:30 AM	2	1	0	17	1	15	0	204	34	4	47	3
7:45 AM	8	4	2	6	2	16	0	149	24	7	47	3
4:00 PM	4	4	1	37	1	6	2	65	23	13	176	12
4:15 PM	6	6	0	32	7	12	0	67	37	12	204	9
4:30 PM	4	3	5	41	8	7	0	83	39	23	179	17
4:45 PM	3	3	2	38	5	4	2	65	25	12	173	8
5:00 PM	6	5	2	47	10	10	2	61	24	19	177	5
5:15 PM	2	5	3	42	4	9	1	90	34	29	202	9
5:30 PM	3	5	2	58	3	6	2	75	33	21	158	9
5:45 PM	2	2	0	44	7	8	1	49	41	17	143	8

6:45-7:45 AM	10	5	2	69	2	47	6	828	107	16	212	8	1312
4:15-5:15 PM	19	17	9	158	30	33	4	276	125	66	733	39	1509

Study Name US52 at SR 132/Sycamore Street

Start Date 10/23/2018

Total Vehicles

	Sycamore Street Eastbound			SR 132 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	6	4	1	3	3	43	4	147	25	5	16	0
6:15 AM	3	1	1	3	3	43	4	164	23	7	33	2
6:30 AM	13	4	3	15	1	44	3	179	13	11	44	3
6:45 AM	11	2	1	10	5	47	1	145	19	8	42	2
7:00 AM	8	1	2	18	6	39	2	198	18	11	65	2
7:15 AM	5	6	3	15	5	51	3	203	32	7	72	7
7:30 AM	4	7	3	10	3	37	2	197	20	9	47	0
7:45 AM	5	2	1	7	5	40	1	114	15	8	44	7
4:00 PM	3	16	8	15	8	24	8	64	16	36	161	19
4:15 PM	5	12	10	25	10	20	3	78	18	46	175	12
4:30 PM	8	11	16	24	12	24	7	88	12	59	146	17
4:45 PM	6	11	5	20	10	17	5	67	18	51	162	10
5:00 PM	12	5	7	23	9	19	3	68	16	43	171	9
5:15 PM	10	8	10	15	10	24	7	83	18	63	146	12
5:30 PM	5	9	15	21	14	22	3	82	15	38	170	17
5:45 PM	5	9	9	15	4	19	1	70	12	37	147	12

6:45-7:45 AM	28	16	9	53	19	174	8	743	89	35	226	11	1411
4:30-5:30 PM	36	35	38	82	41	84	22	306	64	216	625	48	1597

Study Name **US52 at Walnut and Short Hill**

Start Date **10/30/2019**

Total Vehicles

	Walnut Street Eastbound			Short Hill Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	2	1	1	0	1	36	1	128	0	0	44	1
6:15 AM	2	0	0	0	3	52	0	170	0	0	85	0
6:30 AM	2	1	0	1	2	44	0	130	0	0	69	2
6:45 AM	5	0	1	1	4	52	0	145	1	2	66	2
7:00 AM	1	2	2	3	2	54	0	117	3	0	89	0
7:15 AM	3	0	2	10	3	82	3	114	2	1	74	0
7:30 AM	3	0	3	5	6	69	1	131	0	2	43	1
7:45 AM	3	0	3	1	4	25	4	88	0	0	42	4
4:00 PM	9	1	7	2	2	35	0	61	0	1	179	6
4:15 PM	3	1	0	7	6	52	2	47	1	2	187	6
4:30 PM	6	0	4	3	5	37	3	55	0	4	148	5
4:45 PM	2	1	1	6	4	26	0	56	1	6	178	10
5:00 PM	5	0	0	1	2	17	1	49	0	2	171	7
5:15 PM	5	1	4	1	2	16	0	65	0	1	161	14
5:30 PM	3	0	3	0	2	18	0	66	1	1	149	10
5:45 PM	6	1	4	2	3	15	1	52	0	0	130	9

6:45-7:45 AM	12	2	8	19	15	257	4	507	6	5	272	3	1110
4:30-5:30 PM	18	2	9	11	13	96	4	225	1	13	658	36	1086

Study Name US 52 at Augusta Street and Bethel/New Richmond Road

Start Date 10/30/2019

Total Vehicles

	Augusta Street Eastbound			Bethel New Richmond Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3	0	1	0	2	11	1	132	1	3	16	0
6:15 AM	4	0	0	1	1	6	2	133	1	10	27	0
6:30 AM	4	0	3	1	1	6	1	140	2	14	43	1
6:45 AM	6	6	0	3	3	2	0	123	9	25	18	3
7:00 AM	5	6	0	0	2	8	1	132	13	52	23	1
7:15 AM	3	4	0	5	2	15	0	144	31	70	28	3
7:30 AM	3	4	0	8	2	10	1	120	10	29	27	1
7:45 AM	3	3	3	0	2	13	2	83	1	21	34	1
4:00 PM	3	9	4	6	2	1	2	39	3	58	97	8
4:15 PM	7	6	0	9	5	9	1	58	1	64	131	7
4:30 PM	2	5	3	6	5	14	5	53	6	56	117	4
4:45 PM	9	6	1	7	3	9	1	38	4	51	117	6
5:00 PM	2	2	0	3	3	6	2	54	1	57	141	1
5:15 PM	8	8	0	8	6	7	2	65	1	50	116	5
5:30 PM	3	8	0	4	3	10	0	59	8	68	132	9
5:45 PM	6	3	0	6	4	8	2	46	3	57	84	5

6:45-7:45 AM	17	20	0	16	9	35	2	519	63	176	96	8	961
4:30-5:30 PM	21	21	4	24	17	36	10	210	12	214	491	16	1076

Study Name US52 at Adamson Street

Start Date 04/13/2021

Total Vehicles

	US52 Southbound			Adamson Street Westbound			US52 Northbound			Adamson Street Eastbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	1	0	0	0	0	0	0	128	0	1	16	0
6:15 AM	0	0	0	0	0	0	1	137	0	0	27	0
6:30 AM	0	0	0	0	0	4	1	134	0	0	45	1
6:45 AM	2	0	0	0	0	1	1	131	0	0	24	0
7:00 AM	1	0	1	1	0	1	1	147	1	2	22	0
7:15 AM	1	0	0	0	0	0	2	178	0	0	34	0
7:30 AM	0	1	0	0	0	1	1	123	0	0	35	0
7:45 AM	1	0	0	0	0	0	1	87	0	0	35	0
4:00 PM	0	0	5	0	0	1	1	43	0	1	108	2
4:15 PM	0	0	1	0	0	0	1	67	0	2	145	0
4:30 PM	1	0	2	0	0	0	2	54	0	2	120	2
4:45 PM	1	0	2	0	0	2	4	38	0	0	130	2
5:00 PM	1	0	2	1	0	0	2	56	0	3	146	3
5:15 PM	1	0	2	1	0	0	0	67	0	0	116	2
5:30 PM	0	3	1	0	0	0	0	64	0	2	143	1
5:45 PM	2	0	4	1	0	0	0	49	0	2	105	0

6:45-7:45 AM	4	1	1	1	0	3	5	579	1	2	115	0	712
4:30-5:30 PM	4	0	8	2	0	2	8	215	0	5	512	9	765

Appendix B

Existing 2021 Traffic Counts

Intersection US 52 at Front Street
Start Date 04/13/2021
Total Vehicles

	Front Street Eastbound			Old US 52 Westbound			US52 Northbound			US52 Southbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	3	0	0	3	0	9	1	171	11	2	15	0	
6:15 AM	8	0	0	6	1	18	2	145	26	3	22	0	
6:30 AM	4	0	0	8	1	11	1	148	17	3	39	2	
6:45 AM	2	1	0	9	0	16	4	124	14	2	52	0	
7:00 AM	8	0	1	13	0	9	0	161	12	6	36	1	
7:15 AM	6	0	1	20	4	8	0	232	33	2	69	3	
7:30 AM	1	2	0	15	3	17	3	191	31	3	38	4	
7:45 AM	5	1	4	16	4	6	1	109	22	6	41	2	
8:00 AM	5	5	3	12	1	11	1	90	23	7	41	5	
8:15 AM	7	1	3	17	1	17	3	99	17	5	30	5	
8:30 AM	7	1	1	14	1	8	0	91	26	6	32	4	
8:45 AM	8	6	1	21	2	4	4	74	27	4	54	5	
9:00 AM	7	6	1	18	10	12	1	78	21	15	30	2	
9:15 AM	4	1	0	19	5	7	1	82	25	9	37	3	
9:30 AM	8	3	0	19	4	11	0	61	17	6	40	4	
9:45 AM	8	3	1	23	3	4	0	76	18	7	31	4	
2:00 PM	7	3	2	22	9	6	3	70	20	13	69	9	
2:15 PM	10	4	1	18	6	8	3	73	45	9	73	11	
2:30 PM	1	4	3	29	6	6	0	99	33	10	91	9	
2:45 PM	5	9	1	32	7	9	1	59	30	13	92	8	
3:00 PM	5	6	2	34	10	10	2	69	16	13	100	12	
3:15 PM	4	4	2	27	5	6	0	63	29	12	131	7	
3:30 PM	3	7	2	33	7	6	0	87	18	13	149	20	
3:45 PM	16	7	4	42	9	5	2	61	36	15	133	15	
4:00 PM	8	6	3	29	9	8	1	67	30	13	126	8	
4:15 PM	7	6	1	34	8	9	1	80	27	15	148	15	
4:30 PM	5	6	6	35	12	7	1	70	24	11	156	12	
4:45 PM	3	7	1	44	8	6	2	66	32	12	168	15	
5:00 PM	5	3	1	43	6	2	0	67	21	15	175	17	
5:15 PM	4	6	0	36	3	6	0	64	30	19	163	14	
5:30 PM	11	6	2	47	5	6	2	64	23	8	150	11	
5:45 PM	4	5	0	31	6	2	0	56	37	14	129	12	

AM Peak Hour	17	3	2	57	7	50	7	708	90	13	195	8	1157
PM Peak Hour	20	22	9	156	34	24	4	283	104	53	647	59	1415

Study Name US52 at SR 132/Sycamore Street

Start Date 04/13/2021

Total Vehicles

	Sycamore Street Eastbound			SR 132 Westbound			US52 Northbound			US52 Southbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	4	5	0	2	0	35	0	147	21	1	14	2	
6:15 AM	4	6	2	5	1	35	2	129	13	3	25	0	
6:30 AM	4	4	2	7	0	29	3	132	15	7	40	1	
6:45 AM	1	2	0	11	0	31	1	114	19	11	48	2	
7:00 AM	7	2	2	11	0	29	2	139	15	3	46	2	
7:15 AM	9	3	6	18	4	50	7	216	31	11	71	3	
7:30 AM	7	3	3	16	5	36	1	167	21	7	45	4	
7:45 AM	5	2	2	9	7	25	3	102	18	13	40	4	
8:00 AM	5	5	0	4	4	26	2	80	8	7	45	3	
8:15 AM	7	8	0	5	8	26	1	87	18	11	41	1	
8:30 AM	9	6	3	3	5	22	4	82	14	6	35	3	
8:45 AM	3	2	0	3	6	19	3	86	11	14	60	5	
9:00 AM	8	4	2	10	9	12	3	75	14	7	34	4	
9:15 AM	6	7	2	14	8	21	0	80	16	10	44	4	
9:30 AM	5	1	3	8	6	11	4	60	14	10	43	6	
9:45 AM	4	6	5	9	3	28	6	67	18	9	38	6	
2:00 PM	9	14	8	13	4	20	4	64	10	15	65	7	
2:15 PM	8	7	7	11	8	14	6	106	17	15	72	7	
2:30 PM	13	13	8	12	3	18	5	89	16	22	90	11	
2:45 PM	9	7	5	17	19	24	3	60	17	24	87	10	
3:00 PM	6	4	8	12	7	19	3	64	13	20	93	14	
3:15 PM	8	14	3	10	8	13	7	69	12	28	125	15	
3:30 PM	2	8	17	12	7	10	8	88	11	34	129	21	
3:45 PM	7	8	8	15	11	25	4	73	16	35	130	12	
4:00 PM	8	13	5	19	6	25	10	72	11	15	116	19	
4:15 PM	9	5	12	16	8	19	1	77	8	36	133	16	
4:30 PM	8	11	11	23	9	18	2	75	7	42	136	20	
4:45 PM	7	4	2	19	7	10	4	74	12	29	177	13	
5:00 PM	7	20	5	22	14	19	2	59	11	32	171	16	
5:15 PM	6	8	5	16	11	20	4	62	13	31	164	5	
5:30 PM	9	11	8	13	13	20	2	61	12	38	152	13	
5:45 PM	6	10	7	14	8	20	3	66	12	23	127	9	

AM Peak Hour	24	10	11	56	9	146	11	636	86	32	210	11	1197
PM Peak Hour	28	43	23	80	41	67	12	270	43	134	648	54	1349

Study Name **US52 at Walnut and Short Hill**

Start Date **04/13/2021**

Total Vehicles

	Walnut Street Eastbound			Short Hill Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3	1	1	0	1	38	0	122	0	0	17	0
6:15 AM	3	0	0	1	1	31	0	110	0	0	27	3
6:30 AM	4	0	0	1	0	33	0	118	1	0	49	0
6:45 AM	3	2	0	0	0	34	0	97	0	0	54	4
7:00 AM	2	0	3	0	4	46	0	118	2	0	59	2
7:15 AM	3	0	5	0	2	91	1	152	0	1	92	0
7:30 AM	1	0	2	1	2	72	0	109	1	0	64	1
7:45 AM	2	0	0	0	1	33	1	85	0	0	49	2
8:00 AM	4	0	2	1	2	27	2	61	0	0	46	4
8:15 AM	2	1	0	0	2	30	0	78	0	0	44	2
8:30 AM	1	0	1	0	1	28	0	75	2	0	42	0
8:45 AM	1	1	1	1	3	30	0	64	1	0	56	2
9:00 AM	7	0	0	0	2	22	0	65	1	1	51	0
9:15 AM	6	0	1	2	3	22	3	66	0	0	57	1
9:30 AM	5	0	2	0	4	22	0	50	0	1	52	4
9:45 AM	7	1	0	0	1	18	0	69	0	0	49	1
2:00 PM	4	0	2	1	1	0	2	78	0	1	80	4
2:15 PM	3	0	1	1	3	1	5	120	0	0	83	3
2:30 PM	3	1	4	1	4	3	1	107	0	1	109	6
2:45 PM	9	0	3	1	6	18	1	53	0	2	105	4
3:00 PM	3	1	2	1	6	23	3	53	0	1	111	2
3:15 PM	6	2	3	1	2	19	0	63	1	0	131	10
3:30 PM	7	0	3	0	3	24	1	77	0	1	147	3
3:45 PM	2	0	2	0	2	26	0	68	0	1	153	4
4:00 PM	4	2	3	4	4	24	1	57	0	0	127	8
4:15 PM	4	0	1	2	2	20	0	61	0	1	156	4
4:30 PM	2	2	2	3	3	27	2	57	0	0	171	2
4:45 PM	8	1	3	3	2	29	1	55	0	1	183	8
5:00 PM	3	1	0	0	1	13	3	59	1	4	189	4
5:15 PM	9	0	2	2	4	21	1	53	0	1	184	4
5:30 PM	3	0	1	2	4	21	2	49	0	1	166	4
5:45 PM	5	2	0	1	7	23	0	56	0	2	144	5

AM Peak Hour	9	2	10	1	8	243	1	476	3	1	269	7	1030
PM Peak Hour	22	4	7	8	10	90	7	224	1	6	727	18	1124

Study Name US 52 at Augusta Street and Bethel/New Richmond Road

Start Date 04/13/2021

Total Vehicles

	Augusta Street Eastbound			Bethel New Richmond Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3	1	1	1	0	3	0	108	1	5	9	2
6:15 AM	3	2	0	1	1	3	0	109	3	8	20	1
6:30 AM	6	0	0	0	1	7	2	100	3	16	33	3
6:45 AM	4	1	0	3	3	5	0	89	9	32	19	0
7:00 AM	6	2	0	0	1	5	0	110	17	40	21	0
7:15 AM	5	6	0	7	2	13	1	142	21	69	23	1
7:30 AM	1	4	1	11	5	4	0	106	10	31	41	0
7:45 AM	3	2	0	1	1	13	1	71	6	23	27	1
8:00 AM	4	1	1	1	3	3	1	52	2	14	30	3
8:15 AM	3	1	3	0	3	1	0	75	2	17	28	2
8:30 AM	1	0	0	0	1	3	0	76	0	17	25	0
8:45 AM	8	0	0	0	1	3	1	52	4	16	34	3
9:00 AM	3	1	0	0	1	3	0	59	3	20	31	4
9:15 AM	3	5	2	1	1	5	0	64	12	26	30	1
9:30 AM	3	8	0	0	2	4	1	42	2	15	38	4
9:45 AM	3	2	3	2	0	3	0	61	1	18	25	3
2:00 PM	9	5	6	1	2	25	0	46	18	27	53	3
2:15 PM	6	6	0	12	10	82	2	46	5	31	54	4
2:30 PM	6	8	3	13	10	54	2	42	3	31	74	4
2:45 PM	4	8	5	1	4	6	2	42	3	30	80	2
3:00 PM	5	3	7	3	5	8	0	42	4	36	73	6
3:15 PM	2	5	3	6	0	6	4	60	3	29	91	6
3:30 PM	2	7	3	1	5	7	1	67	6	48	99	9
3:45 PM	3	7	4	4	2	6	3	59	5	37	114	4
4:00 PM	3	10	1	1	3	4	2	53	3	43	93	3
4:15 PM	4	10	4	5	3	7	2	55	5	44	112	3
4:30 PM	2	13	2	6	6	5	1	50	6	50	114	7
4:45 PM	4	6	3	3	3	4	4	47	1	48	137	6
5:00 PM	5	4	1	2	2	9	5	53	5	55	133	3
5:15 PM	3	8	1	1	4	4	2	46	2	51	125	8
5:30 PM	3	5	4	7	7	3	3	46	1	51	119	6
5:45 PM	6	9	2	3	5	4	3	47	3	38	100	5

AM Peak Hour	16	13	1	21	11	27	1	447	57	172	104	1	871
PM Peak Hour	14	31	7	12	15	22	12	196	14	204	509	24	1060

Study Name US52 at Adamson Street

Start Date 04/13/2021

Total Vehicles

	US52 Southbound			Adamson Street Westbound			US52 Northbound			Adamson Street Eastbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0	11	0	0	0	0	1	121	0	0	0	0
6:15 AM	0	21	0	0	0	1	0	97	0	0	0	0
6:30 AM	0	32	1	0	0	1	0	109	0	0	0	0
6:45 AM	0	22	0	2	0	1	1	95	0	1	0	0
7:00 AM	0	21	0	0	0	1	1	132	1	0	0	0
7:15 AM	0	33	0	0	0	0	0	161	0	0	0	1
7:30 AM	1	50	1	0	0	1	0	115	0	1	0	1
7:45 AM	0	25	1	0	0	1	1	74	0	3	0	0
8:00 AM	1	31	1	0	0	3	1	57	0	0	1	0
8:15 AM	0	31	0	1	0	0	2	72	0	0	0	1
8:30 AM	2	22	0	1	0	1	1	76	0	0	0	1
8:45 AM	1	35	0	0	0	1	1	58	0	0	0	0
9:00 AM	0	31	0	0	0	0	2	63	0	1	1	0
9:15 AM	0	33	0	0	0	2	5	69	0	0	0	1
9:30 AM	0	37	1	0	1	1	0	47	0	0	1	2
9:45 AM	0	30	0	1	0	1	2	58	0	0	0	0
2:00 PM	3	54	1	0	1	0	1	61	0	1	1	2
2:15 PM	0	64	2	0	0	1	1	53	0	0	1	2
2:30 PM	1	91	1	2	0	1	1	46	0	1	0	6
2:45 PM	1	85	0	2	0	1	1	48	1	0	1	1
3:00 PM	0	80	1	1	0	1	0	43	1	1	4	4
3:15 PM	0	100	1	0	1	0	1	63	1	1	0	3
3:30 PM	1	102	0	0	0	2	2	75	0	0	0	5
3:45 PM	1	120	2	1	0	1	1	63	1	2	0	4
4:00 PM	1	90	1	0	0	2	0	56	0	0	1	5
4:15 PM	3	117	2	1	1	1	0	59	0	1	0	3
4:30 PM	1	125	1	0	1	0	1	57	0	1	1	3
4:45 PM	0	136	3	0	1	1	2	53	1	0	0	2
5:00 PM	3	130	3	0	0	0	2	59	0	3	1	7
5:15 PM	0	132	0	0	1	3	2	44	1	1	2	7
5:30 PM	6	119	0	0	0	3	0	49	1	1	0	2
5:45 PM	2	102	3	1	0	1	0	49	0	0	1	2

AM Peak Hour	1	126	1	2	0	3	2	503	1	2	0	2	643
PM Peak Hour	4	523	7	0	3	4	7	213	2	5	4	19	791

Appendix C

Existing 2021 COVID Adjusted Traffic Counts

Intersection US 52 at Front Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Total Vehicles

	Front Street Eastbound			Old US 52 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.40	0.00	0.00	3.40	0.00	10.21	1.13	194.07	12.48	2.27	17.02	0.00
6:15 AM	9.08	0.00	0.00	6.81	1.13	20.43	2.27	164.56	29.51	3.40	24.97	0.00
6:30 AM	4.54	0.00	0.00	9.08	1.13	12.48	1.13	167.97	19.29	3.40	44.26	2.27
6:45 AM	2.27	1.13	0.00	10.21	0.00	18.16	4.54	140.73	15.89	2.27	59.01	0.00
7:00 AM	9.08	0.00	1.13	14.75	0.00	10.21	0.00	182.72	13.62	6.81	40.86	1.13
7:15 AM	6.81	0.00	1.13	22.70	4.54	9.08	0.00	263.30	37.45	2.27	78.31	3.40
7:30 AM	1.13	2.27	0.00	17.02	3.40	19.29	3.40	216.77	35.18	3.40	43.13	4.54
7:45 AM	5.67	1.13	4.54	18.16	4.54	6.81	1.13	123.70	24.97	6.81	46.53	2.27
8:00 AM	5.67	5.67	3.40	13.62	1.13	12.48	1.13	102.14	26.10	7.94	46.53	5.67
8:15 AM	7.94	1.13	3.40	19.29	1.13	19.29	3.40	112.36	19.29	5.67	34.05	5.67
8:30 AM	7.94	1.13	1.13	15.89	1.13	9.08	0.00	103.28	29.51	6.81	36.32	4.54
8:45 AM	9.08	6.81	1.13	23.83	2.27	4.54	4.54	83.98	30.64	4.54	61.28	5.67
9:00 AM	7.94	6.81	1.13	20.43	11.35	13.62	1.13	88.52	23.83	17.02	34.05	2.27
9:15 AM	4.54	1.13	0.00	21.56	5.67	7.94	1.13	93.06	28.37	10.21	41.99	3.40
9:30 AM	9.08	3.40	0.00	21.56	4.54	12.48	0.00	69.23	19.29	6.81	45.40	4.54
9:45 AM	9.08	3.40	1.13	26.10	3.40	4.54	0.00	86.25	20.43	7.94	35.18	4.54
2:00 PM	7.76	3.33	2.22	24.39	9.98	6.65	3.33	77.62	22.18	14.41	76.51	9.98
2:15 PM	11.09	4.44	1.11	19.96	6.65	8.87	3.33	80.94	49.90	9.98	80.94	12.20
2:30 PM	1.11	4.44	3.33	32.15	6.65	6.65	0.00	109.77	36.59	11.09	100.90	9.98
2:45 PM	5.54	9.98	1.11	35.48	7.76	9.98	1.11	65.42	33.26	14.41	102.01	8.87
3:00 PM	5.54	6.65	2.22	37.70	11.09	11.09	2.22	76.51	17.74	14.41	110.88	13.31
3:15 PM	4.44	4.44	2.22	29.94	5.54	6.65	0.00	69.85	32.15	13.31	145.25	7.76
3:30 PM	3.33	7.76	2.22	36.59	7.76	6.65	0.00	96.46	19.96	14.41	165.21	22.18
3:45 PM	17.74	7.76	4.44	46.57	9.98	5.54	2.22	67.64	39.92	16.63	147.47	16.63
4:00 PM	8.87	6.65	3.33	32.15	9.98	8.87	1.11	74.29	33.26	14.41	139.71	8.87
4:15 PM	7.76	6.65	1.11	37.70	8.87	9.98	1.11	88.70	29.94	16.63	164.10	16.63
4:30 PM	5.54	6.65	6.65	38.81	13.31	7.76	1.11	77.62	26.61	12.20	172.97	13.31
4:45 PM	3.33	7.76	1.11	48.79	8.87	6.65	2.22	73.18	35.48	13.31	186.28	16.63
5:00 PM	5.54	3.33	1.11	47.68	6.65	2.22	0.00	74.29	23.28	16.63	194.04	18.85
5:15 PM	4.44	6.65	0.00	39.92	3.33	6.65	0.00	70.96	33.26	21.07	180.73	15.52
5:30 PM	12.20	6.65	2.22	52.11	5.54	6.65	2.22	70.96	25.50	8.87	166.32	12.20
5:45 PM	4.44	5.54	0.00	34.37	6.65	2.22	0.00	62.09	41.03	15.52	143.03	13.31

AM Peak Hour	19.29	3.40	2.27	64.69	7.94	56.75	7.94	803.51	102.14	14.75	221.31	9.08	1313.1
PM Peak Hour	22.18	24.39	9.98	172.97	37.70	26.61	4.44	313.79	115.31	58.77	717.39	65.42	1568.9

Study Name US52 at SR 132/Sycamore Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Total Vehicles

	Sycamore Street Eastbound			SR 132 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	4.54	5.67	0.00	2.27	0.00	39.72	0.00	166.83	23.83	1.13	15.89	2.27
6:15 AM	4.54	6.81	2.27	5.67	1.13	39.72	2.27	146.40	14.75	3.40	28.37	0.00
6:30 AM	4.54	4.54	2.27	7.94	0.00	32.91	3.40	149.81	17.02	7.94	45.40	1.13
6:45 AM	1.13	2.27	0.00	12.48	0.00	35.18	1.13	129.38	21.56	12.48	54.48	2.27
7:00 AM	7.94	2.27	2.27	12.48	0.00	32.91	2.27	157.75	17.02	3.40	52.21	2.27
7:15 AM	10.21	3.40	6.81	20.43	4.54	56.75	7.94	245.14	35.18	12.48	80.58	3.40
7:30 AM	7.94	3.40	3.40	18.16	5.67	40.86	1.13	189.53	23.83	7.94	51.07	4.54
7:45 AM	5.67	2.27	2.27	10.21	7.94	28.37	3.40	115.76	20.43	14.75	45.40	4.54
8:00 AM	5.67	5.67	0.00	4.54	4.54	29.51	2.27	90.79	9.08	7.94	51.07	3.40
8:15 AM	7.94	9.08	0.00	5.67	9.08	29.51	1.13	98.74	20.43	12.48	46.53	1.13
8:30 AM	10.21	6.81	3.40	3.40	5.67	24.97	4.54	93.06	15.89	6.81	39.72	3.40
8:45 AM	3.40	2.27	0.00	3.40	6.81	21.56	3.40	97.60	12.48	15.89	68.09	5.67
9:00 AM	9.08	4.54	2.27	11.35	10.21	13.62	3.40	85.12	15.89	7.94	38.59	4.54
9:15 AM	6.81	7.94	2.27	15.89	9.08	23.83	0.00	90.79	18.16	11.35	49.94	4.54
9:30 AM	5.67	1.13	3.40	9.08	6.81	12.48	4.54	68.09	15.89	11.35	48.80	6.81
9:45 AM	4.54	6.81	5.67	10.21	3.40	31.78	6.81	76.04	20.43	10.21	43.13	6.81
2:00 PM	9.98	15.52	8.87	14.41	4.44	22.18	4.44	70.96	11.09	16.63	72.07	7.76
2:15 PM	8.87	7.76	7.76	12.20	8.87	15.52	6.65	117.53	18.85	16.63	79.83	7.76
2:30 PM	14.41	14.41	8.87	13.31	3.33	19.96	5.54	98.68	17.74	24.39	99.79	12.20
2:45 PM	9.98	7.76	5.54	18.85	21.07	26.61	3.33	66.53	18.85	26.61	96.46	11.09
3:00 PM	6.65	4.44	8.87	13.31	7.76	21.07	3.33	70.96	14.41	22.18	103.12	15.52
3:15 PM	8.87	15.52	3.33	11.09	8.87	14.41	7.76	76.51	13.31	31.05	138.60	16.63
3:30 PM	2.22	8.87	18.85	13.31	7.76	11.09	8.87	97.57	12.20	37.70	143.03	23.28
3:45 PM	7.76	8.87	8.87	16.63	12.20	27.72	4.44	80.94	17.74	38.81	144.14	13.31
4:00 PM	8.87	14.41	5.54	21.07	6.65	27.72	11.09	79.83	12.20	16.63	128.62	21.07
4:15 PM	9.98	5.54	13.31	17.74	8.87	21.07	1.11	85.38	8.87	39.92	147.47	17.74
4:30 PM	8.87	12.20	12.20	25.50	9.98	19.96	2.22	83.16	7.76	46.57	150.80	22.18
4:45 PM	7.76	4.44	2.22	21.07	7.76	11.09	4.44	82.05	13.31	32.15	196.26	14.41
5:00 PM	7.76	22.18	5.54	24.39	15.52	21.07	2.22	65.42	12.20	35.48	189.60	17.74
5:15 PM	6.65	8.87	5.54	17.74	12.20	22.18	4.44	68.75	14.41	34.37	181.84	5.54
5:30 PM	9.98	12.20	8.87	14.41	14.41	22.18	2.22	67.64	13.31	42.13	168.54	14.41
5:45 PM	6.65	11.09	7.76	15.52	8.87	22.18	3.33	73.18	13.31	25.50	140.82	9.98

AM Peak Hour	27.24	11.35	12.48	63.55	10.21	165.70	12.48	721.80	97.60	36.32	238.33	12.48	1358.48
PM Peak Hour	31.05	47.68	25.50	88.70	45.46	74.29	13.31	299.37	47.68	148.58	718.50	59.87	1495.76

Study Name **US52 at Walnut and Short Hill** AM 8.75%

Start Date **04/13/2021 COVID ADJUSTED** PM -1.80%

Total Vehicles

	Walnut Street Eastbound			Short Hill Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.26	1.09	1.09	0.00	1.09	41.33	0.00	132.68	0.00	0.00	18.49	0.00
6:15 AM	3.26	0.00	0.00	1.09	1.09	33.71	0.00	119.63	0.00	0.00	29.36	3.26
6:30 AM	4.35	0.00	0.00	1.09	0.00	35.89	0.00	128.33	1.09	0.00	53.29	0.00
6:45 AM	3.26	2.18	0.00	0.00	0.00	36.98	0.00	105.49	0.00	0.00	58.73	4.35
7:00 AM	2.18	0.00	3.26	0.00	4.35	50.03	0.00	128.33	2.18	0.00	64.17	2.18
7:15 AM	3.26	0.00	5.44	0.00	2.18	98.97	1.09	165.31	0.00	1.09	100.05	0.00
7:30 AM	1.09	0.00	2.18	1.09	2.18	78.30	0.00	118.54	1.09	0.00	69.60	1.09
7:45 AM	2.18	0.00	0.00	0.00	1.09	35.89	1.09	92.44	0.00	0.00	53.29	2.18
8:00 AM	4.35	0.00	2.18	1.09	2.18	29.36	2.18	66.34	0.00	0.00	50.03	4.35
8:15 AM	2.18	1.09	0.00	0.00	2.18	32.63	0.00	84.83	0.00	0.00	47.85	2.18
8:30 AM	1.09	0.00	1.09	0.00	1.09	30.45	0.00	81.57	2.18	0.00	45.68	0.00
8:45 AM	1.09	1.09	1.09	1.09	3.26	32.63	0.00	69.60	1.09	0.00	60.90	2.18
9:00 AM	7.61	0.00	0.00	0.00	2.18	23.93	0.00	70.69	1.09	1.09	55.46	0.00
9:15 AM	6.53	0.00	1.09	2.18	3.26	23.93	3.26	71.78	0.00	0.00	61.99	1.09
9:30 AM	5.44	0.00	2.18	0.00	4.35	23.93	0.00	54.38	0.00	1.09	56.55	4.35
9:45 AM	7.61	1.09	0.00	0.00	1.09	19.58	0.00	75.04	0.00	0.00	53.29	1.09
2:00 PM	3.93	0.00	1.96	0.98	0.98	0.00	1.96	76.59	0.00	0.98	78.56	3.93
2:15 PM	2.95	0.00	0.98	0.98	2.95	0.98	4.91	117.84	0.00	0.00	81.50	2.95
2:30 PM	2.95	0.98	3.93	0.98	3.93	2.95	0.98	105.07	0.00	0.98	107.03	5.89
2:45 PM	8.84	0.00	2.95	0.98	5.89	17.68	0.98	52.04	0.00	1.96	103.11	3.93
3:00 PM	2.95	0.98	1.96	0.98	5.89	22.59	2.95	52.04	0.00	0.98	109.00	1.96
3:15 PM	5.89	1.96	2.95	0.98	1.96	18.66	0.00	61.86	0.98	0.00	128.64	9.82
3:30 PM	6.87	0.00	2.95	0.00	2.95	23.57	0.98	75.61	0.00	0.98	144.35	2.95
3:45 PM	1.96	0.00	1.96	0.00	1.96	25.53	0.00	66.77	0.00	0.98	150.24	3.93
4:00 PM	3.93	1.96	2.95	3.93	3.93	23.57	0.98	55.97	0.00	0.00	124.71	7.86
4:15 PM	3.93	0.00	0.98	1.96	1.96	19.64	0.00	59.90	0.00	0.98	153.19	3.93
4:30 PM	1.96	1.96	1.96	2.95	2.95	26.51	1.96	55.97	0.00	0.00	167.92	1.96
4:45 PM	7.86	0.98	2.95	2.95	1.96	28.48	0.98	54.01	0.00	0.98	179.70	7.86
5:00 PM	2.95	0.98	0.00	0.00	0.98	12.77	2.95	57.94	0.98	3.93	185.59	3.93
5:15 PM	8.84	0.00	1.96	1.96	3.93	20.62	0.98	52.04	0.00	0.98	180.68	3.93
5:30 PM	2.95	0.00	0.98	1.96	3.93	20.62	1.96	48.12	0.00	0.98	163.01	3.93
5:45 PM	4.91	1.96	0.00	0.98	6.87	22.59	0.00	54.99	0.00	1.96	141.40	4.91

AM Peak Hour	9.7879	2.1751	10.875	1.0875	8.7004	264.27	1.0875	517.67	3.2626	1.0875	292.55	7.6128	1120.17
PM Peak Hour	21.603	3.9279	6.8737	7.8557	9.8196	88.377	6.8737	219.96	0.982	5.8918	713.89	17.675	1103.73

Study Name **US 52 at Augusta Street and Bethel/New Richmond Road**

Start Date **04/13/2021 COVID ADJUSTED** AM 8.75%

Total Vehicles PM -1.80%

	Augusta Street Eastbound			Bethel New Richmond Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.26	1.09	1.09	1.09	0.00	3.26	0.00	117.45	1.09	5.44	9.79	2.18
6:15 AM	3.26	2.18	0.00	1.09	1.09	3.26	0.00	118.54	3.26	8.70	21.75	1.09
6:30 AM	6.53	0.00	0.00	0.00	1.09	7.61	2.18	108.75	3.26	17.40	35.89	3.26
6:45 AM	4.35	1.09	0.00	3.26	3.26	5.44	0.00	96.79	9.79	34.80	20.66	0.00
7:00 AM	6.53	2.18	0.00	0.00	1.09	5.44	0.00	119.63	18.49	43.50	22.84	0.00
7:15 AM	5.44	6.53	0.00	7.61	2.18	14.14	1.09	154.43	22.84	75.04	25.01	1.09
7:30 AM	1.09	4.35	1.09	11.96	5.44	4.35	0.00	115.28	10.88	33.71	44.59	0.00
7:45 AM	3.26	2.18	0.00	1.09	1.09	14.14	1.09	77.22	6.53	25.01	29.36	1.09
8:00 AM	4.35	1.09	1.09	1.09	3.26	3.26	1.09	56.55	2.18	15.23	32.63	3.26
8:15 AM	3.26	1.09	3.26	0.00	3.26	1.09	0.00	81.57	2.18	18.49	30.45	2.18
8:30 AM	1.09	0.00	0.00	0.00	1.09	3.26	0.00	82.65	0.00	18.49	27.19	0.00
8:45 AM	8.70	0.00	0.00	0.00	1.09	3.26	1.09	56.55	4.35	17.40	36.98	3.26
9:00 AM	3.26	1.09	0.00	0.00	1.09	3.26	0.00	64.17	3.26	21.75	33.71	4.35
9:15 AM	3.26	5.44	2.18	1.09	1.09	5.44	0.00	69.60	13.05	28.28	32.63	1.09
9:30 AM	3.26	8.70	0.00	0.00	2.18	4.35	1.09	45.68	2.18	16.31	41.33	4.35
9:45 AM	3.26	2.18	3.26	2.18	0.00	3.26	0.00	66.34	1.09	19.58	27.19	3.26
2:00 PM	8.84	4.91	5.89	0.98	1.96	24.55	0.00	45.17	17.68	26.51	52.04	2.95
2:15 PM	5.89	5.89	0.00	11.78	9.82	80.52	1.96	45.17	4.91	30.44	53.03	3.93
2:30 PM	5.89	7.86	2.95	12.77	9.82	53.03	1.96	41.24	2.95	30.44	72.67	3.93
2:45 PM	3.93	7.86	4.91	0.98	3.93	5.89	1.96	41.24	2.95	29.46	78.56	1.96
3:00 PM	4.91	2.95	6.87	2.95	4.91	7.86	0.00	41.24	3.93	35.35	71.68	5.89
3:15 PM	1.96	4.91	2.95	5.89	0.00	5.89	3.93	58.92	2.95	28.48	89.36	5.89
3:30 PM	1.96	6.87	2.95	0.98	4.91	6.87	0.98	65.79	5.89	47.13	97.21	8.84
3:45 PM	2.95	6.87	3.93	3.93	1.96	5.89	2.95	57.94	4.91	36.33	111.94	3.93
4:00 PM	2.95	9.82	0.98	0.98	2.95	3.93	1.96	52.04	2.95	42.22	91.32	2.95
4:15 PM	3.93	9.82	3.93	4.91	2.95	6.87	1.96	54.01	4.91	43.21	109.98	2.95
4:30 PM	1.96	12.77	1.96	5.89	5.89	4.91	0.98	49.10	5.89	49.10	111.94	6.87
4:45 PM	3.93	5.89	2.95	2.95	2.95	3.93	3.93	46.15	0.98	47.13	134.53	5.89
5:00 PM	4.91	3.93	0.98	1.96	1.96	8.84	4.91	52.04	4.91	54.01	130.60	2.95
5:15 PM	2.95	7.86	0.98	0.98	3.93	3.93	1.96	45.17	1.96	50.08	122.75	7.86
5:30 PM	2.95	4.91	3.93	6.87	6.87	2.95	2.95	45.17	0.98	50.08	116.85	5.89
5:45 PM	5.89	8.84	1.96	2.95	4.91	3.93	2.95	46.15	2.95	37.31	98.20	4.91

AM Peak Hour	17.40	14.14	1.09	22.84	11.96	29.36	1.09	486.13	61.99	187.06	113.10	1.09	947
PM Peak Hour	13.75	30.44	6.87	11.78	14.73	21.60	11.78	192.46	13.75	200.32	499.82	23.57	1041

Study Name **US52 at Adamson Street** AM 8.75%

Start Date **04/13/2021 COVID ADJUSTEI** PM -1.80%

Total Vehicles

	US52 Southbound			Adamson Street Westbound			US52 Northbound			Adamson Street Eastbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	11.96	0.00	0.00	0.00	0.00	1.09	131.59	0.00	0.00	0.00	0.00
6:15 AM	0.00	22.84	0.00	0.00	0.00	1.09	0.00	105.49	0.00	0.00	0.00	0.00
6:30 AM	0.00	34.80	1.09	0.00	0.00	1.09	0.00	118.54	0.00	0.00	0.00	0.00
6:45 AM	0.00	23.93	0.00	2.18	0.00	1.09	1.09	103.32	0.00	1.09	0.00	0.00
7:00 AM	0.00	22.84	0.00	0.00	0.00	1.09	1.09	143.56	1.09	0.00	0.00	0.00
7:15 AM	0.00	35.89	0.00	0.00	0.00	0.00	0.00	175.09	0.00	0.00	0.00	1.09
7:30 AM	1.09	54.38	1.09	0.00	0.00	1.09	0.00	125.07	0.00	1.09	0.00	1.09
7:45 AM	0.00	27.19	1.09	0.00	0.00	1.09	1.09	80.48	0.00	3.26	0.00	0.00
8:00 AM	1.09	33.71	1.09	0.00	0.00	3.26	1.09	61.99	0.00	0.00	1.09	0.00
8:15 AM	0.00	33.71	0.00	1.09	0.00	0.00	2.18	78.30	0.00	0.00	0.00	1.09
8:30 AM	2.18	23.93	0.00	1.09	0.00	1.09	1.09	82.65	0.00	0.00	0.00	1.09
8:45 AM	1.09	38.06	0.00	0.00	0.00	1.09	1.09	63.08	0.00	0.00	0.00	0.00
9:00 AM	0.00	33.71	0.00	0.00	0.00	0.00	2.18	68.52	0.00	1.09	1.09	0.00
9:15 AM	0.00	35.89	0.00	0.00	0.00	2.18	5.44	75.04	0.00	0.00	0.00	1.09
9:30 AM	0.00	40.24	1.09	0.00	1.09	1.09	0.00	51.11	0.00	0.00	1.09	2.18
9:45 AM	0.00	32.63	0.00	1.09	0.00	1.09	2.18	63.08	0.00	0.00	0.00	0.00
2:00 PM	2.95	53.03	0.98	0.00	0.98	0.00	0.98	59.90	0.00	0.98	0.98	1.96
2:15 PM	0.00	62.85	1.96	0.00	0.00	0.98	0.98	52.04	0.00	0.00	0.98	1.96
2:30 PM	0.98	89.36	0.98	1.96	0.00	0.98	0.98	45.17	0.00	0.98	0.00	5.89
2:45 PM	0.98	83.47	0.00	1.96	0.00	0.98	0.98	47.13	0.98	0.00	0.98	0.98
3:00 PM	0.00	78.56	0.98	0.98	0.00	0.98	0.00	42.22	0.98	0.98	3.93	3.93
3:15 PM	0.00	98.20	0.98	0.00	0.98	0.00	0.98	61.86	0.98	0.98	0.00	2.95
3:30 PM	0.98	100.16	0.00	0.00	0.00	1.96	1.96	73.65	0.00	0.00	0.00	4.91
3:45 PM	0.98	117.84	1.96	0.98	0.00	0.98	0.98	61.86	0.98	1.96	0.00	3.93
4:00 PM	0.98	88.38	0.98	0.00	0.00	1.96	0.00	54.99	0.00	0.00	0.98	4.91
4:15 PM	2.95	114.89	1.96	0.98	0.98	0.98	0.00	57.94	0.00	0.98	0.00	2.95
4:30 PM	0.98	122.75	0.98	0.00	0.98	0.00	0.98	55.97	0.00	0.98	0.98	2.95
4:45 PM	0.00	133.55	2.95	0.00	0.98	0.98	1.96	52.04	0.98	0.00	0.00	1.96
5:00 PM	2.95	127.66	2.95	0.00	0.00	0.00	1.96	57.94	0.00	2.95	0.98	6.87
5:15 PM	0.00	129.62	0.00	0.00	0.98	2.95	1.96	43.21	0.98	0.98	1.96	6.87
5:30 PM	5.89	116.85	0.00	0.00	0.00	2.95	0.00	48.12	0.98	0.98	0.00	1.96
5:45 PM	1.96	100.16	2.95	0.98	0.00	0.98	0.00	48.12	0.00	0.00	0.98	1.96

AM Peak Hour	1.09	137.03	1.09	2.18	0.00	3.26	2.18	547.04	1.09	2.18	0.00	2.18	699
PM Peak Hour	3.93	513.57	6.87	0.00	2.95	3.93	6.87	209.16	1.96	4.91	3.93	18.66	777

Appendix D

Existing 2021 COVID Adjusted Traffic Counts-Trucks

Intersection US 52 at Front Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Truck

	Front Street Eastbound			Old US 52 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.67	0.00	0.00	2.27	0.00
6:15 AM	0.00	0.00	0.00	0.00	0.00	1.13	0.00	1.13	0.00	0.00	1.13	0.00
6:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.54	1.13	0.00	1.13	0.00
6:45 AM	0.00	0.00	0.00	1.13	0.00	0.00	0.00	3.40	0.00	0.00	1.13	0.00
7:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	0.00	1.13	1.13	0.00
7:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	1.13	0.00	2.27	0.00
7:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	1.13	0.00	5.67	0.00
7:45 AM	0.00	0.00	1.13	1.13	0.00	0.00	0.00	2.27	0.00	1.13	3.40	0.00
8:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	0.00
8:15 AM	0.00	0.00	0.00	1.13	0.00	1.13	0.00	6.81	0.00	1.13	4.54	1.13
8:30 AM	0.00	0.00	0.00	0.00	0.00	1.13	0.00	4.54	1.13	0.00	6.81	0.00
8:45 AM	0.00	0.00	0.00	1.13	0.00	0.00	0.00	3.40	0.00	1.13	4.54	0.00
9:00 AM	0.00	0.00	0.00	0.00	1.13	0.00	0.00	7.94	0.00	0.00	1.13	0.00
9:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	1.13	4.54	1.13
9:30 AM	0.00	0.00	0.00	1.13	0.00	0.00	0.00	1.13	0.00	0.00	5.67	1.13
9:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.13	1.13	0.00	1.13	0.00
2:00 PM	0.00	0.00	0.00	0.00	0.00	1.11	1.11	3.33	1.11	0.00	0.00	0.00
2:15 PM	1.11	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	5.54	0.00
2:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.65	0.00	1.11	1.11	0.00
2:45 PM	0.00	0.00	0.00	1.11	0.00	0.00	0.00	8.87	0.00	0.00	3.33	0.00
3:00 PM	1.11	0.00	0.00	0.00	0.00	0.00	1.11	2.22	0.00	0.00	2.22	1.11
3:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	3.33	0.00
3:30 PM	1.11	0.00	0.00	1.11	0.00	0.00	0.00	4.44	0.00	0.00	3.33	0.00
3:45 PM	0.00	0.00	0.00	0.00	0.00	1.11	0.00	2.22	0.00	1.11	6.65	0.00
4:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.76	1.11	0.00	0.00	0.00
4:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.44	0.00	0.00	1.11	0.00
4:30 PM	0.00	0.00	0.00	1.11	0.00	1.11	0.00	3.33	0.00	0.00	2.22	0.00
4:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	3.33	0.00
5:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.65	0.00
5:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	2.22	0.00
5:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	1.11	0.00
5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	0.00	0.00

AM Peak Hour	0	0	0	1	0	0	0	11	2	1	10	0	26
PM Peak Hour	0	0	0	1	0	1	0	11	0	0	13	0	27

Study Name US52 at SR 132/Sycamore Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Truck

	Sycamore Street Eastbound			SR 132 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	1.13	0.00	0.00	0.00	0.00	1.13	0.00	3.40	1.13	0.00	1.13	1.13
6:15 AM	0.00	0.00	1.13	1.13	0.00	0.00	0.00	0.00	0.00	0.00	1.13	0.00
6:30 AM	0.00	0.00	0.00	0.00	0.00	1.13	0.00	4.54	0.00	0.00	1.13	0.00
6:45 AM	0.00	0.00	0.00	0.00	0.00	1.13	0.00	1.13	0.00	2.27	1.13	0.00
7:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	1.13	4.54	0.00	0.00	2.27	0.00
7:15 AM	0.00	0.00	0.00	1.13	0.00	1.13	0.00	2.27	1.13	0.00	2.27	0.00
7:30 AM	0.00	0.00	0.00	3.40	0.00	3.40	0.00	0.00	0.00	0.00	4.54	1.13
7:45 AM	0.00	0.00	0.00	2.27	0.00	0.00	0.00	1.13	0.00	1.13	3.40	0.00
8:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.27	1.13
8:15 AM	1.13	0.00	0.00	0.00	0.00	2.27	0.00	4.54	1.13	1.13	3.40	0.00
8:30 AM	0.00	0.00	0.00	0.00	0.00	1.13	0.00	3.40	2.27	0.00	6.81	0.00
8:45 AM	0.00	0.00	0.00	1.13	0.00	0.00	0.00	2.27	0.00	0.00	4.54	0.00
9:00 AM	0.00	0.00	0.00	0.00	1.13	1.13	0.00	5.67	0.00	0.00	1.13	0.00
9:15 AM	0.00	0.00	0.00	0.00	2.27	0.00	0.00	1.13	0.00	0.00	4.54	0.00
9:30 AM	0.00	0.00	0.00	2.27	1.13	0.00	0.00	1.13	0.00	1.13	5.67	0.00
9:45 AM	0.00	0.00	0.00	1.13	0.00	1.13	0.00	1.13	0.00	0.00	1.13	0.00
2:00 PM	1.11	0.00	0.00	0.00	0.00	2.22	0.00	4.44	2.22	0.00	0.00	0.00
2:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	2.22	1.11	4.44	0.00
2:30 PM	0.00	0.00	0.00	1.11	0.00	1.11	0.00	5.54	1.11	0.00	2.22	0.00
2:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	1.11	8.87	1.11	0.00	2.22	0.00
3:00 PM	0.00	0.00	0.00	0.00	0.00	2.22	0.00	2.22	0.00	0.00	3.33	1.11
3:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	4.44	0.00
3:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.44	1.11	1.11	2.22	0.00
3:45 PM	0.00	0.00	0.00	0.00	1.11	1.11	0.00	2.22	2.22	1.11	5.54	0.00
4:00 PM	1.11	0.00	0.00	0.00	0.00	0.00	0.00	7.76	0.00	0.00	0.00	0.00
4:15 PM	0.00	0.00	0.00	1.11	1.11	0.00	0.00	5.54	0.00	0.00	1.11	0.00
4:30 PM	0.00	0.00	0.00	1.11	0.00	0.00	0.00	2.22	1.11	1.11	1.11	0.00
4:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	2.22	0.00	3.33	0.00
5:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.11	0.00	5.54	0.00
5:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	2.22	0.00
5:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	2.22	0.00
5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00	0.00	0.00

AM Peak Hour	0.00	0.00	0.00	4.54	0.00	5.67	1.13	7.94	1.13	2.27	10.21	1.13	34
PM Peak Hour	0.00	0.00	0.00	1.11	0.00	0.00	0.00	8.87	4.44	1.11	12.20	0.00	28

Study Name **US52 at Walnut and Short Hill** AM 8.75%

Start Date **04/13/2021 COVID ADJUSTED** PM -1.80%

Truck

	Walnut Street Eastbound			Short Hill Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	0.00	1.09	0.00	0.00	0.00	0.00	4.35	0.00	0.00	1.09	0.00
6:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	0.00
6:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	0.00	0.00	1.09	0.00
6:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	0.00	0.00
7:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	2.18	0.00
7:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.53	0.00	0.00	3.26	0.00
7:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	7.61	0.00
7:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	5.44	0.00
8:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.00
8:15 AM	0.00	0.00	1.09	0.00	0.00	0.00	0.00	3.26	0.00	0.00	3.26	0.00
8:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.53	0.00	0.00	7.61	0.00
8:45 AM	1.09	0.00	0.00	0.00	0.00	0.00	0.00	3.26	0.00	0.00	4.35	0.00
9:00 AM	0.00	0.00	0.00	1.09	0.00	0.00	0.00	4.35	0.00	0.00	2.18	0.00
9:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	3.26	0.00
9:30 AM	0.00	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00	8.70	0.00
9:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	2.18	0.00
2:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	0.00	0.00
2:15 PM	0.00	0.98	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	3.93	0.00
2:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	3.93	0.00
2:45 PM	0.00	0.00	0.00	0.98	0.00	0.00	0.00	9.82	0.00	0.00	1.96	0.00
3:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	2.95	0.00
3:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	2.95	0.98
3:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	2.95	0.00
3:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	3.93	0.00
4:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	0.00	0.00
4:15 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	1.96	0.00
4:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.98	0.00
4:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	3.93	0.00
5:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	5.89	0.00
5:15 PM	0.00	0.00	0.00	0.98	0.00	0.00	0.00	1.96	0.00	0.00	1.96	0.00
5:30 PM	0.00	0.00	0.98	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.98	0.00
5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00

AM Peak Hour	0	0	0	0	0	0	0	13.05	0	0	13.05	0	26
PM Peak Hour	0	0	0	0.982	0	0	0	9.82	0	0	12.766	0	24

Study Name US 52 at Augusta Street and Bethel/New Richr

Start Date 04/13/2021 COVID ADJUSTED AM 8.75%

Trucks PM -1.80%

	Augusta Street Eastbound			Bethel New Richmond Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	1.09	0.00
6:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	0.00
6:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	1.09	0.00
6:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.26	0.00	1.09	0.00	0.00
7:00 AM	0.00	0.00	0.00	0.00	0.00	2.18	0.00	4.35	0.00	0.00	2.18	0.00
7:15 AM	1.09	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	4.35	0.00
7:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.53	0.00
7:45 AM	0.00	1.09	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	6.53	0.00
8:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	1.09
8:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	2.18	0.00
8:30 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.53	0.00	2.18	6.53	0.00
8:45 AM	0.00	0.00	0.00	0.00	0.00	1.09	0.00	2.18	0.00	0.00	5.44	0.00
9:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	2.18	0.00
9:15 AM	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	1.09	0.00	3.26	0.00
9:30 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	7.61	0.00
9:45 AM	0.00	0.00	0.00	1.09	0.00	0.00	0.00	1.09	0.00	1.09	1.09	0.00
2:00 PM	0.00	0.00	0.98	0.00	0.00	0.98	0.00	2.95	0.98	0.00	0.00	0.00
2:15 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	1.96	0.00	0.98	2.95	0.00
2:30 PM	0.98	0.00	0.00	0.00	0.98	1.96	0.00	1.96	0.00	0.00	0.98	0.00
2:45 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	6.87	0.00	0.00	3.93	0.00
3:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.98	1.96	0.00
3:15 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	2.95	0.00	0.00	2.95	0.00
3:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	1.96	0.00
3:45 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	4.91	0.00	3.93	0.98	0.00
4:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	0.00	0.00
4:15 PM	0.00	0.00	0.00	0.98	0.00	0.98	0.00	5.89	0.00	0.00	1.96	0.00
4:30 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.98	0.00
4:45 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	3.93	0.00	0.00	2.95	0.98
5:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	2.95	3.93	0.00
5:15 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.98	0.00	0.00	2.95	0.00
5:30 PM	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.98	0.00	0.00	0.98	0.00
5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00

AM Peak Hour	1.09	0.00	0.00	0.00	0.00	2.18	0.00	11.96	0.00	1.09	13.05	0.00	29
PM Peak Hour	0.00	0.00	0.00	0.00	0.00	1.96	0.00	7.86	0.00	2.95	10.80	0.98	25

Study Name **US52 at Adamson Street** AM 8.75%

Start Date **04/13/2021 COVID ADJUSTED** PM -1.80%

Trucks

	US52 Southbound			Adamson Street Westbound			US52 Northbound			Adamson Street Eastbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	1.09	0.00	0.00	0.00	0.00	0.00	3.26	0.00	0.00	0.00	0.00
6:15 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:30 AM	0.00	1.09	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.00	0.00
6:45 AM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.00	0.00
7:00 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	5.44	0.00	0.00	0.00	0.00
7:15 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00
7:30 AM	0.00	7.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7:45 AM	0.00	5.44	0.00	0.00	0.00	0.00	0.00	3.26	0.00	0.00	0.00	0.00
8:00 AM	0.00	1.09	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.00	0.00
8:15 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.00	0.00
8:30 AM	0.00	5.44	0.00	0.00	0.00	0.00	0.00	6.53	0.00	0.00	0.00	0.00
8:45 AM	0.00	4.35	0.00	0.00	0.00	0.00	0.00	2.18	0.00	0.00	0.00	0.00
9:00 AM	0.00	3.26	0.00	0.00	0.00	0.00	0.00	4.35	0.00	0.00	0.00	0.00
9:15 AM	0.00	3.26	0.00	0.00	0.00	1.09	0.00	0.00	0.00	0.00	0.00	0.00
9:30 AM	0.00	7.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9:45 AM	0.00	1.09	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00	0.00	0.00
2:00 PM	0.00	0.98	0.00	0.00	0.00	0.00	0.00	3.93	0.00	0.00	0.98	0.00
2:15 PM	0.00	1.96	0.98	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00
2:30 PM	0.00	0.98	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	0.00	0.00
2:45 PM	0.00	2.95	0.00	0.00	0.00	0.00	0.00	7.86	0.00	0.00	0.00	0.00
3:00 PM	0.00	1.96	0.00	0.00	0.00	0.00	0.00	2.95	0.00	0.00	0.00	0.00
3:15 PM	0.00	2.95	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00
3:30 PM	0.00	1.96	0.00	0.00	0.00	0.00	0.00	3.93	0.00	0.00	0.00	0.00
3:45 PM	0.98	0.98	0.00	0.00	0.00	0.00	0.00	3.93	0.00	0.98	0.00	0.00
4:00 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.91	0.00	0.00	0.00	0.00
4:15 PM	0.00	2.95	0.00	0.00	0.00	0.98	0.00	4.91	0.00	0.00	0.00	0.00
4:30 PM	0.00	0.98	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00
4:45 PM	0.00	2.95	0.00	0.00	0.00	0.00	0.00	3.93	0.00	0.00	0.00	0.00
5:00 PM	0.00	3.93	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00
5:15 PM	0.00	1.96	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
5:30 PM	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.98	0.00	0.00	0.00	0.00
5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96	0.00	0.00	0.00	0.00

AM Peak Hour	0.00	14.14	0.00	0.00	0.00	0.00	0.00	11.96	0.00	0.00	0.00	0.00	26
PM Peak Hour	0.00	9.82	0.00	0.00	0.00	0.00	0.00	8.84	0.00	0.00	0.00	0.00	19

Appendix E

Existing 2021 COVID Adjusted Traffic Counts-Cars

Intersection US 52 at Front Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Car

	Front Street Eastbound			Old US 52 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.40	0.00	0.00	3.40	0.00	10.21	1.13	188.39	12.48	2.27	14.75	0.00
6:15 AM	9.08	0.00	0.00	6.81	1.13	19.29	2.27	163.43	29.51	3.40	23.83	0.00
6:30 AM	4.54	0.00	0.00	9.08	1.13	12.48	1.13	161.16	17.02	3.40	43.13	2.27
6:45 AM	2.27	1.13	0.00	9.08	0.00	17.02	4.54	137.32	13.62	2.27	56.75	0.00
7:00 AM	9.08	0.00	1.13	11.35	0.00	10.21	0.00	178.18	12.48	5.67	39.72	1.13
7:15 AM	6.81	0.00	1.13	22.70	4.54	9.08	0.00	261.03	35.18	2.27	76.04	3.40
7:30 AM	1.13	2.27	0.00	17.02	3.40	19.29	3.40	214.50	34.05	3.40	37.45	4.54
7:45 AM	5.67	1.13	3.40	17.02	4.54	6.81	1.13	120.30	24.97	5.67	43.13	2.27
8:00 AM	5.67	5.67	2.27	13.62	1.13	12.48	1.13	102.14	24.97	7.94	41.99	5.67
8:15 AM	7.94	1.13	3.40	18.16	1.13	17.02	3.40	103.28	17.02	4.54	29.51	4.54
8:30 AM	6.81	1.13	1.13	14.75	1.13	6.81	0.00	98.74	27.24	6.81	29.51	4.54
8:45 AM	9.08	6.81	1.13	21.56	2.27	4.54	4.54	80.58	30.64	3.40	53.34	5.67
9:00 AM	7.94	6.81	1.13	20.43	10.21	12.48	1.13	80.58	23.83	17.02	30.64	2.27
9:15 AM	4.54	1.13	0.00	21.56	5.67	7.94	1.13	93.06	27.24	9.08	37.45	2.27
9:30 AM	9.08	3.40	0.00	20.43	4.54	12.48	0.00	68.09	19.29	6.81	39.72	3.40
9:45 AM	9.08	3.40	1.13	26.10	3.40	4.54	0.00	85.12	19.29	7.94	34.05	4.54
2:00 PM	7.76	3.33	2.22	24.39	9.98	5.54	2.22	73.18	21.07	14.41	76.51	9.98
2:15 PM	9.98	4.44	1.11	19.96	6.65	8.87	3.33	77.62	46.57	8.87	75.40	12.20
2:30 PM	1.11	4.44	3.33	31.05	6.65	6.65	0.00	103.12	36.59	9.98	99.79	9.98
2:45 PM	5.54	9.98	1.11	34.37	7.76	9.98	1.11	55.44	32.16	14.41	98.68	8.87
3:00 PM	4.44	6.65	2.22	37.70	9.98	11.09	1.11	73.18	17.74	14.41	108.66	12.20
3:15 PM	4.44	4.44	2.22	29.94	5.54	6.65	0.00	67.64	32.16	13.31	139.71	7.76
3:30 PM	2.22	7.76	2.22	35.48	7.76	6.65	0.00	90.92	19.96	14.41	161.88	22.18
3:45 PM	17.74	7.76	4.44	45.46	9.98	4.44	2.22	65.42	39.92	14.41	140.82	14.41
4:00 PM	8.87	6.65	3.33	29.94	9.98	8.87	1.11	66.53	32.16	14.41	137.49	8.87
4:15 PM	7.76	6.65	1.11	37.70	8.87	9.98	1.11	84.27	29.94	16.63	162.99	16.63
4:30 PM	5.54	6.65	6.65	37.70	13.31	6.65	1.11	74.29	26.61	11.09	170.76	13.31
4:45 PM	3.33	7.76	1.11	48.79	8.87	6.65	2.22	69.85	35.48	13.31	182.95	16.63
5:00 PM	5.54	3.33	1.11	46.57	6.65	2.22	0.00	74.29	23.28	16.63	187.39	18.85
5:15 PM	4.44	6.65	0.00	39.92	3.33	6.65	0.00	68.75	33.26	21.07	178.52	15.52
5:30 PM	12.20	6.65	2.22	51.00	5.54	6.65	2.22	67.64	25.50	8.87	165.21	12.20
5:45 PM	4.44	5.54	0.00	34.37	6.65	2.22	0.00	59.88	41.03	15.52	143.04	13.31

AM Peak Hour	19	3	2	60	8	56	8	791	95	14	210	9	1276
PM Peak Hour	22	24	10	171	38	26	4	303	115	58	704	65	1540

Study Name US52 at SR 132/Sycamore Street AM 13.49%

Start Date 04/13/2021 COVID ADJUSTED PM 10.88%

Car

	Sycamore Street Eastbound			SR 132 Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.40	5.67	0.00	2.27	0.00	38.59	0.00	163.43	22.70	1.13	14.75	1.13
6:15 AM	4.54	6.81	1.13	3.40	1.13	38.59	2.27	146.40	14.75	3.40	27.24	0.00
6:30 AM	3.40	4.54	2.27	7.94	0.00	30.64	3.40	141.86	15.89	7.94	44.26	1.13
6:45 AM	0.00	2.27	0.00	10.21	0.00	34.05	1.13	125.97	21.56	10.21	52.21	2.27
7:00 AM	7.94	2.27	2.27	12.48	0.00	32.91	1.13	153.21	14.75	3.40	46.53	2.27
7:15 AM	10.21	3.40	6.81	18.16	4.54	55.61	7.94	241.73	31.78	12.48	78.31	3.40
7:30 AM	7.94	3.40	3.40	14.75	5.67	37.45	1.13	189.53	23.83	7.94	46.53	3.40
7:45 AM	5.67	2.27	2.27	7.94	7.94	28.37	3.40	112.36	18.16	13.62	41.99	4.54
8:00 AM	5.67	5.67	0.00	4.54	4.54	28.37	1.13	90.79	9.08	7.94	47.67	2.27
8:15 AM	6.81	9.08	0.00	5.67	9.08	26.10	1.13	91.93	19.29	10.21	43.13	1.13
8:30 AM	10.21	6.81	3.40	3.40	5.67	22.70	4.54	89.66	13.62	6.81	31.78	3.40
8:45 AM	3.40	2.27	0.00	2.27	6.81	21.56	3.40	94.20	12.48	14.75	60.15	5.67
9:00 AM	9.08	4.54	2.27	11.35	9.08	12.48	3.40	79.44	15.89	7.94	35.18	4.54
9:15 AM	6.81	7.94	2.27	15.89	6.81	23.83	0.00	89.66	18.16	11.35	45.40	4.54
9:30 AM	5.67	1.13	3.40	6.81	5.67	12.48	4.54	66.96	15.89	10.21	43.13	6.81
9:45 AM	4.54	6.81	5.67	9.08	3.40	30.64	6.81	74.90	20.43	10.21	41.99	6.81
2:00 PM	8.87	15.52	8.87	14.41	4.44	19.96	4.44	66.53	8.87	16.63	72.07	7.76
2:15 PM	8.87	7.76	7.76	12.20	8.87	15.52	6.65	111.99	15.52	15.52	75.40	7.76
2:30 PM	14.41	12.20	8.87	11.09	3.33	18.85	5.54	93.14	16.63	24.39	95.36	12.20
2:45 PM	7.76	7.76	5.54	18.85	21.07	26.61	2.22	55.44	16.63	26.61	94.25	11.09
3:00 PM	6.65	4.44	8.87	13.31	7.76	18.85	3.33	68.75	13.31	22.18	99.79	14.41
3:15 PM	8.87	15.52	3.33	11.09	8.87	14.41	7.76	74.29	13.31	31.05	133.06	16.63
3:30 PM	2.22	8.87	18.85	13.31	7.76	11.09	8.87	92.03	11.09	36.59	140.82	23.28
3:45 PM	7.76	7.76	8.87	15.52	11.09	26.61	4.44	78.72	15.52	36.59	138.60	13.31
4:00 PM	7.76	14.41	5.54	19.96	6.65	27.72	11.09	72.07	12.20	16.63	124.19	21.07
4:15 PM	9.98	5.54	13.31	15.52	7.76	21.07	1.11	79.83	8.87	39.92	146.36	17.74
4:30 PM	8.87	12.20	12.20	24.39	9.98	19.96	2.22	80.94	6.65	45.46	149.69	22.18
4:45 PM	7.76	4.44	2.22	21.07	7.76	11.09	4.44	78.72	11.09	32.16	192.93	14.41
5:00 PM	7.76	22.18	5.54	24.39	15.52	21.07	2.22	65.42	11.09	34.37	184.06	17.74
5:15 PM	6.65	8.87	5.54	16.63	12.20	22.18	4.44	65.42	14.41	34.37	179.63	5.54
5:30 PM	9.98	12.20	8.87	14.41	14.41	22.18	2.22	65.42	13.31	41.03	166.32	14.41
5:45 PM	6.65	11.09	7.76	15.52	8.87	21.07	3.33	70.96	13.31	25.50	140.82	9.98

AM Peak Hour	26.10	11.35	12.48	55.61	10.21	160.02	11.35	710.45	91.93	34.05	223.58	11.35	1309
PM Peak Hour	31.05	47.68	25.50	86.49	45.46	74.29	13.31	290.51	43.24	146.36	706.31	59.88	1466

Study Name **US52 at Walnut and Short Hill**
Start Date **04/13/2021 COVID ADJUSTED**
Car

AM	8.75%
PM	-1.80%

	Walnut Street Eastbound			Short Hill Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.26	1.09	1.09	0.00	1.09	40.24	0.00	128.33	0.00	0.00	17.40	0.00
6:15 AM	3.26	0.00	0.00	1.09	1.09	33.71	0.00	119.63	0.00	0.00	26.10	2.18
6:30 AM	4.35	0.00	0.00	1.09	0.00	35.89	0.00	121.80	1.09	0.00	51.11	0.00
6:45 AM	3.26	2.18	0.00	0.00	0.00	36.98	0.00	102.23	0.00	0.00	56.55	3.26
7:00 AM	2.18	0.00	2.18	0.00	4.35	50.03	0.00	122.89	2.18	0.00	58.73	2.18
7:15 AM	3.26	0.00	5.44	0.00	2.18	98.96	1.09	157.69	0.00	1.09	95.70	0.00
7:30 AM	1.09	0.00	2.18	1.09	2.18	78.30	0.00	117.45	1.09	0.00	61.99	1.09
7:45 AM	2.18	0.00	0.00	0.00	1.09	35.89	1.09	85.91	0.00	0.00	47.85	2.18
8:00 AM	4.35	0.00	2.18	1.09	2.18	29.36	2.18	64.16	0.00	0.00	46.76	4.35
8:15 AM	2.18	1.09	0.00	0.00	2.18	31.54	0.00	80.48	0.00	0.00	44.59	2.18
8:30 AM	1.09	0.00	1.09	0.00	1.09	30.45	0.00	75.04	2.18	0.00	36.98	0.00
8:45 AM	1.09	1.09	1.09	0.00	3.26	32.63	0.00	66.34	1.09	0.00	53.29	2.18
9:00 AM	6.53	0.00	0.00	0.00	2.18	23.93	0.00	66.34	1.09	1.09	51.11	0.00
9:15 AM	6.53	0.00	1.09	2.18	3.26	23.93	3.26	70.69	0.00	0.00	58.73	1.09
9:30 AM	4.35	0.00	2.18	0.00	4.35	23.93	0.00	54.38	0.00	1.09	47.85	4.35
9:45 AM	7.61	1.09	0.00	0.00	1.09	19.58	0.00	73.95	0.00	0.00	51.11	1.09
2:00 PM	3.93	0.00	1.96	0.98	0.98	0.00	1.96	71.69	0.00	0.98	78.56	3.93
2:15 PM	2.95	0.00	0.98	0.98	1.96	0.98	4.91	109.98	0.00	0.00	77.58	2.95
2:30 PM	2.95	0.98	3.93	0.98	3.93	2.95	0.98	99.18	0.00	0.98	102.13	3.93
2:45 PM	7.86	0.00	2.95	0.98	5.89	17.68	0.98	40.26	0.00	1.96	101.15	3.93
3:00 PM	2.95	0.98	1.96	0.98	5.89	22.59	2.95	49.10	0.00	0.98	106.06	1.96
3:15 PM	5.89	1.96	2.95	0.98	1.96	18.66	0.00	58.92	0.98	0.00	123.73	8.84
3:30 PM	6.87	0.00	2.95	0.00	2.95	23.57	0.98	69.72	0.00	0.98	141.41	2.95
3:45 PM	1.96	0.00	1.96	0.00	1.96	25.53	0.00	61.87	0.00	0.98	145.34	3.93
4:00 PM	3.93	1.96	2.95	3.93	3.93	23.57	0.98	51.06	0.00	0.00	119.80	7.86
4:15 PM	3.93	0.00	0.98	1.96	1.96	19.64	0.00	54.99	0.00	0.98	150.25	3.93
4:30 PM	1.96	1.96	1.96	2.95	2.95	26.51	1.96	54.01	0.00	0.00	166.94	1.96
4:45 PM	7.86	0.98	2.95	2.95	1.96	28.48	0.98	49.10	0.00	0.98	175.78	7.86
5:00 PM	2.95	0.98	0.00	0.00	0.98	12.77	2.95	56.96	0.98	3.93	179.71	3.93
5:15 PM	7.86	0.00	1.96	1.96	3.93	20.62	0.98	50.08	0.00	0.98	177.74	3.93
5:30 PM	2.95	0.00	0.98	1.96	3.93	19.64	1.96	46.15	0.00	0.98	162.03	3.93
5:45 PM	4.91	1.96	0.00	0.98	6.87	22.59	0.00	54.01	0.00	1.96	141.41	4.91

AM Peak Hour	9.7875	2.175	9.7875	1.0875	8.7	264.26	1.0875	500.25	3.2625	1.0875	272.96	6.525	1081
PM Peak Hour	20.622	3.928	6.874	7.856	9.82	88.38	6.874	210.15	0.982	5.892	700.17	17.676	1079

Study Name US 52 at Augusta Street and Bethel/New Richr

Start Date 04/13/2021 COVID ADJUSTED AM 8.75%

Cars PM -1.80%

	Augusta Street Eastbound			Bethel New Richmond Road Westbound			US52 Northbound			US52 Southbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	3.26	1.09	1.09	0.00	0.00	3.26	0.00	113.10	1.09	5.44	8.70	2.18
6:15 AM	3.26	2.18	0.00	1.09	1.09	3.26	0.00	118.54	3.26	8.70	18.49	1.09
6:30 AM	6.53	0.00	0.00	0.00	1.09	4.35	2.18	106.58	3.26	17.40	33.71	3.26
6:45 AM	4.35	0.00	0.00	3.26	1.09	3.26	0.00	93.53	9.79	31.54	20.66	0.00
7:00 AM	6.53	1.09	0.00	0.00	1.09	2.18	0.00	115.28	16.31	39.15	20.66	0.00
7:15 AM	4.35	6.53	0.00	7.61	2.18	14.14	1.09	148.99	22.84	73.95	20.66	1.09
7:30 AM	1.09	4.35	1.09	10.88	5.44	4.35	0.00	115.28	10.88	33.71	38.06	0.00
7:45 AM	3.26	1.09	0.00	0.00	1.09	8.70	1.09	75.04	6.53	25.01	22.84	1.09
8:00 AM	4.35	1.09	1.09	1.09	1.09	2.18	1.09	56.55	2.18	14.14	31.54	2.18
8:15 AM	3.26	1.09	3.26	0.00	3.26	0.00	0.00	77.21	2.18	18.49	28.28	2.18
8:30 AM	1.09	0.00	0.00	0.00	1.09	3.26	0.00	76.13	0.00	16.31	19.58	0.00
8:45 AM	8.70	0.00	0.00	0.00	1.09	2.18	1.09	54.38	3.26	14.14	31.54	3.26
9:00 AM	3.26	1.09	0.00	0.00	1.09	3.26	0.00	59.81	3.26	19.58	31.54	4.35
9:15 AM	3.26	5.44	2.18	1.09	1.09	4.35	0.00	69.60	11.96	28.28	29.36	1.09
9:30 AM	3.26	5.44	0.00	0.00	2.18	4.35	1.09	45.68	2.18	15.23	33.71	4.35
9:45 AM	3.26	2.18	3.26	1.09	0.00	3.26	0.00	65.25	1.09	18.49	26.10	3.26
2:00 PM	8.84	4.91	4.91	0.98	1.96	23.57	0.00	42.23	16.69	26.51	52.05	2.95
2:15 PM	5.89	5.89	0.00	9.82	8.84	74.63	1.96	43.21	4.91	29.46	50.08	3.93
2:30 PM	4.91	7.86	2.95	12.77	8.84	50.08	0.98	39.28	1.96	29.46	71.69	3.93
2:45 PM	3.93	7.86	4.91	0.98	3.93	2.95	1.96	34.37	1.96	29.46	74.63	1.96
3:00 PM	4.91	2.95	5.89	2.95	4.91	6.87	0.00	39.28	3.93	34.37	69.72	5.89
3:15 PM	1.96	4.91	2.95	5.89	0.00	4.91	3.93	55.97	2.95	27.50	85.43	5.89
3:30 PM	1.96	6.87	2.95	0.00	4.91	5.89	0.98	62.85	5.89	47.14	95.25	8.84
3:45 PM	2.95	5.89	3.93	3.93	1.96	4.91	2.95	53.03	4.91	31.42	110.97	3.93
4:00 PM	2.95	8.84	0.98	0.98	2.95	3.93	1.96	47.14	2.95	37.32	91.33	2.95
4:15 PM	3.93	9.82	3.93	3.93	2.95	5.89	1.96	48.12	4.91	42.23	108.02	2.95
4:30 PM	1.96	12.77	1.96	5.89	5.89	4.91	0.98	48.12	4.91	49.10	110.97	6.87
4:45 PM	3.93	5.89	2.95	2.95	2.95	2.95	3.93	42.23	0.98	47.14	131.59	4.91
5:00 PM	4.91	3.93	0.98	1.96	1.96	8.84	4.91	50.08	4.91	51.06	126.68	2.95
5:15 PM	2.95	7.86	0.98	0.98	3.93	2.95	1.96	44.19	1.96	49.10	119.80	7.86
5:30 PM	2.95	4.91	3.93	6.87	6.87	1.96	2.95	44.19	0.98	50.08	115.88	5.89
5:45 PM	5.89	8.84	1.96	2.95	4.91	3.93	2.95	44.19	2.95	37.32	98.20	4.91

AM Peak Hour	16.31	11.96	1.09	21.75	9.79	23.93	1.09	473.06	59.81	178.35	100.05	1.09	898
PM Peak Hour	13.75	30.44	6.87	11.78	14.73	19.64	11.78	184.62	12.77	196.40	489.04	22.59	1014

Study Name **US52 at Adamson Street** AM 8.75%

Start Date **04/13/2021 COVID ADJUSTED** PM -1.80%

Cars

	US52 Southbound			Adamson Street Westbound			US52 Northbound			Adamson Street Eastbound		
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 AM	0.00	9.79	0.00	0.00	0.00	0.00	1.09	128.33	0.00	0.00	0.00	0.00
6:15 AM	0.00	19.58	0.00	0.00	0.00	1.09	0.00	105.49	0.00	0.00	0.00	0.00
6:30 AM	0.00	33.71	0.00	0.00	0.00	1.09	0.00	116.36	0.00	0.00	0.00	0.00
6:45 AM	0.00	23.93	0.00	2.18	0.00	1.09	1.09	101.14	0.00	1.09	0.00	0.00
7:00 AM	0.00	19.58	0.00	0.00	0.00	1.09	1.09	135.94	0.00	0.00	0.00	0.00
7:15 AM	0.00	32.63	0.00	0.00	0.00	0.00	0.00	169.65	0.00	0.00	0.00	1.09
7:30 AM	1.09	45.68	1.09	0.00	0.00	1.09	0.00	125.06	0.00	1.09	0.00	1.09
7:45 AM	0.00	20.66	1.09	0.00	0.00	1.09	1.09	77.21	0.00	3.26	0.00	0.00
8:00 AM	1.09	32.63	1.09	0.00	0.00	3.26	1.09	59.81	0.00	0.00	0.00	0.00
8:15 AM	0.00	30.45	0.00	1.09	0.00	0.00	2.18	76.13	0.00	0.00	0.00	1.09
8:30 AM	2.18	17.40	0.00	1.09	0.00	1.09	1.09	76.13	0.00	0.00	0.00	1.09
8:45 AM	1.09	33.71	0.00	0.00	0.00	1.09	1.09	59.81	0.00	0.00	0.00	0.00
9:00 AM	0.00	30.45	0.00	0.00	0.00	0.00	2.18	64.16	0.00	1.09	1.09	0.00
9:15 AM	0.00	32.63	0.00	0.00	0.00	1.09	5.44	75.04	0.00	0.00	0.00	1.09
9:30 AM	0.00	32.63	1.09	0.00	1.09	1.09	0.00	51.11	0.00	0.00	1.09	2.18
9:45 AM	0.00	31.54	0.00	1.09	0.00	1.09	2.18	61.99	0.00	0.00	0.00	0.00
2:00 PM	2.95	52.05	0.98	0.00	0.98	0.00	0.98	55.97	0.00	0.98	0.00	1.96
2:15 PM	0.00	58.92	0.98	0.00	0.00	0.98	0.98	50.08	0.00	0.00	0.98	1.96
2:30 PM	0.98	88.38	0.98	1.96	0.00	0.00	0.98	42.23	0.00	0.00	0.00	5.89
2:45 PM	0.98	80.52	0.00	1.96	0.00	0.98	0.98	38.30	0.98	0.00	0.98	0.98
3:00 PM	0.00	75.61	0.98	0.98	0.00	0.98	0.00	39.28	0.98	0.98	3.93	3.93
3:15 PM	0.00	94.27	0.98	0.00	0.98	0.00	0.98	59.90	0.98	0.98	0.00	2.95
3:30 PM	0.98	97.22	0.00	0.00	0.00	1.96	1.96	69.72	0.00	0.00	0.00	4.91
3:45 PM	0.00	116.86	1.96	0.98	0.00	0.98	0.00	57.94	0.98	0.98	0.00	3.93
4:00 PM	0.98	88.38	0.98	0.00	0.00	1.96	0.00	50.08	0.00	0.00	0.98	4.91
4:15 PM	2.95	111.95	1.96	0.98	0.98	0.00	0.00	53.03	0.00	0.98	0.00	2.95
4:30 PM	0.98	121.77	0.98	0.00	0.98	0.00	0.98	53.03	0.00	0.98	0.98	2.95
4:45 PM	0.00	130.61	2.95	0.00	0.98	0.98	1.96	48.12	0.98	0.00	0.00	1.96
5:00 PM	2.95	123.73	2.95	0.00	0.00	0.00	1.96	55.97	0.00	2.95	0.98	6.87
5:15 PM	0.00	127.66	0.00	0.00	0.98	2.95	1.96	42.23	0.98	0.98	1.96	6.87
5:30 PM	5.89	115.88	0.00	0.00	0.00	2.95	0.00	47.14	0.98	0.98	0.00	1.96
5:45 PM	1.96	100.16	2.95	0.98	0.00	0.98	0.00	46.15	0.00	0.00	0.98	1.96

AM Peak Hour	1.09	121.80	1.09	2.18	0.00	3.26	2.18	531.79	0.00	2.18	0.00	2.18	668
PM Peak Hour	3.93	503.77	6.87	0.00	2.95	3.93	6.87	199.35	1.96	4.91	3.93	18.66	757

Seasonal Factors

Intersection	Count Date	East Leg		North Leg		West Leg		South Leg	
		FC	Seasonal Factor	FC	Seasonal Factor	FC	Seasonal Factor	FC	Seasonal Factor
Front Street at US-52	4/13/2021	7	0.88	3	0.937	7	0.88	3	0.937
Sycamore Street at US-52	4/13/2021	5	0.88	3	0.937	7	0.88	3	0.937
Walnut Street at US-52	4/13/2021	7	0.88	3	0.937	7	0.88	3	0.937
Augusta Street at US-52	4/13/2021	5	0.88	3	0.937	7	0.88	3	0.937
Adamson Street at US-52	4/13/2021	7	0.88	3	0.937	7	0.88	3	0.937

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 4/13/2021 3 Tuesday April

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Front Street at US-52
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	US-52	*FC* =	3	northbound			APROACH	DEPART					
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	39.78	3321.3	876	4237.08	3770.85	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	74.866	6250.69	1648.63	7974.18	7046.8	70	6250	1650	7970	7050
SEASONAL FACTOR	0.937	0.937	0.937	70.1494	5856.89	1544.77	7471.81	6509.27	***70***	***5860***	***1540***	***7470***	***6510***

WEST LEG	Front St.	FC =	7	eastbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	209.67	133	47.87	390.54	478.15	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	382.95	242.916	87.4317	713.298	890.162	380	240	90	710	890
SEASONAL F	0.880	0.880	0.880	336.996	213.766	76.9399	627.702	815.877	***340***	***210***	***80***	***630***	***810***

NORTH LEG	US-52	FC =	3	southbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	323	2871.96	263.5	3458.46	3829.25	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	607.886	5405.03	495.907	6508.82	7178.43	610	5410	500	6520	7170
SEASONAL F	0.937	0.937	0.937	569.589	5064.51	464.665	6098.77	6673.3	***570***	***5060***	***460***	***6090***	***6680***

EAST LEG	Front St.	FC =	7	westbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	851.02	174.87	298.28	1324.17	1332	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	1554.34	319.389	544.79	2418.52	2499.43	1550	320	540	2410	2500
SEASONAL F	0.880	0.880	0.880	1367.82	281.063	479.416	2128.29	2328.12	***1370***	***280***	***480***	***2130***	***2320***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Front Street at US-52
PARTIAL COUNT * FACTOR = 24 HR B&C

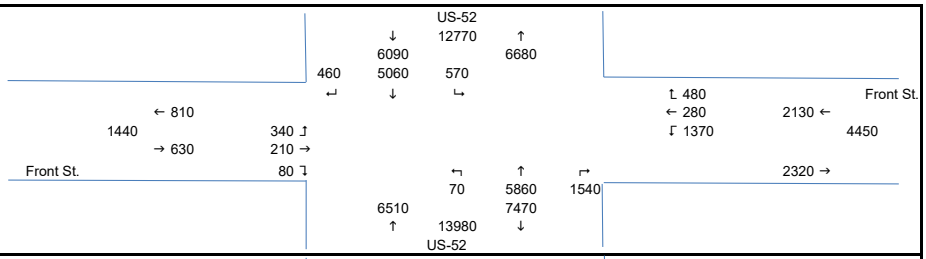
SOUTH LEG	US-52	*FC* =	3	northbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	2	109	9	119.92	102.15	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	4.6287	226.64	18.765	250.033	210.354	0	230	20	250	210
SEASONAL FACTOR	0.937	0.937	0.937	4.33709	212.361	17.5828	234.281	196.05	***0***	***210***	***20***	***230***	***190***

WEST LEG	Front St.	FC =	7	eastbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	3	0	1	4.46	7.85	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	6.07725	0	2.06225	8.1395	16.0735	10	0	0	10	10
SEASONAL FACTOR	0.880	0.880	0.880	5.34798	0	1.81478	7.16276	10.6062	***10***	***0***	***0***	***10***	***10***

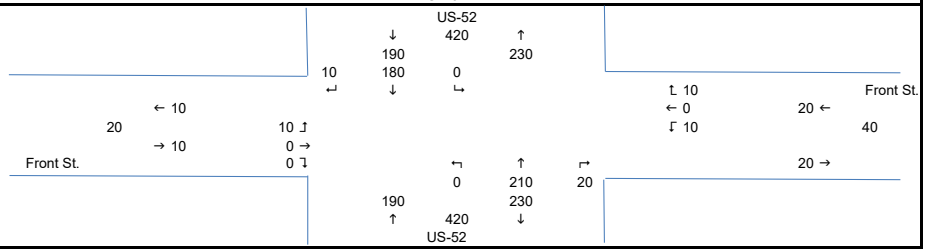
NORTH LEG	US-52	FC =	3	southbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	0	92	5	96.54	118.75	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	191.903	9.3825	201.286	244.981	0	190	10	200	250
SEASONAL FACTOR	0.937	0.937	0.937	0	179.813	8.7914	188.605	228.502	***0***	***180***	***10***	***190***	***230***

EAST LEG	Front St.	FC =	7	westbound			APROACH	DEPART					
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**		**APROACH**	**DEPART**
	LT	THRU	RT	9	1	7	16.83	9	**LT**	**THRU**	**RT**	**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	16.3885	2.06225	12.264	30.7148	18.765	20	0	10	30	20
SEASONAL FACTOR	0.880	0.880	0.880	14.4219	1.81478	10.7923	27.029	17.5828	***10***	***0***	***10***	***20***	***20***

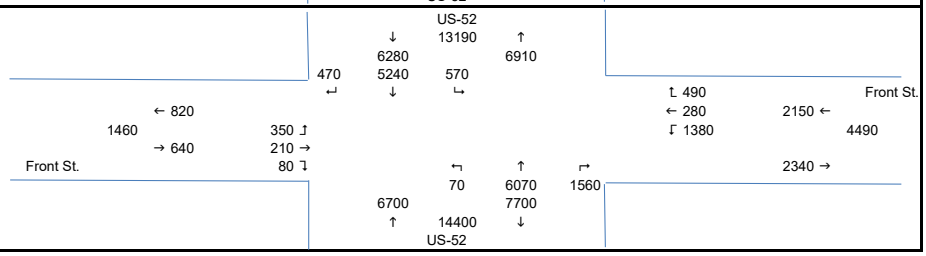
P&A 24 HR



B&C 24 HR



TOTAL AADT



For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 4/13/2021 3 Tuesday April

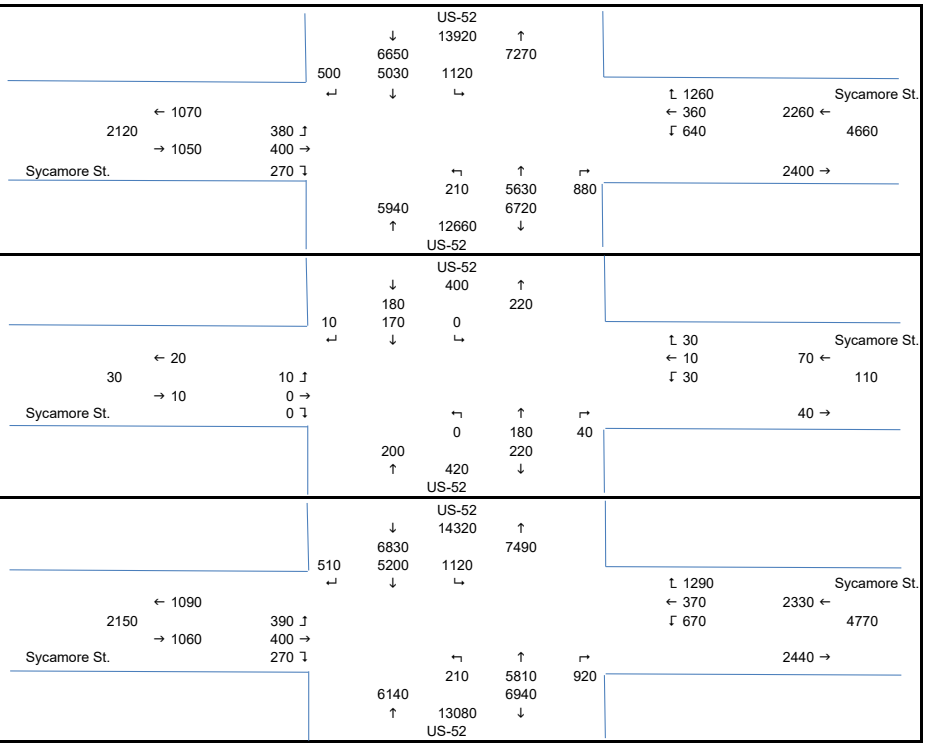
PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Sycamore St. at US-52
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	117	3195	499	3810.71	3426.65	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	219.742	6013.07	938.949	7171.76	6403.22	220	6010	940		7170	6400
SEASONAL FACTOR	0.937	0.937	0.937	205.899	5634.24	879.795	6719.94	5941.05	***210***	***5630***	***880***		***6720***	***5940***
WEST LEG	Sycamore S	FC =	7		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	235	249	167	650.39	628.51	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	428.337	454.783	304.778	1187.9	1162.31	430	450	300		1180	1160
SEASONAL F	0.880	0.880	0.880	376.936	400.209	268.205	1045.35	1065.77	***380***	***400***	***270***		***1050***	***1070***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	633	2855	284	3771.07	4231.32	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	1191.31	5372.3	533.547	7097.15	7878.16	1190	5370	530		7090	7880
SEASONAL F	0.937	0.937	0.937	1116.25	5033.85	499.934	6650.03	7275.52	***1120***	***5030***	***500***		***6650***	***7270***
EAST LEG	Sycamore S	FC =	5		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	405	228	802	1435.22	1380.91	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.792	1.792	1.792	726.136	409.024	1436.75	2571.91	2585.04	730	410	1440		2580	2580
SEASONAL F	0.880	0.880	0.880	639	359.941	1264.34	2263.28	2396.26	***640***	***360***	***1260***		***2260***	***2400***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Sycamore St. at US-52
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	2	94	20	116.29	103.35	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	4.6704	195.907	41.8877	242.465	210.801	0	200	40		240	210
SEASONAL FACTOR	0.937	0.937	0.937	4.37616	183.564	39.2487	227.189	195.777	***0***	***180***	***40***		***220***	***200***
WEST LEG	Sycamore S	FC =	7		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	4	0	1	5.61	13.49	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	8.176	0	2.06225	10.2383	26.2502	10	0	0		10	20
SEASONAL FACTOR	0.880	0.880	0.880	7.19488	0	1.81478	9.00966	19.525	***10***	***0***	***0***		***10***	***20***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	86	5	90.93	118.68	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	180.207	9.3825	189.589	240.656	0	180	10		190	250
SEASONAL FACTOR	0.937	0.937	0.937	0	168.854	8.7914	177.645	222.944	***0***	***170***	***10***		***180***	***220***
EAST LEG	Sycamore S	FC =	5		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	16	7	20	42.78	20.09	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.807	1.807	1.807	28.5325	12.1973	36.5737	77.3035	41.8877	30	10	40		80	40
SEASONAL FACTOR	0.880	0.880	0.880	25.1086	10.7336	32.1848	68.027	39.2487	***30***	***10***	***30***		***70***	***40***

P&A 24 HR



B&C 24 HR

TOTAL AADT

For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 4/13/2021 3 Tuesday April

PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Walnut St. at US-52

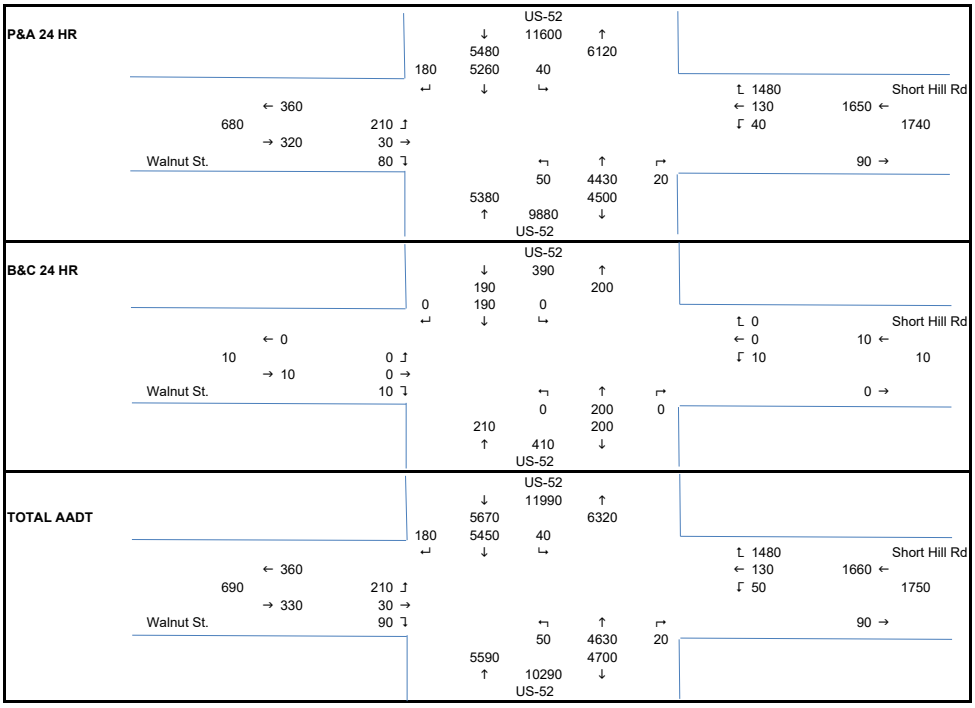
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	US-52	FC =	3	northbound			APROACH	DEPART							
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			APROACH	DEPART
	LT	THRU	RT	30	2510.68	10	2550.68	3054.75	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	56.46	4725.1	18.82	4800.38	5745	60	4730	20		4810	5750
SEASONAL FACTOR	0.937	0.937	0.937	52.903	4427.42	17.6343	4497.96	5375.5	***50***	***4430***	***20***		***4500***	***5380***
WEST LEG	Walnut St.	FC =	7	eastbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			APROACH	DEPART
	LT	THRU	RT	130.91	17.02	46.84	194.77	213.02	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	239.099	31.086	85.5504	355.736	396.292	240	30	90		360	400
SEASONAL F	0.880	0.880	0.880	210.407	27.3557	75.2844	313.047	362.685	***210***	***30***	***80***		***320***	***360***
NORTH LEG	US-52	FC =	3	southbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			APROACH	DEPART
	LT	THRU	RT	20	2982.05	100.02	3102.07	3560.59	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	37.64	5612.22	188.238	5838.1	6642.7	40	5610	190		5840	6650
SEASONAL F	0.937	0.937	0.937	35.2687	5258.65	176.379	5470.3	6114.9	***40***	***5260***	***180***		***5480***	***6120***
EAST LEG	Short Hill R	FC =	7	westbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			APROACH	DEPART
	LT	THRU	RT	25.86	83	919	1027.86	47.02	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	47.2317	151.594	1678.5	1877.32	87.546	50	150	1680		1880	90
SEASONAL F	0.880	0.880	0.880	41.5639	133.403	1477.08	1652.05	80.2587	***40***	***130***	***1480***		***1650***	***90***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Walnut St. at US-52

PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	US-52	FC =	3	northbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			APROACH	DEPART
	LT	THRU	RT	0	102	0	102.32	103.25	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	213.337	0	213.337	213.378	0	210	0		210	220
SEASONAL FACTOR	0.937	0.937	0.937	0	199.897	0	199.897	199.176	***0***	***200***	***0***		***200***	***210***
WEST LEG	Walnut St.	FC =	7	eastbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			APROACH	DEPART
	LT	THRU	RT	1	1	3	5.23	0.98	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	1.98925	1.7885	5.767	9.54475	2.0433	0	0	10		10	0
SEASONAL FACTOR	0.880	0.880	0.880	1.75054	1.57388	5.07496	8.39938	1.91457	***0***	***0***	***10***		***10***	***0***
NORTH LEG	US-52	FC =	3	southbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			APROACH	DEPART
	LT	THRU	RT	0	96	1	96.93	103.41	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	200.056	2.0433	202.099	215.326	0	200	0		200	210
SEASONAL FACTOR	0.937	0.937	0.937	0	187.452	1.91457	189.367	201.647	***0***	***190***	***0***		***190***	***200***
EAST LEG	Short Hill R	FC =	7	westbound			APROACH	DEPART							
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			APROACH	DEPART
	LT	THRU	RT	4	0	0	4.14	0.98	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	7.5555	0	0	7.5555	1.7885	10	0	0		10	0
SEASONAL FACTOR	0.880	0.880	0.880	6.64884	0	0	6.64884	1.57388	***10***	***0***	***0***		***10***	***0***



For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

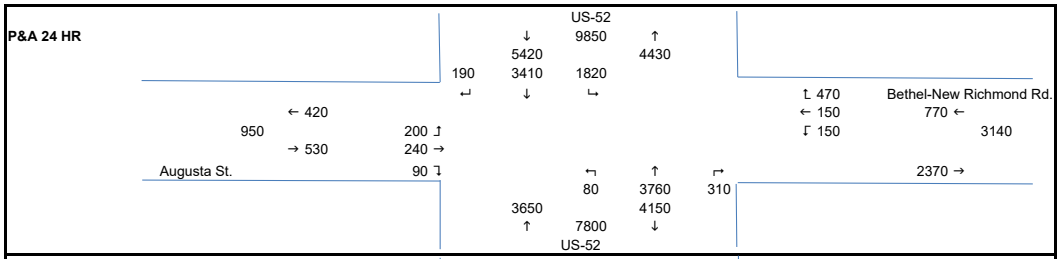
Date of Count: 4/13/2021 3 Tuesday April

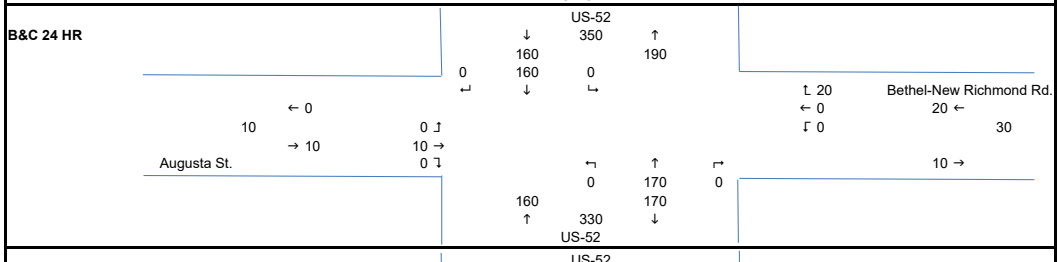
PART 1: INPUT PARTIAL DAY P&A VEHICLES — ROUTE: Augusta St. at US-52
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

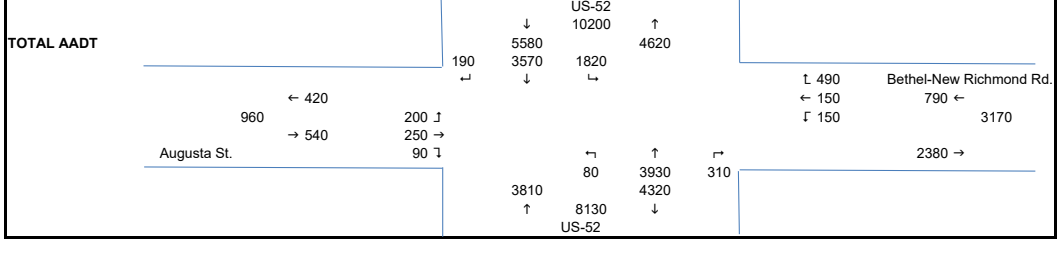
SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	43	2131	174	2347.66	2089.08	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	80.926	4010.03	327.336	4418.3	3919.65	80	4010	330		4420	3920
SEASONAL FACTOR	0.937	0.937	0.937	75.8277	3757.4	306.714	4139.94	3656.66	***80***	***3760***	***310***		***4150***	***3650***
WEST LEG	Augusta St.	FC =	7		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	127	148	59	333.6	243.95	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	231.83	269.674	107.796	609.3	450.472	230	270	110		610	450
SEASONAL F	0.880	0.880	0.880	204.01	237.313	94.8609	536.184	412.284	***200***	***240***	***90***		***530***	***420***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	1032	1933	105	3070.06	2555.52	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	1942.22	3638.15	197.478	5777.85	4775.63	1940	3640	200		5780	4770
SEASONAL F	0.937	0.937	0.937	1819.86	3408.95	185.037	5413.85	4431.13	***1820***	***3410***	***190***		***5420***	***4430***
EAST LEG	Bethel-New	FC =	5		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	97	96	298	490.81	1353.58	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.792	1.792	1.792	173.699	172.068	533.765	879.532	2539.23	170	170	530		870	2540
SEASONAL F	0.880	0.880	0.880	152.855	151.42	469.713	773.988	2363.89	***150***	***150***	***470***		***770***	***2370***

PART 2: INPUT PARTIAL DAY B&C VEHICLES — ROUTE: Augusta St. at US-52
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	87	2	89.34	86.92	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	181.958	4.31595	186.274	180.398	0	180	0		180	170
SEASONAL FACTOR	0.937	0.937	0.937	0	170.495	4.04405	174.539	168.718	***0***	***170***	***0***		***170***	***160***
WEST LEG	Augusta St.	FC =	7		eastbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	2	4	1	7.4	3.05	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	3.77775	7.93875	1.7885	13.505	6.08681	0	10	0		10	0
SEASONAL FACTOR	0.880	0.880	0.880	3.32442	6.9861	1.57388	11.8844	5.6024	***0***	***10***	***0***		***10***	***0***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	84	2	85.94	104.48	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	174.869	4.31595	179.185	213.094	0	170	0		170	210
SEASONAL FACTOR	0.937	0.937	0.937	0	163.852	4.04405	167.896	197.894	***0***	***160***	***0***		***160***	***190***
EAST LEG	Bethel-New	FC =	5		westbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	2	1	15	18.19	6.42	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.807	1.807	1.807	3.74049	1.77086	27.358	32.8693	12.2547	0	0	30		30	10
SEASONAL FACTOR	0.880	0.880	0.880	3.29163	1.55836	24.075	28.925	11.0301	***0***	***0***	***20***		***20***	***10***







For converting partial day turning movements counts to seasonally adjusted 24 hour (AADT) counts.
Yellow boxes require user input. Scroll down for 24 hour diagrams. Use the Seasonal AdjuistmtFactors_YYYY spreadsheet to lookup seasonal factor.
Use Avg TD by FC.xslx to compute P&A B&C FACTORs.

Date of Count: 4/13/2021 3 Tuesday April

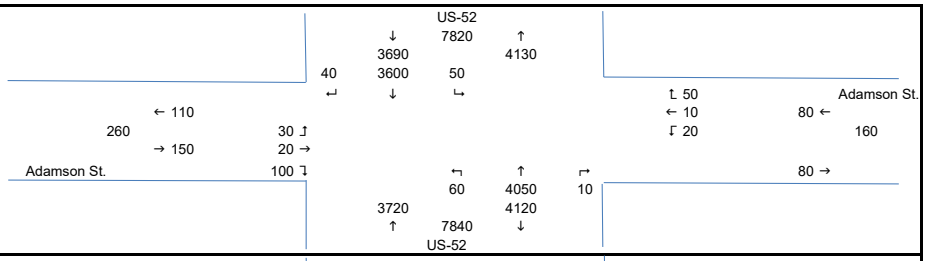
PART 1: INPUT PARTIAL DAY P&A VEHICLES ROUTE Adamson St. at US-52
PARTIAL COUNT * FACTOR * SEASONAL FACTOR = 24 HR P&A

SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
				LT	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	33	2299	8	2339.76	2120.16	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	62.106	4326.27	15.056	4403.43	3985.81	60	4330	20		4410	3980
SEASONAL FACTOR	0.937	0.937	0.937	58.1933	4053.71	14.1075	4126.01	3726.58	***60***	***4050***	***10***		***4120***	***3720***
WEST LEG	Adamson St	FC =	7		eastbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	19	15	65	99.02	65.02	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	34.7023	27.4331	118.719	180.854	121.979	30	30	120		180	120
SEASONAL F	0.880	0.880	0.880	30.5381	24.1411	104.472	159.152	113.565	***30***	***20***	***100***		***150***	***110***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	27	2042	25	2094.2	2348.69	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.882	1.882	1.882	50.8516	3843.35	47.0876	3941.28	4417.46	50	3840	50		3940	4420
SEASONAL F	0.937	0.937	0.937	47.648	3601.21	44.1211	3692.98	4133.96	***50***	***3600***	***40***		***3690***	***4130***
EAST LEG	Adamson St	FC =	7		westbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	13	7	31	50.93	50.04	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
P&A FACTOR	1.826	1.826	1.826	23.7437	12.7851	56.4918	93.0206	93.3408	20	10	60		90	100
SEASONAL F	0.880	0.880	0.880	20.8945	11.2509	49.7128	81.8581	85.8966	***20***	***10***	***50***		***80***	***80***

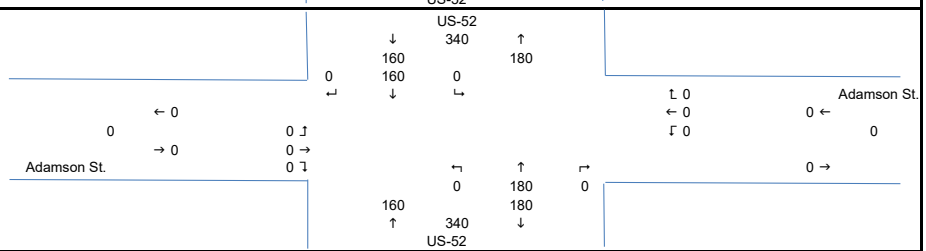
PART 2: INPUT PARTIAL DAY B&C VEHICLES ROUTE Adamson St. at US-52
PARTIAL COUNT * FACTOR = 24 HR B&C

SOUTH LEG	US-52	*FC* =	3		northbound		APROACH	DEPART					APROACH	DEPART
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**SOUTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	90	0	90.24	82.84	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	0	188.15	0	188.15	172.721	0	190	0		190	170
SEASONAL FACTOR	0.937	0.937	0.937	0	176.297	0	176.297	161.84	***0***	***180***	***0***		***180***	***160***
WEST LEG	Adamson St	FC =	7		eastbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**WEST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	1	0	0.98	0.98	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	0	1.7885	0	1.7885	2.0433	0	0	0		0	0
SEASONAL FACTOR	0.880	0.880	0.880	0	1.57388	0	1.57388	1.91457	***0***	***0***	***0***		***0***	***0***
NORTH LEG	US-52	FC =	3		southbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**NORTH LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	1	83	1	84.8	92.31	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	2.085	2.085	2.085	2.0433	172.721	2.0433	176.808	191.928	0	170	0		170	190
SEASONAL FACTOR	0.937	0.937	0.937	1.91457	161.84	1.91457	165.669	179.621	***0***	***160***	***0***		***160***	***180***
EAST LEG	Adamson St	FC =	7		westbound		APROACH	DEPART						
	FACTOR			**LT**	**THRU**	**RT**	TOTAL	TOTAL		**EAST LEG**			**APROACH**	**DEPART**
	LT	THRU	RT	0	0	2	2.07	1.96	**LT**	**THRU**	**RT**		**TOTAL**	**TOTAL**
B&C FACTOR	1.825	1.825	1.825	0	0	3.77775	3.77775	3.8318	0	0	0		0	0
SEASONAL FACTOR	0.880	0.880	0.880	0	0	3.32442	3.32442	3.48845	***0***	***0***	***0***		***0***	***0***

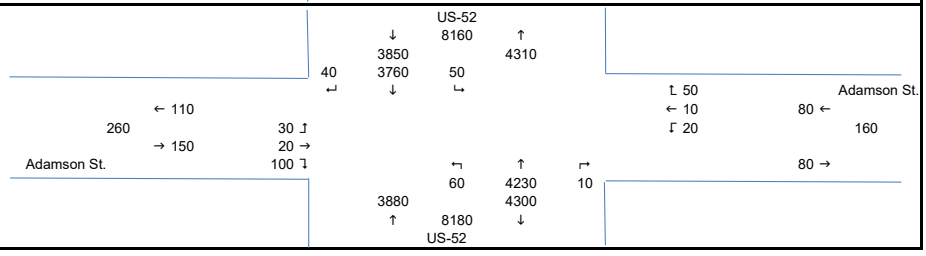
P&A 24 HR



B&C 24 HR



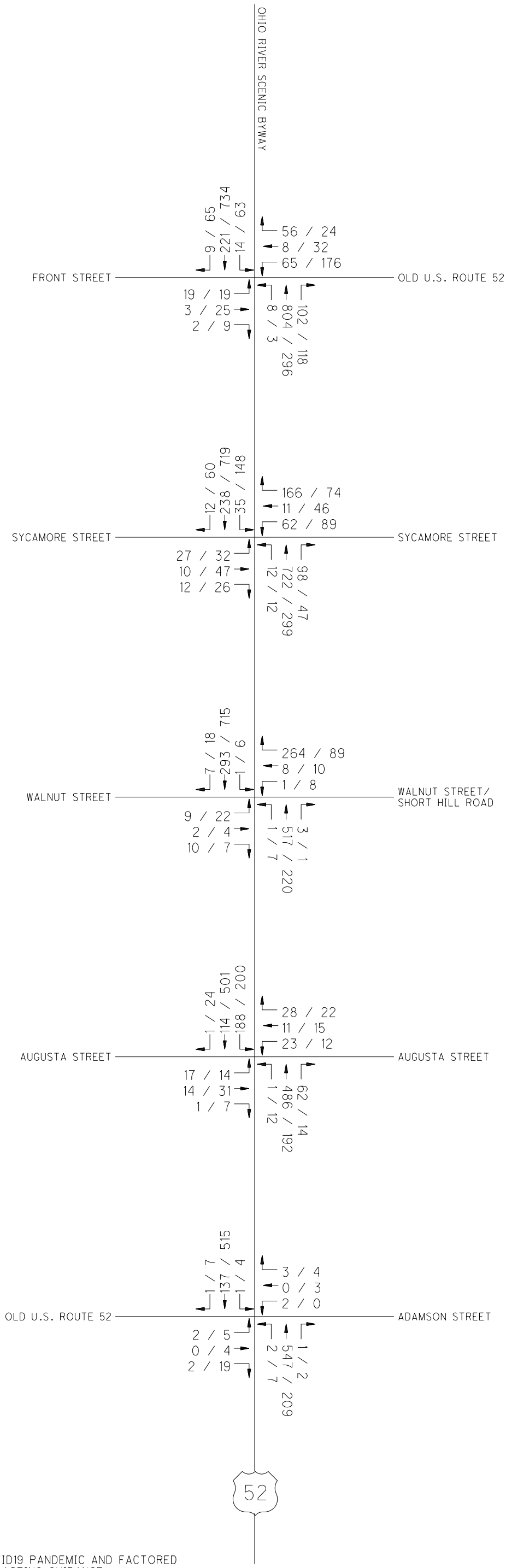
TOTAL AADT



ODOT Design Traffic
CLE-52-4.67

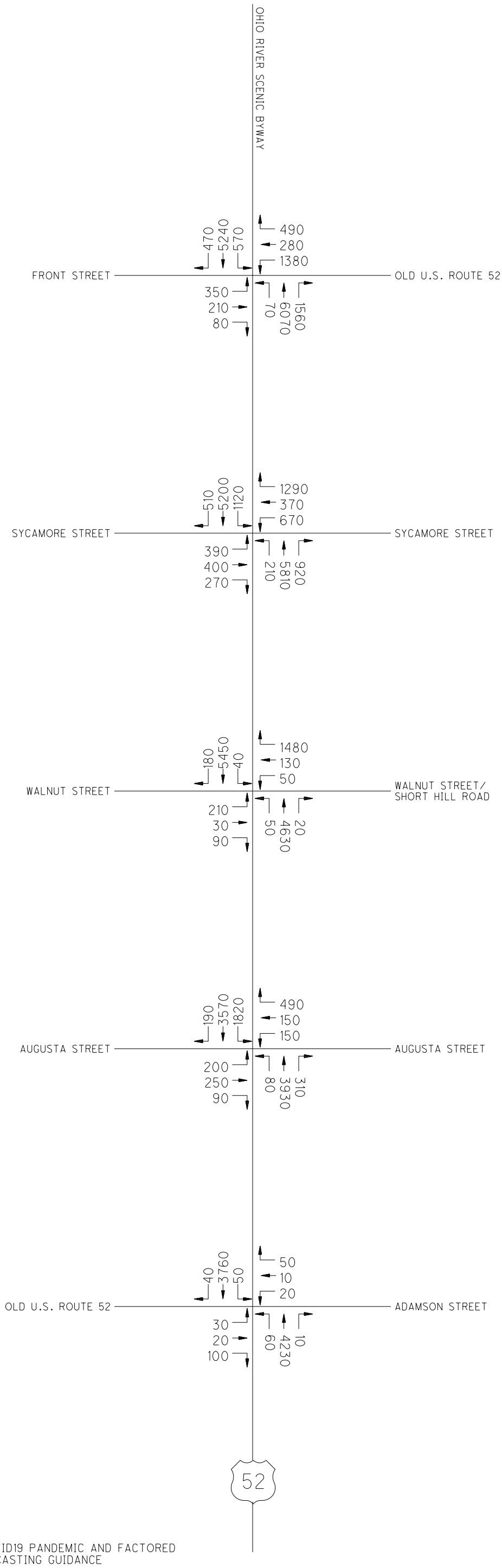
Appendix B

Count Plates



COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

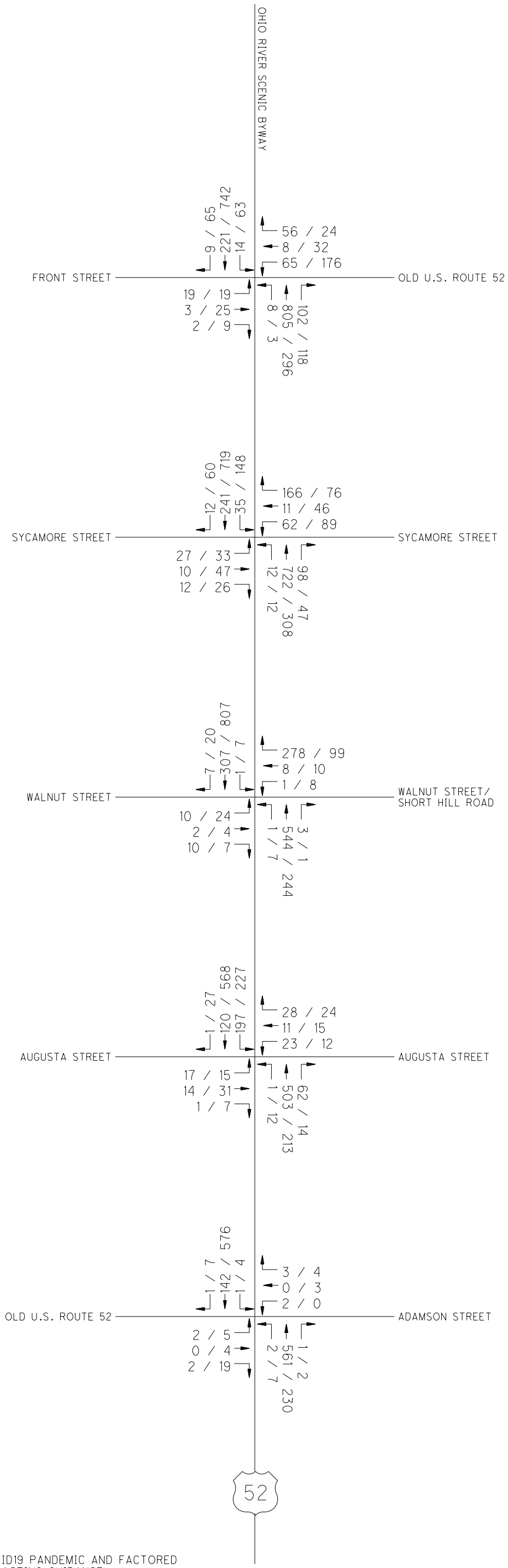
8.5	**PID 114042**	**CLE-52-4.67 COUNTS AM/PM DESIGN HOUR UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

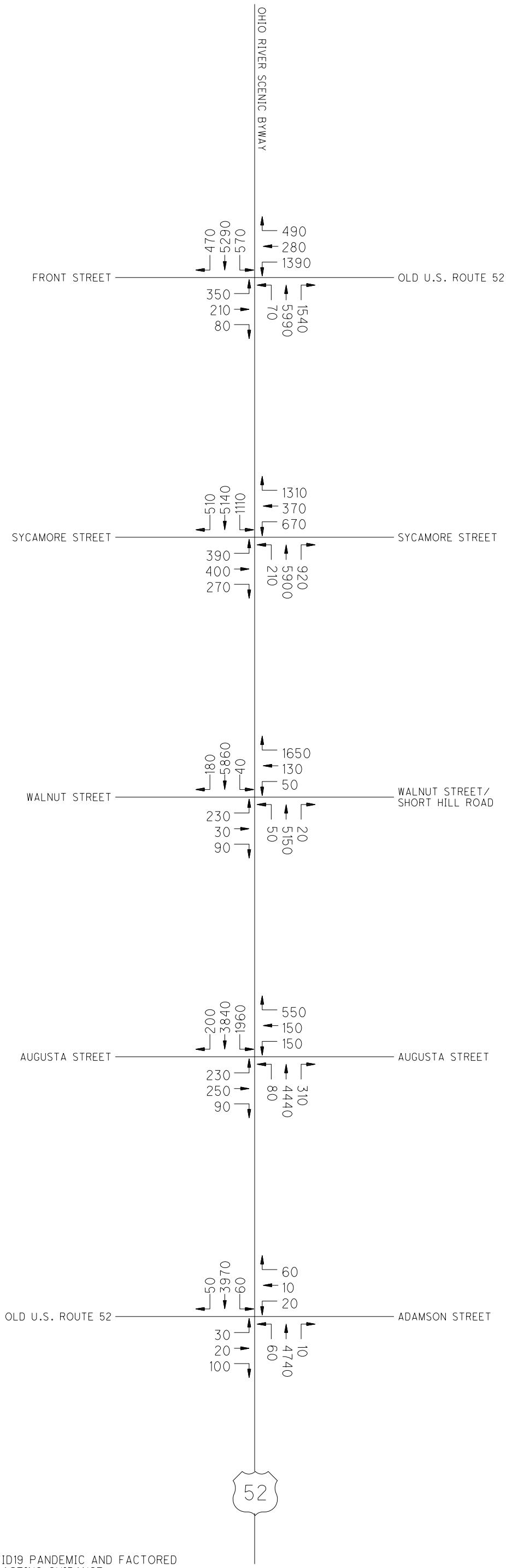
8 · 5	**PID 114042**	**CLE-52-4.67 COUNTS ADT UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 / 8	**PID 114042**	**CLE-52-4.67 COUNTS AM/PM DESIGN HOUR BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 of 8	PID 114042	CLE-52-4.67 COUNTS ADT BALANCED ODOT STATEWIDE PLANNING AND RESEARCH	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE

ODOT Design Traffic
CLE-52-4.67

Appendix C

DHV Factors

K-Factor Estimations

Intersection	Count Date	East Leg			North Leg		West Leg		South Leg	
		FC	Statewide Average DHV	Proxy K-Factor	FC	Statewide Average DHV	FC	Statewide Average DHV	FC	Statewide Average DHV
Front Street at US-52	4/13/2021	7	**1.12**		3	**1.12**	7	**1.12**	3	**1.12**
Sycamore Street at US-52	4/13/2021	5	**1.12**		3	**1.12**	7	**1.12**	3	**1.12**
Walnut Street at US-52	4/13/2021	7	**1.12**		3	**1.12**	7	**1.12**	3	**1.12**
Augusta Street at US-52	4/13/2021	5	**1.12**		3	**1.12**	7	**1.12**	3	**1.12**
Adamson Street at US-52	4/13/2021	7	1.12	**13.39%**	3	**1.12**	7	**1.12**	3	**1.12**

Bold value used in NCHRP sheets

Insufficient data to calculate - value is the nearest FC

ODOT Design Traffic
CLE-52-4.67

Appendix D

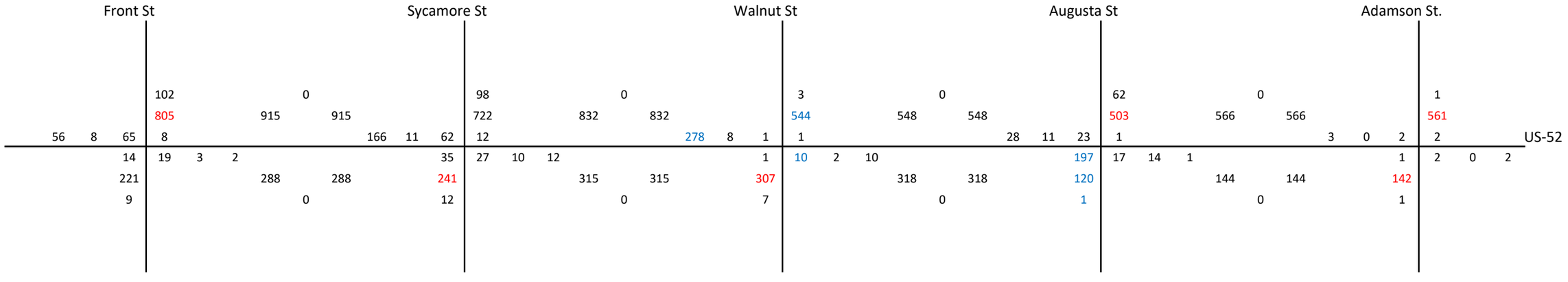
Count, No Build, and Build Balancing

CLE-52-4.67
AM Peak Counts Balancing

2021 Counts

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N

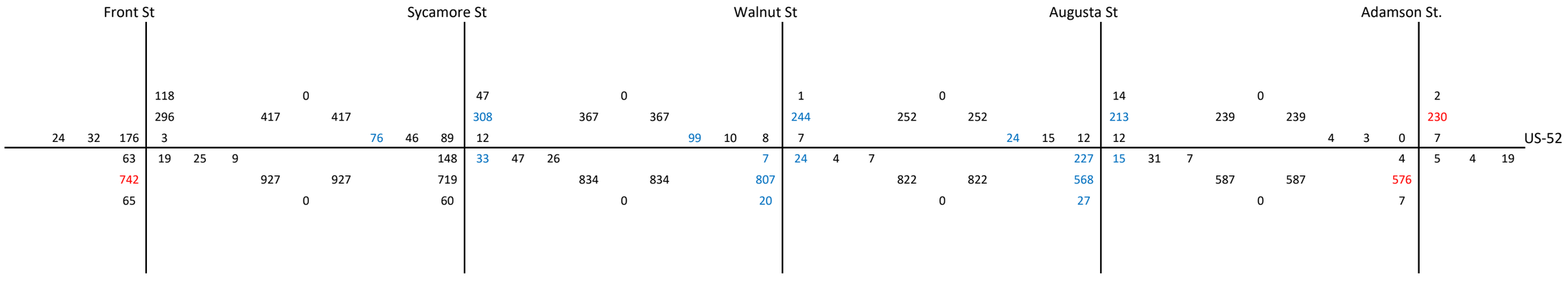


CLE-52-4.67
PM Peak Counts Balancing

2021 Counts

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N

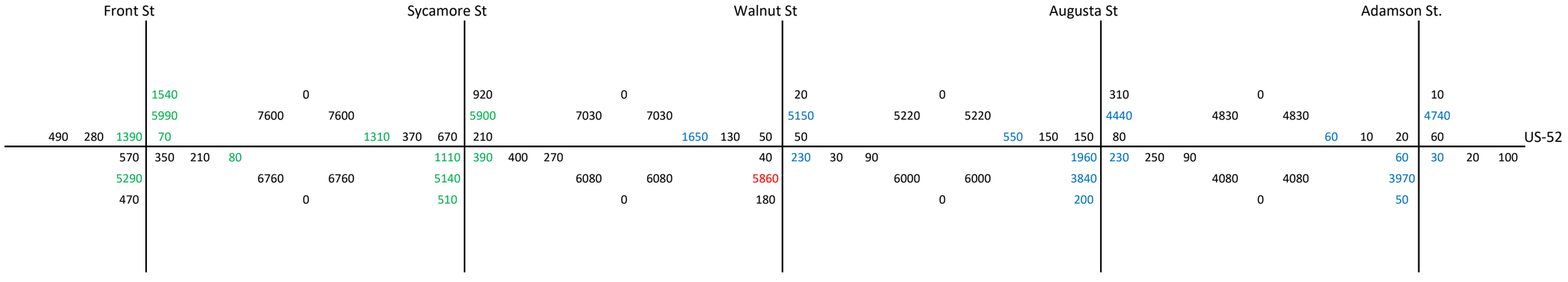


CLE-52-4.67
ADT Counts Balancing

2021 Counts

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

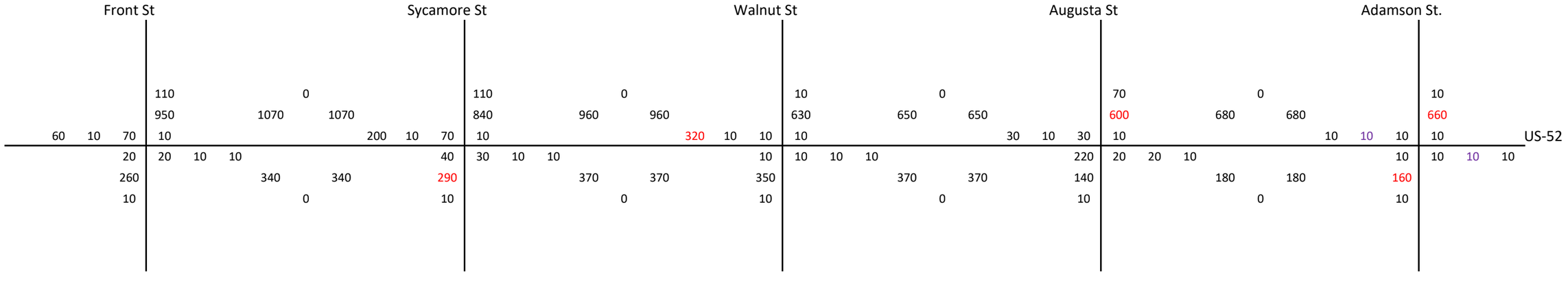
N



CLE-52-4.67
2026 No Build AM Peak Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N



CLE-52-4.67
2026 No Build PM Peak Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N



CLE-52-4.67
2026 No Build ADT Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

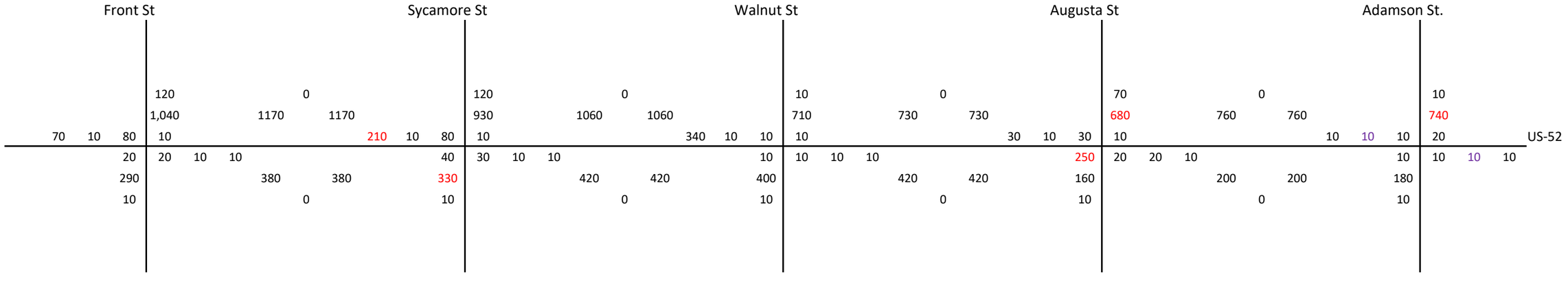
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CLE-52-4.67
2046 No Build AM Peak Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

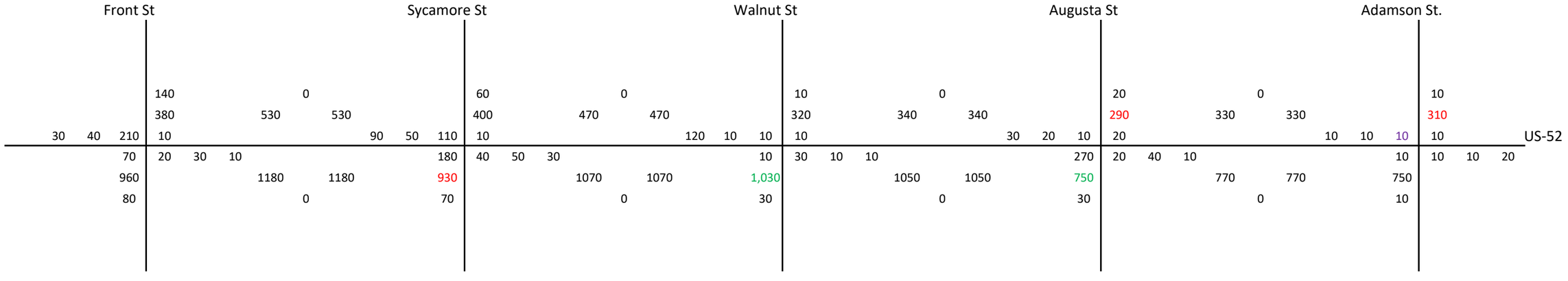
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CLE-52-4.67
2046 No Build PM Peak Balancing

Higher Volume Through
Higher Volume Distributed
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Zero Growth

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CLE-52-4.67
2046 No Build ADT Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth



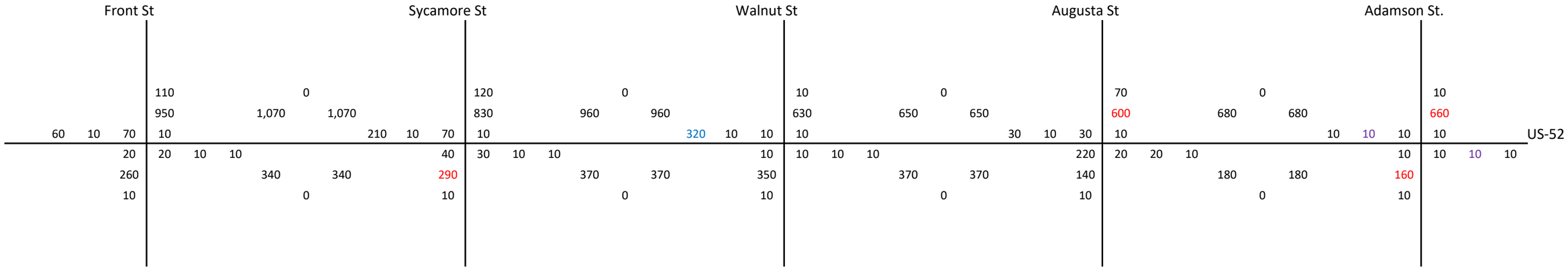
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CLE-52-4.67
2026 Build AM Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N



CLE-52-4.67
2026 Build PM Peak Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

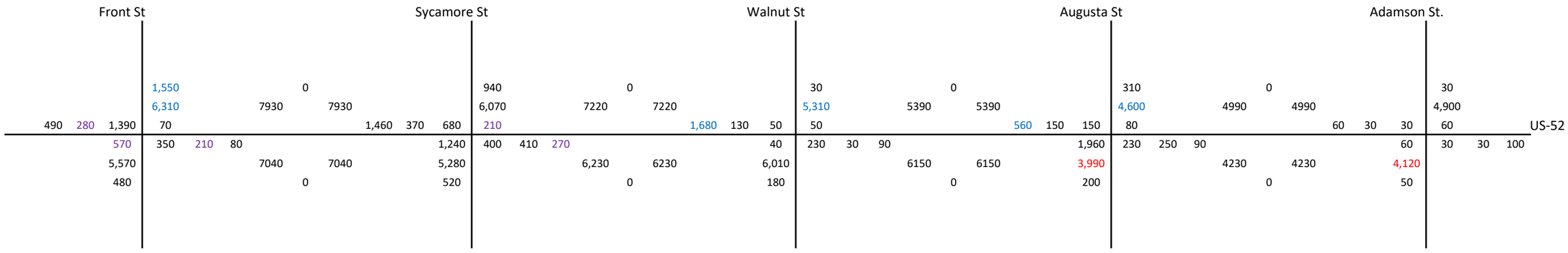
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CLE-52-4.67
2026 Build ADT Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

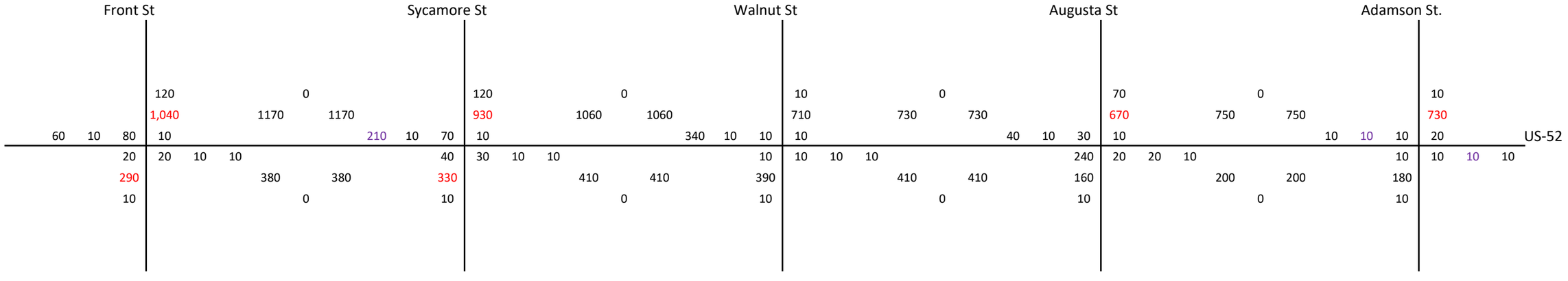
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CLE-52-4.67
2046 Build AM Peak Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

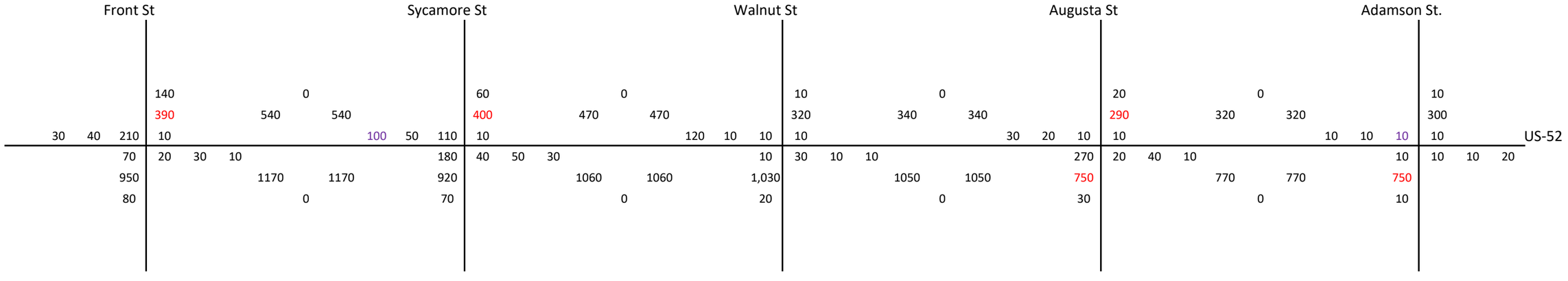
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CLE-52-4.67
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Higher Volume Through
Higher Volume Distributed
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Zero Growth

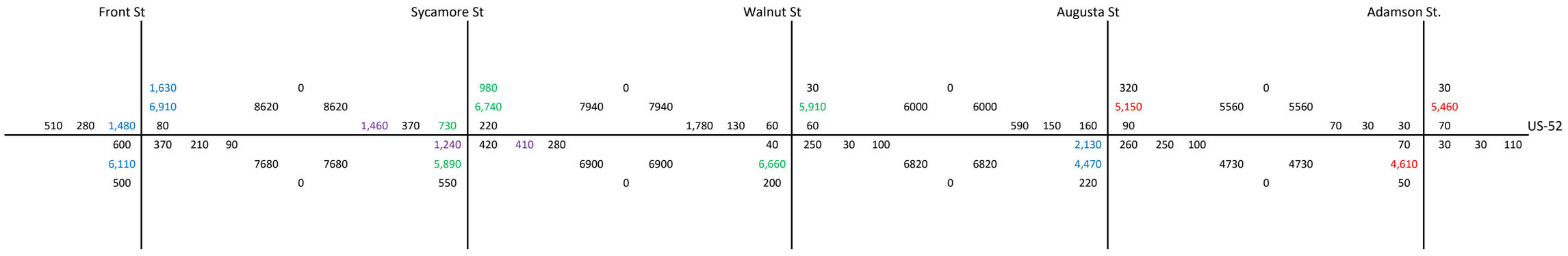
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CLE-52-4.67
2046 Build ADT Balancing

Higher Volume Through
Higher Volume Distributed
Split
Zero Growth

N



ODOT Design Traffic
CLE-52-4.67

Appendix E

Build Truck Calculations

2046 Build Truck Percentages

Front Street	2046 Growth Factor	DHV	2046 AM Truck	2046 PM Truck	2046 ADT Truck	2046 AM Total	2046 PM Total	2046 ADT Total	2046 AM Truck %	2046 PM Truck %	2046 ADT Truck %
East Leg	1.367	1.12	2	3	27	150	280	2,260	1.0%	1.1%	1.2%
North Leg	1.455	1.12	18	21	276	320	1,100	7,200	5.6%	1.9%	3.8%
West Leg	1.367	1.12	0	0	14	40	60	670	0.0%	0.0%	2.0%
South Leg	1.455	1.12	21	18	335	1170	540	8,620	1.8%	3.3%	3.9%

Sycamore Street	2046 Growth Factor	DHV	2046 AM Truck	2046 PM Truck	2046 ADT Truck	2046 AM Total	2046 PM Total	2046 ADT Total	2046 AM Truck %	2046 PM Truck %	2046 ADT Truck %
East Leg	1.4	1.12	17	2	98	290	260	2,550	5.9%	0.6%	3.8%
North Leg	1.47	1.12	21	21	265	380	1,170	7,670	5.6%	1.8%	3.4%
West Leg	1.367	1.12	0	0	14	50	120	1,110	0.0%	0.0%	1.2%
South Leg	1.41	1.12	16	21	310	1,060	470	7,940	1.5%	4.4%	3.9%

Walnut Street	2046 Growth Factor	DHV	2046 AM Truck	2046 PM Truck	2046 ADT Truck	2046 AM Total	2046 PM Total	2046 ADT Total	2046 AM Truck %	2046 PM Truck %	2046 ADT Truck %
East Leg	1.1	1.12	0	1	11	360	140	1,970	0.0%	0.9%	0.6%
North Leg	1.428	1.12	21	21	271	410	1,060	6,900	5.1%	2.0%	3.9%
West Leg	1.1	1.12	0	0	11	30	50	380	0.0%	0.0%	2.9%
South Leg	1.417	1.12	21	16	283	730	340	6,000	2.8%	4.7%	4.7%

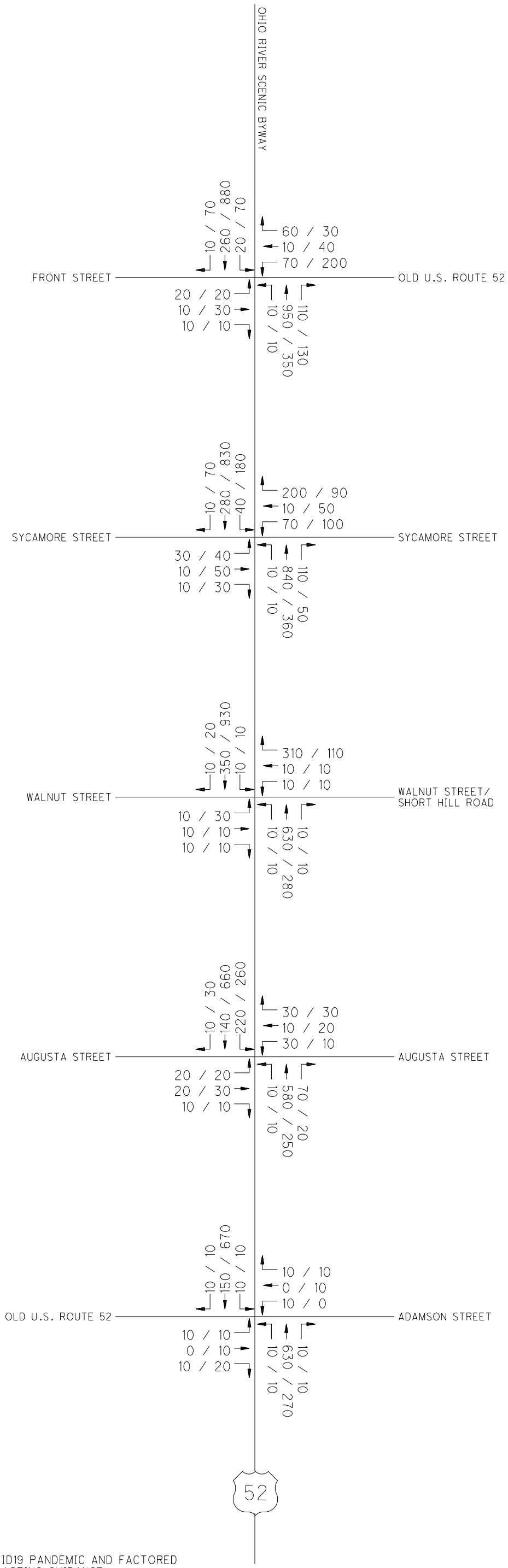
Augusta Street	2046 Growth Factor	DHV	2046 AM Truck	2046 PM Truck	2046 ADT Truck	2046 AM Total	2046 PM Total	2046 ADT Total	2046 AM Truck %	2046 PM Truck %	2046 ADT Truck %
East Leg	1.1	1.12	2	2	22	80	60	900	3.1%	4.1%	2.4%
North Leg	1.463	1.12	23	25	234	410	1,050	6,810	5.6%	2.3%	3.4%
West Leg	1.1	1.12	1	0	11	50	70	610	2.5%	0.0%	1.8%
South Leg	1.464	1.12	20	13	249	750	320	5,560	2.6%	4.1%	4.5%

Adamson Street	2046 Growth Factor	DHV	2046 AM Truck	2046 PM Truck	2046 ADT Truck	2046 AM Total	2046 PM Total	2046 ADT Total	2046 AM Truck %	2046 PM Truck %	2046 ADT Truck %
East Leg	1.1	1.12	0	0	0	30	30	130	0.0%	0.0%	0.0%
North Leg	1.456	1.12	23	16	233	200	770	4,720	11.4%	2.1%	4.9%
West Leg	1.1	1.12	0	0	0	30	40	170	0.0%	0.0%	0.0%
South Leg	1.456	1.12	20	15	262	760	320	5,560	2.6%	4.6%	4.7%

ODOT Design Traffic
CLE-52-4.67

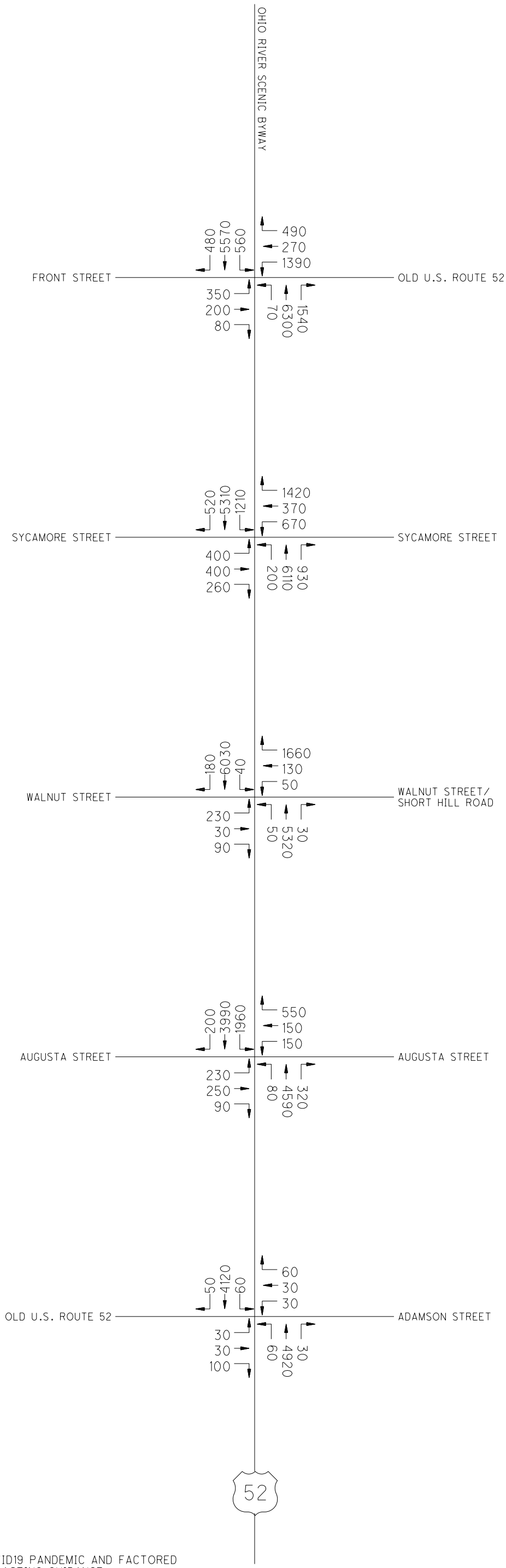
Appendix F

Unbalanced Traffic Plates



COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8 / 5	**PID 114042**	**CLE-52-4.67 2026 NO BUILD AM/PM DESIGN HOUR UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8.5

PID 114042

CLE-52-4.67 2026 NO BUILD ADT UNBALANCED
ODOT STATEWIDE PLANNING AND RESEARCH

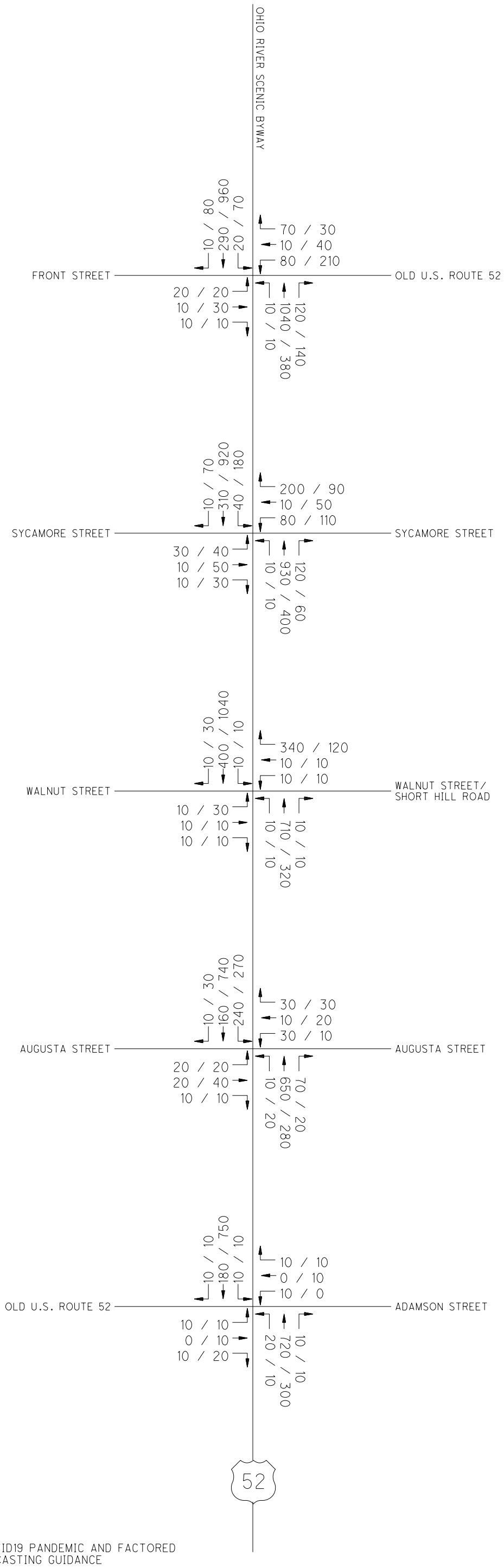
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DATE 04/07/20

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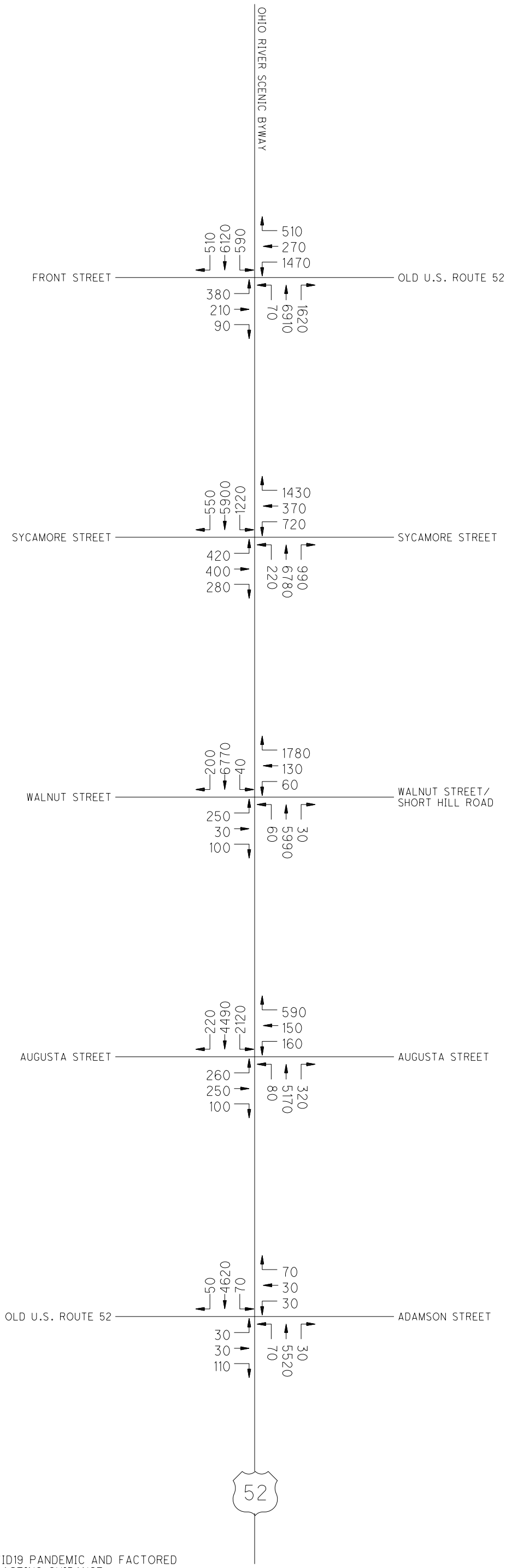
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COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8 / 5	**PID 114042**	**CLE-52-4.67 2046 NO BUILD AM/PM DESIGN HOUR UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8.5

PID 114042

CLE-52-4.67 2046 NO BUILD ADT UNBALANCED
ODOT STATEWIDE PLANNING AND RESEARCH

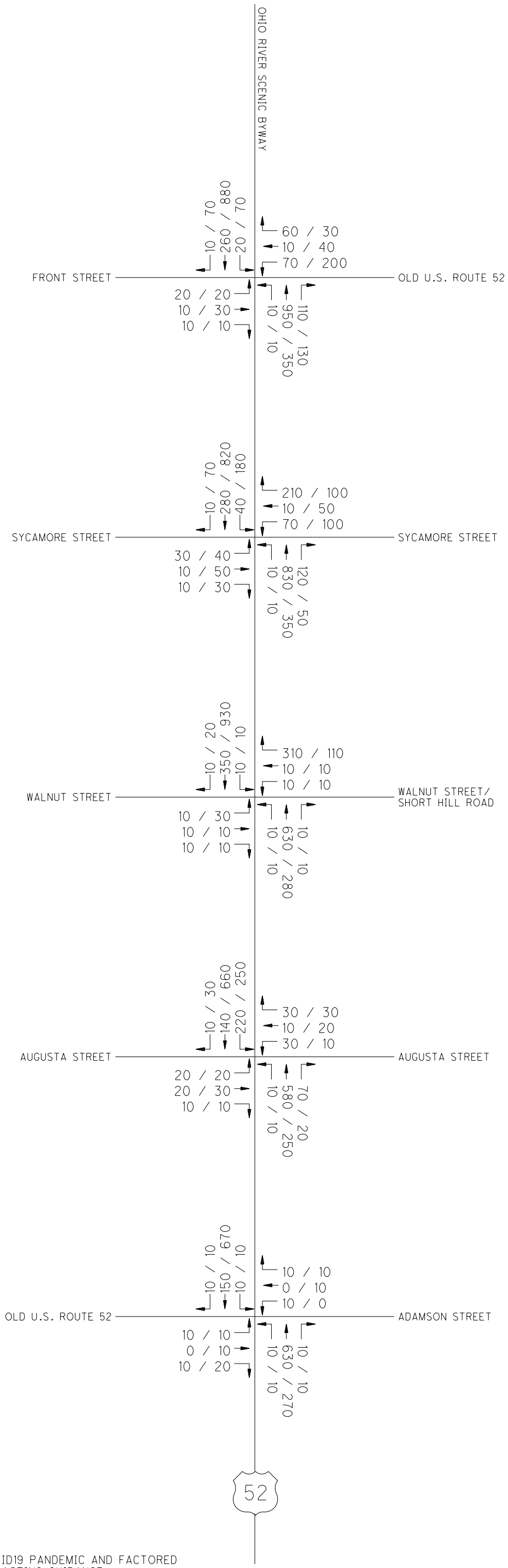
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DATE 04/07/20

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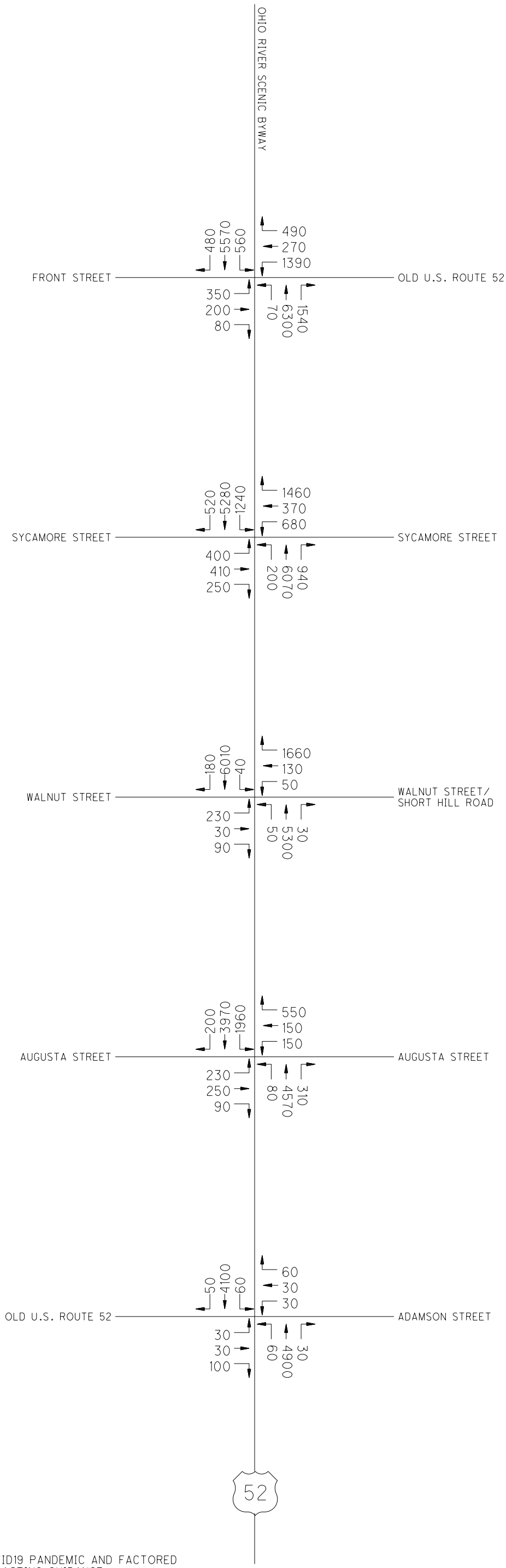
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COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8 / 5	**PID 114042**	**CLE-52-4.67 2026 BUILD AM/PM DESIGN HOUR UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

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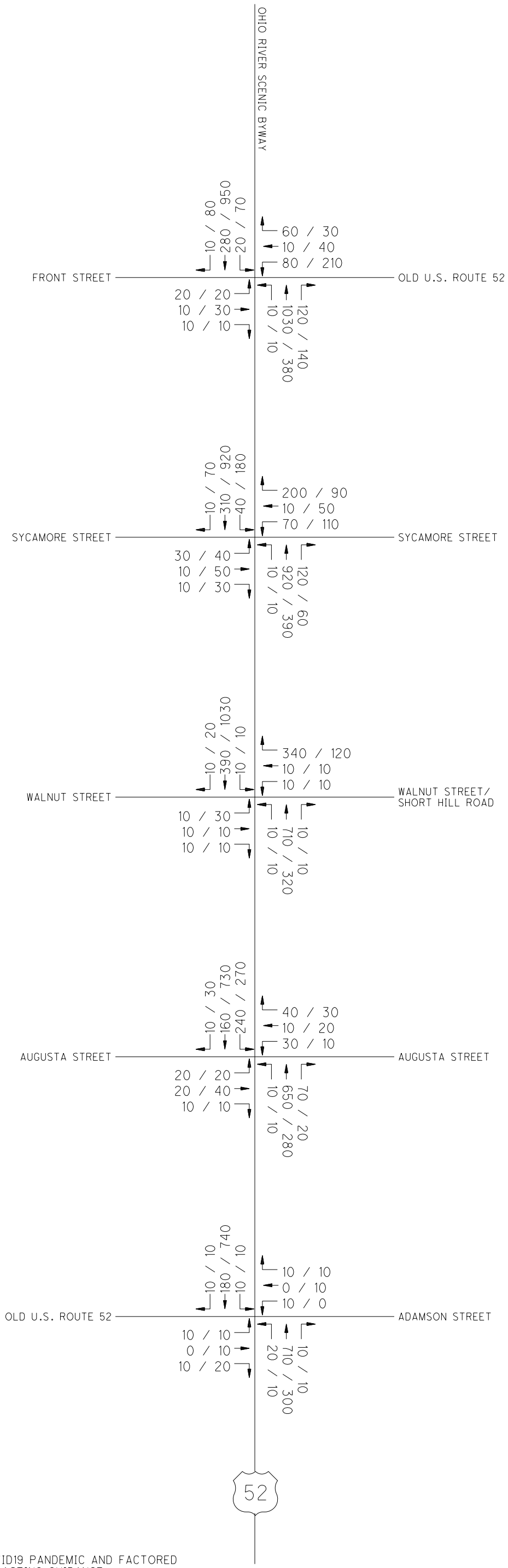
PID 114042

CLE-52-4.67 2026 BUILD ADT UNBALANCED
ODOT STATEWIDE PLANNING AND RESEARCH

ANALYST KMN
DATE 04/07/20

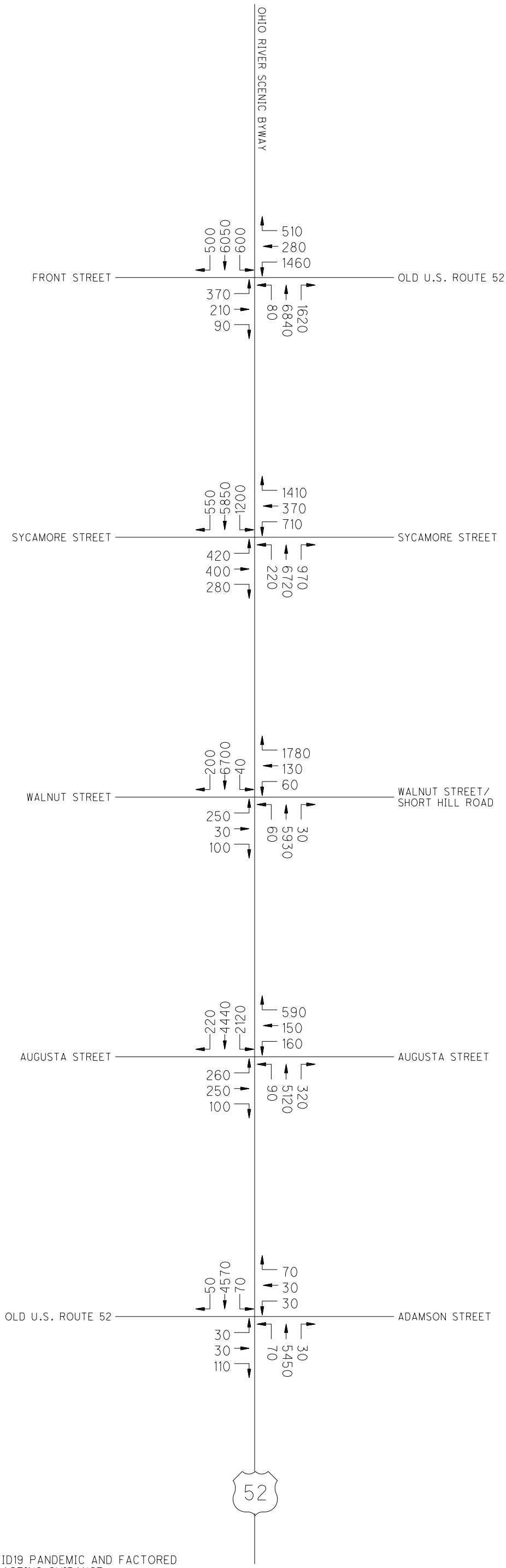
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COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

8 / 5	**PID 114042**	**CLE-52-4.67 2046 BUILD AM/PM DESIGN HOUR UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE



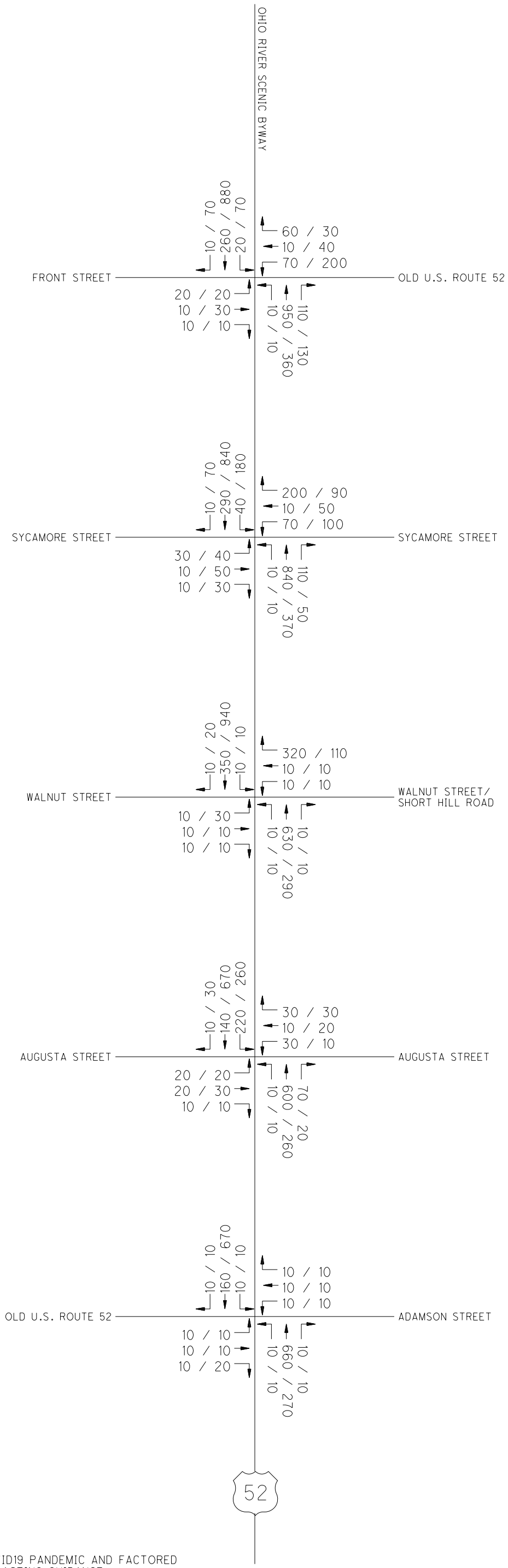
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8 of 5	**PID 114042**	**CLE-52-4.67 2046 BUILD ADT UNBALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N

ODOT Design Traffic
CLE-52-4.67

Appendix G

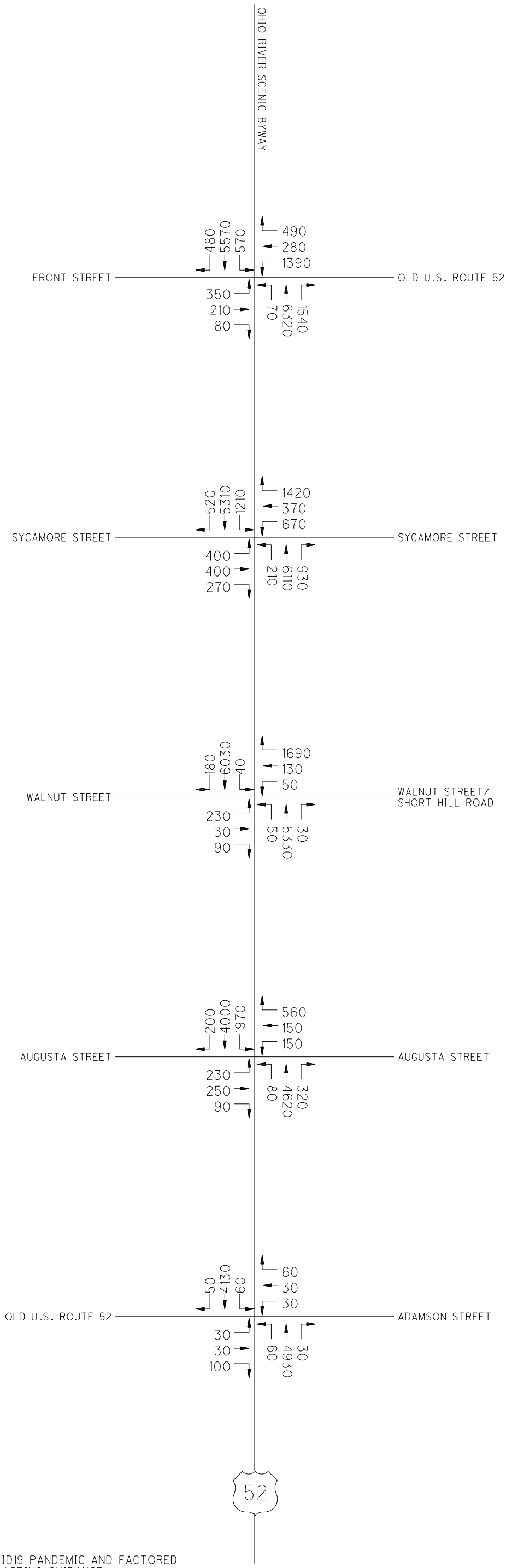
Balanced Traffic Plates



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

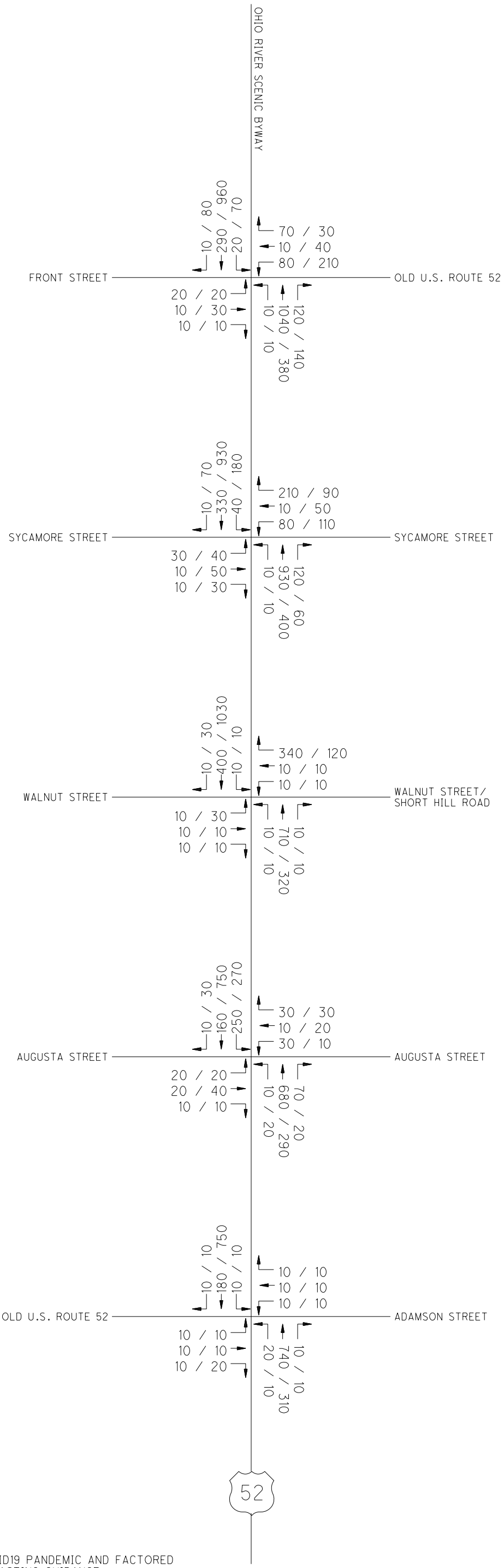
5 / 8	**PID 114042**	**CLE-52-4.67 2026 NO BUILD AM/PM DESIGN HOUR BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



STATE OF OHIO DEPARTMENT OF TRANSPORTATION

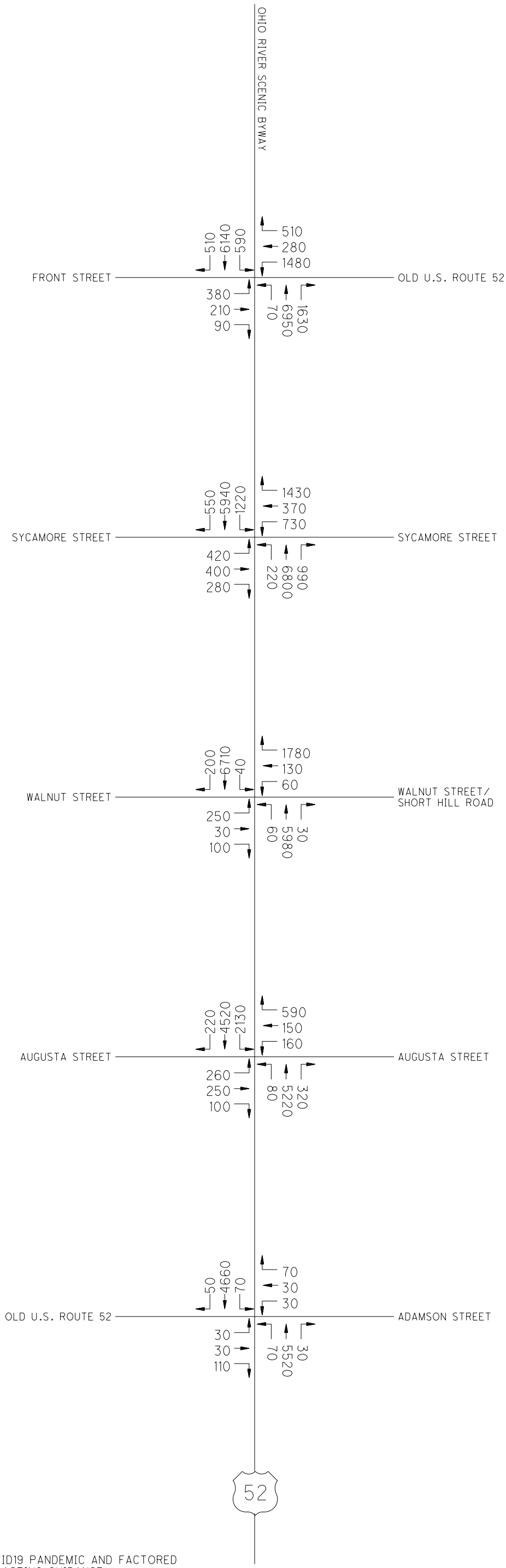
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5 of 8	**PID 114042**	**CLE-52-4.67 2026 NO BUILD ADT BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



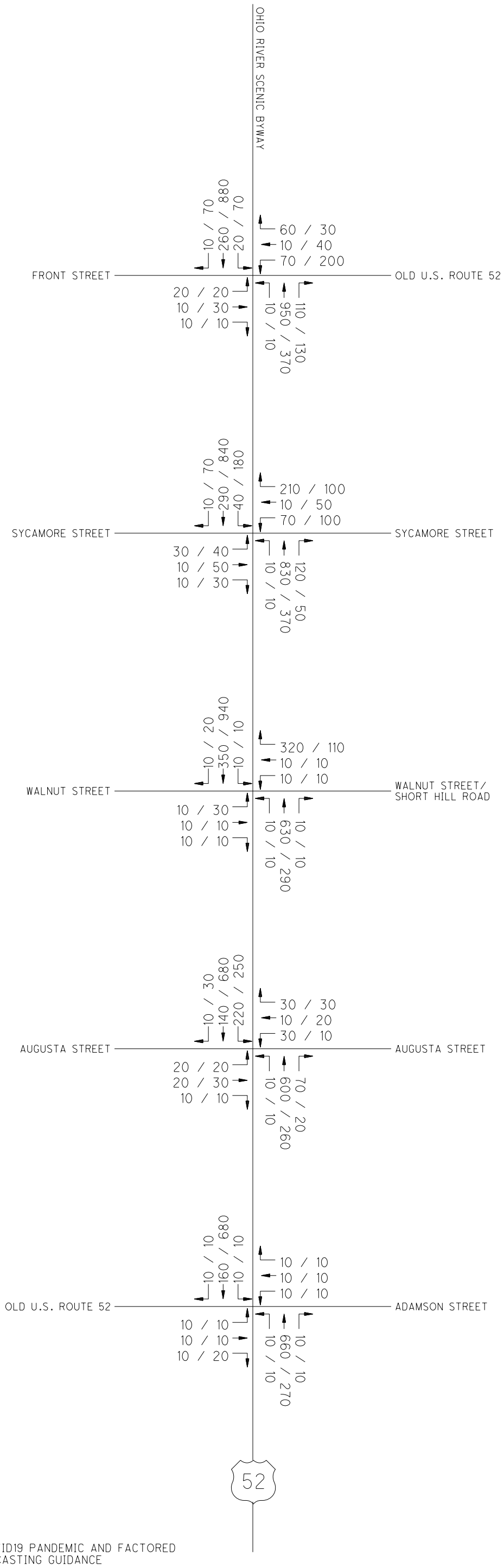
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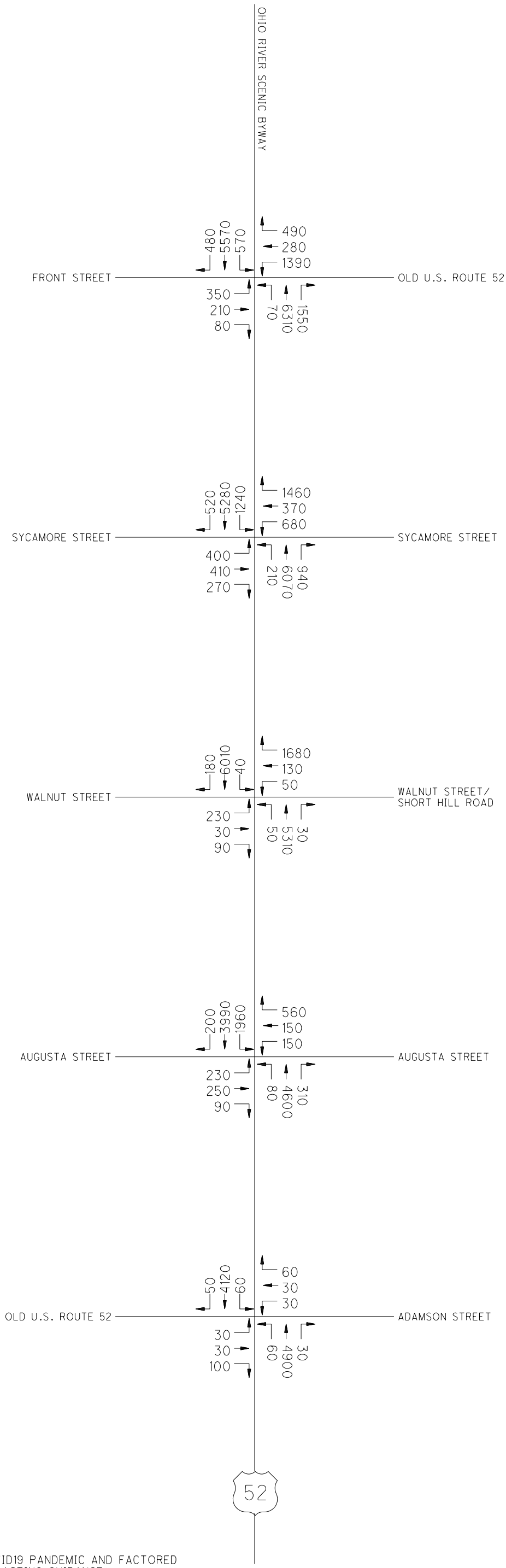
COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 of 8	**PID 114042**	**CLE-52-4.67 2046 NO BUILD ADT BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



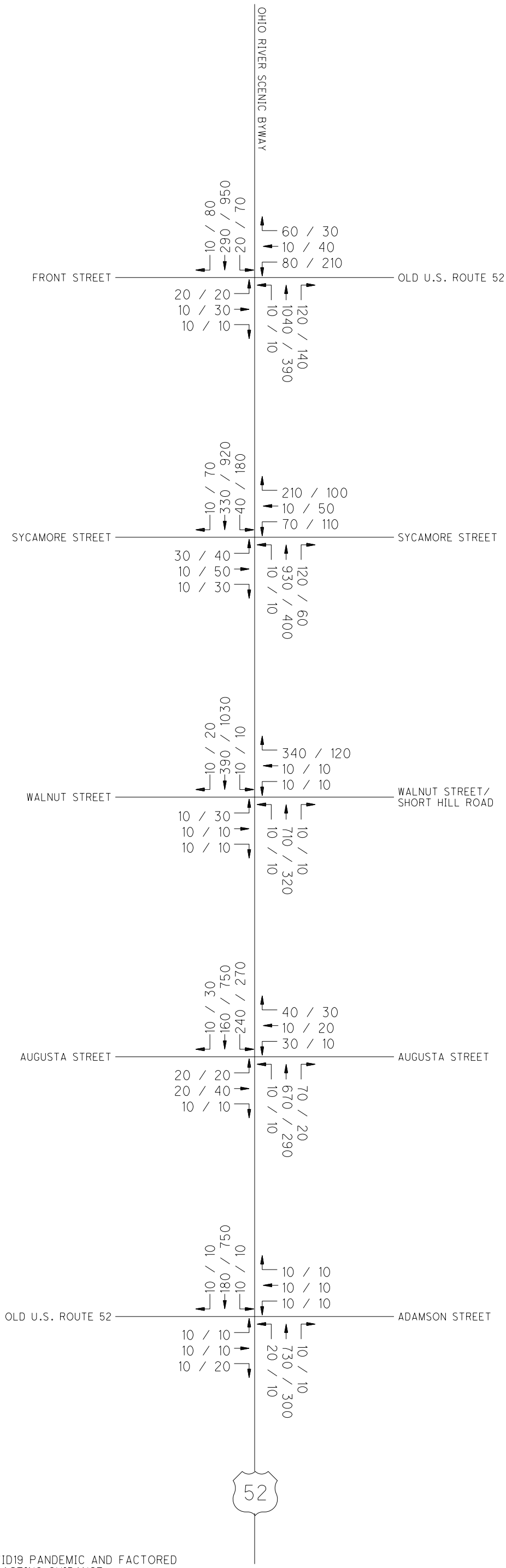
COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 / 8	**PID 114042**	**CLE-52-4.67 2026 BUILD AM/PM DESIGN HOUR BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE



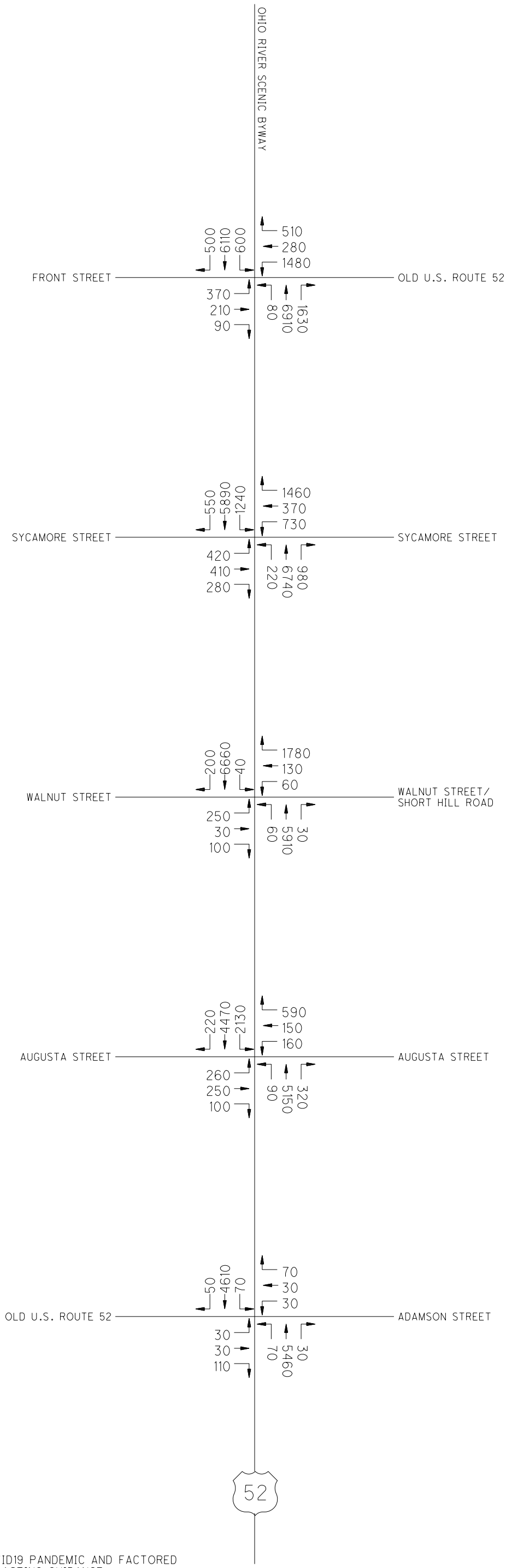
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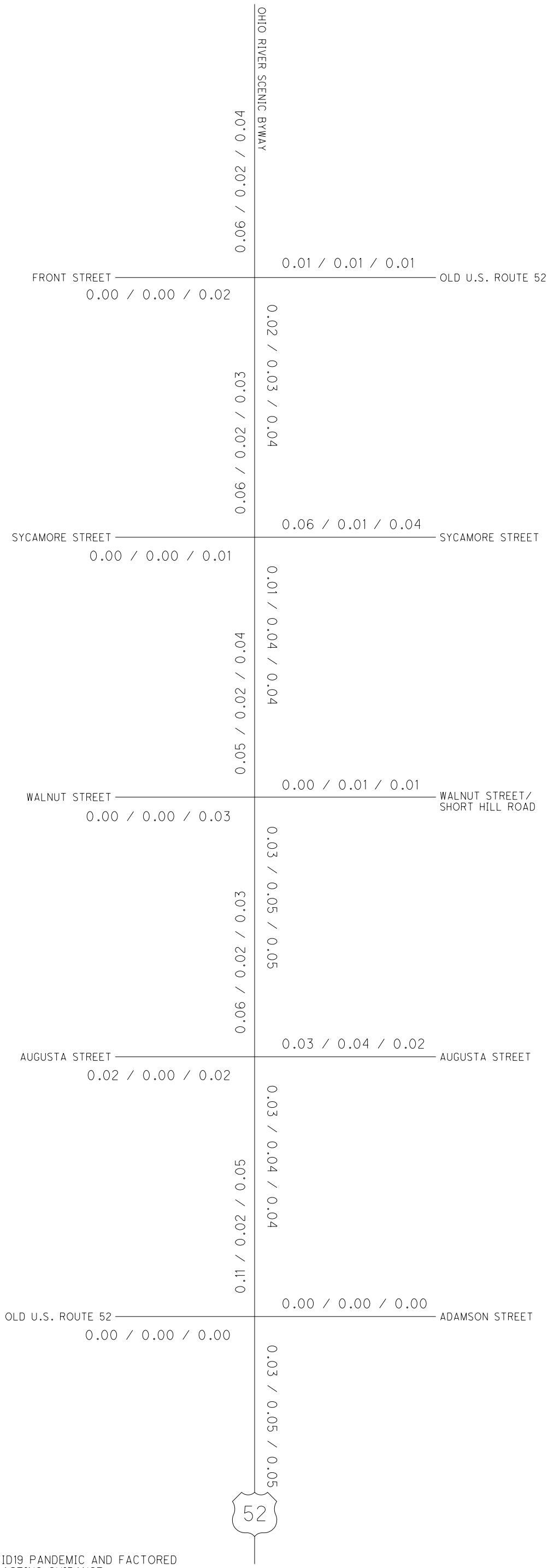
COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 / 8	**PID 114042**	**CLE-52-4.67 2046 BUILD AM/PM DESIGN HOUR BALANCED ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN	0 NOT TO SCALE	N
			DATE 04/07/20		



COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

5 of 8	**PID 114042**	**CLE-52-4.67 2046 BUILD ADT BALANCED** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE N



COUNTS COLLECTED DURING COVID19 PANDEMIC AND FACTORED PER ODOT MODELING AND FORECASTING GUIDANCE

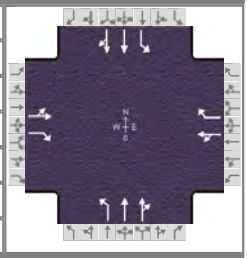
AM TD / PM TD / T24

5 / 8	**PID 114042**	**CLE-52-4.67 2046 BUILD AM TD / PM TD / T24** **ODOT STATEWIDE PLANNING AND RESEARCH**	ANALYST KMN DATE 04/07/20	0 NOT TO SCALE	N

Appendix B – Highway Capacity Report

HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	5/9/2019	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Front Street	File Name	1 Front AM 2046 NO BUILD.xus		
Project Description	2046 No Build AM Peak				

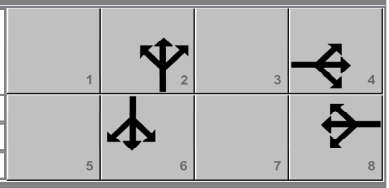


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	10	10	80	10	60	10	1040	120	20	290	10

Signal Information			
Cycle, s	41.1	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	20.0	9.1	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	2.0	2.0	0.0	0.0	0.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	10	10	80	10	60	10	1040	120	20	290	10
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0	0		0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0	12.0		12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0	0		0	0	315	0		315	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

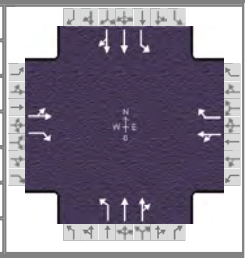
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		10.0		26.0		20.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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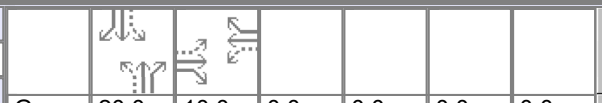
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 4:00
Intersection	Front Street	File Name	1 Front PM 2046 NO BUILD.xus		
Project Description	2046 No Build PM Peak				

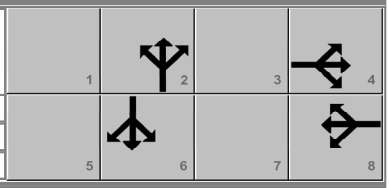


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	30	10	210	40	30	10	390	140	70	950	80

Signal Information			
Cycle, s	42.1	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	20.0	10.0	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	2.0	2.0	0.0	0.0	0.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	30	10	210	40	30	10	390	140	70	950	80
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0	0		0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0	12.0		12.0	12.0	12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0	0		0	0	315	0		315	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

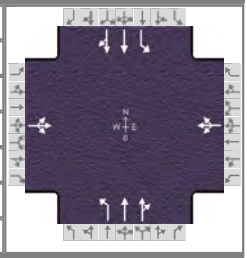
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		292.0		49.0		24.0		102.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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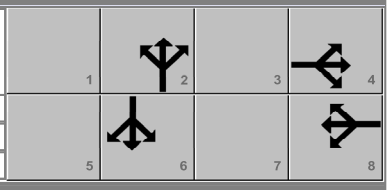
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Sycamore Street/SR 132	File Name	3 Sycamore AM 2046 NO BUILD.xus		
Project Description	2046 No Build AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	70	10	210	10	930	120	40	330	10

Signal Information												
Cycle, s	42.4	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	20.0	10.4	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0		
				Red	2.0	2.0	0.0	0.0	0.0	0.0		



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	70	10	210	10	930	120	40	330	10
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		300	0		100	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

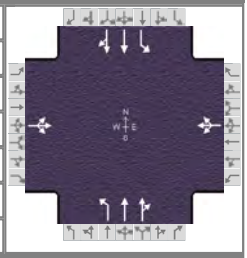
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		29.0		20.0		20.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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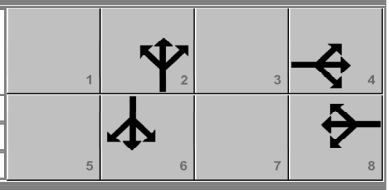
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Sycamore Street/SR 132	File Name	4 Sycamore PM 2046 NO BUILD.xus		
Project Description	2046 No Build PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	50	30	110	50	100	10	400	60	180	920	70

Signal Information												
Cycle, s	41.9	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	20.0	9.9	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0		
				Red	2.0	2.0	0.0	0.0	0.0	0.0		



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	50	30	110	50	100	10	400	60	180	920	70
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		300	0		100	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

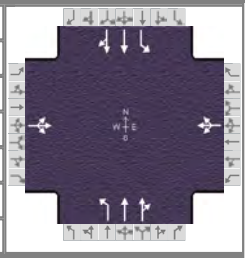
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		12.0		20.0		20.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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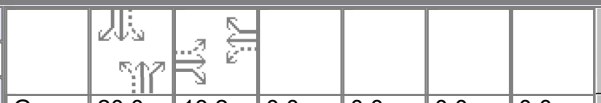
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Walnut Street/Short Hill…	File Name	5 Walnut and Short Hill AM 2046 NO BUILD.xus		
Project Description	2046 No Build AM Peak				

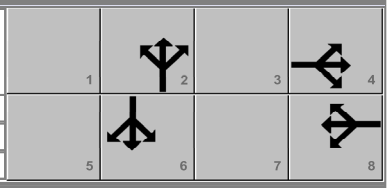


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	10	10	10	10	340	10	710	10	10	390	10

Signal Information			
Cycle, s	45.2	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	20.0	13.2	0.0	0.0	0.0	0.0						
Yellow	4.0	4.0	0.0	0.0	0.0	0.0						
Red	2.0	2.0	0.0	0.0	0.0	0.0						



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	10	10	10	10	340	10	710	10	10	390	10
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		50	0		75	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

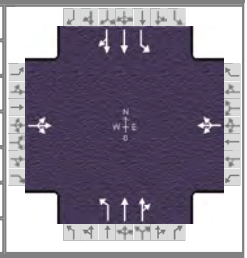
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		180.0		41.0		20.0		50.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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HCS7 Signalized Intersection Input Data

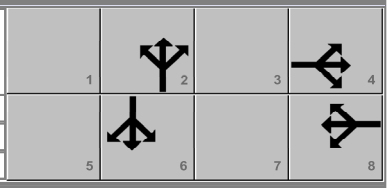
General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Walnut Street/Short Hill…	File Name	6 Walnut and Short Hill PM 2046 NO BUILD.xus		
Project Description	2046 No Build PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	10	10	120	10	320	10	10	1030	20

Signal Information			
Cycle, s	41.1	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	20.0	9.1	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	10	10	120	10	320	10	10	1030	20
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		50	0		75	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

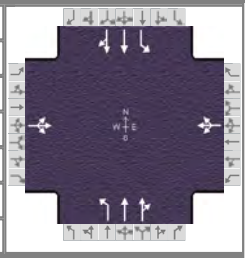
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		35.0		20.0		22.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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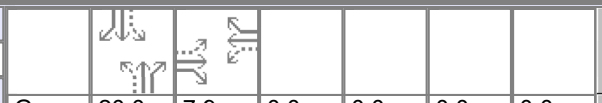
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Bethel N. Richmond/Au…	File Name	7 Augusta AM 2046 NO BUILD.xus		
Project Description	2046 No Build AM Peak				

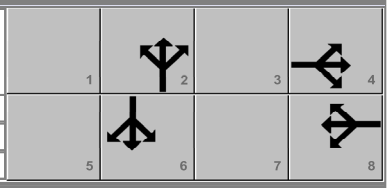


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	20	10	30	10	40	10	670	70	240	160	10

Signal Information			
Cycle, s	39.9	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	20.0	7.9	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	20	10	30	10	40	10	670	70	240	160	10
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		290	0		280	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

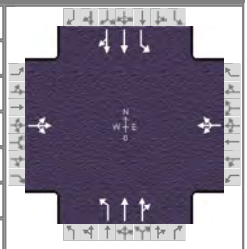
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		10.0		20.0		20.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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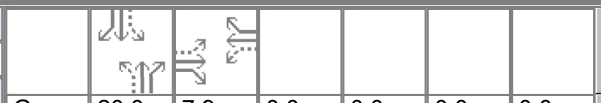
HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.25
Analyst	Caroline Duffy	Analysis Date	Oct 7, 2021	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Bethel N. Richmond/Au…	File Name	8 Augusta 2046 PM 20 2 lane.xus		
Project Description	2046 No Build PM Peak				

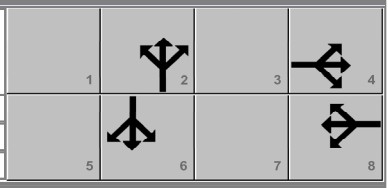


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	40	10	10	20	30	10	290	20	270	750	30

Signal Information			
Cycle, s	39.9	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	20.0	7.9	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	40	10	10	20	30	10	290	20	270	750	30
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %		0			0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft		12.0			12.0		12.0	12.0		12.0	12.0	
Turn Bay Length, ft		0			0		290	0		280	0	
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s		10.0		10.0		20.0		20.0
Yellow Change Interval (*Y*), s		4.0		4.0		4.0		4.0
Red Clearance Interval (R_c), s		2.0		2.0		2.0		2.0
Minimum Green (G_{min}), s		10		10		20		20
Start-Up Lost Time (*l1*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s		2.0		2.0		2.0		2.0
Recall Mode		Off		Off		Off		Off
Dual Entry		Yes		Yes		Yes		Yes
Walk (*Walk*), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (*PC*), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

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HCS7 Two-Way Stop-Control Report

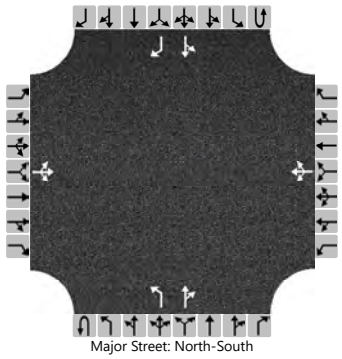
General Information

Analyst	Caroline Duffy
Agency/Co.	143Engineers
Date Performed	10/07/21
Analysis Year	2046
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	US 52 and Adamson Inter.
Jurisdiction	New Richmond, Ohio
East/West Street	Adamson Street
North/South Street	US 52
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	0	0	0	1	1
Configuration			LTR				LTR			L		TR		LT		R
Volume (veh/h)		10	10	10		10	10	10		20	730	10		10	180	10
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized														Yes		
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			33				33			22				11		
Capacity, c (veh/h)			361				318			1371				815		
v/c Ratio			0.09				0.10			0.02				0.01		
95% Queue Length, Q_{95} (veh)			0.3				0.3			0.0				0.0		
Control Delay (s/veh)			16.0				17.6			7.7				9.5		
Level of Service (LOS)			C				C			A				A		
Approach Delay (s/veh)		16.0				17.6				0.2				0.6		
Approach LOS		C				C										

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HCS7 Two-Way Stop-Control Report

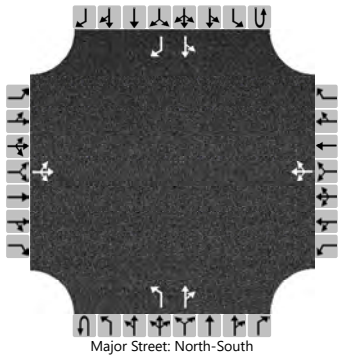
General Information

Analyst	Caroline Duffy
Agency/Co.	143Engineers
Date Performed	10/07/21
Analysis Year	2046
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	

Site Information

Intersection	US 52 and Adamson Inter.
Jurisdiction	New Richmond, Ohio
East/West Street	Adamson Street
North/South Street	US 52
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	1	0	0	0	1	1
Configuration			LTR				LTR			L		TR		LT		R
Volume (veh/h)		10	10	20		10	10	10		10	300	10		10	750	10
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized													Yes			
Median Type | Storage	Left + Thru								1							

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

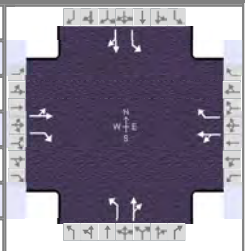
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			43				33			11				11		
Capacity, c (veh/h)			318				330			808				1217		
v/c Ratio			0.14				0.10			0.01				0.01		
95% Queue Length, Q_{95} (veh)			0.5				0.3			0.0				0.0		
Control Delay (s/veh)			18.1				17.1			9.5				8.0		
Level of Service (LOS)			C				C			A				A		
Approach Delay (s/veh)	18.1				17.1				0.3				0.2			
Approach LOS	C				C											

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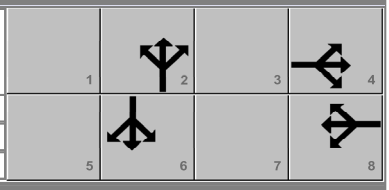
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Front Street	File Name	1 Front AM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	10	10	80	10	60	10	1040	120	20	290	10

Signal Information												
Cycle, s	74.0	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	Yes	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	52.1	9.9	0.0	0.0	0.0	0.0		
				Yellow	4.0	4.0	0.0	0.0	0.0	0.0		
				Red	2.0	2.0	0.0	0.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		7.0		7.0		6.0		6.0
Phase Duration, s		15.9		15.9		58.1		58.1
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.1		3.1
Queue Clearance Time (g_s), s		3.1		6.5		47.6		51.1
Green Extension Time (g_e), s		0.2		0.1		4.5		0.0
Phase Call Probability		0.99		0.99		1.00		1.00
Max Out Probability		0.03		0.72		0.02		1.00

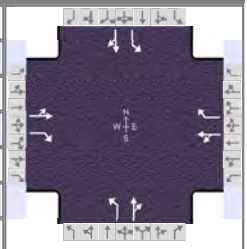
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		33	11		98	65	11	1261		22	326	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1590	1610		1478	1610	1070	1865		447	1889	
Queue Service Time (g_s), s		0.0	0.4		3.4	2.7	0.3	45.6		3.4	4.6	
Cycle Queue Clearance Time (g_c), s		1.1	0.4		4.5	2.7	4.8	45.6		49.1	4.6	
Green Ratio (*g/C*)		0.13	0.13		0.13	0.13	0.70	0.70		0.70	0.70	
Capacity (*c*), veh/h		293	214		289	214	786	1314		137	1331	
Volume-to-Capacity Ratio (*X*)		0.111	0.051		0.339	0.304	0.014	0.959		0.159	0.245	
Back of Queue (*Q*), ft/ln (95 th percentile)		22	7		70	46	2	509		16	53	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.9	0.3		2.8	1.8	0.1	20.4		0.7	2.1	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00	0.00	0.01	0.00		0.05	0.00	
Uniform Delay (d_1), s/veh		28.3	28.0		29.7	29.0	4.8	10.0		32.3	3.9	
Incremental Delay (d_2), s/veh		0.1	0.0		0.3	0.3	0.0	7.2		0.2	0.0	
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		28.3	28.0		30.0	29.3	4.8	17.2		32.5	3.9	
Level of Service (LOS)		C	C		C	C	A	B		C	A	
Approach Delay, s/veh / LOS	28.3	C		29.7	C		17.1	B		5.7	A	
Intersection Delay, s/veh / LOS	16.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.84	B	1.84	B
Bicycle LOS Score / LOS	0.56	A	0.76	A	2.59	C	1.06	A

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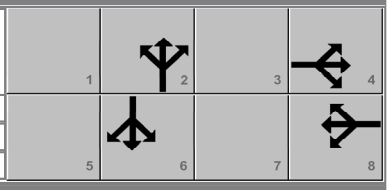
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Front Street	File Name	2 Front PM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	30	10	210	40	30	10	390	140	70	950	80

Signal Information													
Cycle, s	75.6	Reference Phase	2										
Offset, s	0	Reference Point	Begin										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	47.7	15.9	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		7.0		7.0		6.0		6.0
Phase Duration, s		21.9		21.9		53.7		53.7
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.1		3.1		3.1		3.1
Queue Clearance Time (g_s), s		3.8		15.7		45.1		43.6
Green Extension Time (g_e), s		0.4		0.2		0.0		4.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.10		0.86		1.00		0.00

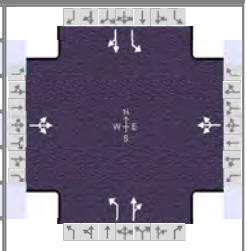
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		54	11		272	33	11	576		76	1120	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1699	1610		1460	1610	511	1814		850	1874	
Queue Service Time (g_s), s		0.0	0.4		12.0	1.2	1.5	13.0		4.0	41.6	
Cycle Queue Clearance Time (g_c), s		1.8	0.4		13.7	1.2	43.1	13.0		16.9	41.6	
Green Ratio (*g/C*)		0.21	0.21		0.21	0.21	0.63	0.63		0.63	0.63	
Capacity (*c*), veh/h		425	340		396	340	137	1144		487	1182	
Volume-to-Capacity Ratio (*X*)		0.128	0.032		0.687	0.096	0.080	0.504		0.156	0.947	
Back of Queue (*Q*), ft/ln (95 th percentile)		34	7		210	20	8	180		31	494	
Back of Queue (*Q*), veh/ln (95 th percentile)		1.4	0.3		8.4	0.8	0.3	7.2		1.3	19.8	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00	0.00		0.00	0.00	0.03	0.00		0.10	0.00	
Uniform Delay (d_1), s/veh		24.3	23.8		29.0	24.1	32.7	7.6		12.1	12.8	
Incremental Delay (d_2), s/veh		0.0	0.0		2.6	0.0	0.1	0.1		0.1	2.0	
Initial Queue Delay (d_3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		24.3	23.8		31.6	24.1	32.8	7.7		12.2	14.9	
Level of Service (LOS)		C	C		C	C	C	A		B	B	
Approach Delay, s/veh / LOS	24.2	C		30.8	C		8.2	A		14.7	B	
Intersection Delay, s/veh / LOS	15.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.86	B	1.86	B
Bicycle LOS Score / LOS	0.60	A	0.99	A	1.46	A	2.46	B

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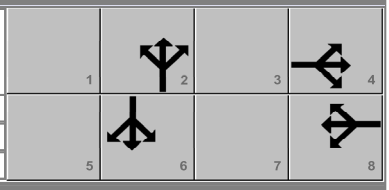
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Sycamore Street/SR 132	File Name	3 Sycamore AM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	70	10	210	10	930	120	40	330	10

Signal Information													
Cycle, s	89.3	Reference Phase	2										
Offset, s	0	Reference Point	Begin										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	57.3	20.0	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		26.0		26.0		63.3		63.3
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.3		3.3		3.2		3.2
Queue Clearance Time (g_s), s		5.0		19.2		53.0		59.7
Green Extension Time (g_e), s		0.4		0.6		3.9		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.33		0.00		0.00		1.00

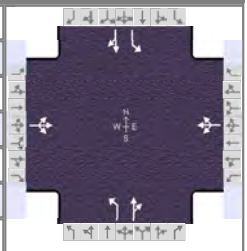
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		54			315		11	1141		43	370	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1008			1586		1029	1862		501	1890	
Queue Service Time (g_s), s		0.0			13.7		0.4	51.0		6.5	7.8	
Cycle Queue Clearance Time (g_c), s		3.0			17.2		7.7	51.0		57.7	7.8	
Green Ratio (*g/C*)		0.22			0.22		0.64	0.64		0.64	0.64	
Capacity (*c*), veh/h		290			406		657	1195		117	1213	
Volume-to-Capacity Ratio (*X*)		0.187			0.777		0.017	0.955		0.373	0.305	
Back of Queue (*Q*), ft/ln (95 th percentile)		42			269		4	623		44	121	
Back of Queue (*Q*), veh/ln (95 th percentile)		1.7			10.8		0.2	24.9		1.8	4.9	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.01	0.00		0.44	0.00	
Uniform Delay (d_1), s/veh		28.0			33.6		8.8	14.9		42.2	7.2	
Incremental Delay (d_2), s/veh		0.1			1.6		0.0	2.3		0.7	0.1	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		28.1			35.3		8.8	17.2		42.9	7.2	
Level of Service (LOS)		C			D		A	B		D	A	
Approach Delay, s/veh / LOS	28.1	C		35.3	D		17.1	B		11.0	B	
Intersection Delay, s/veh / LOS	19.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.93	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.58	A	1.01	A	2.39	B	1.17	A

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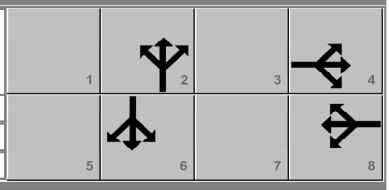
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Sycamore Street/SR 132	File Name	4 Sycamore PM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	40	50	30	110	50	100	10	400	60	180	920	70

Signal Information					EB			WB			NB			SB		
Cycle, s	62.5	Reference Phase	2													
Offset, s	0	Reference Point	Begin	Green	38.5	12.0		0.0	0.0		0.0	0.0		0.0	0.0	
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	4.0		0.0	0.0		0.0	0.0		0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0		0.0	0.0		0.0	0.0		0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		18.0		18.0		44.5		44.5
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.2		3.2
Queue Clearance Time (g_s), s		5.9		13.1		35.5		34.3
Green Extension Time (g_e), s		0.4		0.0		0.0		4.2
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.59		1.00		1.00		0.00

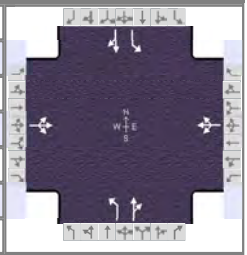
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		130			283		11	500		196	1076	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1651			1564		533	1856		912	1876	
Queue Service Time (g_s), s		0.0			7.2		1.2	8.8		9.0	32.3	
Cycle Queue Clearance Time (g_c), s		3.9			11.1		33.5	8.8		17.8	32.3	
Green Ratio (*g/C*)		0.19			0.19		0.62	0.62		0.62	0.62	
Capacity (*c*), veh/h		394			383		168	1143		548	1155	
Volume-to-Capacity Ratio (*X*)		0.331			0.739		0.065	0.437		0.357	0.931	
Back of Queue (*Q*), ft/ln (95 th percentile)		70			198		6	111		68	363	
Back of Queue (*Q*), veh/ln (95 th percentile)		2.8			7.9		0.3	4.5		2.7	14.5	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.02	0.00		0.69	0.00	
Uniform Delay (d_1), s/veh		22.0			24.7		25.9	6.3		11.0	10.8	
Incremental Delay (d_2), s/veh		0.2			6.5		0.1	0.1		0.1	1.6	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		22.1			31.3		25.9	6.4		11.1	12.4	
Level of Service (LOS)		C			C		C	A		B	B	
Approach Delay, s/veh / LOS	22.1	C		31.3	C		6.8	A		12.2	B	
Intersection Delay, s/veh / LOS	14.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	0.70	A	0.95	A	1.33	A	2.59	C

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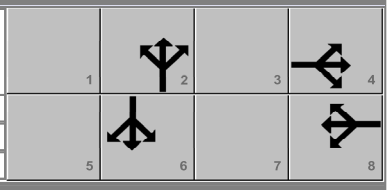
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Walnut Street/Short Hill…	File Name	5 Walnut and Short Hill AM 2046 Road Diet with S…		
Project Description	2046 Road Diet Signalized AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	10	10	10	10	340	10	710	10	10	390	10

Signal Information					EB		WB		NB		SB	
Cycle, s	49.8	Reference Phase	2	Green	23.1	14.7	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	Begin	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On	Red	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On									



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		20.7		20.7		29.1		29.1
Change Period, (*Y+R c*), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.4		3.4		3.1		3.1
Queue Clearance Time (*g s*), s		2.7		13.3		21.1		21.7
Green Extension Time (*g e*), s		1.0		1.0		0.0		0.9
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		1.00		0.00

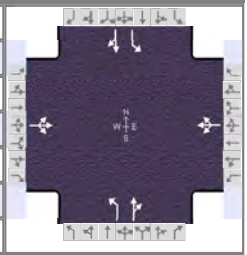
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		33			391		11	783		11	435	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1502			1619		969	1895		702	1891	
Queue Service Time (*g s*), s		0.0			1.7		0.4	19.1		0.7	8.1	
Cycle Queue Clearance Time (*g c*), s		0.7			11.3		7.7	19.1		19.7	8.1	
Green Ratio (*g/C*)		0.30			0.30		0.46	0.46		0.46	0.46	
Capacity (*c*), veh/h		542			555		453	882		207	881	
Volume-to-Capacity Ratio (*X*)		0.060			0.705		0.024	0.887		0.053	0.494	
Back of Queue (*Q*), ft/ln (95 th percentile)		10			162		3	332		5	114	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.4			6.5		0.1	13.3		0.2	4.6	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.06	0.00		0.07	0.00	
Uniform Delay (*d 1*), s/veh		12.7			16.5		11.8	12.3		21.2	9.4	
Incremental Delay (*d 2*), s/veh		0.0			0.6		0.0	10.5		0.0	0.2	
Initial Queue Delay (*d 3*), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		12.8			17.1		11.8	22.9		21.3	9.6	
Level of Service (LOS)		B			B		B	C		C	A	
Approach Delay, s/veh / LOS	12.8	B		17.1	B		22.7	C		9.9	A	
Intersection Delay, s/veh / LOS	17.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.65	B	1.65	B
Bicycle LOS Score / LOS	0.54	A	1.13	A	1.80	B	1.22	A

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HCS Signalized Intersection Results Summary

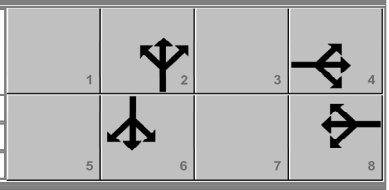
General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Walnut Street/Short Hill…	File Name	6 Walnut and Short Hill PM 2046 Road Diet with…		
Project Description	2046 Road Diet Signalized PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	30	10	10	10	10	120	10	320	10	10	1030	20

Signal Information			
Cycle, s	60.1	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	38.4	9.7	0.0	0.0	0.0	0.0	
Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		15.7		15.7		44.4		44.4
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.3		3.3		3.1		3.1
Queue Clearance Time (g_s), s		3.6		7.1		36.1		34.9
Green Extension Time (g_e), s		0.2		0.1		0.0		3.5
Phase Call Probability		0.97		0.97		1.00		1.00
Max Out Probability		0.06		1.00		1.00		0.00

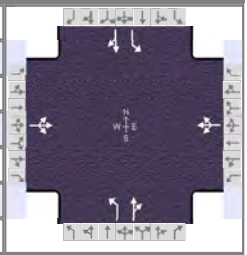
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		54			152		11	359		11	1141	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1494			1630		501	1890		1039	1894	
Queue Service Time (g_s), s		0.0			0.0		1.2	5.1		0.3	32.9	
Cycle Queue Clearance Time (g_c), s		1.6			5.1		34.1	5.1		5.4	32.9	
Green Ratio (*g/C*)		0.16			0.16		0.64	0.64		0.64	0.64	
Capacity (*c*), veh/h		337			327		166	1207		696	1210	
Volume-to-Capacity Ratio (*X*)		0.161			0.465		0.066	0.297		0.016	0.943	
Back of Queue (*Q*), ft/ln (95 th percentile)		28			84		6	59		2	352	
Back of Queue (*Q*), veh/ln (95 th percentile)		1.1			3.3		0.2	2.3		0.1	14.1	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.12	0.00		0.03	0.00	
Uniform Delay (d_1), s/veh		21.8			23.3		25.4	4.8		6.0	9.9	
Incremental Delay (d_2), s/veh		0.1			0.4		0.1	0.1		0.0	2.2	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		21.9			23.7		25.4	4.9		6.0	12.1	
Level of Service (LOS)		C			C		C	A		A	B	
Approach Delay, s/veh / LOS	21.9	C		23.7	C		5.5	A		12.0	B	
Intersection Delay, s/veh / LOS	12.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.92	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	0.58	A	0.74	A	1.10	A	2.39	B

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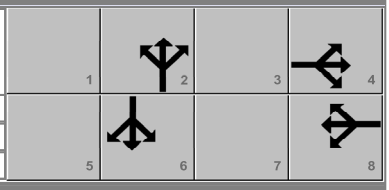
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	AM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Bethel N. Richmond/Au…	File Name	7 Augusta AM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized AM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	20	10	30	10	40	10	670	70	240	160	10

Signal Information													
Cycle, s	50.8	Reference Phase	2										
Offset, s	0	Reference Point	Begin										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	30.2	8.6	0.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0			
				Red	2.0	2.0	0.0	0.0	0.0	0.0			



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		14.6		14.6		36.2		36.2
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.6		3.6
Queue Clearance Time (g_s), s		3.2		4.1		17.6		30.5
Green Extension Time (g_e), s		0.3		0.2		1.2		1.4
Phase Call Probability		0.85		0.85		1.00		1.00
Max Out Probability		0.00		0.00		1.00		0.00

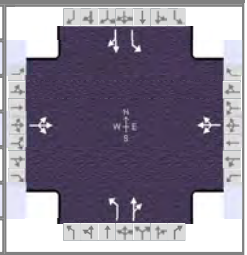
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		54			87		11	804		261	185	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1670			1616		1218	1868		688	1880	
Queue Service Time (g_s), s		0.0			0.0		0.2	15.6		12.9	2.2	
Cycle Queue Clearance Time (g_c), s		1.2			2.1		1.9	15.6		28.5	2.2	
Green Ratio (*g/C*)		0.17			0.17		0.59	0.59		0.59	0.59	
Capacity (*c*), veh/h		395			383		812	1084		327	1092	
Volume-to-Capacity Ratio (*X*)		0.138			0.227		0.013	0.742		0.797	0.169	
Back of Queue (*Q*), ft/ln (95 th percentile)		21			34		2	198		131	24	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.8			1.4		0.1	7.9		5.2	1.0	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.01	0.00		0.47	0.00	
Uniform Delay (d_1), s/veh		17.2			17.6		5.1	7.6		20.1	4.8	
Incremental Delay (d_2), s/veh		0.1			0.1		0.0	2.4		1.7	0.0	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		17.3			17.7		5.1	10.0		21.8	4.8	
Level of Service (LOS)		B			B		A	B		C	A	
Approach Delay, s/veh / LOS	17.3	B		17.7	B		10.0	A		14.8	B	
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.63	B	1.63	B
Bicycle LOS Score / LOS	0.58	A	0.63	A	1.83	B	1.22	A

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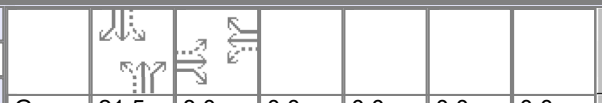
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	143Engineers			Duration, h	0.250
Analyst	Caroline Duffy	Analysis Date	May 8, 2025	Area Type	Other
Jurisdiction	New Richmond	Time Period	PM	PHF	0.92
Urban Street	US 52	Analysis Year	2046	Analysis Period	1> 7:00
Intersection	Bethel N. Richmond/Au…	File Name	8 Augusta PM 2046 Road Diet with Signals.xus		
Project Description	2046 Road Diet Signalized PM Peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	20	40	10	10	20	30	10	290	20	270	750	30

Signal Information			
Cycle, s	41.5	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



							1	2	3	4
Green	21.5	8.0	0.0	0.0	0.0	0.0	5	6	7	8
Yellow	4.0	4.0	0.0	0.0	0.0	0.0				
Red	2.0	2.0	0.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8		2		6
Case Number		8.0		8.0		6.0		6.0
Phase Duration, s		14.0		14.0		27.5		27.5
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		3.2		3.2		3.2		3.2
Queue Clearance Time (g_s), s		3.4		3.3		19.0		18.4
Green Extension Time (g_e), s		0.1		0.1		0.6		3.1
Phase Call Probability		0.80		0.80		1.00		1.00
Max Out Probability		0.02		0.02		1.00		0.12

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h		76			65		11	337		293	848	
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1753			1699		660	1878		1060	1887	
Queue Service Time (g_s), s		0.0			0.0		0.6	4.4		9.3	16.4	
Cycle Queue Clearance Time (g_c), s		1.4			1.3		17.0	4.4		13.7	16.4	
Green Ratio (*g/C*)		0.19			0.19		0.52	0.52		0.52	0.52	
Capacity (*c*), veh/h		451			430		255	971		610	976	
Volume-to-Capacity Ratio (*X*)		0.169			0.152		0.043	0.347		0.481	0.869	
Back of Queue (*Q*), ft/ln (95 th percentile)		22			19		4	46		69	197	
Back of Queue (*Q*), veh/ln (95 th percentile)		0.9			0.8		0.1	1.9		2.8	7.9	
Queue Storage Ratio (*RQ*) (95 th percentile)		0.00			0.00		0.01	0.00		0.25	0.00	
Uniform Delay (d_1), s/veh		14.1			14.0		16.2	5.9		9.9	8.8	
Incremental Delay (d_2), s/veh		0.1			0.1		0.0	0.1		0.2	2.4	
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh		14.1			14.1		16.3	6.0		10.1	11.1	
Level of Service (LOS)		B			B		B	A		B	B	
Approach Delay, s/veh / LOS	14.1	B		14.1	B		6.3	A		10.9	B	
Intersection Delay, s/veh / LOS	10.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.64	B	1.64	B
Bicycle LOS Score / LOS	0.61	A	0.60	A	1.06	A	2.37	B

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HCS Two-Way Stop-Control Report

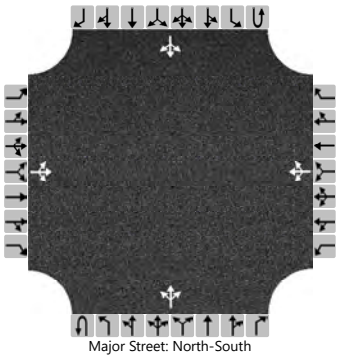
General Information

Analyst	Caroline Duffy
Agency/Co.	143Engineers
Date Performed	05/08/25
Analysis Year	2039
Time Analyzed	6:30-7:30 AM
Intersection Orientation	North-South
Project Description	Road Diet

Site Information

Intersection	US 52 and Adamson Inter.
Jurisdiction	New Richmond, Ohio
East/West Street	Adamson Street
North/South Street	US 52
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		5	0	1		1	0	8		6	740	1		2	156	1
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			7				10			7				2		
Capacity, c (veh/h)			335				371			1400				815		
v/c Ratio			0.02				0.03			0.00				0.00		
95% Queue Length, Q_{95} (veh)			0.1				0.1			0.0				0.0		
95% Queue Length, Q_{95} (ft)			2.6				2.6			0.0				0.0		
Control Delay (s/veh)			15.9				15.0			7.6	0.1	0.1		9.4	0.0	0.0
Level of Service (LOS)			C				B			A	A	A		A	A	A
Approach Delay (s/veh)		15.9				15.0				0.1				0.1		
Approach LOS		C				B				A				A		

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HCS Two-Way Stop-Control Report

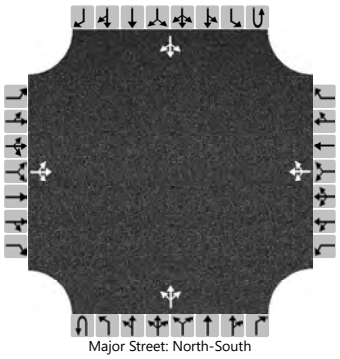
General Information

Analyst	Caroline Duffy
Agency/Co.	143Engineers
Date Performed	05/08/25
Analysis Year	2046
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Road Diet

Site Information

Intersection	US 52 and Adamson Inter.
Jurisdiction	New Richmond, Ohio
East/West Street	Adamson Street
North/South Street	US 52
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		10	10	20		10	10	10		10	300	10		10	750	10
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized																
Median Type | Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			43				33			11				11		
Capacity, c (veh/h)			316				328			800				1217		
v/c Ratio			0.14				0.10			0.01				0.01		
95% Queue Length, Q_{95} (veh)			0.5				0.3			0.0				0.0		
95% Queue Length, Q_{95} (ft)			12.8				7.7			0.0				0.0		
Control Delay (s/veh)			18.2				17.2			9.6	0.1	0.1		8.0	0.1	0.1
Level of Service (LOS)			C				C			A	A	A		A	A	A
Approach Delay (s/veh)		18.2				17.2				0.4				0.2		
Approach LOS		C				C				A				A		

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Appendix C – Existing Turn Lane Lengths

Front Street Existing Turn Lane Length



Sycamore Street SR 132 Street Existing Turn Lane Length



Walnut Street/Short Hill Existing Turn Lane **Length**



Augusta Street Existing Turn Lane Length

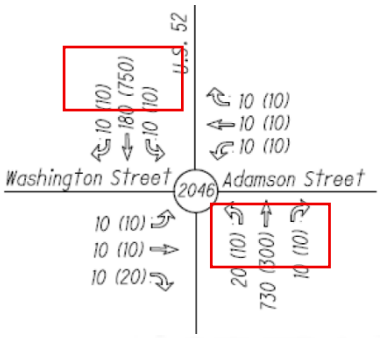


Adamson Street Existing Turn Lane



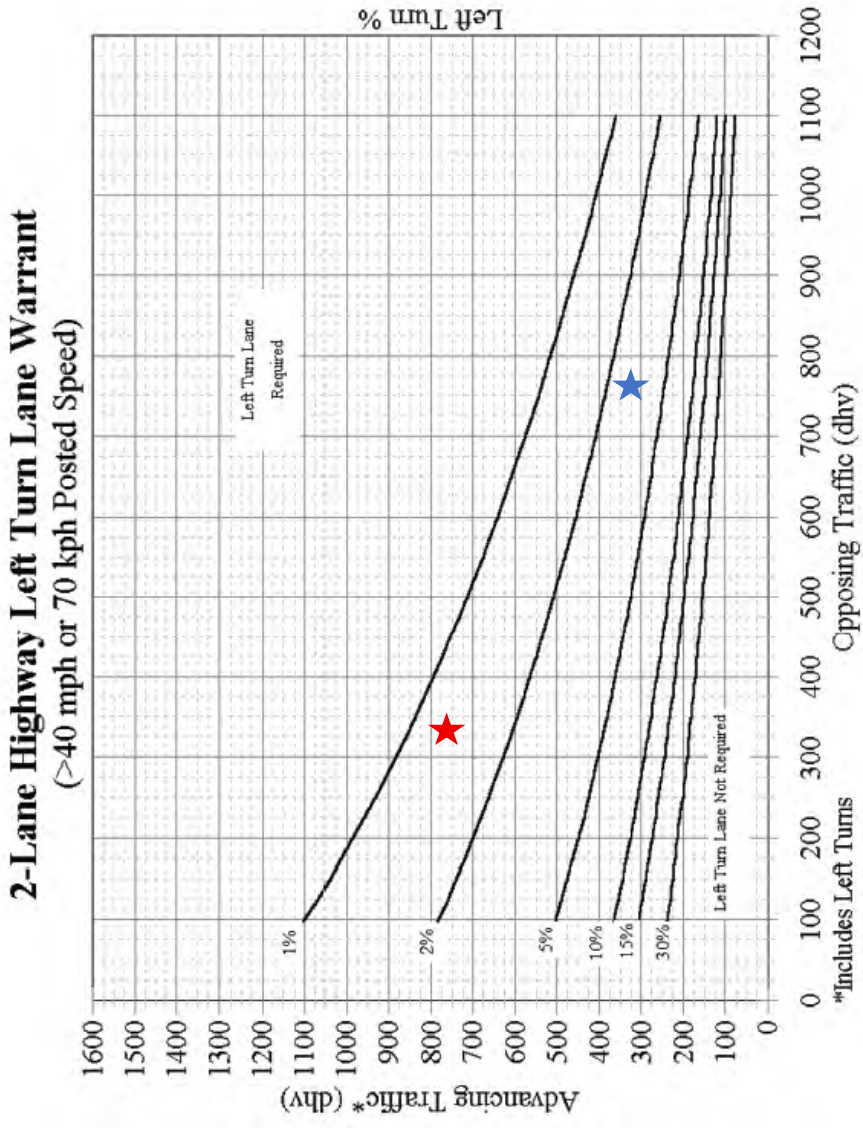
Appendix D – Adamson Left Turn Lane Analysis

CLE-US 52-4.67 ADAMSON LEFT TURN LANE ANALYSIS



PM Peak
SB
Advancing: 770 Opposing 320
Curve Line: 10/770 = 1.0%
NB
Advancing: 320 Opposing 770
Curve Line: 10/320 = 3.0%

2-LANE LEFT TURN LANE WARRANT (HIGH SPEED)	401-5b
	REFERENCE SECTION 401.6.1



Appendix E – Ecological Report
THIS REPORT WILL BE UPDATED

AMERICAN STRUCTUREPOINT INC.

9825 Kenwood Road, Suite 305
Cincinnati, Ohio 45242
(513) 407-8317

www.structurepoint.com

M E M O R A N D U M

DATE: March 14, 2025

TO: 143Engineers, LLC

FROM: Natalie Jones (American Structurepoint)

RE: CLE-US52-4.67 (PID 114042) Preliminary Water Resources Site Walk

CC: Rick Paul (American Structurepoint)

A preliminary waters site walk was performed by American Structurepoint Inc. on May 26, 2021, and March 10, 2025, in New Richmond, Clermont County, Ohio, to determine the potential presence of wetlands, streams, potentially jurisdictional ditches, ponds and lakes. The preliminary findings are illustrated in Attachment 1 and the photo log is provided in Attachment 2.

During the site investigation two (2) potential wetlands, five (5) potential streams, and one (1) potential jurisdictional ditch were observed within the study area (Table 1). Potential Wetland 1 and 2 each showed signs of wetland hydrology and hydrophytic vegetation. Potential Streams 1 and 2 had ordinary high water marks (OHWM) and algal crusts, which suggest these streams contain water for extended periods of time during the year. Potential Jurisdictional Ditch 1 appeared to be a relatively permanent water, alternating between having a OHWM and being fully vegetated, suggesting a potentially jurisdictional ditch. Additionally, Potential Stream 3 had isolated pools of water, suggesting an intermittent stream. Furthermore, Twelvemile Creek and Little Indian Creek were observed to have flowing water, suggesting a perennial stream. No ponds or lakes were identified within the study area.

Table 1. Potential Water Resources within the Study Area Limits

Name	Potential Type	Photograph Number(s)
Potential Wetland 1	Emergent wetland	1
Potential Wetland 2	Forested wetland	2
Potential Stream 1	Intermittent	3-4
Twelvemile Creek	Perennial	5-6
Potential Stream 2	Intermittent	7-8
Potential Jurisdictional Ditch 1	Potentially jurisdictional ditch	9-10
Potential Stream 3	Intermittent	11
Little Indian Creek	Perennial	12

Attachment 1:

Figure 1: Potential Water Resources Map
Figure 2: Photo Location Map

Attachment 2:

Photo Log

Attachment 1
Mapping



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

Figure 1: Potential Water Resources Map (1 of 4)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 (PID 114042)

Location: New Richmond
County: Clermont
State: Ohio

Date: 03/12/2025



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Figure 1: Potential Water Resources Map (2 of 4)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 (PID 114042)

Location: New Richmond
County: Clermont
State: Ohio

Date: 03/11/2025



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Figure 1: Potential Water Resources Map (3 of 4)

Client:
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CLE-US52-4.67 (PID 114042)

Location: New Richmond
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Figure 1: Potential Water Resources Map (4 of 4)

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Date: 03/12/2025



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Figure 2: Photo Location Map (1 of 4)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 (PID 114042)

Location: New Richmond
County: Clermont
State: Ohio

Date: 03/12/2025



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Figure 2: Photo Location Map (2 of 4)

Client:
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Figure 2: Photo Location Map (4 of 4)

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CLE-US52-4.67 (PID 114042)

Location: New Richmond
County: Clermont
State: Ohio

Date: 03/12/2025

Attachment 2
Photo Log

CLE-US52-4.67 (PID 114042)

May 26, 2021, and March 10, 2025



Photograph 1. View of Potential Wetland 1, looking south (2025).



Photograph 2. View of Potential Wetland B, looking north (2021).



Photograph 3. View of Potential Stream 1, looking east (2025).



Photograph 4. View of Potential Stream 1, looking east (2021).



Photograph 5. View of Twelvemile Creek, looking west (2021).



Photograph 6. View of Twelvemile Creek, looking east (2021).



Photograph 7. View of Potential Stream 2, looking east (2025).



Photograph 8. View of Potential Stream 2, looking east (2021).



Photograph 9. View of Potential Jurisdiction Ditch 1, looking south (2021).



Photograph 10. View of Potential Jurisdictional Ditch 1, looking north (2025).



Photograph 11. View of Potential Stream 3, looking east (2025).



Photograph 12. View of Little Indian Creek, looking west (2025).

This report will be updated at the Stage 2 submittal

AMERICAN STRUCTUREPOINT INC.

4700 ASHWOOD DRIVE, SUITE 145
CINCINNATI, OHIO 45241
TEL 513.407.8317

ENVIRONMENTAL SCREENING REPORT –

CLE-US52-4.67 NEW RICHMOND ROUNDABOUTS (PID 114042)

NEW RICHMOND, OHIO TOWNSHIP, CLERMONT COUNTY, OHIO

Prepared for:

143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

Prepared by:

American Structurepoint, Inc.
4700 Ashwood Drive, Suite 145
Cincinnati, Ohio 45241
(614) 901-2235

Authors: Richard M. Paul, PWS; Holly Rundle

May 25, 2021

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Appendix B – Hazardous Materials Records Summary

Appendix C – Historical Aerial Photography

Appendix D – Environmental Resources

1.0 Introduction and Summary

This Environmental Screening Report (ESR) was prepared for 143Engineers, LLC as part of the proposed CLE-US52-4.67 New Richmond Roundabouts project (PID 114042) in Ohio Township, Clermont County, Ohio. This proposed project will include converting the existing four-lane divided section of US 52 to one lane of traffic in each direction using existing northbound lanes of US 52, and converting the existing southbound lanes to a shared-use path. Additionally, the four existing intersections at Front Street, Sycamore Street, Walnut Street, and Augusta Street, will be converted to roundabouts. The study area maps are included in Appendix A.

The ESR was conducted only through literature research, with no site investigation conducted.

A review of hydrological records identified the presence of ten potential drainage features and five potential wetlands within the study area. The study area is within a 100-year floodplain. Potential habitat for threatened and endangered species occurs within the study area. A search of nationwide and local database sources was reviewed to determine if there were any recognizable environmental conditions located within the study area (Appendix B and C). The resulting determination concluded that properties with potential hazardous materials storage or usage are present within the study area. A search of the Ohio Historic Preservation Office database showed three previously surveyed areas completed for portions of the study area, as well as three historic structures within the vicinity of the project area (Appendix D). Additionally, the Ohio Environmental Protection Agency (OEPA) identified an Ohio River-Zone of Critical Concern, a Source Water Protection Area, and an Inner Management Zone within the study area. Three recreational resources were noted adjacent to the study area.

2.0 Environmental Records Review

2.1 Ecological and Hydrological

According to the New Richmond, Ohio quadrangle map, two mapped stream features (Twelvemile Creek and an unnamed tributary to Twelvemile Creek) flow through the northern/central section of the study area, and one mapped stream feature (Little Indian Creek) flows through the southern section of the study area. The Clermont County Soil Survey (Appendix A) and the Clermont County SSURGO mapping (Appendix A) were reviewed for the study area. The Clermont County Soil Survey showed four intermittent drainage features within the study area. Three of the drainage features were depicted at the same locations on the quandrangle map, and one feature was noted at the intersection of US 52 and Sycamore Street. Additionally, none of the mapped soils within the study area are hydric.

National Wetland Inventory (NWI) and Ohio Wetland Inventory (OWI) mapping were reviewed and are included on the provided maps (Appendix A). The NWI mapping revealed one riverine feature (R2UBH) and one forested wetland (PFO1A) shown within the study area. In addition, multiple NWI features are illustrated adjacent to the study area limits. The OWI mapping revealed one shallow marsh, one open water, and one wet meadow within the study area. Furthermore, the study area is within a 100–year floodplain per the Federal Emergency Management Agency (FEMA) 100-year floodplain maps (Appendix A).

Based upon literature research, there are potentially ten drainage features within the study area. The locations of these potential drainage features are detailed below in Table 1.

Table 1 – Potential Drainage Features

Potential Drainage Feature No.	Location within Study Area	Resource
1	Northernmost study area limits, beneath US 52	FEMA map
2 (unnamed tributary to Twelvemile Creek)	South of Front Street intersection, beneath US 52	Topographic, Historic Soils and FEMA maps
3 (Twelvemile Creek)	Between Front Street and Sycamore Street intersection, beneath US 52	Topographic, Historic Soils and FEMA maps
4	North of Sycamore Street intersection, beneath US 52	FEMA map
5	North of Sycamore Street, and continues south along the west side of US 52 and beneath Walnut Street	Historic Soils and FEMA maps
6	South of Sycamore Street intersection, beneath US 52	FEMA map
7	North of Augusta Street intersection, beneath US 52	FEMA map
8	South of Augusta Street intersection, beneath US 52	FEMA map
9	Flowing beneath Adamson Road, east of US 52	FEMA map

10 (Little Indian Creek)	North of Little Indian Creek Road	Topographic, Historic Soils and FEMA maps

The US Fish and Wildlife Service (USFWS) has identified the following species, identified in Table 2, as being Federally-Listed within Clermont County, Ohio as of September, 2020.

Table 2 – Federally Listed Species, Clermont County, Ohio

Species	Status	Habitat
Indiana bat (*Myotis sodalis*)	Endangered	Winter habitat = Caves and mines; Summer habitat = roost under trees with loose bark, etc.; forage in forested stream corridors and upland forests.
Northern long-eared bat (*Myotis septentrionalis*)	Threatened	Winter habitat = Caves and mines; Summer habitat = roost under trees with loose bark, etc., in caves/mines and structures; forage in woods.
Running buffalo clover (*Trifolium stoloniferum*)	Endangered	Partially shaded woodlots, mowed areas, and along streams and trails; require periodic disturbance; cannot tolerate full sun, full shade, or severe disturbance.
Fanshell (*Cyprogenia stegaria*)	Endangered	Found in medium-to-large rivers in sand and gravel.
Pink Mucket Pearly Mussel (*Lampsilis orbiculata*)	Endangered	Found in streams and small rivers in mud and sand.
Sheepnose (*Plethobasus cyphyus*)	Endangered	Found in larger rivers and streams in coarse sand and gravel.
Rayed bean (*Villosa fabalis*)	Endangered	Found in smaller, headwater creeks, but they are sometimes found in large rivers and glacial lakes.
Snuffbox (*Epioblasma triquetra*)	Endangered	Found in small to medium-sized creeks and some larger rivers, in areas with a swift current.

Coordination with the Ohio Department of Natural Resources (ODNR), Division of Wildlife, was conducted on May 10, 2021. ODNR confirmed to have the following species provided in Table 3 present within a half-mile radius for plants and a one-mile radius for all other features from the study area. No records of any rare or endangered species were identified within the study area. Additionally, ODNR stated they are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks or forests, national wildlife refuges, or other protected natural areas within a one-mile radius of the project study area. A copy of this coordination letter is available in Appendix D.

Table 3 – ODNR Natural Heritage Database Results

Species	Status	Habitat
Virginia-mallow (*Pariosida hermaphrodita*)	Potentially Threatened	Found in open to semi-open disturbed situations in sandy soils along rivers (along or very near the bank of the Ohio River). Flowering in July-September.

Channel Darter *(Percina copelandi)*	Threatened	Found in lakes or large streams; living over sandy or gravelly shoals off beaches.
Wartyback *(Cyclonaias nodulata)*	Endangered	Found in medium to large rivers at depths of up to 15-18 feet on a sand and mud substrate.
Threehorn Wartyback *(Obliquaria reflexa)*	Threatened	Found in medium to large rivers on gravel, gravel-sand, or gravel-mud substrates with moderate current.
Deertoe (*Truncilla truncata)*	Species of Concern	Found in lakes and medium-to-large rivers, on mud, sand, or gravel substrates.
Smooth Buttonweed *(Spermacoce glabra)*	Potentially Threatened	Found along river banks, where floods regularly scour soil. Flowering in summer and fall.

2.2 Hazardous Materials

A search of nationwide and local database sources was conducted through the Ohio Regulated Properties Search (ORPS) provided by the Ohio Department of Transportation (ODOT) on May 13, 2021. That search was performed using the parameter limits set into place by the ORPS tool for the study area. A copy of the ORPS report is included in Appendix B. Table 4 details the results of the properties near the study area.

Table 4 – Standard Federal, State, and Tribal Environmental Sources as Identified in the ORPS

Standard Environmental Record	Total Properties Within Search Distance	Adjacent Property Listed (Y/N)	Subject Property Listed (Y/N)
SEMS – Non-NPL Sites w/buffer (US EPA)	0	N	N
SMES – NPL Sites w/buffer (US EPA)	0	N	N
Federal Resource Conservation & Recovery Act (RCRA) Sites	3	Y	Y
RCRA – TSD Sites w/buffer (US EPA)	0	N	N
Federal Engineering Controls (US EPA)	0	N	N
Federal Institutional Controls (US EPA)	0	N	N
State Leaking Underground Storage Tank (LUST) Facilities	2	N	Y
State Underground Storage Tanks (UST) Facilities	3	N	Y
Coal Gas Generators	0	N	N
DERR Database	0	N	N

Impoundment Sites	0	N	N
Landfills – Active Solid Waste Facilities w/buffer	0	N	N
Landfills – Historic/Abandoned Facilities w/buffer	1	Y	N
Landfills – Solid Waste Facility Polygons	0	N	N
Projects with Engineering Controls	0	N	N
Projects with Institutional Controls	0	N	N
Spills Database	0	N	N
VAP Sites	0	N	N
Potential Areas of Concern	0	N	N

Table 5 details the ORPS records reported within and adjacent to the study area. More details on the ORPS records at these site locations are included in Appendix B.

Table 5 – Standard Federal, State, and Tribal Environmental Properties within the Study Area

Property Address	Adjacent/Within Study Area	Standard Environmental Records	Details/Status
527 Sycamore Street	Within Study Area	UST	No reported releases.
520 Sycamore Street	Within Study Area	UST, LUST, and RCRA	RCRA- conditionally exempt small quantity generator (CESQG). UST/LUST- No Further Action status, suspected release in 2020 was disproved.
415 Sycamore Street	Within Study Area	LUST	No Further Action status.
410 Sycamore Street	Within Study Area	UST, LUST, and RCRA	RCRA- unspecified universe. UST/LUST- No Further Action status.
1041 Old US 52, Suite D	Adjacent	RCRA	RCRA-CESQG
N/A; southernmost study area limits	Adjacent	State Abandoned Dump and Landfill	Abandoned dump located within ORPS 300-foot buffer. Closed in 1980.

Historical aerial photographs were reviewed for the years 1958, 1969, 1976, 1986, 1997, 2009, 2014, and 2021. These historical aerial photographs are included in Appendix C and the study area is summarized in Table 6.

Table 6 – Historical Aerial Photography Summary

Year	Description
1958	Primarily agricultural use in the northern and southern sections of the study area. The central section of the study area is more residential with some commercial use.
1969	US 52 was constructed, following along the current study area. Intersections include more commercial use, with gas stations located on the corners of the Sycamore Street intersection.
1976	The study area is similar to the previous aerial, with more growth surrounding US 52.
1986	The study area is similar to the previous aerial, with minor changes to commercial buildings along US 52.
1997	The study area and US 52 is similar to the previous aerial.
2009	The study area and US 52 is similar to the previous aerial.
2014	The study area and US 52 is similar to the previous aerial.
2021	The study area and US 52 is similar to the previous aerial.

2.3 Cultural Resources

A search of the Ohio Historic Preservation Office database showed three previous cultural resources studies completed for portions of the study area. One Phase I Archaeological Survey was completed for the proposed New Richmond Marina project in the northern section of the study area. Another Phase 1 Archaeological Survey was completed at the Prather Site in the northeastern section of the study area. Additionally, one Phase I Cultural Resources Survey was completed for the proposed improvements to the Forest Park project in the southern section of the study area. Three historic structures were also noted directly adjacent to the project area, including a church at 411 Walnut Street, a single dwelling at 233 Augusta Street, and a single dwelling at 1059 SR 52 near the southernmost study area limits.

A copy of the map generated from the OHPO database search is included in Appendix D. Additional cultural resources surveys may be needed depending upon right-of-way requirements and impacts to waterways. Should any human remains be discovered, work on that portion of the project should stop immediately, the remains should be covered and/or protected in place, and local law enforcement and/or the County Coroner should be notified.

2.4 Other Environmental Resources

The OEPA was contacted for information regarding drinking water sources near the study area. Portions of the proposed project are within the Ohio River-Zone of Critical Concern, a Source Water Protection Area, and an Inner Management Zone (Appendix D)

ODOT Transportation Information Mapping System (TIMS) was used to investigate the following underserved populations: linguistically isolated, over age 64, low income, and minority population. Mapping includes the percentage of the underserved populations within each census block located within the study area (Appendix D). ODOT TIMS revealed the study area is within two census blocks. The two census blocks are also summarized below in Table 7. An assessment of impacts to the Underserved

Population will be necessary, and the populations must be included in the Public Involvement process. The level of measures to address impacts and/or effects will depend on the context and intensity of the project. Impacts should be avoided if at all possible, or every effort should be made to minimize and/or mitigate the impacts.

Table 7 –Underserved Populations Census Blocks within Study Area

Census Block	Linguistically Isolated	Over Age 64	Low Income	Minority Population
390250416001	0%	15%	42%	2%
390250416002	0%	12%	28%	17%

Section 4(f) resources include any publicly owned park, recreational area, or wildlife or waterfowl refuge, or any publically or privately owned historic site. Section 4(f) (49 USC 303 and 23 USC 138) applies only to projects that receive funding or require approval by an agency of the US DOT, including FHWA.

Three recreational resources were noted adjacent to the study area. New Richmond Knothold Fields at 1009 Old US 52 #985, on the northeast side of the study area, is open to public use for baseball fields. Additionally, Union Square Park East and Union Square Park West are directly north of Augusta Street toward the southern terminus of the study area and are both open to the public to use.

Section 6(f) resources include any area or facility acquired through the use of Land and Water Conservation Fund (LWCF) assistance. The nearby Section 6(f) listings in Clermont County are provided in Appendix D. No Section 6(f) resources were found within or directly adjacent to the study area.

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Appendix A - Mapping

Project Location Map

USGS Topographic Map

2021 Aerial Photography (5 Sheets)

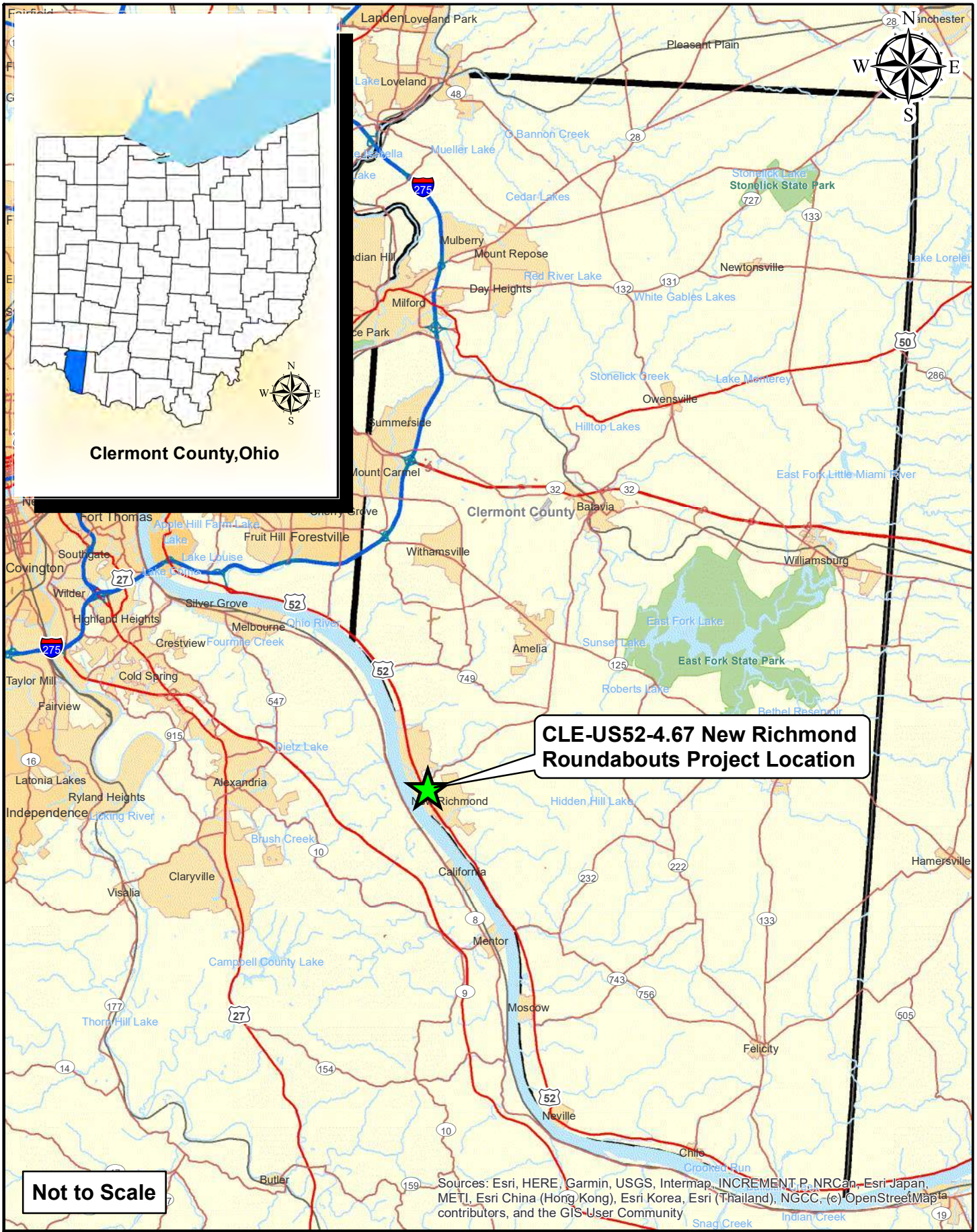
1975 Clermont County Soil Survey Map (3 Sheets)

Clermont County SSURGO Map (5 Sheets)

National Wetland Inventory Map (5 Sheets)

Ohio Wetland Inventory Map (5 Sheets)

FEMA 100-Year Floodplain Map



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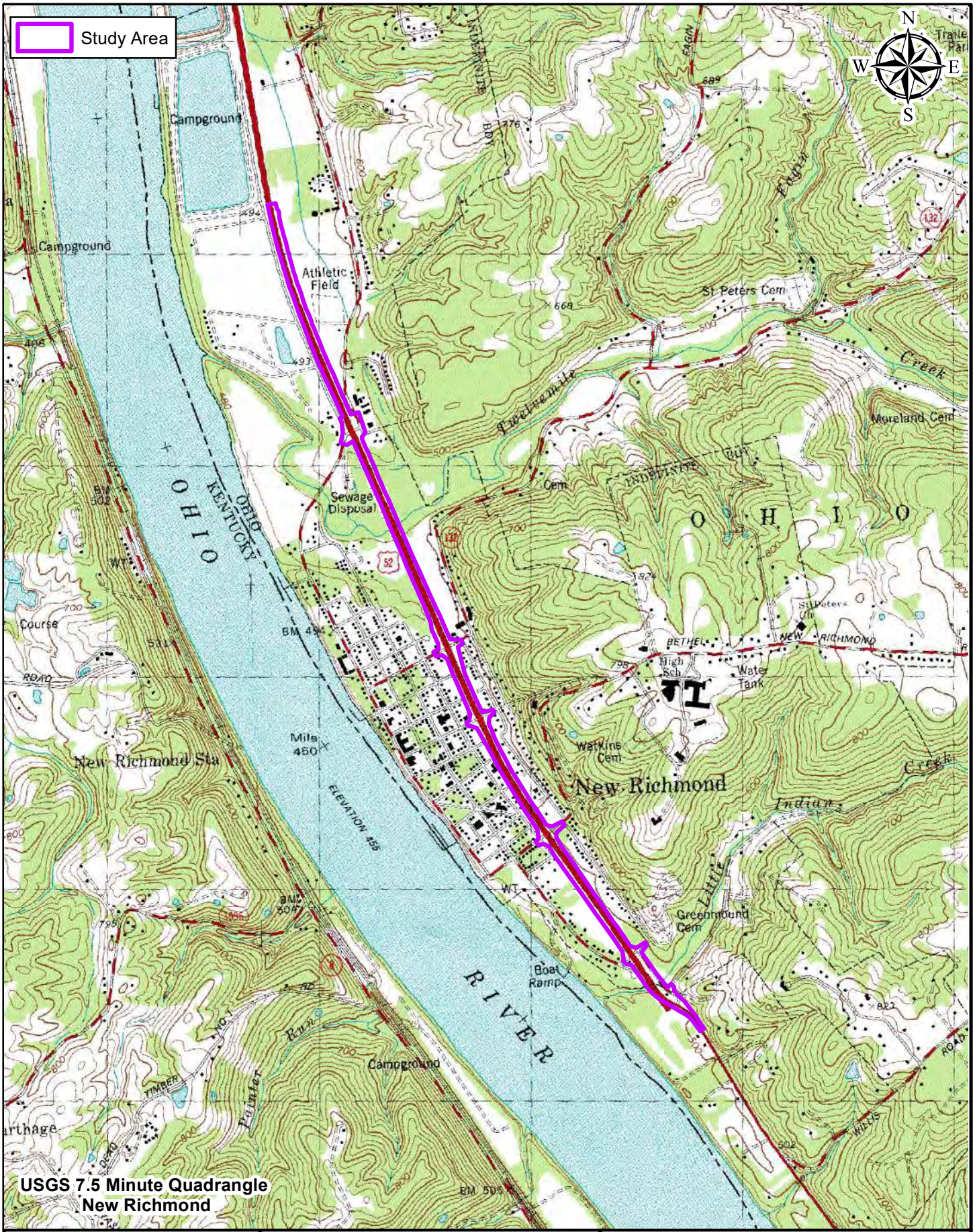
Project Location Map

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)

Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio

Date: 05/06/2021



USGS 7.5 Minute Quadrangle
New Richmond

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USGS Topographic Map

Client:
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2021 Aerial Map (1 of 5)

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2021 Aerial Map (2 of 5)

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Location: New Richmond
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2021 Aerial Map (3 of 5)

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143Engineers, LLC
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC. www.structurepoint.com	2021 Aerial Map (4 of 5)	CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
	Client: 143Engineers, LLC 3249 Plateau Place Cincinnati, Ohio 45241	Location: New Richmond Township: Ohio County: Clermont State: Ohio Date: 05/06/2021

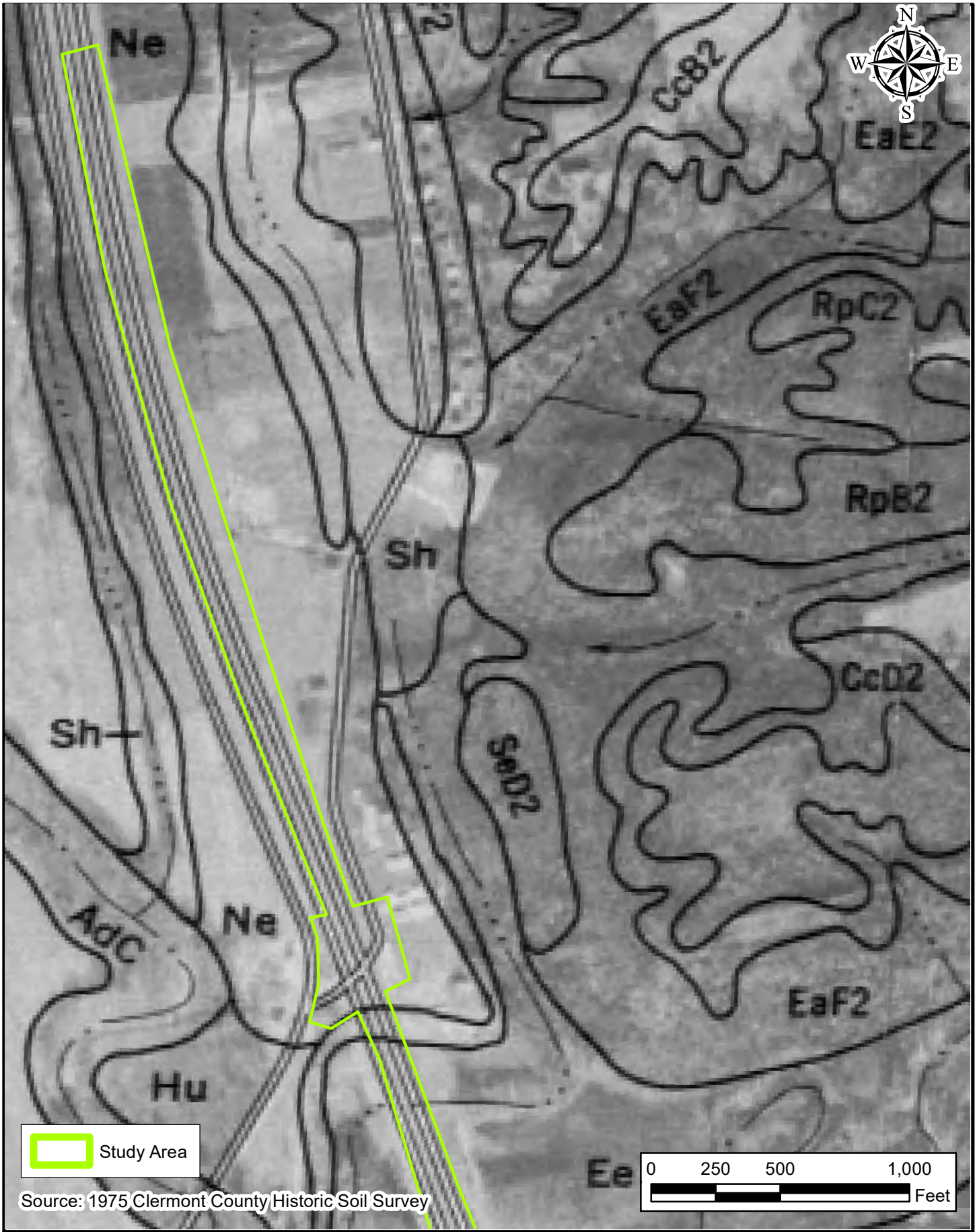


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2021 Aerial Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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Historic Soils Map (1975)

Client:
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Location: New Richmond
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Date: 05/06/2021



Source: 1975 Clermont County Historic Soil Survey

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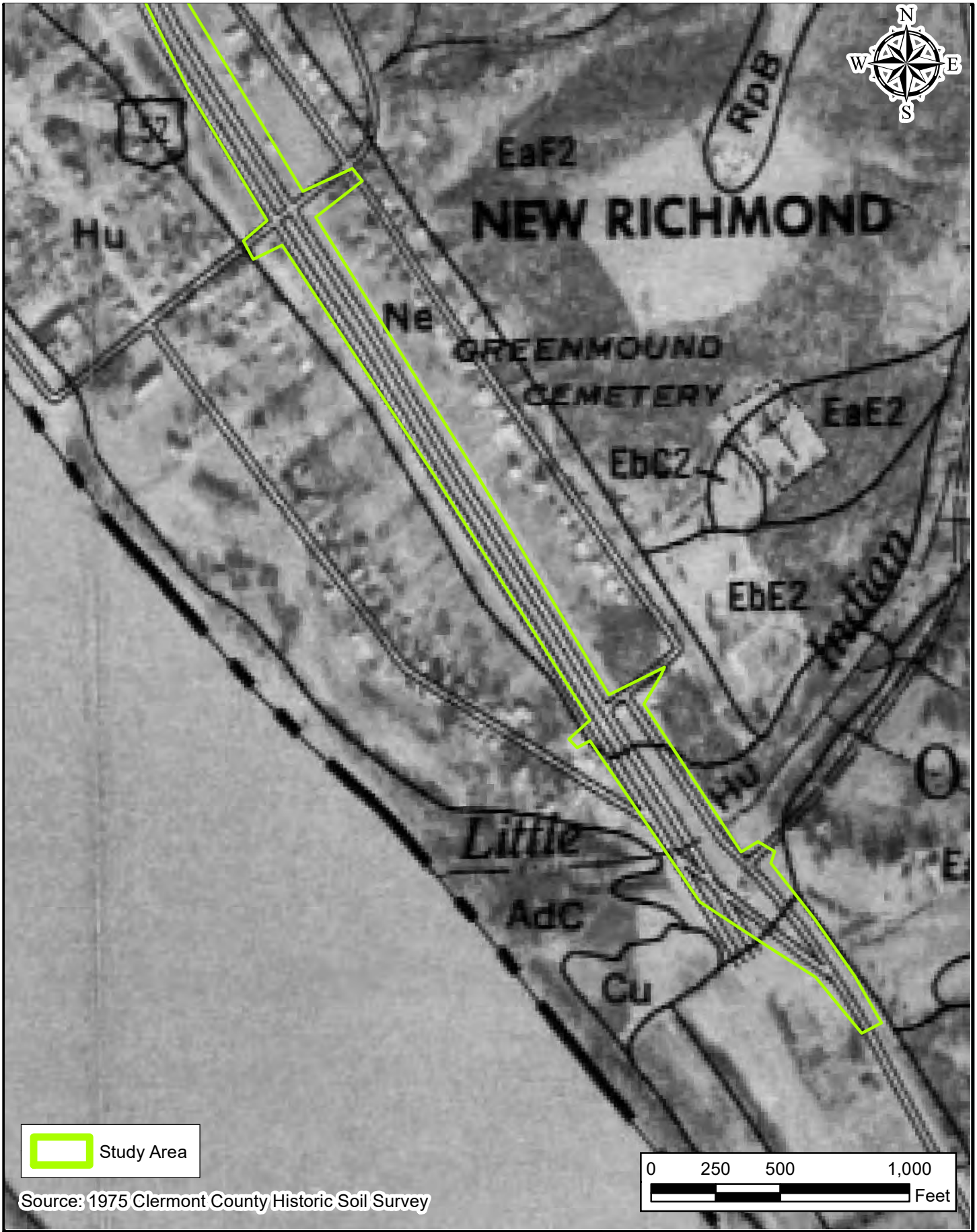
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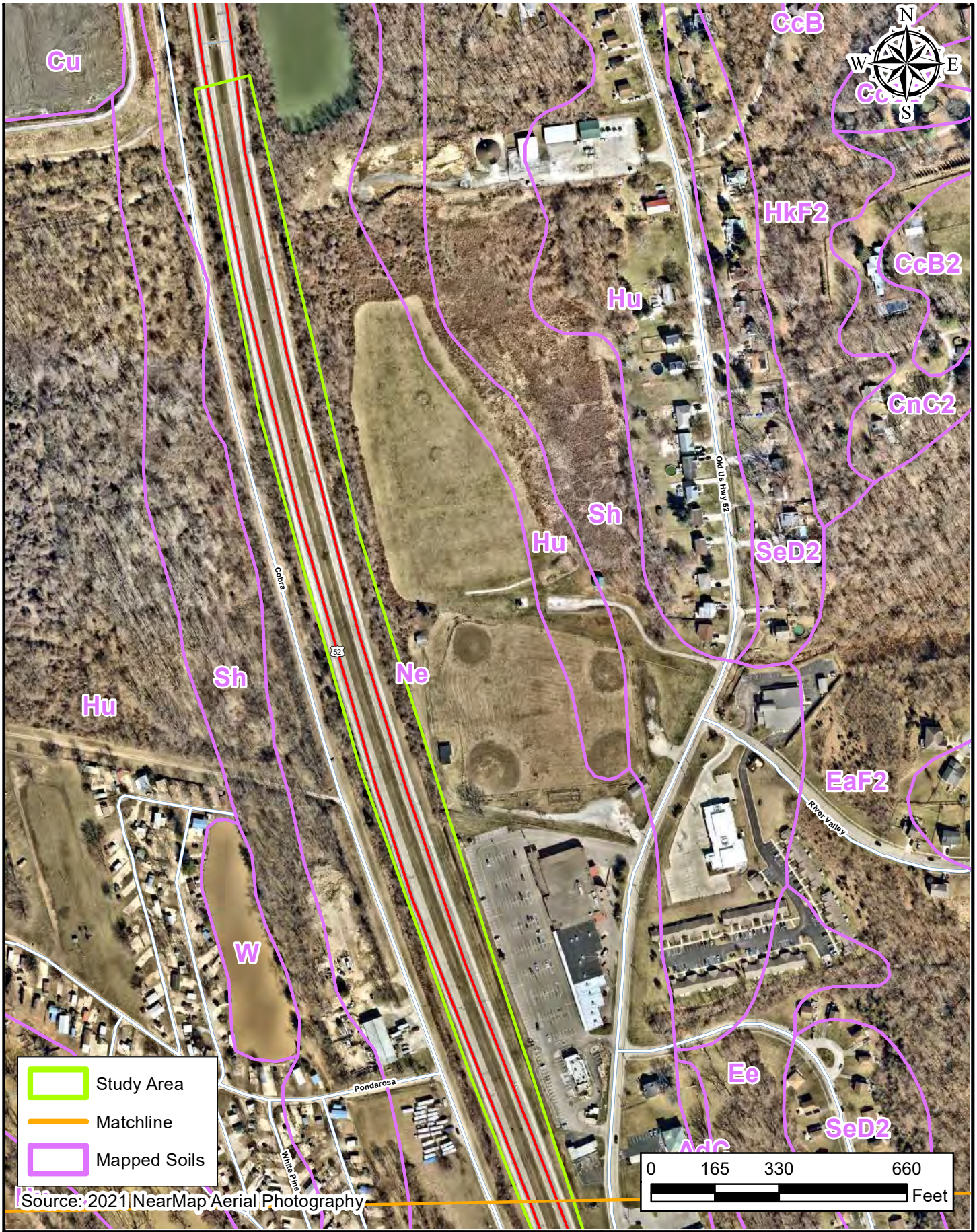
Source: 1975 Clermont County Historic Soil Survey

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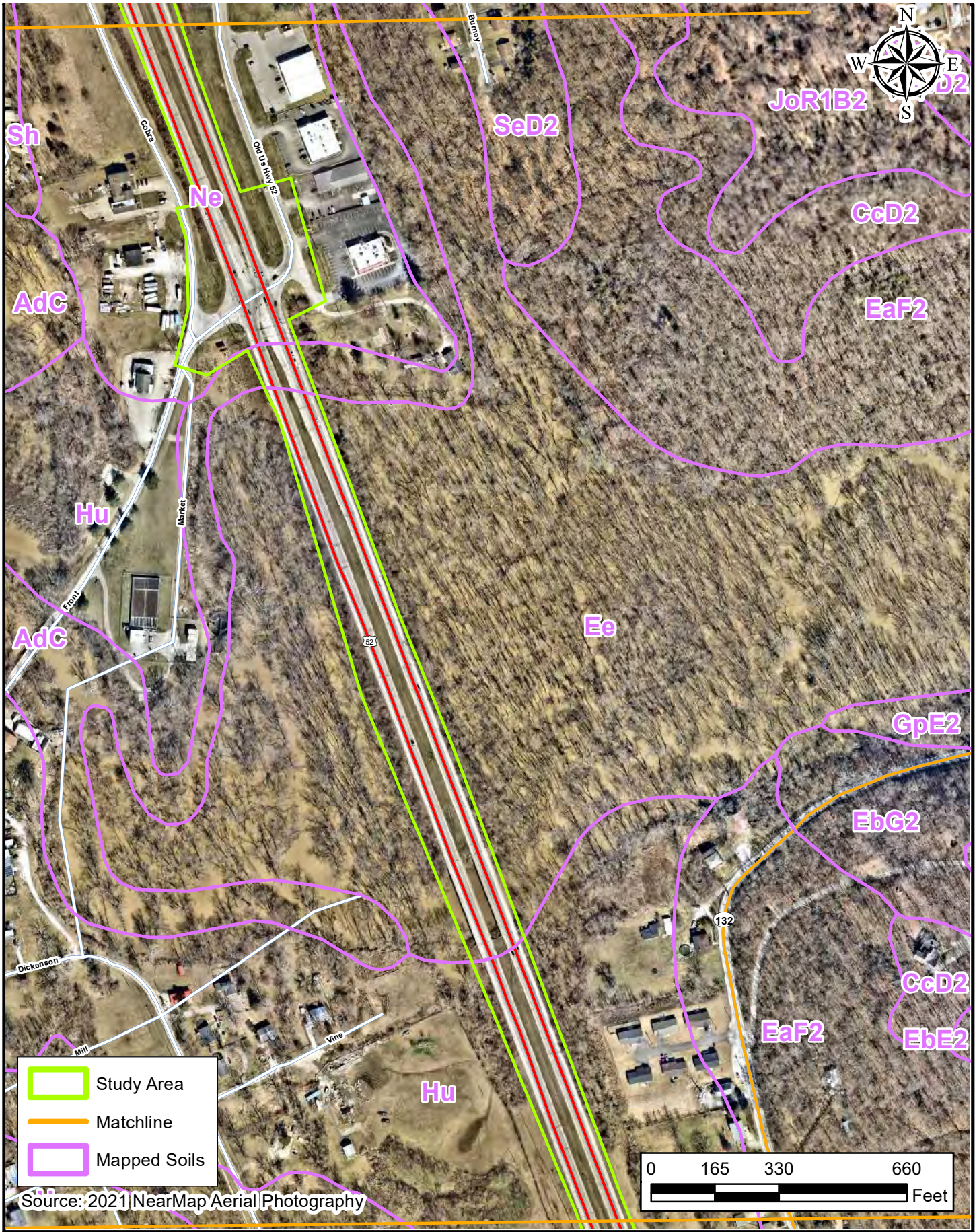


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SSURGO Mapped Soils (1 of 5)

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SSURGO Mapped Soils (2 of 5)

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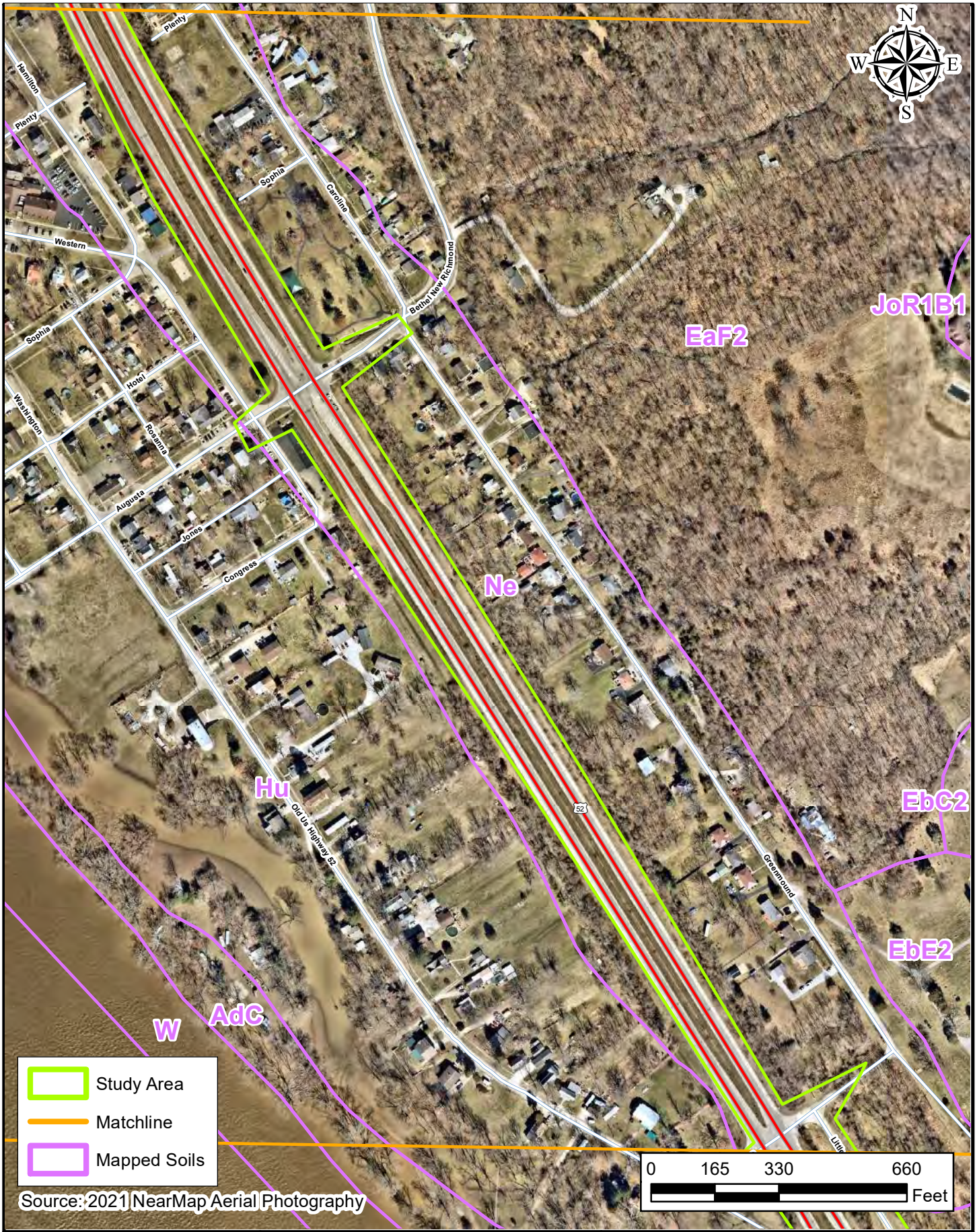


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SSURGO Mapped Soils (3 of 5)

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SSURGO Mapped Soils (4 of 5)

Client:
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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SSURGO Mapped Soils (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

National Wetlands Inventory Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)

Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio

Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

National Wetlands Inventory Map (2 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021

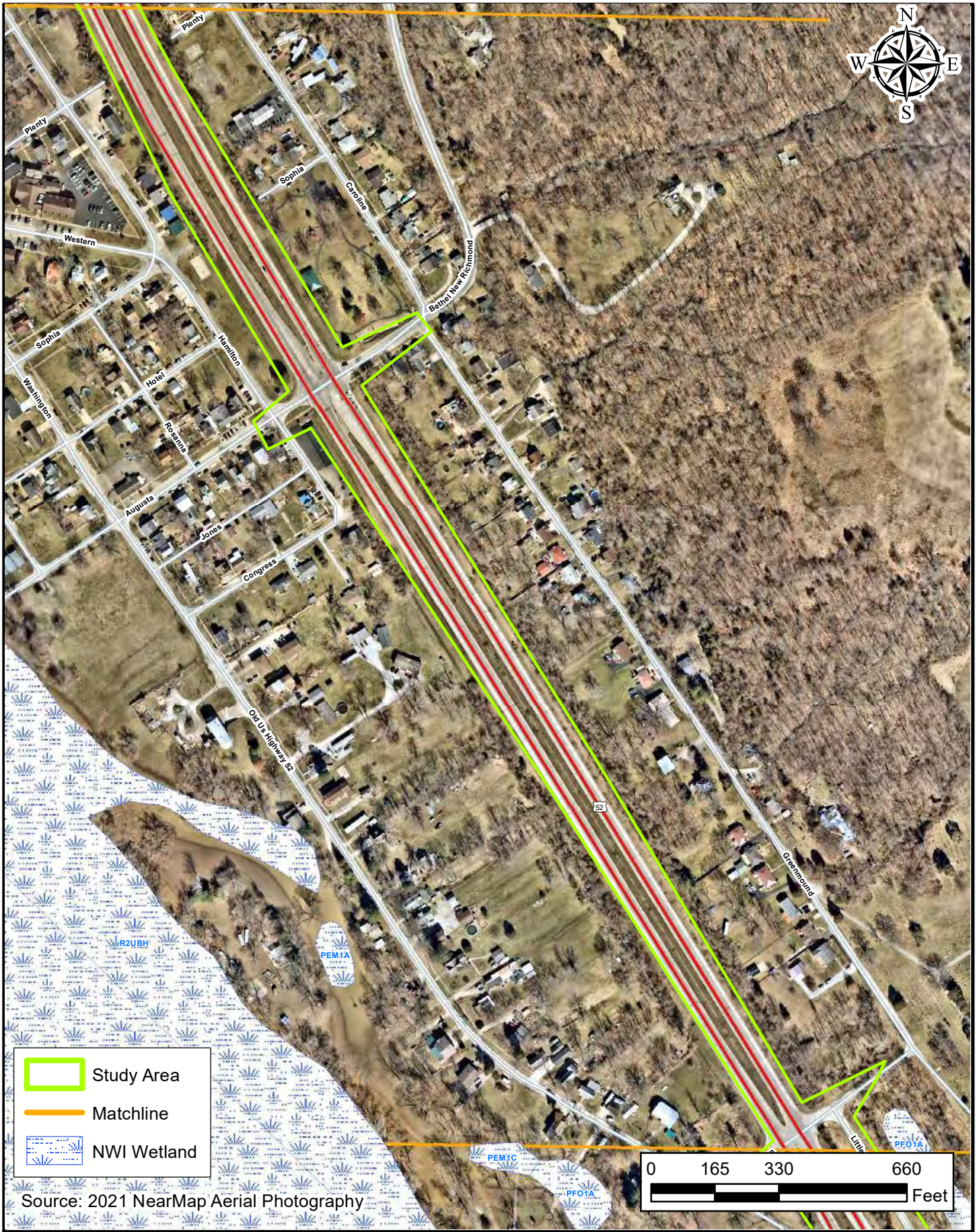


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National Wetlands Inventory Map (3 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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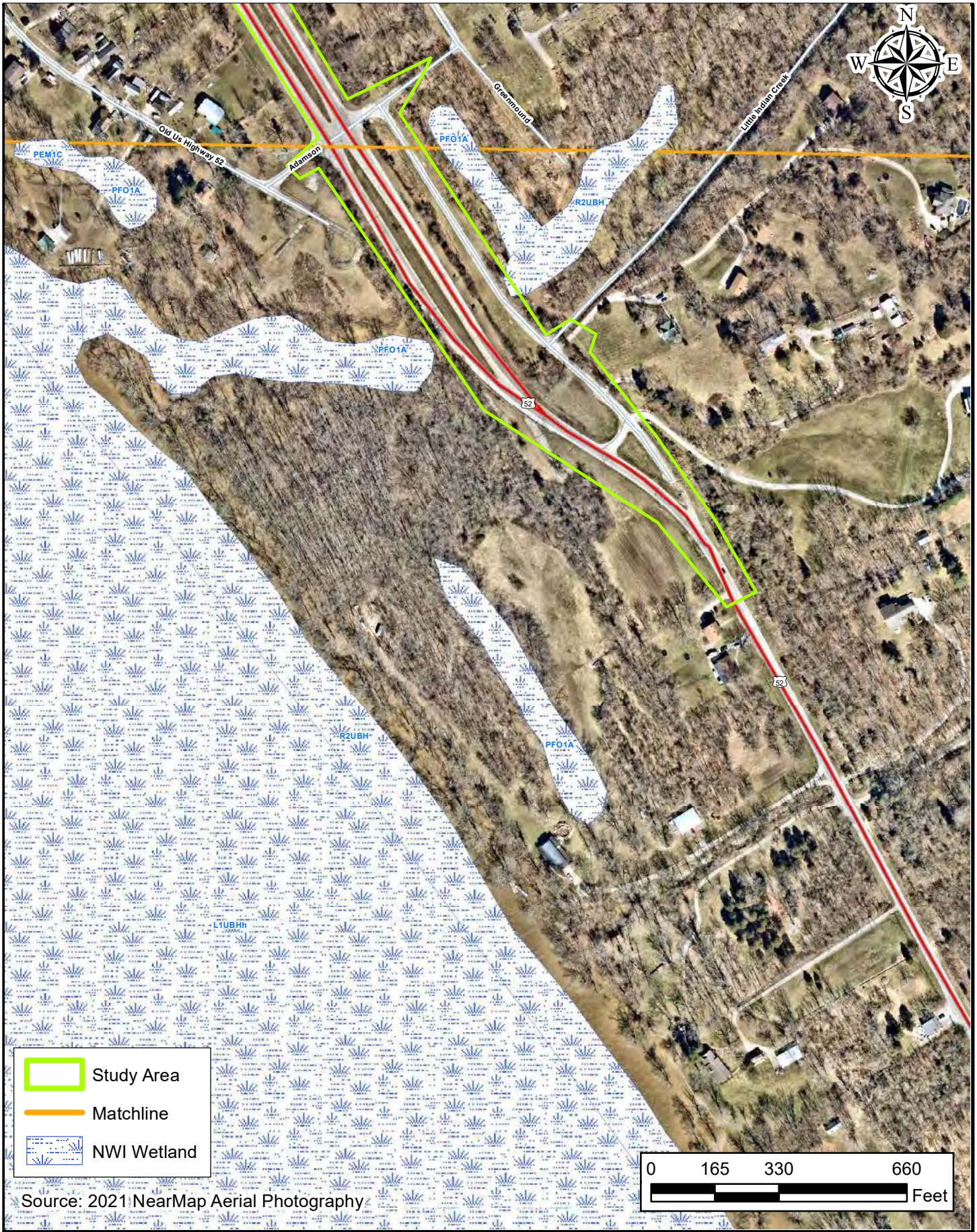
National Wetlands Inventory Map (4 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)

Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio

Date: 05/06/2021

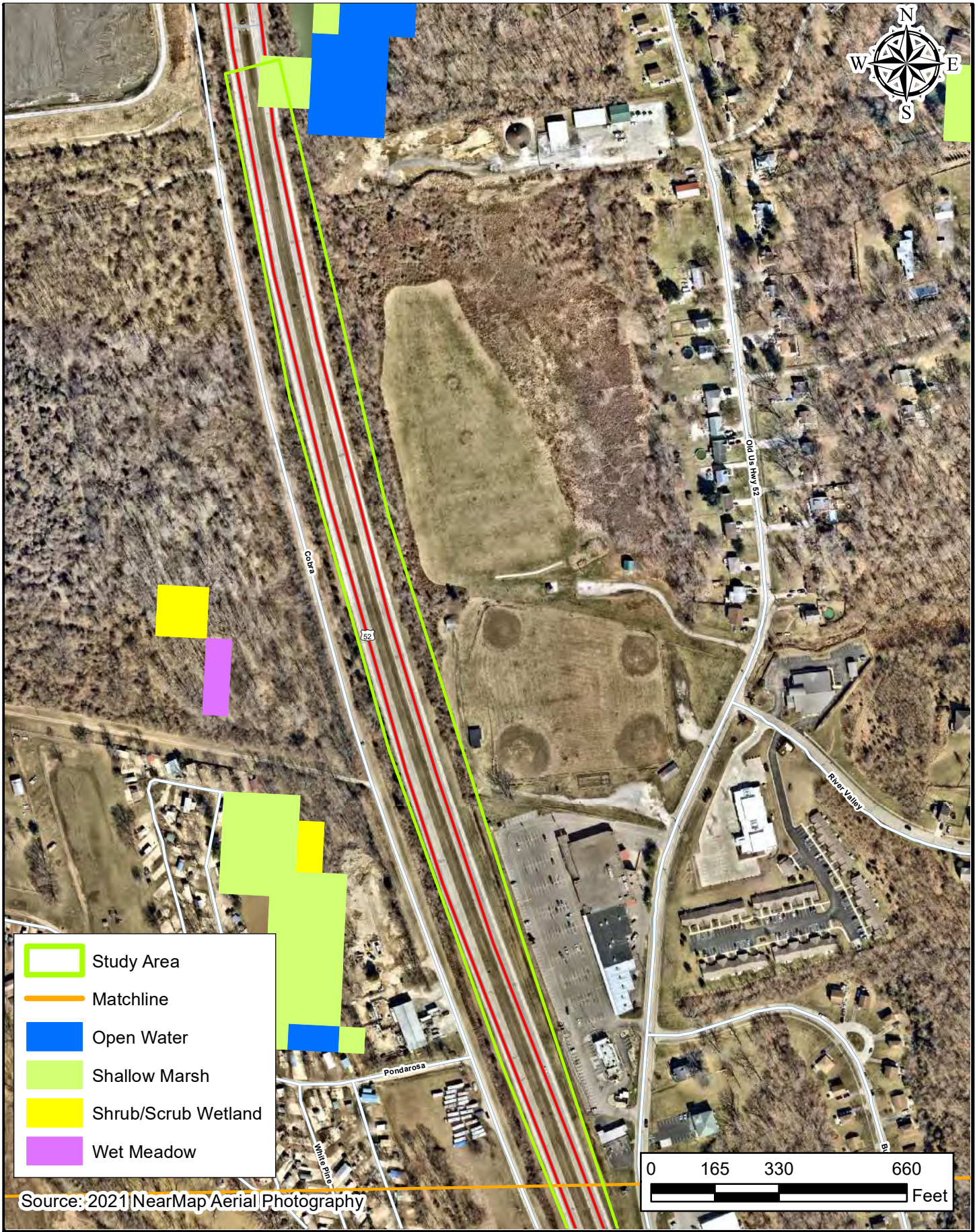


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National Wetlands Inventory Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
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Township: Ohio
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Date: 05/06/2021



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Ohio Wetlands Inventory Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)

Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio

Date: 05/06/2021



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Ohio Wetlands Inventory Map (2 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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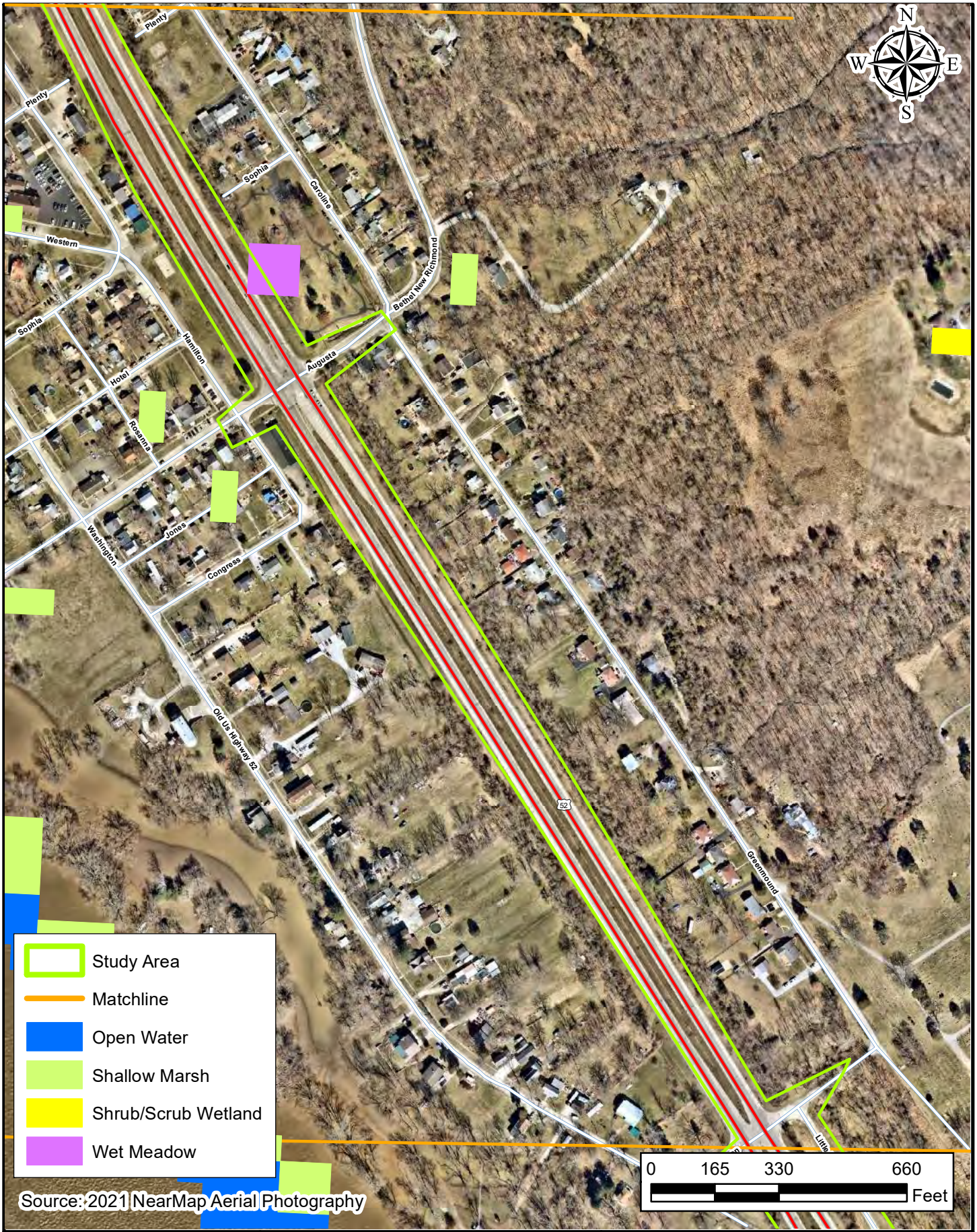
Ohio Wetlands Inventory Map (3 of 5)

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143Engineers, LLC
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Cincinnati, Ohio 45241

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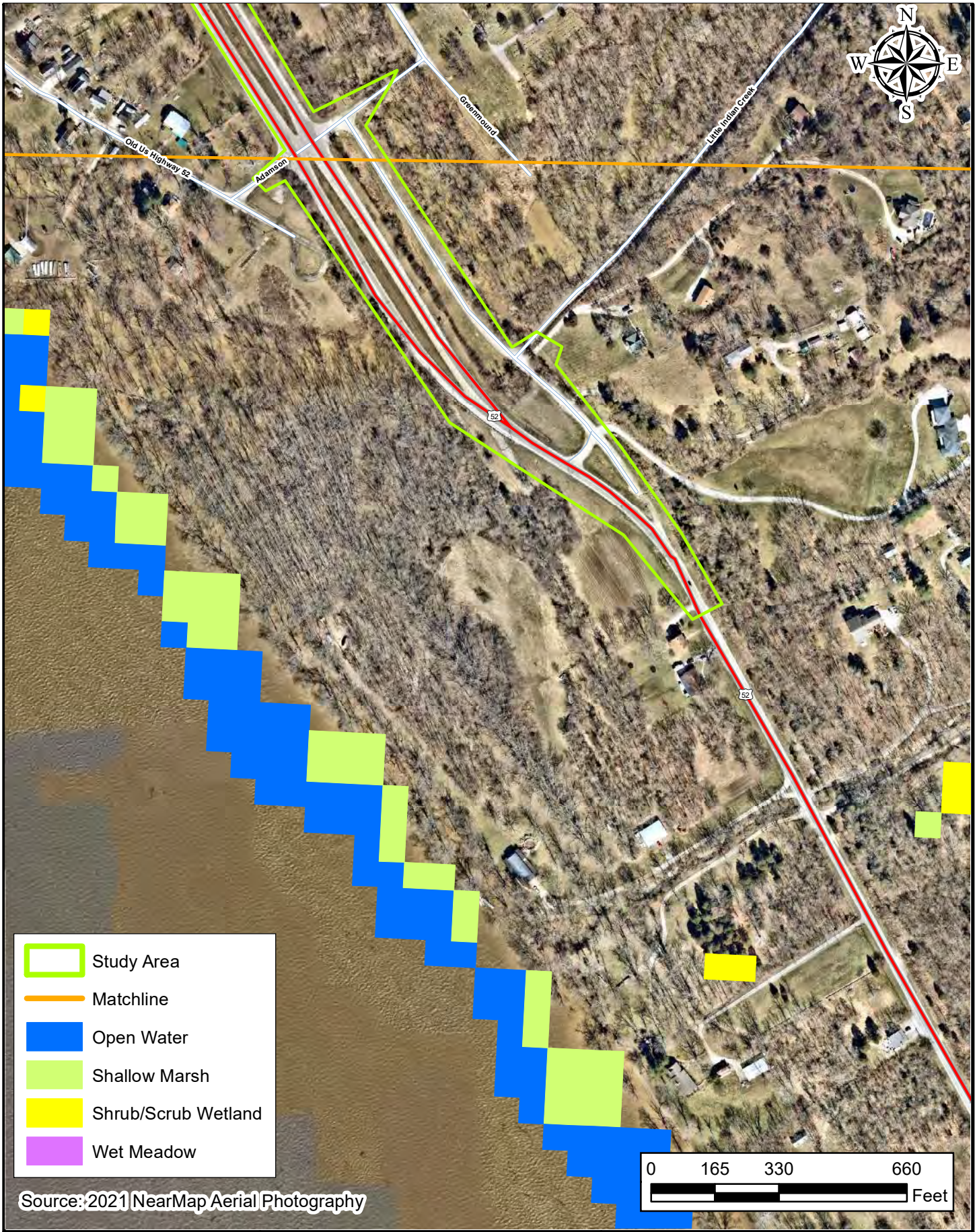
Ohio Wetlands Inventory Map (4 of 5)

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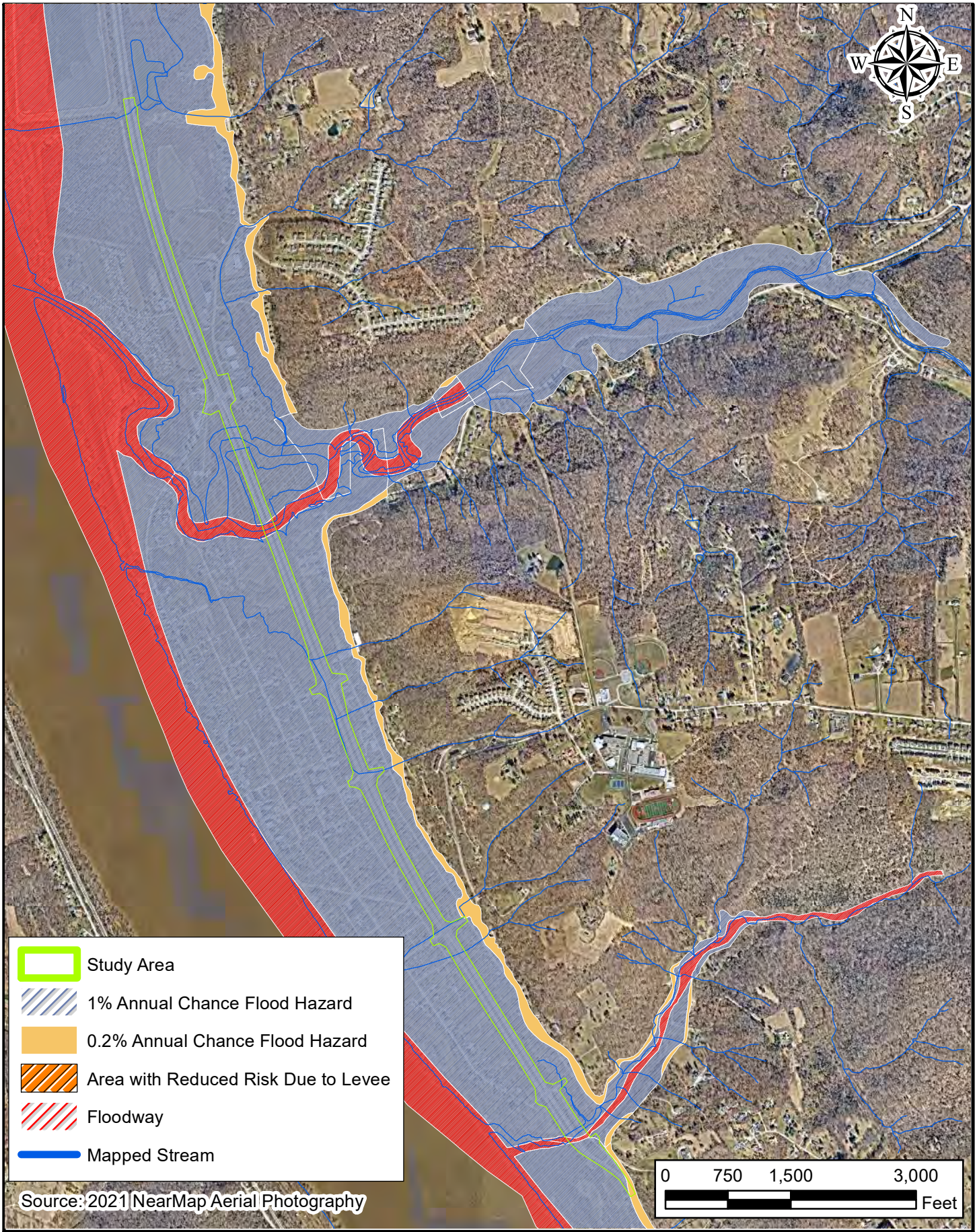
Ohio Wetlands Inventory Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)

Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio

Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

FEMA 100-Year Floodplain Map

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021

Appendix B - Hazardous Materials Records Summary

ORPS Summary Report- New Richmond

Area of Interest (AOI) Information

Area : 144.77 acres

May 13 2021 16:02:37 Eastern Daylight Time



Summary

Name	Count	Area(acres)	Length(ft)
SEMS - Non-NPL Sites w/buffer (US EPA)	0	0	N/A
SEMS - NPL Sites w/buffer (US EPA)	0	0	N/A
RCRA (US EPA)	3	N/A	N/A
RCRA - TSD Sites w/buffer (US EPA)	0	0	N/A
Federal Engineering Controls (US EPA)	0	N/A	N/A
Federal Institutional Controls (US EPA)	0	N/A	N/A
BUSTR - UST Locations (BUSTR/OGRIP)	40	N/A	N/A
BUSTR - LUST Locations (BUSTR/OGRIP)	7	N/A	N/A
Coal Gas Generators (OEPA-DERR)	0	N/A	N/A
DERR Database (OEPA-DERR)	0	N/A	N/A
Impoundment Sites (OEPA-DERR)	0	N/A	N/A
Landfills - Active Solid Waste Facilities w/buffer (OEPA-DMWM)	0	0	N/A
Landfills - Historic/Abandoned Facilities w/buffer (OEPA-DMWM/DERR)	2	5.31	N/A
Landfills - Solid Waste Facility Polygons (OEPA-DMWM)	0	0	N/A
Projects With Engineering Controls (OEPA-DERR)	0	N/A	N/A
Projects With Institutional Controls (OEPA-DERR)	0	N/A	N/A
Spills Database (OEPA)	0	N/A	N/A
VAP Sites (OEPA-DERR)	0	N/A	N/A
Potential Areas of Concern (ODOT-OES)	0	0	N/A

RCRA (US EPA)

#	REGISTRY_ID	PRIMARY_NAME	ADDRESS	CITY	STATE	ZIP	LAST_REPORTED_DATE	URL
1	110009687712	ADAMSONS SUNOCO	410 SYCAMORE STREET	NEW RICHMOND	OH	45157-1137	4/14/2015	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110009687712
2	110066962095	FAMILY DOLLAR #2130	1041 OLD US 52 SUITE D	NEW RICHMOND	OH	45157-8501	9/17/2015	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110066962095
3	110004573925	SPEEDWAY 9595	520 SYCAMORE CIRCLE	NEW RICHMOND	OH	45157-1148	4/28/2015	https://ofmpub.epa.gov/frs_public2/fii_query_detail.disp_program_facility?p_registry_id=110004573925

#	PGM_SYS_ID	PGM_SYS_ACRONYM	INTEREST_TYPE	REFERENCE_POINT_DESC	Count
1	OHD000681585	RCRAINFO	UNSPECIFIED UNIVERSE	CENTER OF A FACILITY OR STATION	1
2	OHR000198242	RCRAINFO	CESQG	ENTRANCE POINT OF A FACILITY OR STATION	1
3	OH0000345942	RCRAINFO	CESQG	CENTER OF A FACILITY OR STATION	1

BUSTR - UST Locations (BUSTR/OGRIP)

#	FACILITY_ID	CURRENT_FACILITY_NAME	ADDRESS	CITY	ZIP	Status	INSPECTION_DATE	FACILITY_CO
1	13000017	NEW RICHMOND FOOD MART	527 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	No
2	13000017	NEW RICHMOND FOOD MART	527 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	No
3	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	No
4	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	No
5	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	No
6	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	09/10/13	Yes
7	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	09/10/13	Yes
8	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	09/10/13	Yes
9	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	09/10/13	Yes
10	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	09/10/13	Yes
11	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	Yes
12	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	Yes
13	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	11/12/13	Yes
14	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	REM	*No Data*	*No Data*
15	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	REM	*No Data*	*No Data*
16	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	REM	*No Data*	*No Data*
17	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	REM	*No Data*	*No Data*
18	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	REM	*No Data*	*No Data*
19	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	REM	*No Data*	*No Data*
20	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
21	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
22	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
23	13000017	NEW RICHMOND FOOD MART	527 SYCAMORE ST	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
24	13000017	NEW RICHMOND FOOD MART	527 SYCAMORE ST	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
25	13000197	NEW RICHMOND FUEL INC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
26	13000197	NEW RICHMOND FUEL INC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
27	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
28	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	CIU	*No Data*	*No Data*
29	13000197	NEW RICHMOND FUEL INC	410 SYCAMORE ST	NEW RICHMOND	45157	CIU	*No Data*	*No Data*

#	TANK_ID	CAPACITY	CONTENT	DATE_REMOVED	FACILITY_STATUS	Count
1	T00001	10000	Gasoline	NULL	Active	5
2	T00002	10000	Gasoline	NULL	Active	5
3	T00001	6000	Gasoline	NULL	Active	2
4	T00002	6000	Gasoline	NULL	Active	2
5	T00003	6000	Gasoline	NULL	Active	2
6	T00006	3000	Kerosene	NULL	Active	1
7	T00007	8000	Diesel	NULL	Active	1
8	T00008	10000	Gasoline	NULL	Active	1
9	T00009	12000	Gasoline	NULL	Active	1
10	T00010	10000	Gasoline	NULL	Active	1
11	T00001	6000	Gasoline	NULL	Active	1
12	T00002	6000	Gasoline	NULL	Active	1
13	T00003	6000	Gasoline	NULL	Active	1
14	T00001	12000	Gasoline	08/17/95	Inactive	1
15	T00002	4000	Gasoline	08/17/95	Inactive	1
16	T00003	4000	Gasoline	08/17/95	Inactive	1
17	T00004	4000	Gasoline	08/17/95	Inactive	1
18	T00005	4000	Gasoline	08/17/95	Inactive	1
19	T00004	550	Used Oil	10/23/08	Inactive	1
20	T00008	10000	Gasoline	*No Data*	*No Data*	1
21	T00007	8000	Diesel	*No Data*	*No Data*	1
22	T00009	12000	Gasoline	*No Data*	*No Data*	1
23	T00002	10000	Gasoline	*No Data*	*No Data*	1
24	T00001	10000	Gasoline	*No Data*	*No Data*	1
25	T00001	6000	Gasoline	*No Data*	*No Data*	1
26	T00002	6000	Gasoline	*No Data*	*No Data*	1
27	T00006	3000	Kerosene	*No Data*	*No Data*	1
28	T00010	10000	Gasoline	*No Data*	*No Data*	1
29	T00003	6000	Gasoline	*No Data*	*No Data*	1

BUSTR - LUST Locations (BUSTR/OGRIP)

#	FACILITY_ID	CURRENT_FACILITY_NAME	ADDRESS	CITY	ZIP	INCIDENT_ID	LTF	STATUS	FACILITY_STATUS	Count
1	*No Data*	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	*No Data*	1 SUS/CON from regulated UST	NFA: No Further Action	Inactive	2
2	13000197	HIGH OCTANE JONES LLC	410 SYCAMORE ST	NEW RICHMOND	45157	N00001	6 Closure of regulated UST	CLO: Closure	Active	1
3	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	N00001	1 SUS/CON from regulated UST	NFA: No Further Action	Inactive	1
4	13000100	SPEEDWAY #9595	520 SYCAMORE CT BX 322	NEW RICHMOND	45157	N00002	1 SUS/CON from regulated UST	NFA: No Further Action	Inactive	1
5	*No Data*	NEW RICHMOND FUEL INC	410 SYCAMORE ST	NEW RICHMOND	45157	*No Data*	6 Closure of regulated UST	NFA: No Further Action	Inactive	1
6	*No Data*	BP OIL CO. #09279	415 SYCAMORE ST	NEW RICHMOND	45157	*No Data*	1 SUS/CON from regulated UST	NFA: No Further Action	Inactive	1

Landfills - Historic/Abandoned Facilities w/buffer (OEPA-DMWM/DERR)

#	LATITUDE	LONGITUDE	SITE	ALT SITE NAME/LOCATION	COUNTY	WASTE_TYPE	YEAR_CLOSED	SECONDARY_ID
1	38.94395	-84.27383	New Richmond Dump	*No Data*	Cleremont	Need Data	0	*No Data*
2	38.943889	-84.273889	NEW RICHMOND DUMP	NORTHEAST OF US-52 ON THE SOUTH EDGE OF VILLAGE LIMITS.	CLERMONT	UNKNOWN	<'80	*No Data*

#	SWLF_ID	DATABASE	OEPA_DISTRICT	EDOCS_LINK	Area(acres)
1	*No Data*	Historic	SWDO	https://edocpub.epa.ohio.gov/ODOTService/api/DocPop/00	2.83
2	N	Abandoned	SWDO	https://edocpub.epa.ohio.gov/ODOTService/api/DocPop/00	2.47

FAMILY DOLLAR #2130
Handler ID: OHR000198242
1041 OLD US 52 SUITE D
NEW RICHMOND, OH 45157-8501

County Name: CLERMONT

Latitude: 38.938668
Longitude: -84.267616

Hazardous Waste Generator:

Owner Name: RIVERTOWN MARKET PLACE LLC



**You can navigate within the map with your mouse.*

No BIENNIAL REPORT data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PHONE	TYPE OF CONTACT
KEVIN STRAIGHT	PO BOX 1017	CHARLOTTE	NC	28201	704-708-1909	Public
KEVIN STRAIGHT	PO BOX 1017	CHARLOTTE	NC	28201	704-708-1909	Permit

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND OR INDUSTRIAL FURNACE	STORAGE	TREATMENT

No Handler information is available for the facility listed above.

No PROCESS INFORMATION is available for the facility listed above.

HANDLER TYPE

LIST OF NAICS CODES AND DESCRIPTIONS

NAICS CODE	NAICS DESCRIPTION
45299	ALL OTHER GENERAL MERCHANDISE STORES

No Waste Codes are available for the facility listed above.

Go To Top Of The Page

Total Number of Facilities Retrieved: 1

MAIL THE COMPLETED FORM TO: Ohio EPA, DMWM, P.O. Box 1049, Columbus, OH 43216-1049	Ohio Environmental Protection Agency **RCRA SUBTITLE C SITE IDENTIFICATION** RECEIVED MAR 13 2015 OHIO EPA - DMWM	For Ohio EPA Use Only 558960

1. Reason for Submittal	**Reason for Submittal:** ☒ To provide initial notification (to obtain an EPA ID Number for hazardous waste, universal waste, or used oil activities). ☐ To provide subsequent notification (to update site identification information). ☐ As a component of a First RCRA Hazardous Waste Part A Permit Application, ☐ As a component of a Revised RCRA Hazardous Waste Part A Permit Application (Amendment #_____) ☐ As a component of the Hazardous Waste Report for the year _____.	
2. Site EPA ID No.	**EPA ID Number:** OHR000198242	
3. Site Name	**Name:** FAMILY DOLLAR #2130	
4. Site Location Information	**Street Address:** 1041 ~~OLD US HIGHWAY 52 STE~~ D OLD US 52 Site D	
	City, Town, or Village: NEW RICHMOND	**County:** Clermont
	State: OH	**Country:** United States **Zip Code:** 45157-8501
5. Site Land Type	**Site Land Type:** ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	
6. North American Industry Class. System (NAICS) Code(s) for the Site	**A.** (Primary) 452999	**B.**
	C.	**D.**
7. Site Contact Person:	**First Name:** Kevin	**MI:** **Last Name:** Straight
	Title: Program Manager – Environmental Compliance	
	Street or P.O. Box: P.O. Box 1017	
	City, Town or Village: Charlotte	
	State: NC	**Country:** United States **Zip Code:** 28201
	E-mail: kstraight@familydollar.com	
	Phone & Ext.: 704-708-1909	**Fax:**
8. Legal Owner and Operator of the Site Additional Owners and/or Operators should be listed in the Comment Section or on another copy of this form page.	**A. Name of Site's Legal Owner:** Rivertown Market Place LLC	**Date Became Owner (mm/dd/yyyy):** 1/1/2013
	Owner Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	
	Street or P.O. Box: 2558 Eight Mile Rd	
	City, Town, or Village: Cincinnati	**Phone:** 513-553-4245
	State: OH	**Country:** United States **Zip Code:** 0
	B. Name of Site's Operator: Family Dollar Stores	**Date Became Operator (mm/dd/yyyy):** 11/11/1992
	Operator Type: ☒ Private ☐ County ☐ District ☐ Federal ☐ Indian ☐ Municipal ☐ State ☐ Other	
	Street or P.O. Box: P.O. Box 1017	
	City, Town, or Village: Charlotte	**Phone:** 866-377-6420
	State: NC	**Country:** United States **Zip Code:** 28201

N

9/17/15 LMA

CE

9. Type of Regulated Waste Activity (Mark "X" in the appropriate boxes.)

A. Hazardous Waste Activities

1. Generator of Hazardous Waste
(choose only one of the following three categories or leave blank if not applicable)

- ☐ a. **Large Quantity Generator (LQG):** Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste; or
- ☐ b. **Small Quantity Generator (SQG)** 100 to 1,000 kg/mo (220-2,200 lbs.) of non-acute hazardous waste; or
- ☒ c. **Conditionally Exempt Small Quantity Generator (CESQG):** Less than 100 kg/mo of non-acute hazardous waste

In addition, indicate other generator activities (check all that apply)

- ☐ d. Short-Term Generator (generate fr -term or one-time event and not from on-going processes). If "Yes", provide an explanation in the Comments section.
- ☐ e. United States Importer of Hazardous Waste
- ☐ f. Mixed Waste (hazardous and radioactive) Generator

2. Hazardous Waste Report Generator Status
(choose one if a Reason for Submittal is the Hazardous Waste Report)

- ☐ a. **Large Quantity Generator (LQG):** Greater than 1,000 kg/mo (2,200 lbs.) of non-acute hazardous waste was generated at the site in any one month, or
- ☐ b. **Small Quantity Generator (SQG)** In one or more months the site generated greater than 100kg (220 lbs) but in no month did it generate more than 1,000 kg/mo (220-2,200 lbs) of non-acute hazardous waste, or
- ☐ c. **Conditionally Exempt Small Quantity Generator (CESQG):** The site generated no more than 100 kg (220 lbs) of non-acute hazardous waste in any one month.
- ☐ d. **Non-Generator** The site did not generate any hazardous waste during the calendar year.

For Items 3 through 7, check all that apply:

3. Transporter of Hazardous Waste
- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

☐ **4. Treater, Storer or Disposer of Hazardous Waste (at your site)** Note: A hazardous waste permit is required for this activity.

☐ **5. Recycler of Hazardous Waste (at your site)** Note: A hazardous waste permit may be required for this activity.
- ☐ a. 72-hour Recycler

6. Exempt Boiler and/or Industrial Furnace
- ☐ a. Small Quantity On-site Burner Exemption
- ☐ b. Smelting, Melting and Refining Furnace Exemption

☐ **7. Underground Injection Control**

☐ **8. Receives Hazardous Waste from Off-site**

B. Universal Waste Activities

☐ **1. Large Quantity Handler of Universal Waste (accumulate 5,000 kg or more). Indicate types of universal waste managed at your site. (check all boxes that apply):**

	Managed
a. Batteries	☐
b. Pesticides	☐
c. Mercury Containing Equipment	☐
d. Lamps	☐

☐ **2. Destination Facility for Universal Waste**
Note: A hazardous waste permit may be required for this activity.

C. Used Oil Activities

1. Used Oil Transporter
Indicate Type(s) of Activity(ies)
- ☐ a. Transporter
- ☐ b. Transfer Facility (at your site)

2. Used Oil Processor and/or Re-refiner
Indicate Type(s) of Activity(ies)
- ☐ a. Processor
- ☐ b. Re-r

☐ **3. Off-Specification Used Oil Burner**

4. Used Oil Fuel Marketer -
Indicate Type(s) of Activity(ies)
- ☐ a. Marketer Who Directs Shipment of Off-Specification Used Oil to Off-Specification Used Oil Burner
- ☐ b. Marketer Who First Claims the Used Oil Meets the Specifications

D. Eligible Academic Entities with Laboratories – Notification for opting into or withdrawing from managing laboratory hazardous wastes pursuant to OAC rules 3745-52-200 through 3745-52-216

☐ 1. Opting into or currently operating under OAC rules 3745-52-200 through 3745-52-216 for the management of hazardous wastes in laboratories. **Mark all that apply:**

- ☐ a. College or University
- ☐ b. Teaching hospital that is owned by or has a formal written affiliation agreement with a college or university
- ☐ c. Non-profit institute that is owned by or has a formal written affiliation agreement with a college or university

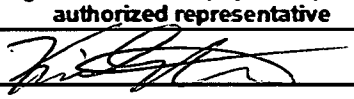
☐ 2. Withdrawing from OAC rules 3745-52-200 through 3745-53-216 for the management of hazardous waste in laboratories

10. Waste Codes for Federally Regulated Hazardous Wastes. Please list the codes for the federally regulated hazardous waste handled at your site. List them in the order they are presented in the regulations (e.g., D001, D003, F007, U112). Use an additional page if more space is needed.

D001	D002	D004	D005	D007	D008	D009
D010	D011	D016	D024	D035	U002	

11. Comments

12. Certification. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature of owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (mm-dd-yyyy)
	Kevin Straight, Program Manager, Env.	2/27/2015

OTTER

Facility Info

Expand all / Collapse all

Return to Search Screen

Facility Info

Facility ID	13000017
Facility Name	NEW RICHMOND FOOD MART
Address	527 SYCAMORE ST
City	NEW RICHMOND,OHIO
Zip	45157
County	CLERMONT
Type	GAS STATION
Phone	(513)553-2256
Latitude	38.955116
Longitude	-84.28158
Created Date	04/28/2012
24 Hr Emergency Contact	GOPI PATEL
24 Hr Emergency Phone	(513)646-4253
Local Fire Dept	UNION TWP FIRE DEPARTMENT

Tank Info

(Details...)

Number of CIU Tanks	2
Number of Tanks with petroleum Contents	2
Number of Tanks with HazMat Contents	0
Total Number of Tanks	2

Permit Info

Permit ID	Issue Date	Contractor Name	Status
P00003	10/02/2014	ARMOR SHIELD OF AMERICA	Closed
P00002	01/26/2006	TRI-STATE SERVICE	Closed
P00001	02/24/2005	TRI-STATE SERVICE	Expired

Owner Info

Owner ID	W024208
Owner Name	CONVENIENCE REAL ESTATE NO 51 LL
Contact Person	GOPI PATEL
Address	527 SYCAMORE ST
City	NEW RICHMOND
State	OHIO
Zip	45157
Type	COMMERCIAL
Phone	(513)553-2256
Email	PNARENDRA1123@GMAIL.COM

Release Info

Rel. #	Rep.Date	LTF	Status	Rules

There are No Releases

Registration Info

Reg. ID	Reg. Year	Reg. Date	Type of Reg.
R00031	2020	05/21/2020	Annual Renewal
R00029	2019	06/26/2019	Annual Renewal
R00030	2019	06/26/2019	Modification
R00028	2018	05/25/2018	Annual Renewal
R00027	2017	05/18/2017	Annual Renewal
R00026	2016	05/18/2017	Annual Renewal
R00025	2015	07/09/2015	Annual Renewal
R00023	2014	06/12/2014	Annual Renewal
R00024	2014	06/12/2014	Modification
R00022	2013	06/10/2013	Annual Renewal
R00021	2012	06/05/2012	Annual Renewal
R00020	2011	10/28/2011	Annual Renewal
R00019	2010	06/14/2010	Annual Renewal
R00018	2009	05/28/2009	Annual Renewal
R00017	2008	07/14/2008	Annual Renewal
R00016	2007	07/07/2008	Owner Change
R00015	2007	04/30/2007	Annual Renewal
R00014	2006	08/30/2006	Annual Renewal
R00013	2005	09/26/2005	Annual Renewal
R00012	2004	06/04/2004	Annual Renewal
R00011	2003	07/15/2003	Annual Renewal
R00010	2002	12/19/2002	Annual Renewal
R00009	2001	--	Annual Renewal

R00020	2010	--	Annual Renewal
R00019	2009	--	Annual Renewal
R00017	2008	--	Annual Renewal
R00009	2001	--	Annual Renewal
R00008	2000	--	Annual Renewal
R00007	2001	--	Amended
R00006	1998	--	Annual Renewal
R00005	1997	--	Amended
R00004	1996	--	Annual Renewal
R00003	1995	--	Annual Renewal
R00002	1994	--	Annual Renewal
R00001	1992	--	New

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OTTER

Facility Info

Expand all / Collapse all

Return to Search Screen

Facility Info

Facility ID	13000197
Facility Name	NEW RICHMOND FUEL INC
Address	410 SYCAMORE ST
City	NEW RICHMOND,OHIO
Zip	45157
County	CLERMONT
Type	GAS STATION
Phone	(513)553-3835
Latitude	38.9548
Longitude	-84.2813
Created Date	04/28/2012
24 Hr Emergency Contact	NARENDRA PATEL
24 Hr Emergency Phone	(513)646-4253
Local Fire Dept	NEW RICHMOND FIRE & EMS

Tank Info (Details...)

Number of CIU Tanks	4
Number of Tanks with petroleum Contents	5
Number of Tanks with HazMat Contents	0
Total Number of Tanks	5

Permit Info

Permit ID	Issue Date	Contractor Name	Status
P00003	02/19/2019	HARRY GRAU & SONS, INC.	Closed
P00002	10/15/2008	MVM INC	Closed
P00001 (15569)	07/17/1996		Expired

Owner Info

Owner ID	W261721
Owner Name	NEW RICHMOND FUEL INC
Contact Person	NARENDRA PATEL
Address	410 SYCAMORE ST
City	NEW RICHMOND
State	OHIO
Zip	45157
Type	COMMERCIAL
Phone	(513)553-3835
Email	PNARENDRA1123@GMAIL.COM

Release Info

Rel. #	Rep.Date	LTF	Status	Rules
N00001	10/23/2008	6 Closure of regulated UST	NFA: No Further Action	2005

Registration Info

Reg. ID	Reg. Year	Reg. Date	Type of Reg.
R00034	2020	09/25/2020	Annual Renewal
R00032	2019	06/26/2019	Annual Renewal
R00033	2019	06/26/2019	Modification
R00031	2019	05/24/2019	Amended
R00030	2018	05/25/2018	Annual Renewal
R00029	2017	05/16/2017	Annual Renewal
R00028	2016	09/30/2016	Annual Renewal
R00027	2015	08/16/2016	Owner Change
R00026	2015	08/11/2015	Annual Renewal
R00025	2014	08/11/2015	Annual Renewal
R00024	2013	08/11/2015	Annual Renewal
R00023	2012	08/11/2015	Annual Renewal
R00022	2011	10/24/2011	Modification
R00021	2011	10/24/2011	Annual Renewal
R00018	2008	09/25/2008	Owner Change
R00016	2007	09/27/2007	Annual Renewal
R00015	2006	06/05/2006	Annual Renewal
R00014	2005	09/13/2005	Annual Renewal
R00013	2004	08/11/2004	Annual Renewal
R00012	2003	10/10/2003	Annual Renewal
R00011	2002	01/28/2003	Owner Change
R00010	2002	01/15/2003	Annual Renewal

R00008	2000	--	Annual Renewal
R00007	2001	--	Amended
R00006	1998	--	Annual Renewal
R00005	1997	--	Amended
R00004	1996	--	Annual Renewal
R00003	1995	--	Annual Renewal
R00002	1994	--	Annual Renewal
R00001	1992	--	New

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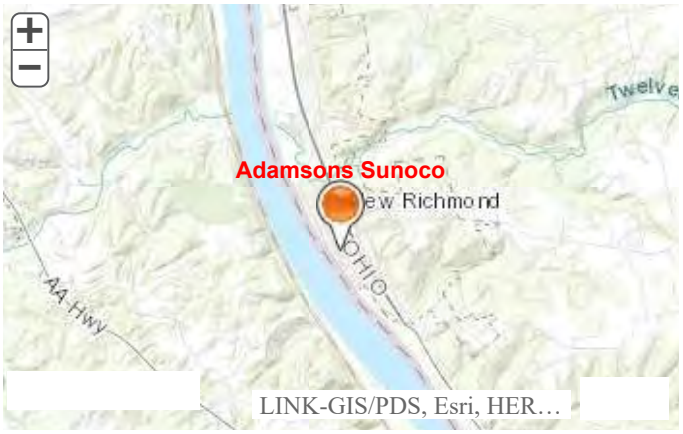
SUNOCO SERVICE STATION
Handler ID: OHD000681585
410 SYCAMORE ST
NEW RICHMOND, OH 45157

County Name: CLERMONT

Latitude: 38.95523
Longitude: -84.28157

Hazardous Waste Generator:

Owner Name: NAME NOT REPORTED



**You can navigate within the map with your mouse.*

No BIENNIAL REPORT data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PHONE	TYPE OF CONTACT
GIL LOVELL	410 SYCAMORE ST	NEW RICHMOND	OH	45157	313-358-2540	Public
GIL LOVELL	410 SYCAMORE ST	NEW RICHMOND	OH	45157	313-358-2540	Permit

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND OR INDUSTRIAL FURNACE	STORAGE	TREATMENT

HANDLER TYPE
Not in a universe

No PROCESS INFORMATION is available for the facility listed above.

No NAICS Codes are available for the facility listed above.

No Waste Codes are available for the facility listed above.

Ohio Department of Commerce

Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
8895 E Main St. • P.O. Box 687
Reynoldsburg, OH 43068-9009
(614) 752-7938 FAX (614) 752-7942
www.com.state.oh.us

Bob Taft
Governor

Doug White
Director

June 09, 2006

JEFF KOLE
BP PRODUCTS
4850 EAST 49TH ST
CUYAHOGA HEIGHTS, OH 44125

SITE: BP OIL CO. #09279
415 SYCAMORE ST
NEW RICHMOND OH
CLERMONT COUNTY
RELEASE #13000238-N00001

RE: NO FURTHER ACTION STATUS REGARDING CORRECTIVE ACTION REQUIREMENTS

Dear Mr. Kole:

The Bureau of Underground Storage Tank Regulations (BUSTR) has reviewed all information submitted for this release. Based on the assumptions used in the tier evaluation report, BUSTR requires no further action (NFA) involving corrective action under Ohio Administrative Code (OAC) 1301:7-9-13, effective March 1999.

Thank you for your cooperation. If you have any questions, please contact our office at (614) 752-7938.

Sincerely,

Kelly J. Gill
Corrective Action Supervisor

xc: Site File
Leonard Powell, Delta

SPEEDWAY 9595
Handler ID: OH0000345942
520 SYCAMORE CT
NEW RICHMOND, OH 45157-1148

County Name: CLERMONT

Latitude: 38.95569
Longitude: -84.28036

Hazardous Waste Generator:

Owner Name: SPEEDWAY LLC



**You can navigate within the map with your mouse.*

No BIENNIAL REPORT data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PHONE	TYPE OF CONTACT
CHARLES A BESSE	PO BOX 1500	SPRINGFIELD	OH	45501	937-863-6278	Public
CHARLES BESSE	PO BOX 1500	SPRINGFIELD	OH	45501	937-863-6278	Permit
DAVID DILLON	P O BOX 1500	SPRINGFIELD	OH	45501	937-863-6511	Permit

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE	LAND DISPOSAL	INCINERATOR	BOILER AND OR INDUSTRIAL FURNACE	STORAGE	TREATMENT

No Handler information is available for the facility listed above.

No PROCESS INFORMATION is available for the facility listed above.

HANDLER TYPE

LIST OF NAICS CODES AND DESCRIPTIONS

NAICS CODE	NAICS DESCRIPTION
44711	GASOLINE STATIONS WITH CONVENIENCE STORES

No Waste Codes are available for the facility listed above.

Go To Top Of The Page

Total Number of Facilities Retrieved: 1

Ohio | Department of Commerce
Division of State Fire Marshal
Mike DeWine, Governor
Jon Husted, Lt. Governor
Sheryl Maxfield, Director

June 18, 2020

MICHAEL BYRNE
SPEEDWAY LLC
500 SPEEDWAY DRIVE
ENON, OHIO 45323

SITE: SPEEDWAY #9595
(FUNCTIONAL ELEMENT REPAIR)
520 SYCAMORE CT BX 322
NEW RICHMOND OH
CLERMONT COUNTY
RELEASE #13000100-N00003

RE: SUSPECTED RELEASE DISPROVED

Dear Mr. Byrne:

The Bureau of Underground Storage Tank Regulations (BUSTR) has reviewed the information submitted for the suspected release reported on January 16, 2020. Based on the submitted information, this suspected release has been disproved and no additional investigation is required.

Thank you for your cooperation. If you have any questions, please contact our office at (614) 752-7938.

Sincerely,

Kelly J. Gill
Corrective Action Supervisor

xc: Site File
Doug Darrah (ATC)

Appendix C – Historical Aerial Photography

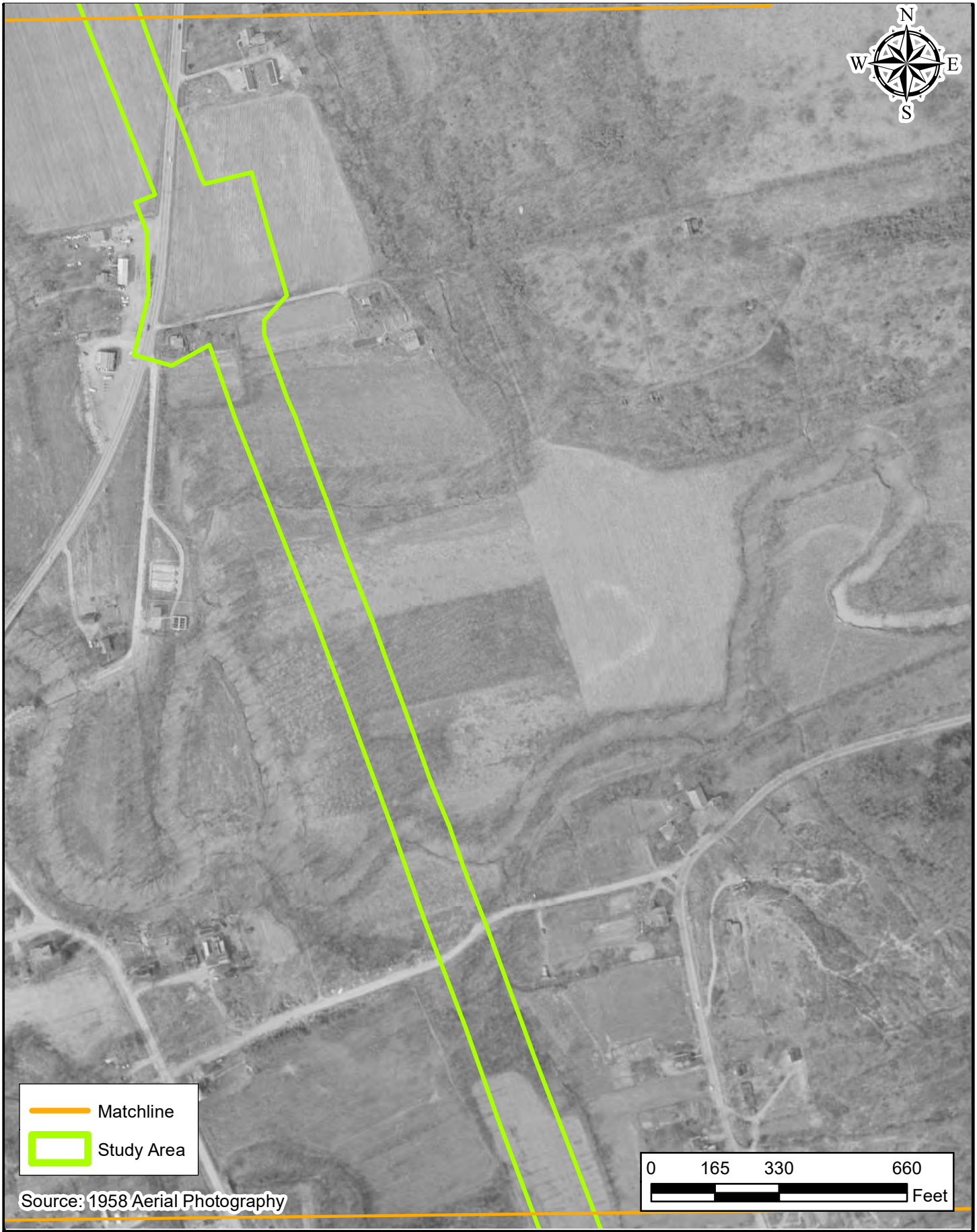


AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

1958 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1958 Aerial Map (2 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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1958 Aerial Map (3 of 5)

Client:
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Date: 05/06/2021

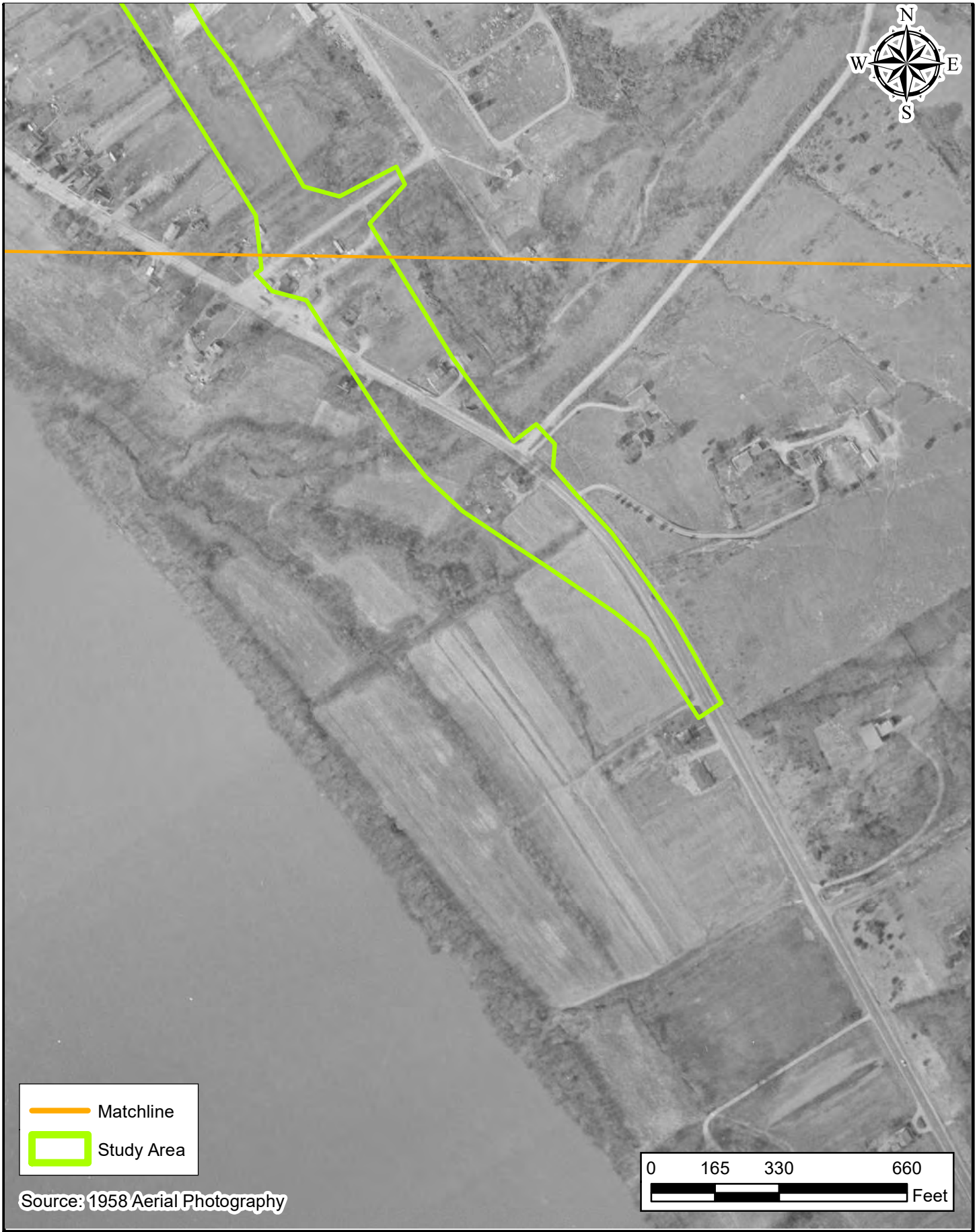


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1958 Aerial Map (4 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1958 Aerial Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1969 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1969 Aerial Map (2 of 5)

Client:
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Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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State: Ohio
Date: 05/06/2021

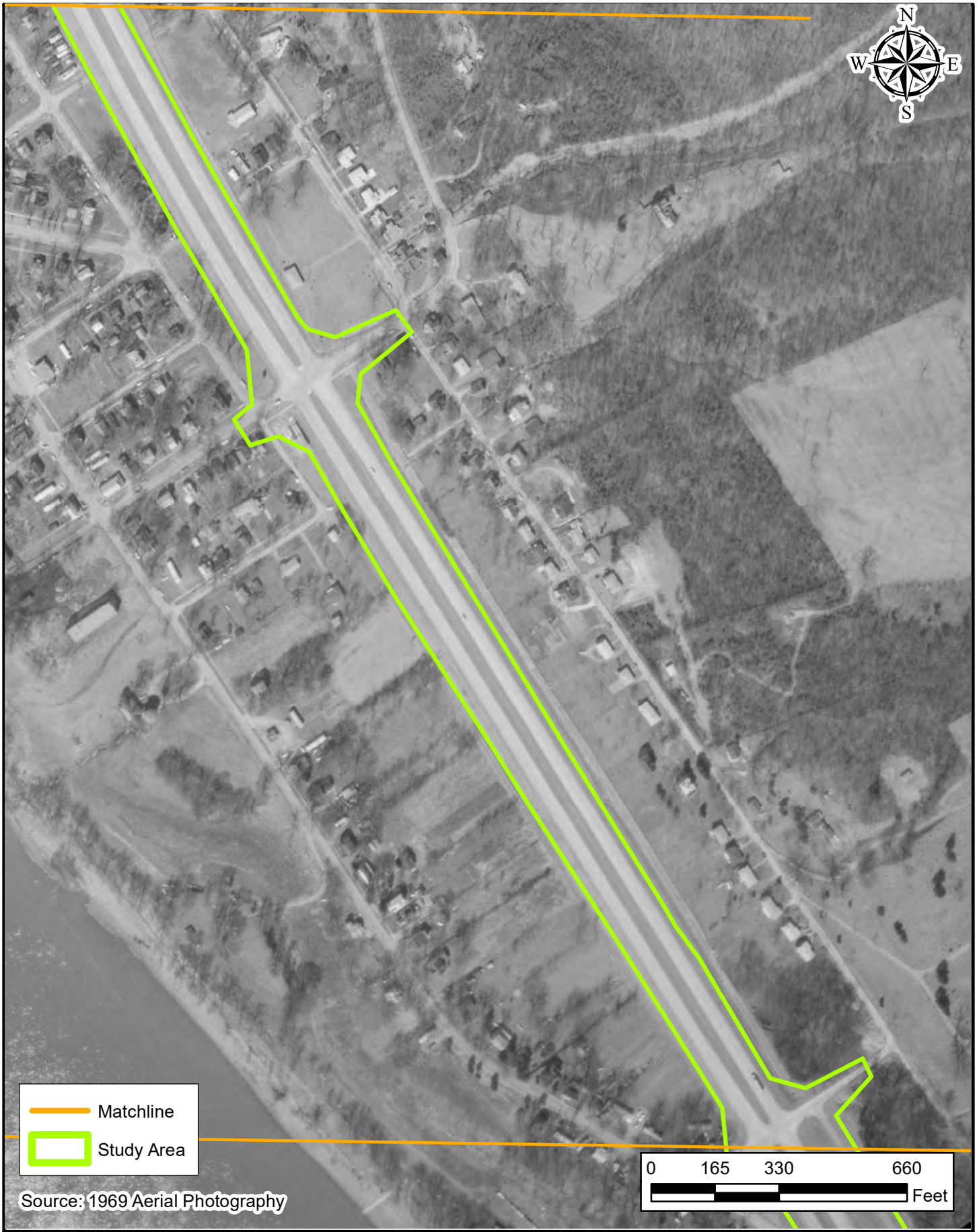


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1969 Aerial Map (3 of 5)

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1969 Aerial Map (4 of 5)

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1969 Aerial Map (5 of 5)

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1976 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1976 Aerial Map (2 of 5)

Client:
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
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1976 Aerial Map (3 of 5)

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Date: 05/06/2021

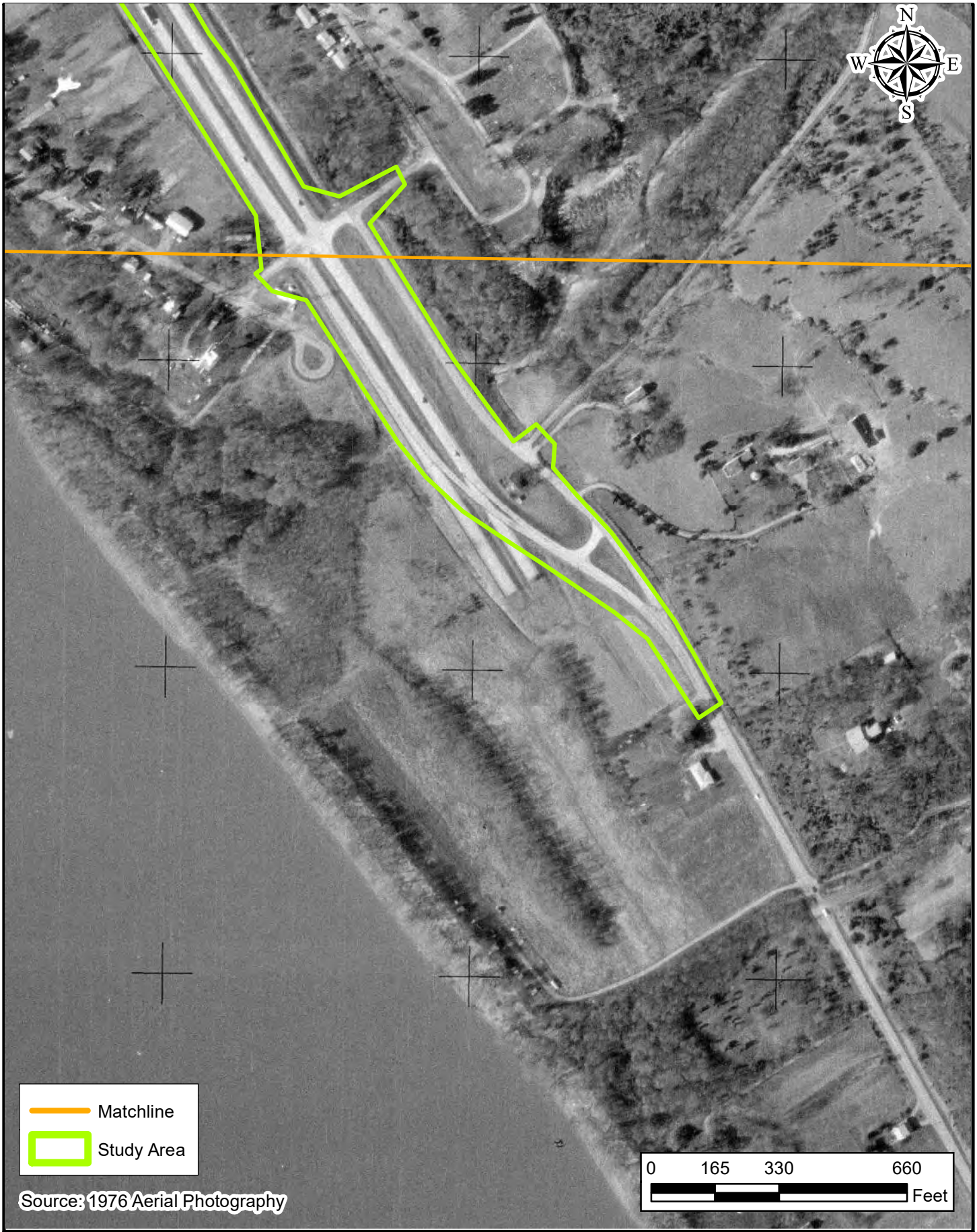


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1986 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
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1986 Aerial Map (2 of 5)

Client:
143Engineers, LLC
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Cincinnati, Ohio 45241

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Location: New Richmond
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Date: 05/06/2021

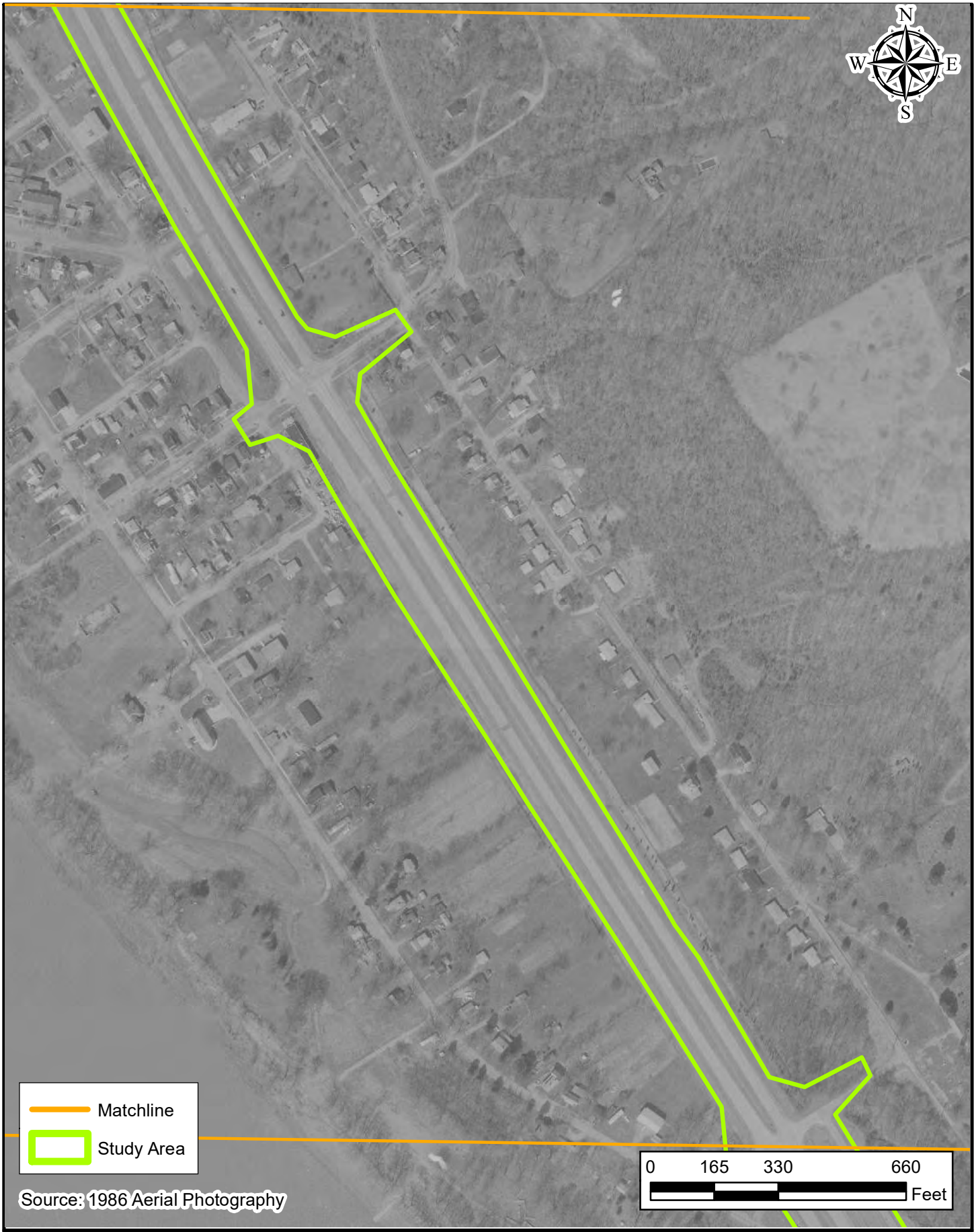


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1986 Aerial Map (3 of 5)

Client:
143Engineers, LLC
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Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
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1986 Aerial Map (4 of 5)

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143Engineers, LLC
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1986 Aerial Map (5 of 5)

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Date: 05/06/2021



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1997 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



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1997 Aerial Map (2 of 5)

Client:
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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County: Clermont
State: Ohio
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1997 Aerial Map (3 of 5)

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Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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County: Clermont
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Date: 05/06/2021

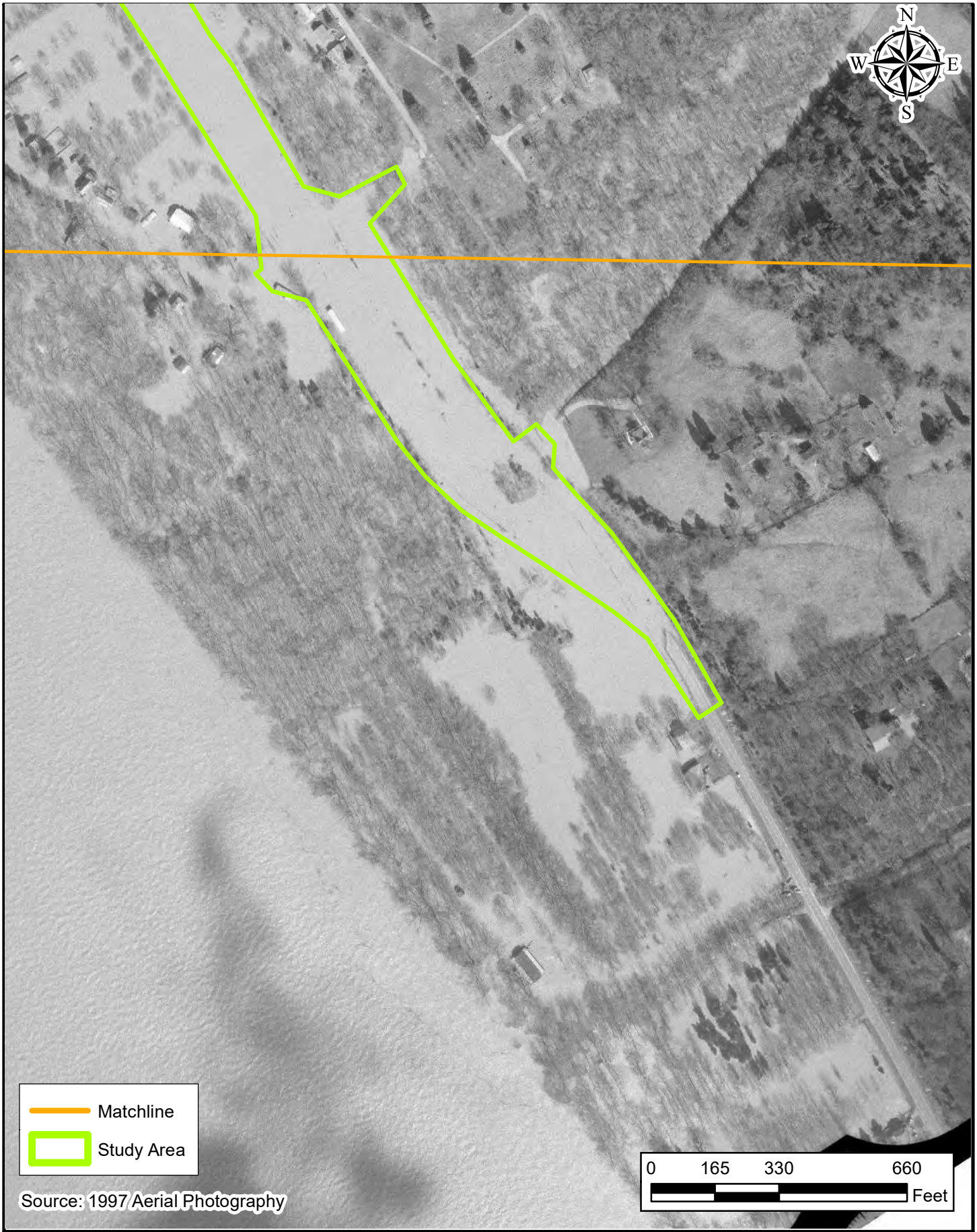


AMERICAN STRUCTUREPOINT INC.
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1997 Aerial Map (4 of 5)

Client:
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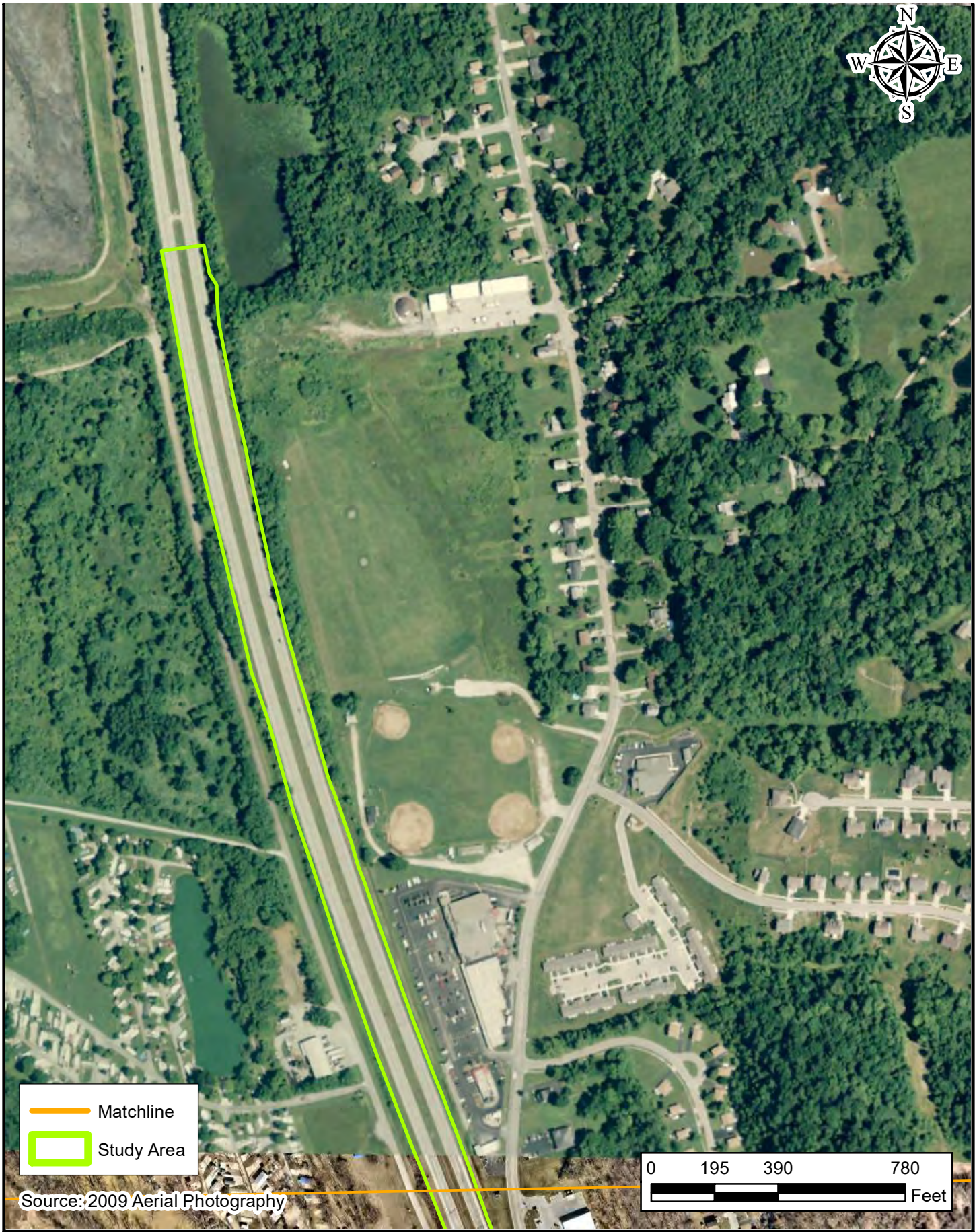


AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

1997 Aerial Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

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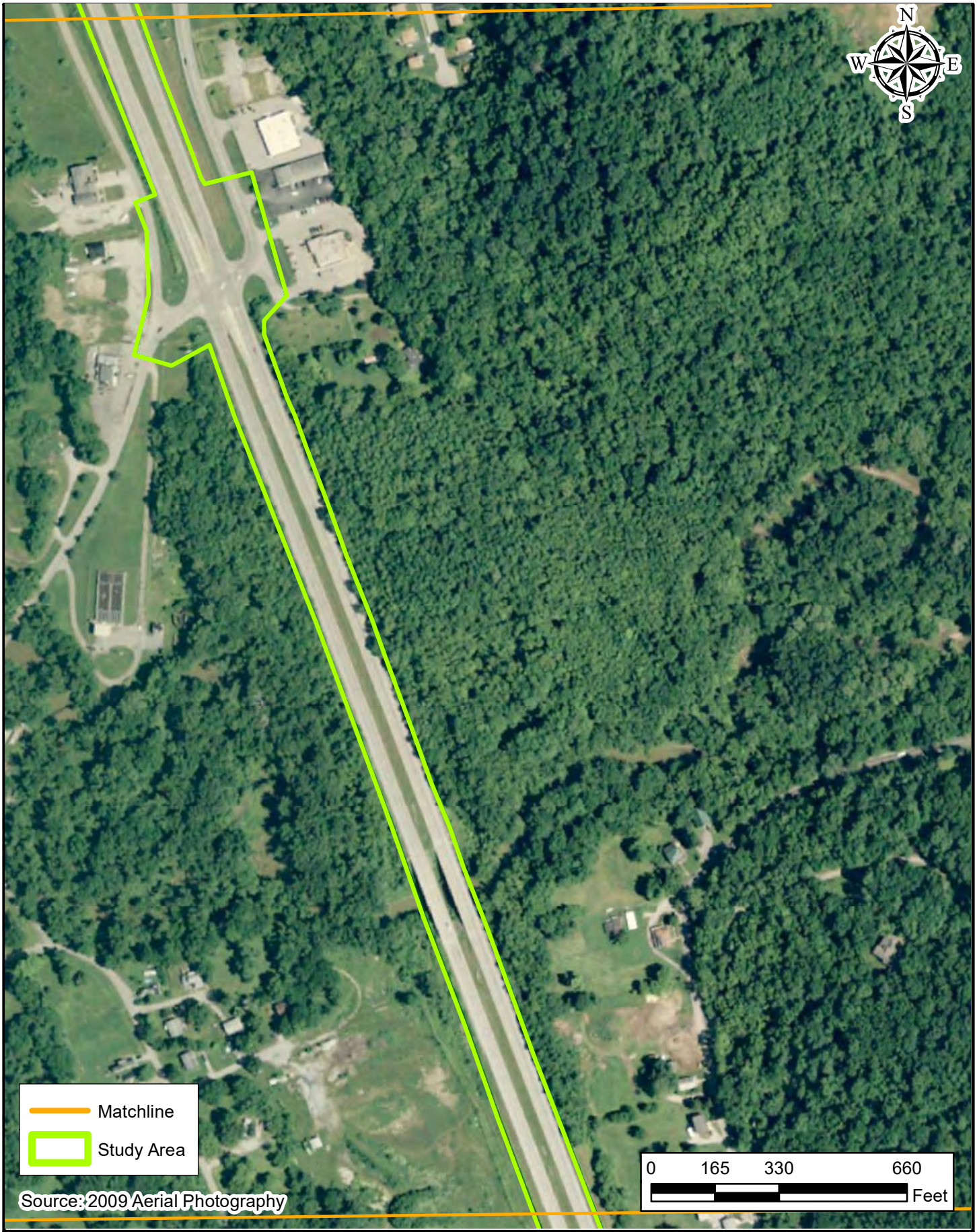


AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2009 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021

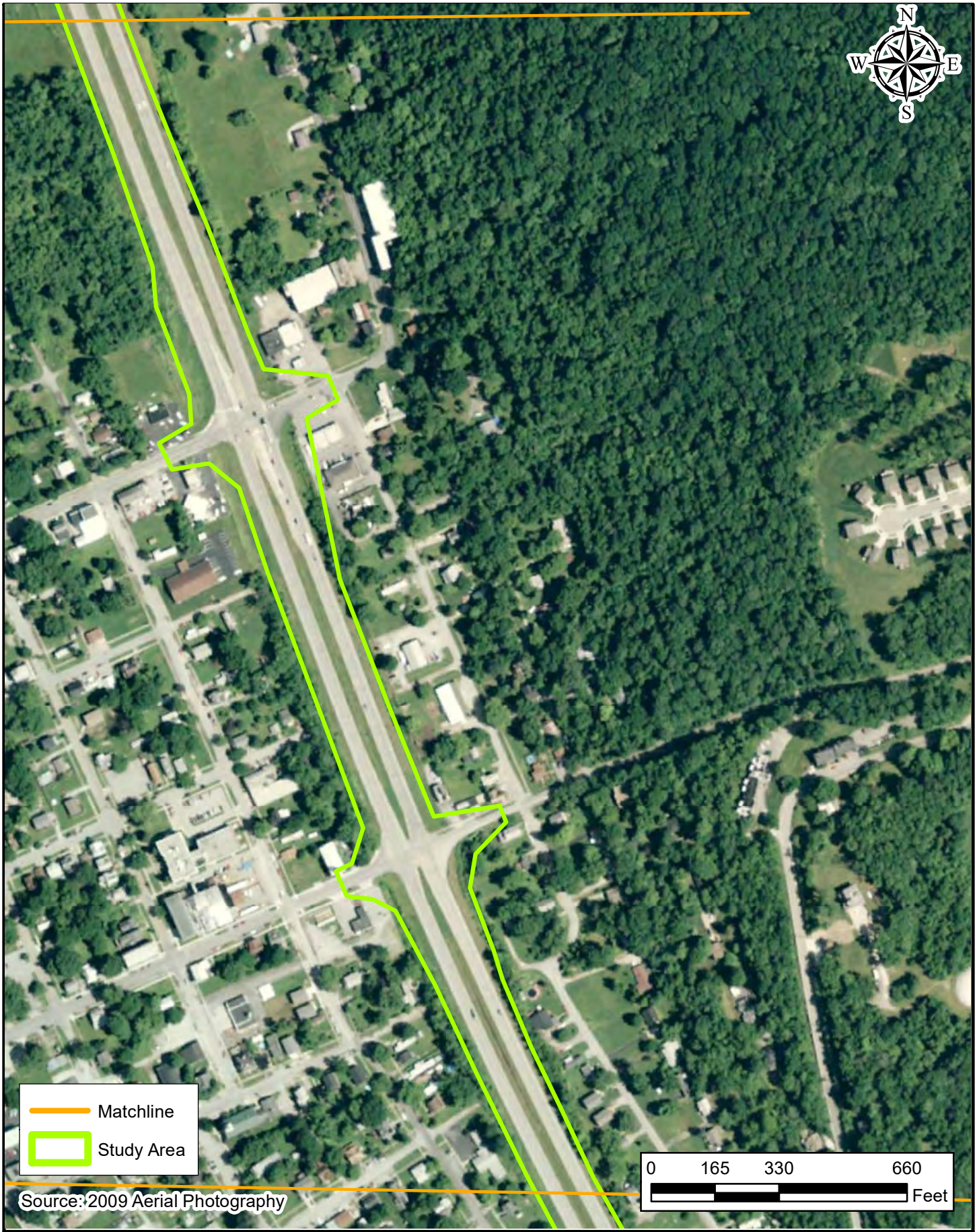


AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2009 Aerial Map (2 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2009 Aerial Map (3 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2009 Aerial Map (4 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2009 Aerial Map (5 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2014 Aerial Map (1 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2014 Aerial Map (2 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021

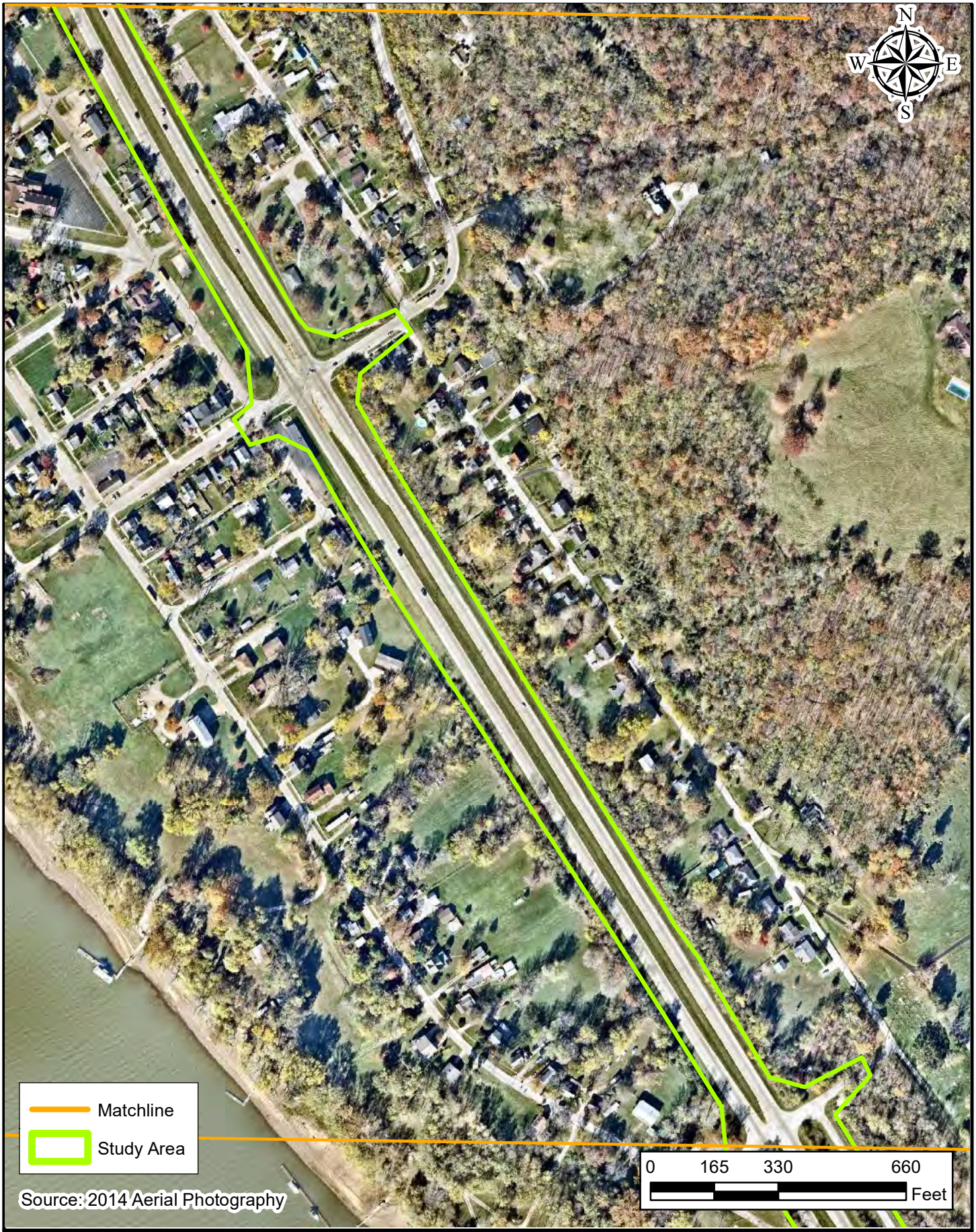


AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2014 Aerial Map (3 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021



AMERICAN STRUCTUREPOINT INC.
www.structurepoint.com

2014 Aerial Map (4 of 5)

Client:
143Engineers, LLC
3249 Plateau Place
Cincinnati, Ohio 45241

CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
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CLE-US52-4.67 New Richmond Roundabouts (PID 114042)
Location: New Richmond
Township: Ohio
County: Clermont
State: Ohio
Date: 05/06/2021

Appendix D – Environmental Resources

Jeff Johnson, Chief
Division of Natural Areas & Preserves
2045 Morse Rd, Building A
Columbus, Ohio 43229

10 May 2021

Holly Rundle
American Structurepoint
2550 Corporate Exchange Dr.
Columbus, OH 43231

Dear Ms. Rundle,

I have reviewed the Natural Heritage Database for the CLE-US52-4.67 (PID 114042) project area, including a half mile radius for plants and a one mile radius for all other features, in Ohio Township, Clermont County, Ohio. The numbers/letters on the list below correspond to the areas marked on the accompanying map. Common name, scientific name and status are given for each species.

1. *Ripariosida hermaphrodita* – Virginia-mallow, potentially threatened (2 sites)
2. *Percina copelandi* – Channel Darter, threatened
3. *Cyclonaias nodulata* – Wartyback, endangered

Obliquaria reflexa – Threehorn Wartyback, threatened
Truncilla truncata – Deertoe, species of concern

4. *Spermacoce glabra* – Smooth Buttonweed, potentially threatened

We are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state nature preserves, parks, wildlife areas or forests, national wildlife refuges, parks or forests, or other protected natural areas within a one mile radius of the project area.

Our inventory program has not completely surveyed Ohio and relies on information supplied by many individuals and organizations. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. This letter only represents a review of rare species and natural features data within the Ohio Natural Heritage Database. It does not fulfill coordination under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S. C. 661 et seq.) and does not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

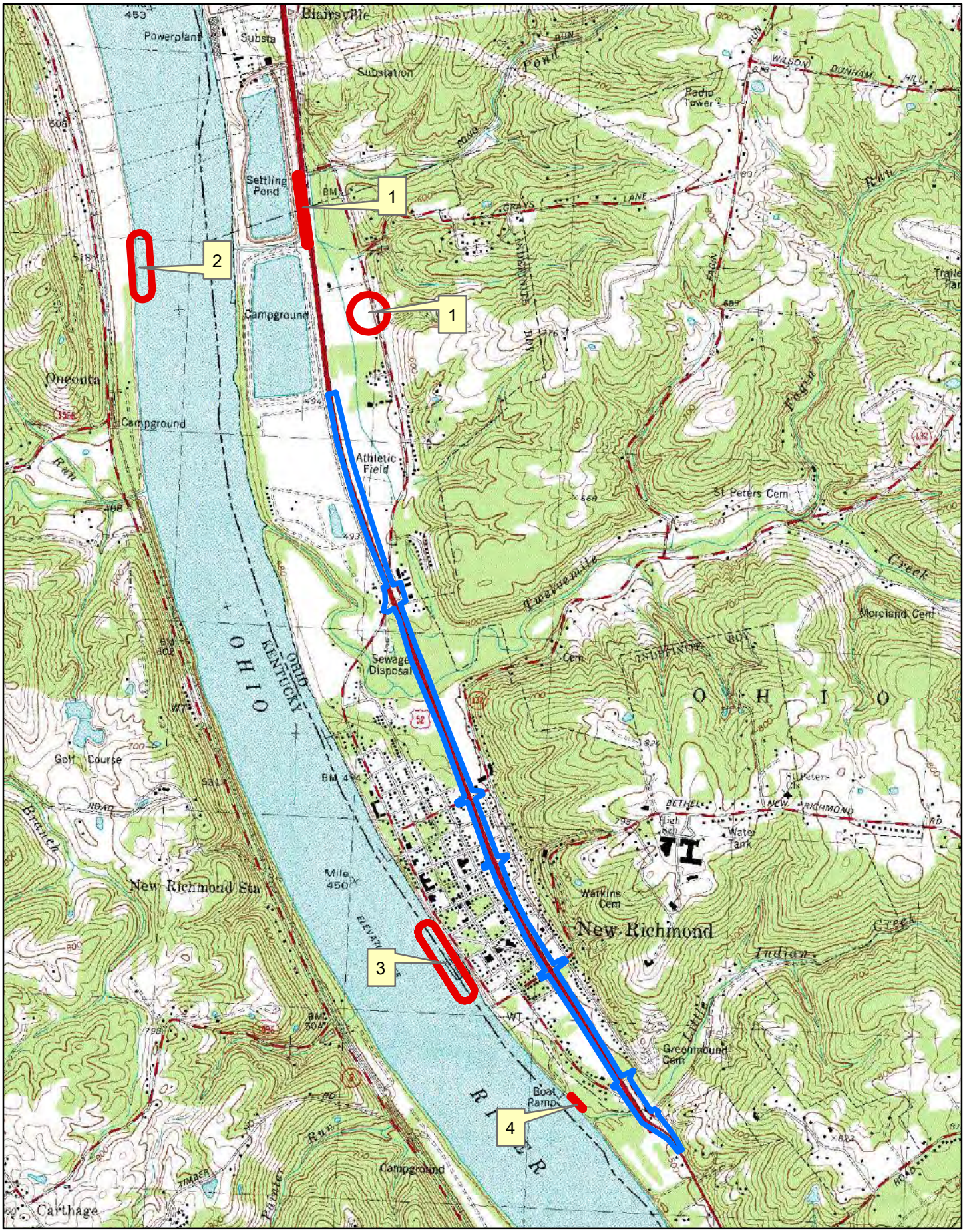
Please contact me at 614-265-6818 if I can be of further assistance.

Sincerely,

Debbie Woischke

Debbie Woischke
Ohio Natural Heritage Program

CLE-US52-4.67 (PID 114042)



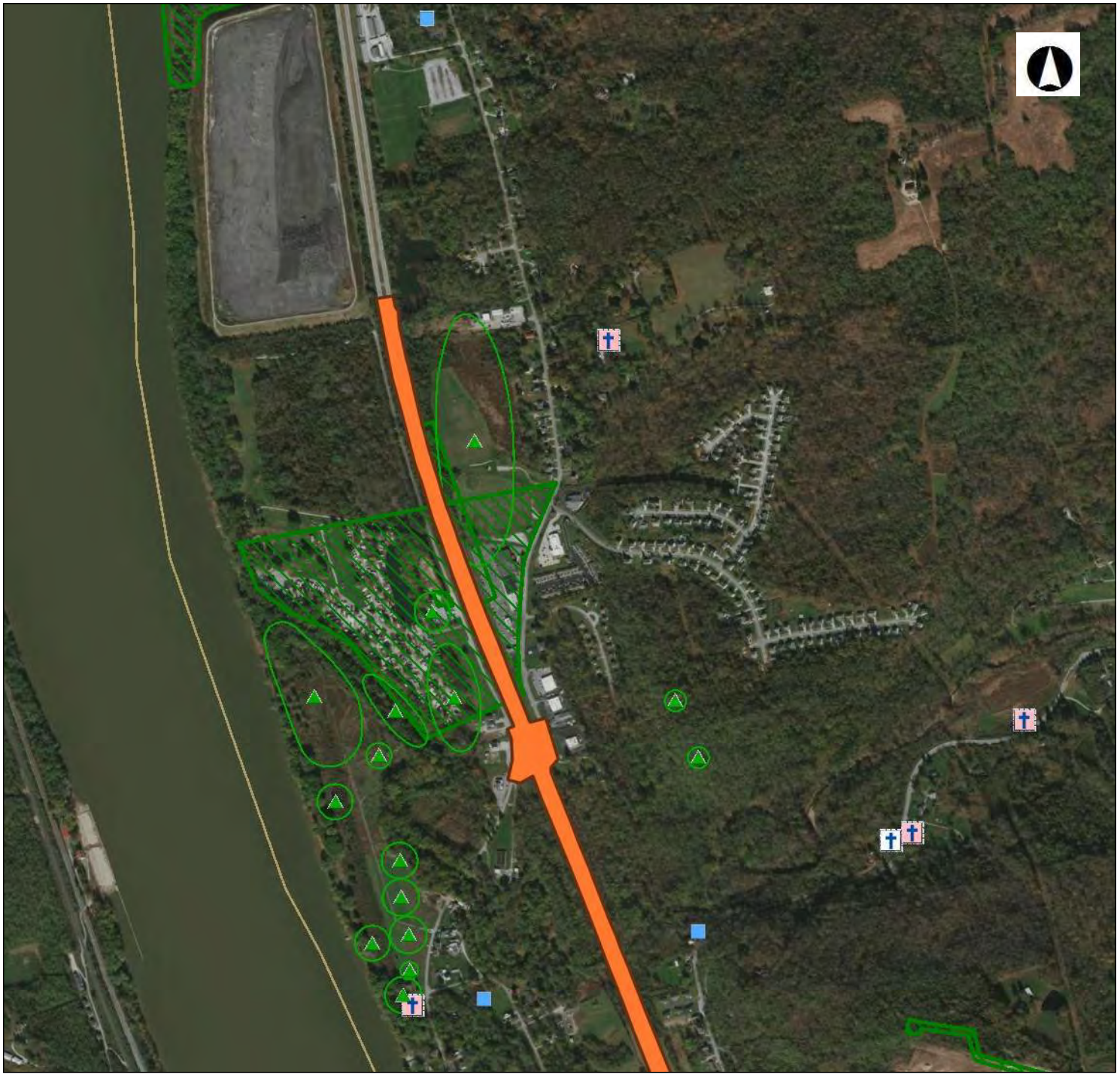
Cultural Resources Tables

Previously Surveyed Areas within the Vicinity of the Project Area

NADB	Title	Author(s)	Year	Phase	Sent From	Acres	Areas
12761	Phase I (Literature Review) Archaeological Survey for the Proposed New Richmond Marina Near New Richmond, Clermont County, Ohio	Skinner, Shaune	1981	1	OHS (Ohio Historical Society)	60.8265	1
15875	The Prather Site: The Testing of Spatial Patterning of Archaeological Material	Wymer, Dee Ann	1978	1	Dee Ann Wymer	5.6	1
14740	Phase I Cultural Resources Survey of ca. 2.5 Acres within the New Richmond Forest Park for Planned Improvements to the Forest Park by the Village of New Richmond, Clermont County, Ohio	Leary, Christopher G. and Christopher Bergman	2001	1	BHE Environmental, Inc.	2.6519	1

Historic Structures within the Vicinity of the Project Area

OHI Number	Address	Name	Name 2	Style	Style 2	Use	Use 2	Date
CLE0046910	411 Walnut St	United Church of Christ	Deutsche Protestant Ische StP	Greek Revival	Element Present	Church/Religious Structure	N/A	1876
CLE0046710	233 Augusta St	Nichols Moore & Gyl Building	N/A	Federal	Transitional Style	Single Dwelling	N/A	1868
CLE0048210	1059 SR 52	Goebel House	N/A	Greek Revival	Element Present	Single Dwelling	N/A	1855



OHIO HISTORY CONNECTION
State Historic Preservation Office

Legend

- NR Listings
  - Listed
  - National Historic Landmark
  - Delisted
- Determinations of Eligibility
  - DOE
  - Demolished
- Archaeological Sites
- Historic Structures
- Historic Bridges
- Historic Tax Credit Projects
- Local Designations
- OGS Cemeteries
  - Confident
  - Not Confident
- Historic Markers
- Dams
- Previously Surveyed Area

0 0.22 0.44 Miles

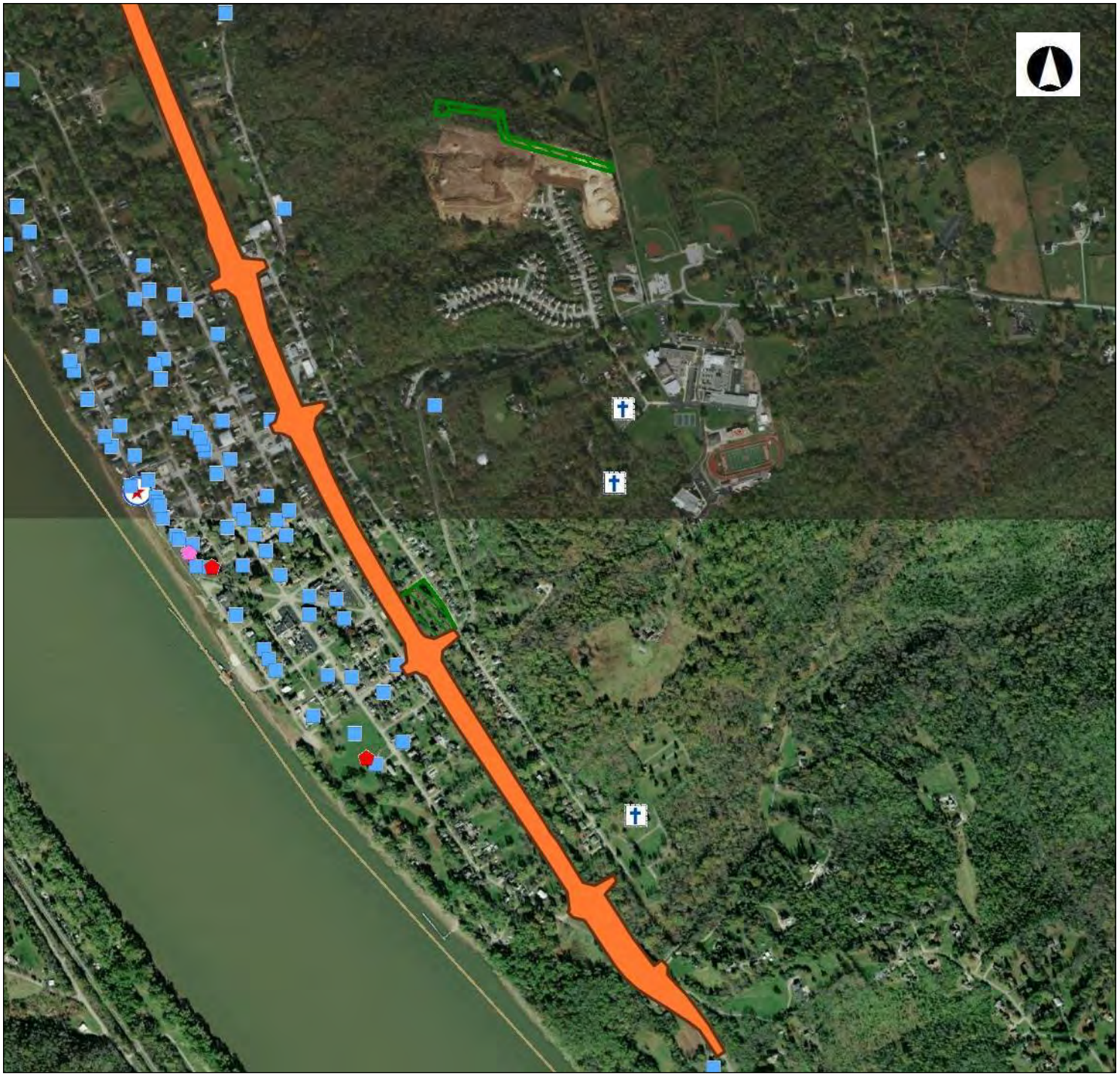
1: 17,358

Copyright/Disclaimer

This map is a user generated static output from an Internet mapping site and is for generalThis map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Datum: [Datum]
Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere





OHIO HISTORY CONNECTION
State Historic Preservation Office

Legend

- NR Listings
  - Listed
  - National Historic Landmark
  - Delisted
- Determinations of Eligibility
  - DOE
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- Dams
- Previously Surveyed Area

0 0.22 0.44 Miles

1: 17,358

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Datum: [Datum]
Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere



Drinking Water Source Protection Areas



5/17/2021, 9:51:08 AM

1:36,112

0 0.23 0.45 0.9 mi

0 0.38 0.75 1.5 km

Ohio River (surface water)

- Ohio River-Zone of Critical Concern
- Ohio River-Zone of High Concern

Lake Erie (surface water)

- Lake Erie-Critical Assessment Zone
- Lake Erie-Potential Influence Zone

Inland (surface water)

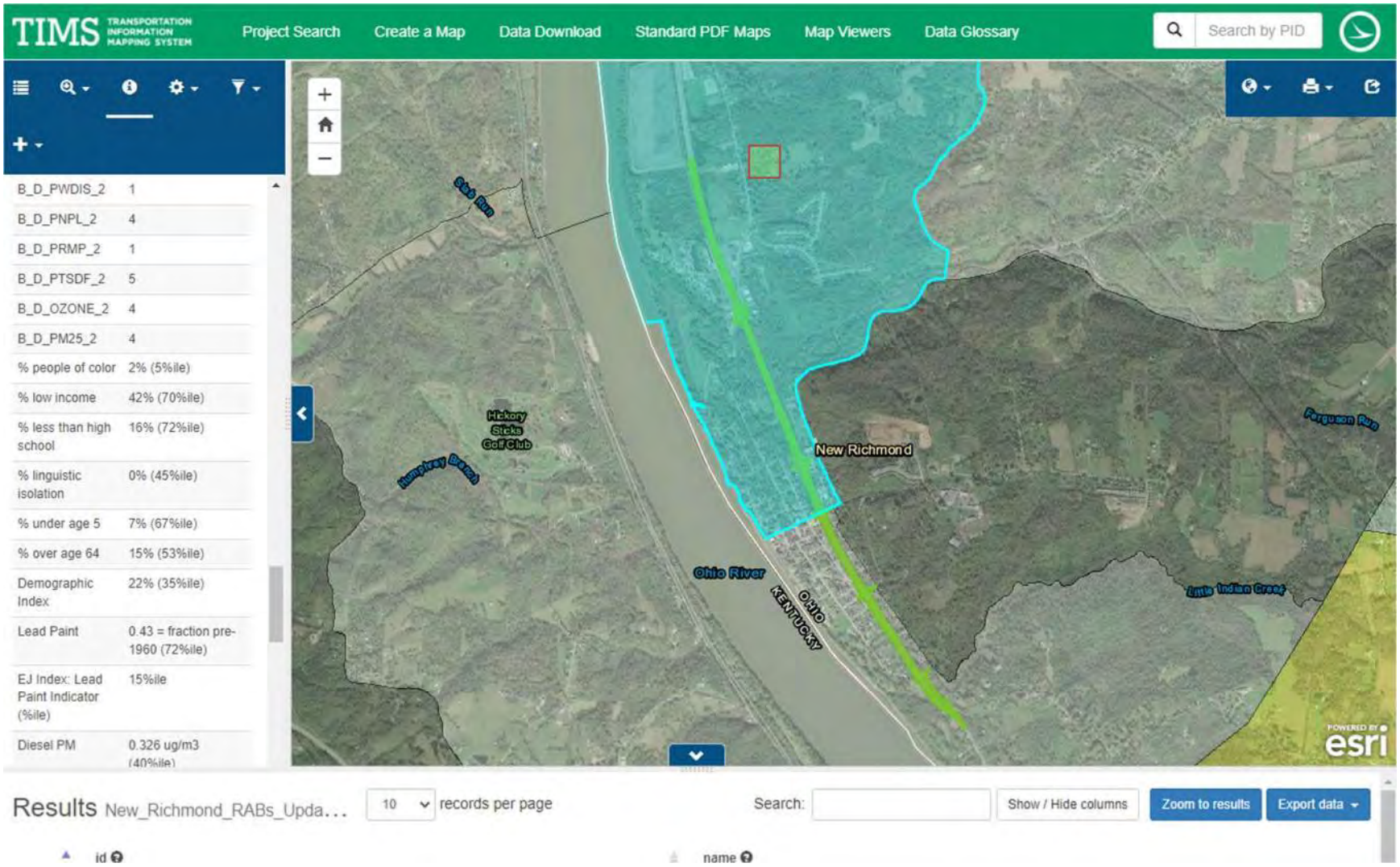
- Emergency Management Zone
- Corridor Management Zone
- Source Water Protection Area
- Inner Management Zone

Division of Drinking and Ground Waters, Ohio EPA, Esri, HERE, Garmin, Maxar

Ohio EPA
Division of Drinking and Ground Waters

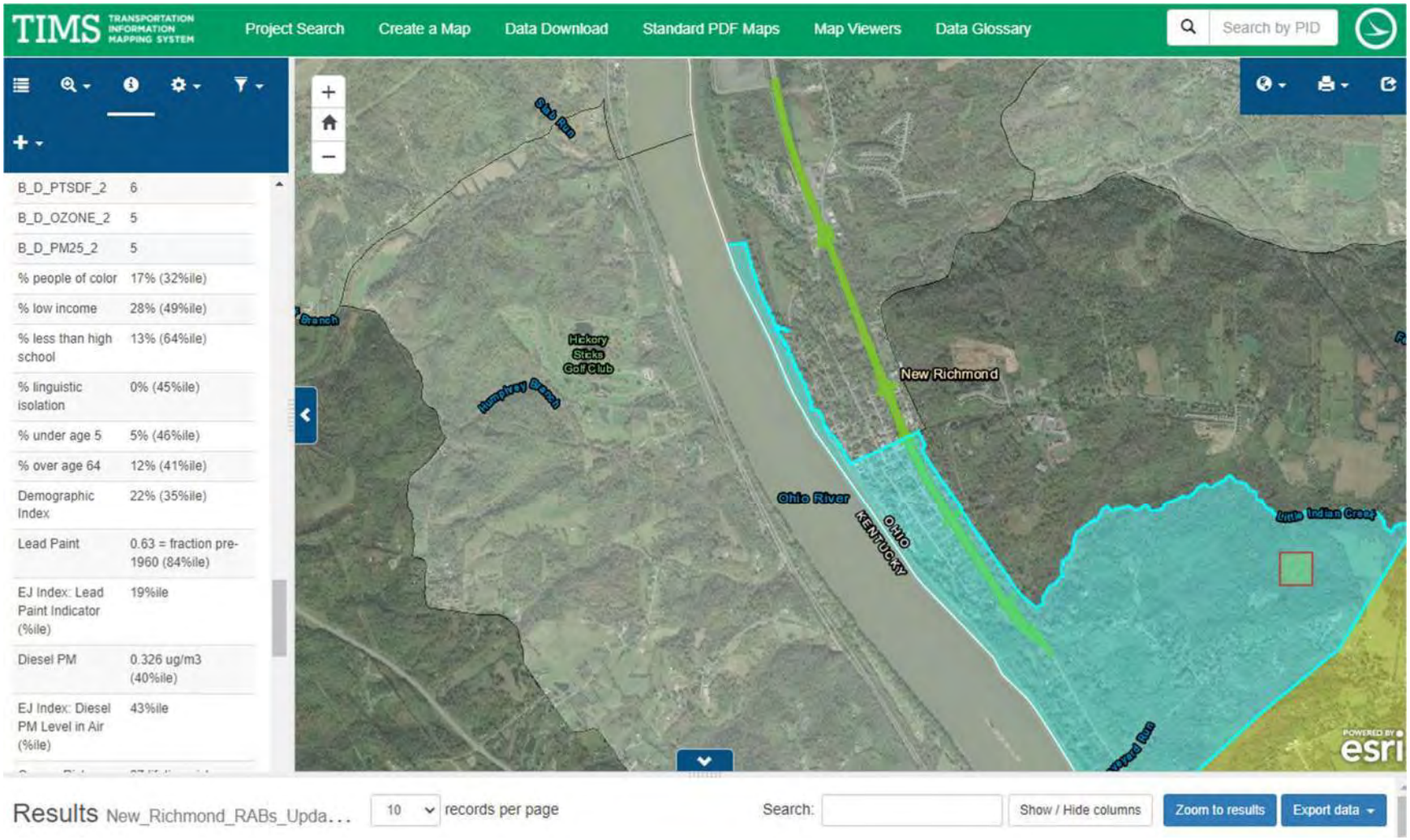
TIMS MAPPING

Census Block # 390250416001



TIMS MAPPING

Census Block # 390250416002



Land and Water Conservation Fund Summary Report

Ohio; Clermont County

(**Unofficial report**; contact us to learn where to find official information: https://lwcf.tplgis.org/contact)

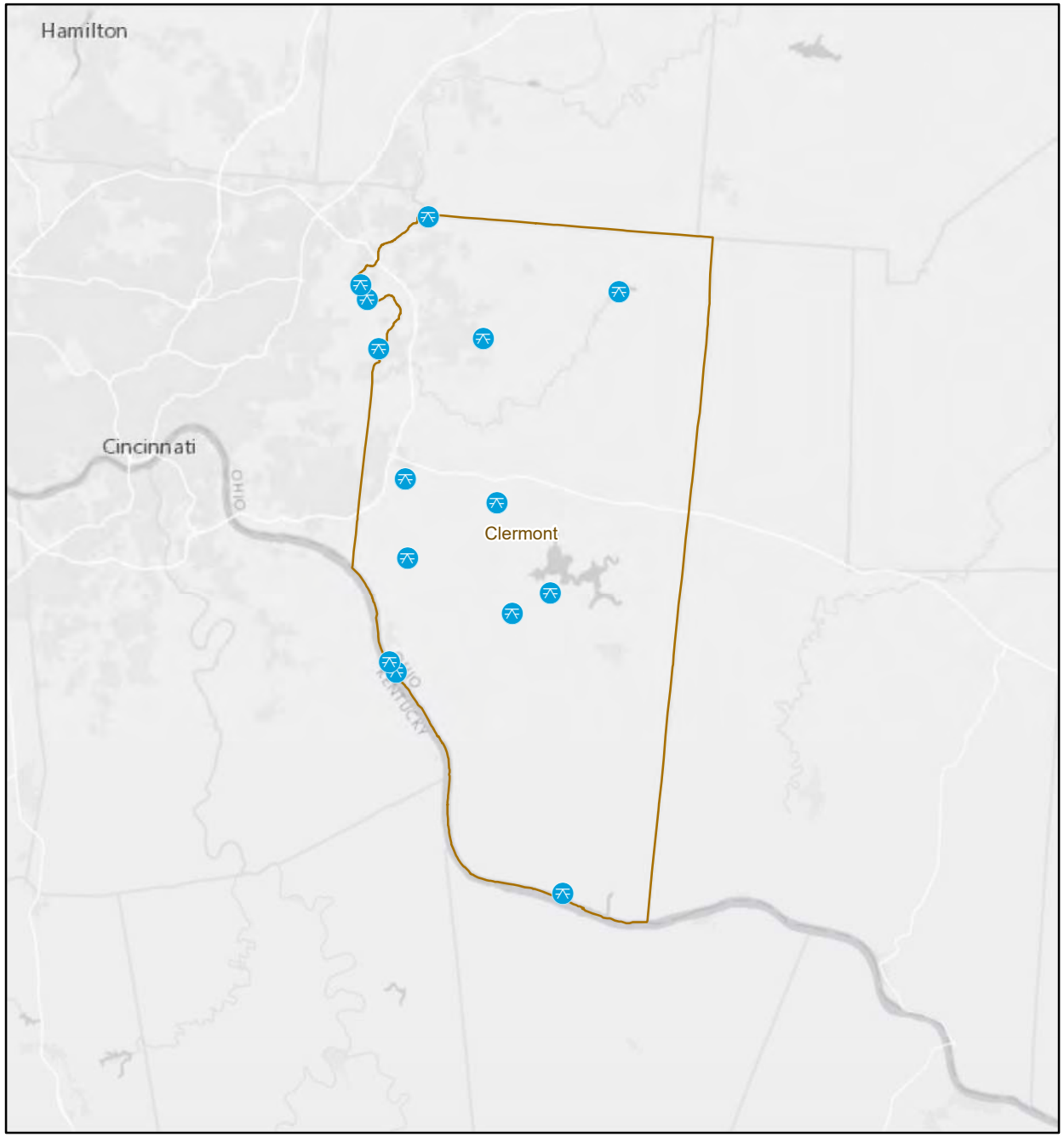
May 13, 2021

Number of projects funded:
15
Year range of funding:
1974 - 2017
Total funding received (estimate):
$1,700,000

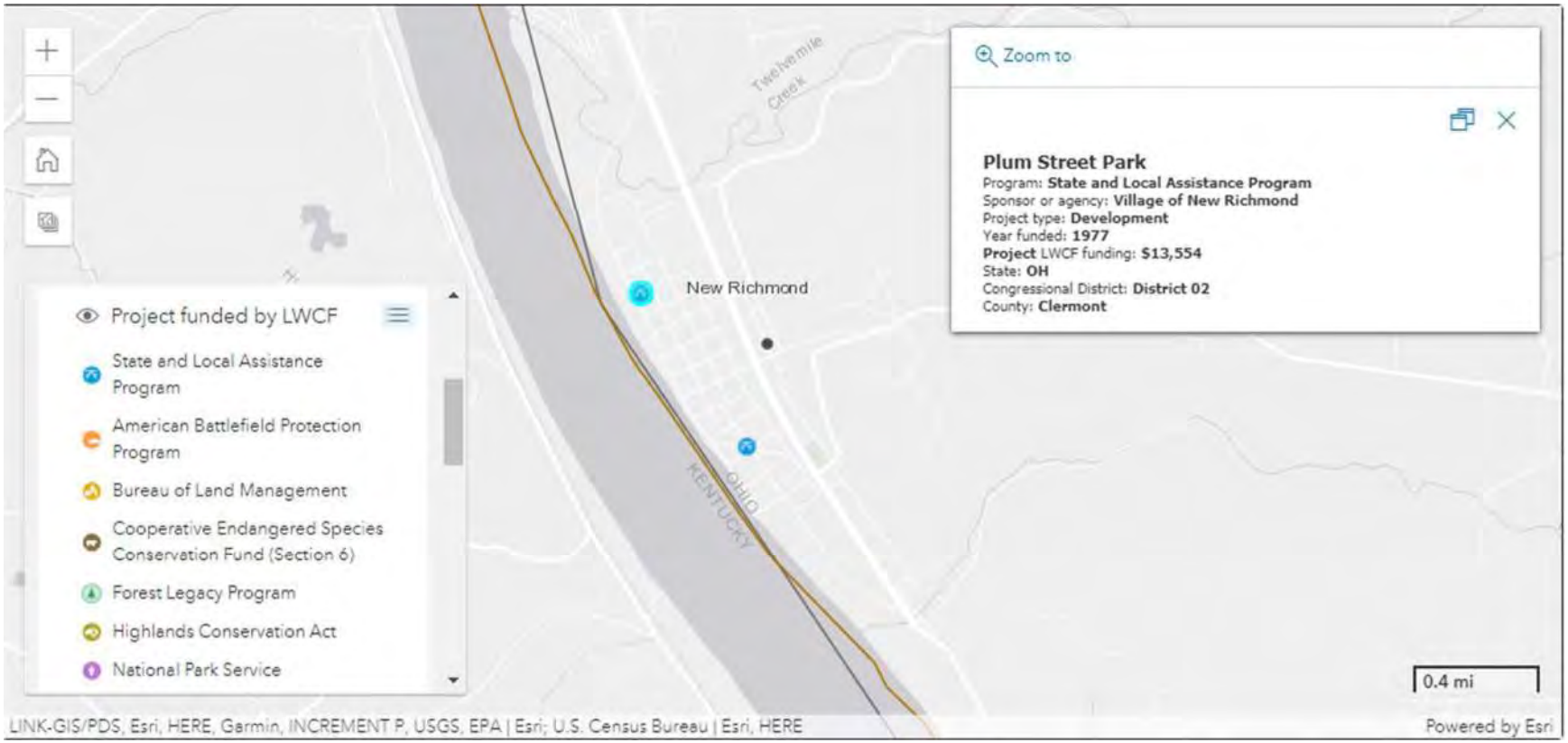
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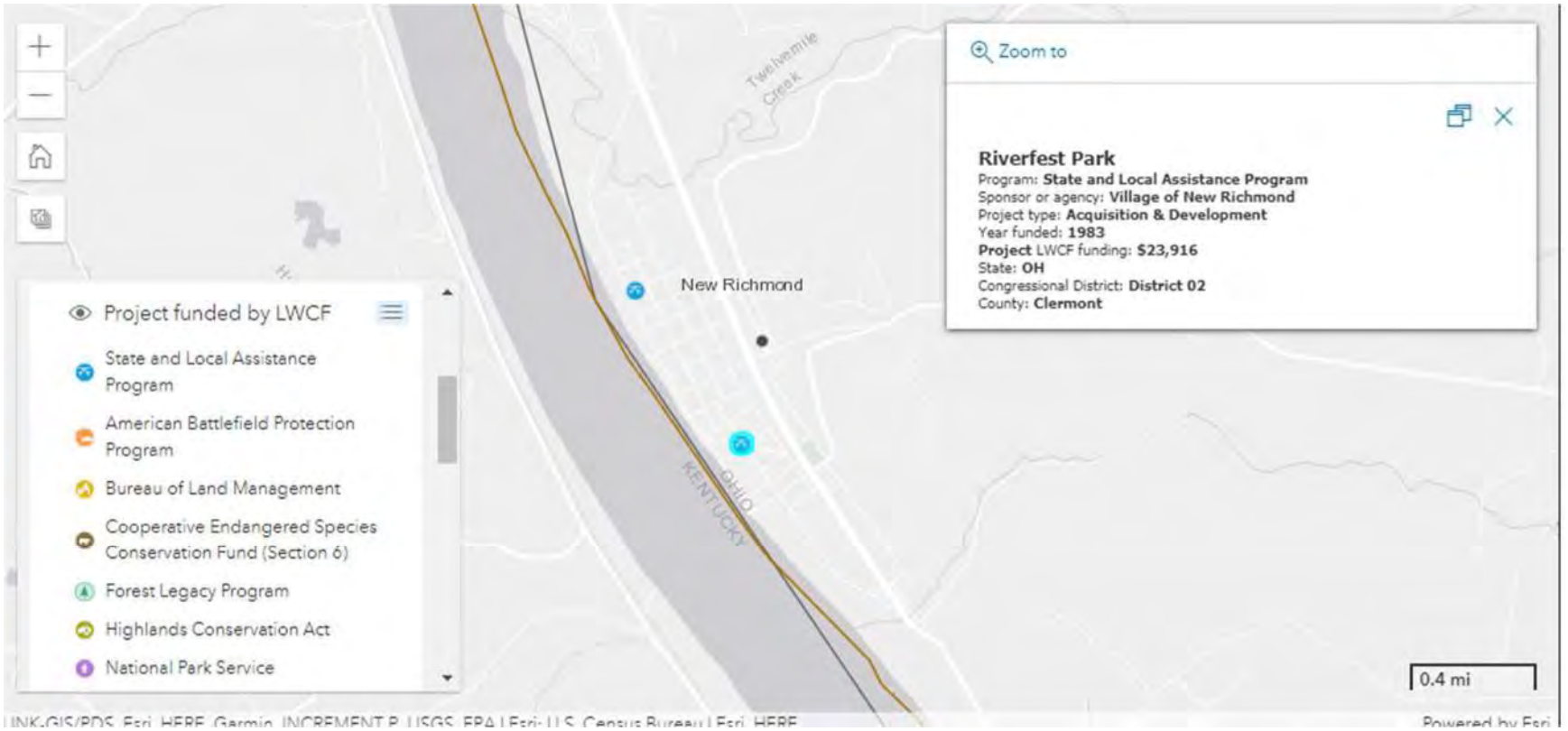
Project funded by LWCF

State and Local Assistance Program (15)



This report was created on May 13, 2021 using the Land and Water Conservation Fund interactive mapping site. It is for informational purposes only. The providers of this report disclaim any and all warranties, express or implied, including fitness for a particular purpose or merchantability, and make no representation that the report is complete, accurate, or error free. Use and reliance on this report is at the sole risk of the party using same.
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Zoom to
Plum Street Park
Program: State and Local Assistance Program
Sponsor or agency: Village of New Richmond
Project type: Development
Year funded: 1977
Project LWCF funding: $13,554
State: OH
Congressional District: District 02
County: Clermont
Project funded by LWCF
State and Local Assistance Program
American Battlefield Protection Program
Bureau of Land Management
Cooperative Endangered Species Conservation Fund (Section 6)
Forest Legacy Program
Highlands Conservation Act
National Park Service
New Richmond
Twelvemile Creek
OHIO
KENTUCKY
0.4 mi
LINK-GIS/PDS, Esri, HERE, Garmin, INCREMENT P, USGS, EPA | Esri; U.S. Census Bureau | Esri, HERE
Powered by Esri


Zoom to
Riverfest Park
Program: State and Local Assistance Program
Sponsor or agency: Village of New Richmond
Project type: Acquisition & Development
Year funded: 1983
Project LWCF funding: $23,916
State: OH
Congressional District: District 02
County: Clermont
Project funded by LWCF
State and Local Assistance Program
American Battlefield Protection Program
Bureau of Land Management
Cooperative Endangered Species Conservation Fund (Section 6)
Forest Legacy Program
Highlands Conservation Act
National Park Service
New Richmond
Twelvemile Creek
OHIO
KENTUCKY
0.4 mi
Powered by Esri

Appendix F – Cost Estimates

CLE-US 52-4.67 New Richmond Funding Breakdown
Summary - Phase 1 03.01.26

DESCRIPTION	TOTAL $
SYCAMORE ST ROUNDABOUT CONSTRUCTION COST SUBTOTAL	**$1,515,472**
WALNUT ST ROUNDABOUT CONSTRUCTION COST SUBTOTAL	**$977,948**
AUGUSTA ST ROUNDABOUT CONSTRUCTION COST SUBTOTAL	**$993,414**
Subtotal Construction Cost	**$3,486,834**
Inflation	$519,538
Maintaining Traffic	$104,605
Field Office, Type C	$50,000
Construction Layout Stakes	$26,151
Mobilization (Per ODOT CMS)	$174,342
Subtotal Construction Cost	**$4,361,470**
ENGINEERING	**$523,376**
CONSTRUCTION ENGINEERING	**$313,815**
RIGHT OF WAY	**$46,890**
TOTAL PROJECT COST	**$5,245,551**

This estimate represents our Professional Opinion of the Probable Project Construction Cost. The estimate is taken from historical bid data. Unit costs are in 2023 dollars. 14.9% inflation included to adjust total project cost to 2026 dollars.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of the probable construction cost.



Caroline Duffy

03.01.2026

New Richmond US 52 - Sycamore St Roundabout					
DESCRIPTION	**ITEM**	**QUANTIT**	**UNIT**	**$/UNIT**	**TOTAL $**
ROADWAY					
Pavement Removed	202	9,693	Sq. Yd.	$18.00	$174,474
Curb and Gutter Removed	202	443	Lin, Ft.	$12.00	$5,316
Excavation	203	1,900	Cu. Yd.	$20.00	$38,000
Embankment	203	750	Cu. Yd.	$20.00	$15,000
Subgrade Compaction	204	6,493	Sq. Yd.	$3.00	$19,479
Proof Rolling	204	4	Hour	$225.00	$900
Cement Subgrade Stabilization, 14" Deep	206	6,493	Sq. Yd.	$6.00	$38,958
ROADWAY SUBTOTAL					**$292,127**
EROSION CONTROL					
Seeding & Mulching	659	4,379	Sq. Yd.	$5.00	$21,895
Topsoil	659	365	Cu. Yd	$50.00	$18,250
EROSION CONTROL SUBTOTAL					**$40,145**
DRAINAGE					
Underdrain	605	1,413	Lin. Ft.	$12.00	$16,956
Storm Sewer and Structures	611	750	Lin. Ft.	$130.00	$97,500
DRAINAGE SUBTOTAL					**$114,456**
PAVEMENT					
Asphalt Concrete Base, 7"	301	1,263	Cu. Yd.	$195.00	$246,285
Asphalt Concrete Base, 4.5"	301	204	Cu. Yd.	$195.00	$39,780
Aggregate Base, 6"	304	1,354	Cu. Yd.	$80.00	$108,320
Aggregate Base, 8"	304	32	Cu. Yd.	$80.00	$2,560
Tack Coat	407	266	Gal	$4.00	$1,064
Asphalt Concrete Surface Course, 1.5"	441	271	Cu. Yd.	$230.00	$62,330
Asphalt Concrete Surface Course, 1.25" (Driveways)	441	5	Cu. Yd.	$500.00	$2,500
Asphalt Concrete Intermediate Course, 1.75" (Driveways)	441	7	Cu. Yd.	$400.00	$2,800
Asphalt Concrete Intermediate Course, 1.75"	448	316	Cu. Yd.	$155.00	$48,980
Concrete Pavement, Stamped and Stained	452	355	Sq. Yd.	$95.00	$33,725
Concrete Walk, 4"	608	5,102	Sq. Ft.	$13.00	$66,326
Curb Ramp	608	1,505	Sq. Ft.	$20.00	$30,100
Combination Curb and Gutter, Type 2	609	1,413	Lin. Ft.	$40.00	$56,520
Curb, Type 6	609	1,271	Lin. Ft.	$35.00	$44,485
Combination Curb and Gutter, Type 9	609	304	Lin. Ft.	$35.00	$10,640
PAVEMENT SUBTOTAL					**$756,415**
LIGHTING					
Street Lighting	625	750	Lin. Ft.	$75.00	$56,250
LIGHTING SUBTOTAL					**$56,250**
TRAFFIC SIGNALS					
Removal of Traffic Signal Installation	632	1	Each	$3,50	$3,500
TRAFFIC SIGNALS SUBTOTAL					**$3,500**
CONTINGENCY					**$252,579**
SYCAMORE STREET ROUNDABOUT TOTAL					**$ 1,515,472**

This estimate does not include Right-of-Way costs. This estimate represents our Professional Opinion of the Probable Project Construction Cost. The estimate is taken from historical bid data. Unit costs are in 2023 dollars. 14.9% inflation included to adjust total project cost to 2026 dollars.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of the probable construction cost.

New Richmond US 52 - Walnut St Roundabout					
DESCRIPTION	**ITEM**	**QUANTIT**	**UNIT**	**$/UNIT**	**TOTAL $**
ROADWAY					
Pavement Removed	202	5,702	Sq. Yd.	$18.00	$102,636
Curb and Gutter Removed	202	571	Lin. Ft.	$12.00	$6,852
Excavation	203	700	Cu. Yd.	$20.00	$14,000
Embankment	203	700	Cu. Yd.	$20.00	$14,000
Subgrade Compaction	204	3,662	Sq. Yd.	$3.00	$10,986
Proof Rolling	204	2	Hour	$225.00	$450
Cement Subgrade Stabilization, 14" Deep	206	3,662	Sq. Yd.	$6.00	$21,972
ROADWAY SUBTOTAL					**$170,896**
EROSION CONTROL					
Seeding & Mulching	659	2,996	Sq. Yd.	$5.00	$14,980
Topsoil	659	250	Cu. Yd	$50.00	$12,500
EROSION CONTROL SUBTOTAL					**$27,480**
DRAINAGE					
Underdrain	605	1,165	Lin. Ft.	$12.00	$13,980
Storm Sewer and Structures	611	550	Lin. Ft.	$130.00	$71,500
DRAINAGE SUBTOTAL					**$85,480**
PAVEMENT					
Asphalt Concrete Base, 7"	301	712	Cu. Yd.	$195.00	$138,840
Asphalt Concrete Base, 4.5"	301	93	Cu. Yd.	$195.00	$18,135
Aggregate Base, 6"	304	734	Cu. Yd.	$80.00	$58,720
Tack Coat	407	146	Gal	$4.00	$584
Asphalt Concrete Surface Course, 1.5"	441	153	Cu. Yd.	$230.00	$35,190
Asphalt Concrete Intermediate Course, 1.75"	448	178	Cu. Yd.	$155.00	$27,590
Concrete Pavement, Stamped and Stained	452	330	Sq. Yd.	$95.00	$31,350
Non-Reinforced Concrete Pavement, 8"	452	197	Sq. Yd.	$80.00	$15,760
Concrete Walk, 4"	608	4,024	Sq. Ft.	$13.00	$52,312
Curb Ramp	608	960	Sq. Ft.	$20.00	$19,200
Combination Curb and Gutter, Type 2	609	1,165	Lin. Ft.	$40.00	$46,600
Curb, Type 6	609	1,017	Lin. Ft.	$35.00	$35,595
Combination Curb and Gutter, Type 9	609	285	Lin. Ft.	$35.00	$9,975
PAVEMENT SUBTOTAL					**$489,851**
LIGHTING					
Street Lighting	625	550	Lin. Ft.	$75.00	$41,250
LIGHTING SUBTOTAL					**$41,250**
CONTINGENCY					**$162,991**
WALNUT STREET ROUNDABOUT SUBTOTAL					**$977,948**

This estimate does not include Right-of-Way costs. This estimate represents our Professional Opinion of the Probable Project Construction Cost. The estimate is taken from historical bid data. Unit costs are in 2026 dollars. 14.9% inflation included to adjust total project cost to 2026 dollars.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of the probable construction cost.

New Richmond US 52 - Augusta St Roundabout					
DESCRIPTION	ITEM	QUANTIT	UNIT	$/UNI	TOTAL $
ROADWAY					
Pavement Removed	202	6,291	Sq. Yd.	$18.0	$113,238
Curb and Gutter Removed	202	252	Lin. Ft.	$12.0	$3,024
Excavation	203	600	Cu. Yd.	$20.0	$12,000
Embankment	203	250	Cu. Yd.	$20.0	$5,000
Subgrade Compaction	204	3,892	Sq. Yd.	$3.00	$11,676
Proof Rolling	204	2	Hour	$225.	$450
Cement Subgrade Stabilization, 14" Deep	206	3,892	Sq. Yd.	$6.00	$23,352
ROADWAY SUBTOTAL					**$168,740**
EROSION CONTROL					
Seeding & Mulching	659	2,693	Sq. Yd.	$5.00	$13,465
Topsoil	659	224	Cu. Yd	$50.0	$11,200
EROSION CONTROL SUBTOTAL					**$24,665**
DRAINAGE					
Underdrain	605	887	Lin. Ft.	$12.0	$10,644
Storm Sewer and Structures	611	600	Lin. Ft.	$130.	$78,000
DRAINAGE SUBTOTAL					**$88,644**
PAVEMENT					
Asphalt Concrete Base, 7"	301	757	Cu. Yd.	$195.	$147,615
Asphalt Concrete Base, 4.5"	301	69	Cu. Yd.	$195.	$13,455
Aggregate Base, 6"	304	741	Cu. Yd.	$80.0	$59,280
Aggregate Base, 8"	304	22	Cu. Yd.	$80.0	$1,760
Tack Coat	407	156	Gal	$4.00	$624
Asphalt Concrete Surface Course, 1.5"	441	162	Cu. Yd.	$230.	$37,260
Asphalt Concrete Intermediate Course, 1.75"	448	189	Cu. Yd.	$155.	$29,295
Concrete Pavement, Stamped and Stained	452	330	Sq. Yd.	$95.0	$31,350
Non-Reinforced Concrete Pavement, 6"	452	12	Sq. Yd.	$70.0	$840
Concrete Walk, 4"	608	4,449	Sq. Ft.	$13.0	$57,837
Curb Ramp	608	1,612	Sq. Ft.	$20.0	$32,240
Combination Curb and Gutter, Type 2	609	887	Lin. Ft.	$40.0	$35,480
Curb, Type 6	609	1,151	Lin. Ft.	$35.0	$40,285
Combination Curb and Gutter, Type 9	609	285	Lin. Ft.	$35.0	$9,975
PAVEMENT SUBTOTAL					**$497,296**
LIGHTING					
Street Lighting	625	600	Lin. Ft.	$75.0	$45,000
LIGHTING SUBTOTAL					**$45,000**
TRAFFIC SIGNALS					
Removal of Traffic Signal Installation	632	1	Each	$3,50	$3,500
TRAFFIC SIGNALS SUBTOTAL					**$3,500**
CONTINGENCY					**$165,569**
AUGUSTA STREET ROUNDABOUT SUBTOTAL					**$993,414**

This estimate does not include Right-of-Way costs. This estimate represents our Professional Opinion of the Probable Project Construction Cost. The estimate is taken from historical bid data. Unit costs are in 2023 dollars. 14.9% inflation included to adjust total project cost to 2026 dollars.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of the probable construction cost.

CLE-US 52-4.67 New Richmond Funding Breakdown
Summary - Phase 2 03.01.26

DESCRIPTION	TOTAL $
FRONT ST ROUNDABOUT CONSTRUCTION COST SUBTOTAL	**$1,328,548**
SOUTH CURVE IMPROVEMENT CONSTRUCTION COST SUBTOTAL	**$447,705**
Subtotal Construction Cost	**$1,776,253**
Inflation	$264,662
Maintaining Traffic	$53,288
Field Office, Type C	$50,000
Construction Layout Stakes	$13,322
Mobilization (Per ODOT CMS)	$88,813
Subtotal Construction Cost	**$2,246,337**
ENGINEERING	**$521,096**
CONSTRUCTION ENGINEERING	**$159,863**
RIGHT OF WAY	**$25,000**
TOTAL PROJECT COST	**$2,952,296**

This estimate represents our Professional Opinion of the Probable Project Construction Cost. The estimate is taken from historical bid data. Unit costs are in 2023 dollars. 14.9% inflation included to adjust total project cost to 2026 dollars.

In providing estimates of probable construction cost, the Client understands that the Consultant has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the Consultant's opinions of probable construction costs are made on the basis of the Consultant's professional judgment and experience. The Consultant makes no warranty, express or implied, that the bids or the negotiated cost of the Work will not vary from the Consultant's opinion of the probable construction cost.



03.01.2026

New Richmond US 52 - Front St Roundabout

DESCRIPTION	ITEM	QUANTIT	UNIT	$/UNIT	TOTAL $
ROADWAY					
Pavement Removed	202	9,423	Sq. Yd.	$18.00	$169,614
Excavation	203	3,100	Cu. Yd.	$20.00	$62,000
Embankment	203	300	Cu. Yd.	$20.00	$6,000
Subgrade Compaction	204	6,175	Sq. Yd.	$3.00	$18,525
Proof Rolling	204	4	Hour	$225.00	$900
Cement Subgrade Stabilization, 14" Deep	206	6,175	Sq. Yd.	$10.00	$61,750
ROADWAY SUBTOTAL					**$318,789**
EROSION CONTROL					
Seeding & Mulching	659	4,014	Sq. Yd.	$5.00	$20,070
Topsoil	659	335	Cu. Yd	$50.00	$16,750
EROSION CONTROL SUBTOTAL					**$36,820**
DRAINAGE					
Underdrain	605	1,345	Lin. Ft.	$12.00	$16,140
Storm Sewer and Structures	611	1,050	Lin. Ft.	$130.00	$136,500
DRAINAGE SUBTOTAL					**$152,640**
PAVEMENT					
Pavement Planing, 1.5"	254	1,088	Sq. Yd.	$8.00	$8,704
Asphalt Concrete Base, 7"	301	1,201	Cu. Yd.	$195.00	$234,195
Asphalt Concrete Base, 4.5"	301	169	Cu. Yd.	$195.00	$32,955
Aggregate Base, 6"	304	1,254	Cu. Yd.	$80.00	$100,320
Tack Coat	407	339	Gal	$4.00	$1,356
Asphalt Concrete Surface Course, 1.5"	441	302	Cu. Yd.	$230.00	$69,460
Asphalt Concrete Intermediate Course, 1.75"	448	300	Cu. Yd.	$155.00	$46,500
Concrete Pavement, Stamped and Stained	452	424	Sq. Yd.	$95.00	$40,280
Concrete Walk, 4"	608	3,758	Sq. Ft.	$13.00	$48,854
Curb Ramp	608	932	Sq. Ft.	$20.00	$18,640
Combination Curb and Gutter, Type 2	609	1,345	Lin. Ft.	$40.00	$53,800
Curb, Type 6	609	2,086	Lin. Ft.	$35.00	$73,010
Combination Curb and Gutter, Type 9	609	285	Lin. Ft.	$35.00	$9,975
PAVEMENT SUBTOTAL					**$738,049**
LIGHTING					
Street Lighting	625	1,050	Lin. Ft.	$75.00	$78,750
LIGHTING SUBTOTAL					**$78,750**
TRAFFIC SIGNALS					
Removal of Traffic Signal Installation	632	1	Each	$3,500.00	$3,500
TRAFFIC SIGNALS SUBTOTAL					**$3,500**
Front Street Roundabout Construction Subtotal				**SUBTOTAL**	**$1,328,548**

New Richmond US 52 - South Curve Improvement

DESCRIPTION	ITEM	QUANTIT	UNIT	$/UNIT	TOTAL $
GRADING					
Excavation	203	3,152	Cu. Yd.	$20.00	$63,040
Embankment	203	1,200	Cu. Yd.	$20.00	$24,000
Subgrade Compaction	204	716	Sq. Yd.	$3.00	$2,148
Proof Rolling	204	400	Hour	$225.00	$90,000
ROADWAY SUBTOTAL					**$179,188**
EROSION CONTROL					
Seeding & Mulching	659	0	Sq. Yd.	$5.00	$0
Topsoil	659	0	Cu. Yd	$50.00	$0
EROSION CONTROL SUBTOTAL					**$0**
DRAINAGE					
Underdrain	605	0	Lin. Ft.	$12.00	$0
DRAINAGE SUBTOTAL					**$0**
PAVEMENT					
Microseal	421	5,100	Sq. Yd.	2.51	$12,801
Tack Coat	407	382	Gal	$4.00	$1,528
SIGNS AND PAVEMENT MARKINGS					$75,000
South Curve Construction Subtotal				**SUBTOTAL**	**$447,705**

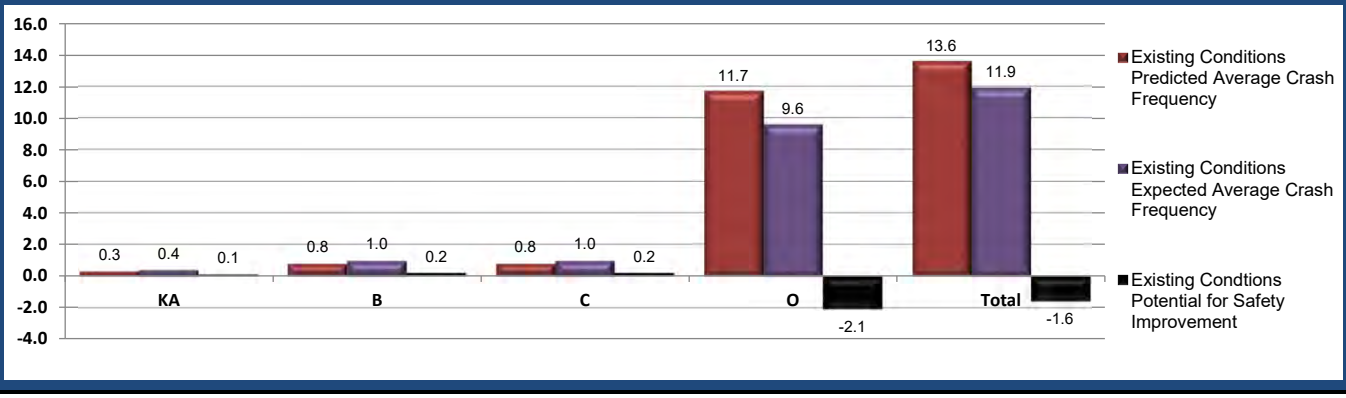
Appendix G – ECAT

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.3069	0.7969	0.7999	11.6563	13.5600
$N_{expected}$ - Existing Conditions	0.3825	0.9874	0.9828	9.5828	11.9355
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0756**	**0.1905**	**0.1829**	-2.0735	-1.6245

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0808	0.2278	0.2575	3.8254	4.3915
US52: 5.389	US 52-Sycamore St	0.084	0.2375	0.2682	3.9192	4.5089
US52: 5.996	US 52-Walnut St	0.0698	0.1435	0.0848	0.715	1.0131
US52: 6.443	US 52-Augusta St	0.0516	0.1455	0.1643	2.9233	3.2847
US52: 6.638	US 52-Adamson St	0.0207	0.0426	0.0251	0.2734	0.3618

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0923	0.2606	0.2946	2.2746	2.9221
US52: 5.389	US 52-Sycamore St	0.125	0.3524	0.398	3.9054	4.7808
US52: 5.996	US 52-Walnut St	0.1001	0.2052	0.1212	1.6593	2.0858
US52: 6.443	US 52-Augusta St	0.0453	0.1283	0.1448	1.5135	1.8319
US52: 6.638	US 52-Adamson St	0.0198	0.0409	0.0242	0.23	0.3149

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	**0.0115**	**0.0328**	**0.0371**	-1.5508	-1.4694
US52: 5.389	US 52-Sycamore St	**0.041**	**0.1149**	**0.1298**	-0.0138	**0.2719**
US52: 5.996	US 52-Walnut St	**0.0303**	**0.0617**	**0.0364**	**0.9443**	**1.0727**
US52: 6.443	US 52-Augusta St	-0.0063	-0.0172	-0.0195	-1.4098	-1.4528
US52: 6.638	US 52-Adamson St	-0.0009	-0.0017	-0.0009	-0.0434	-0.0469

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Intersections	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary by Crash Type

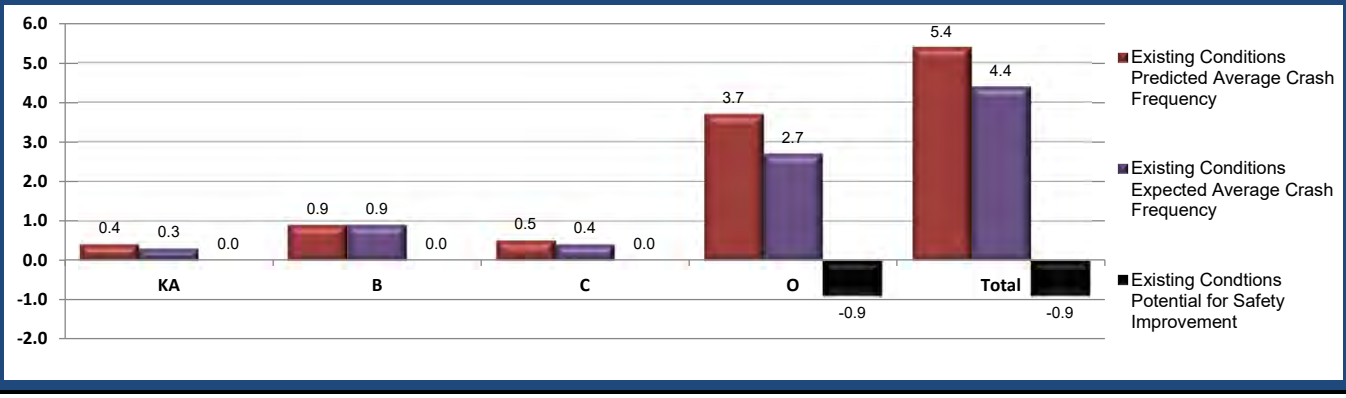
Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Expected Crash Frequency
Unknown	0.0226	0.0170	-0.0056	
Head On	0.2048	0.1881	-0.0167	
Rear End	4.3989	3.6345	-0.7644	
Backing	1.4602	1.1445	-0.3157	
Sideswipe - Meeting	0.0151	0.0122	-0.0029	
Sideswipe - Passing	1.2779	1.0968	-0.1811	
Angle	2.6521	2.5960	-0.0561	
Parked Vehicle	0.5118	0.4270	-0.0848	
Pedestrian	0.0855	0.0974	**0.0119**	
Animal	0.0000	0.0000	0.0000	
Train	0.0065	0.0046	-0.0019	
Pedalcycles	0.0180	0.0157	-0.0023	
Other Non-Vehicle	0.0000	0.0000	0.0000	
Fixed Object	1.1349	1.1193	-0.0156	
Other Object	0.0629	0.0540	-0.0089	
Overturning	0.0373	0.0430	**0.0057**	
Other Non-Collision	0.1315	0.1329	**0.0014**	
Left Turn	1.0244	0.9208	-0.1036	
Right Turn	0.5156	0.4317	-0.0839	

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.3817	0.8665	0.4533	3.6582	5.3597
$N_{expected}$ - Existing Conditions	0.3489	0.9103	0.4464	2.7330	4.4386
$N_{potential\ for\ improvement}$ - Existing Conditions	-0.0328	**0.0438**	-0.0069	-0.9252	-0.9211

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4-4.685	US 52 Start of Project to Front Street	0.0258	0.0258	0.0258	0.4587	0.5361
US52: 4.686-5.389	US 52-Front St to Sycamore St	0.0262	0.0262	0.0262	0.4658	0.5444
US52: 5.39-5.996	US 52-Sycamore St to Walnut St	0.0183	0.0183	0.0183	0.3259	0.3808
US52: 5.997-6.443	US 52-Walnut St to Augusta St	0.0129	0.0129	0.0129	0.2294	0.2681
US52: 6.444-6.71	US 52-Augusta St to Little Indian Creek	0.1051	0.2757	0.1301	0.7665	1.2774
US52: 6.72-7.21	US 52-Little Indian to End of Project	0.1934	0.5076	0.24	1.4119	2.3529

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4-4.685	US 52 Start of Project to Front Street	0.0248	0.0641	0.0345	0.4332	0.5566
US52: 4.686-5.389	US 52-Front St to Sycamore St	0.0323	0.0834	0.0453	0.4529	0.6139
US52: 5.39-5.996	US 52-Sycamore St to Walnut St	0.019	0.0485	0.0264	0.2501	0.344
US52: 5.997-6.443	US 52-Walnut St to Augusta St	0.0147	0.0374	0.0202	0.1854	0.2577
US52: 6.444-6.71	US 52-Augusta St to Little Indian Creek	0.128	0.3357	0.1587	0.8297	1.4521
US52: 6.72-7.21	US 52-Little Indian to End of Project	0.1301	0.3412	0.1613	0.5817	1.2143

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4-4.685	US 52 Start of Project to Front Street	-0.001	**0.0383**	**0.0087**	-0.0255	**0.0205**
US52: 4.686-5.389	US 52-Front St to Sycamore St	**0.0061**	**0.0572**	**0.0191**	-0.0129	**0.0695**
US52: 5.39-5.996	US 52-Sycamore St to Walnut St	**0.0007**	**0.0302**	**0.0081**	-0.0758	-0.0368
US52: 5.997-6.443	US 52-Walnut St to Augusta St	**0.0018**	**0.0245**	**0.0073**	-0.044	-0.0104
US52: 6.444-6.71	US 52-Augusta St to Little Indian Creek	**0.0229**	**0.06**	**0.0286**	**0.0632**	**0.1747**
US52: 6.72-7.21	US 52-Little Indian to End of Project	-0.0633	-0.1664	-0.0787	-0.8302	-1.1386

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Existing Segments	Date Performed	03.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary by Crash Type

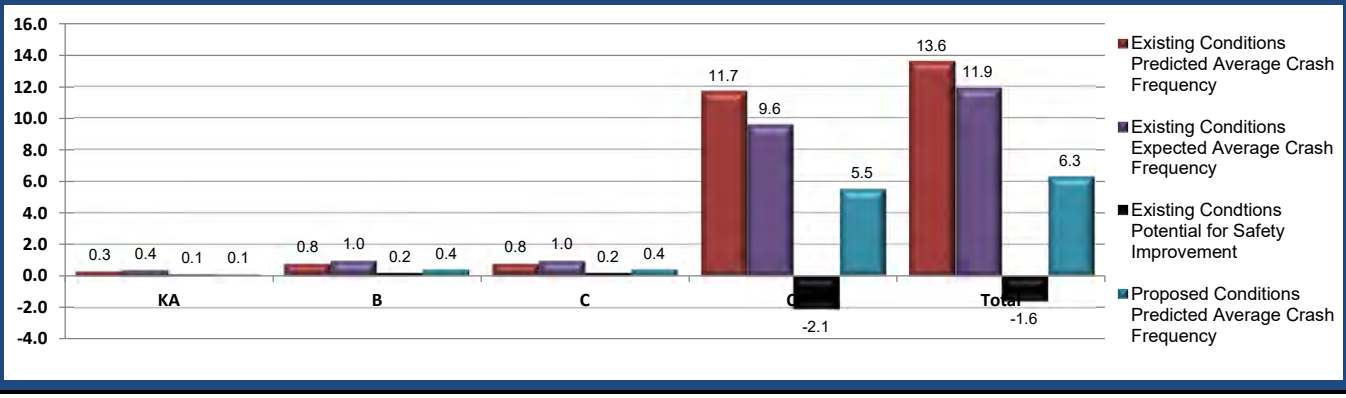
Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Expected Crash Frequency
Unknown	0.0461	0.0367	-0.0094	
Head On	0.0346	0.0290	-0.0056	
Rear End	0.9287	0.8128	-0.1159	
Backing	0.0710	0.0535	-0.0175	
Sideswipe - Meeting	0.2829	0.2182	-0.0647	
Sideswipe - Passing	0.4174	0.3666	-0.0508	
Angle	0.2741	0.2259	-0.0482	
Parked Vehicle	0.0720	0.0600	-0.0120	
Pedestrian	0.0213	0.0176	-0.0037	
Animal	4.7720	3.7313	-1.0407	
Train	0.0010	0.0007	-0.0003	
Pedalcycles	0.0103	0.0082	-0.0021	
Other Non-Vehicle	0.0005	0.0004	-0.0001	
Fixed Object	2.5093	2.0341	-0.4752	
Other Object	0.1766	0.1437	-0.0329	
Overturning	0.2127	0.1867	-0.0260	
Other Non-Collision	0.2056	0.1647	-0.0409	
Left Turn	0.0956	0.0798	-0.0158	
Right Turn	0.0000	0.0000	0.0000	

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.3069	0.7969	0.7999	11.6563	13.5600
$N_{expected}$ - Existing Conditions	0.3825	0.9874	0.9828	9.5828	11.9355
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0756**	**0.1905**	**0.1829**	-2.0735	-1.6245
$N_{expected}$ - Proposed Conditions	0.0961	0.3664	0.3507	5.4934	6.3066

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0808	0.2278	0.2575	3.8254	4.3915
US52: 5.389	US 52-Sycamore St	0.084	0.2375	0.2682	3.9192	4.5089
US52: 5.996	US 52-Walnut St	0.0698	0.1435	0.0848	0.715	1.0131
US52: 6.443	US 52-Augusta St	0.0516	0.1455	0.1643	2.9233	3.2847
US52: 6.638	US 52-Adamson St	0.0207	0.0426	0.0251	0.2734	0.3618

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0923	0.2606	0.2946	2.2746	2.9221
US52: 5.389	US 52-Sycamore St	0.125	0.3524	0.398	3.9054	4.7808
US52: 5.996	US 52-Walnut St	0.1001	0.2052	0.1212	1.6593	2.0858
US52: 6.443	US 52-Augusta St	0.0453	0.1283	0.1448	1.5135	1.8319
US52: 6.638	US 52-Adamson St	0.0198	0.0409	0.0242	0.23	0.3149

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	**0.0115**	**0.0328**	**0.0371**	-1.5508	-1.4694
US52: 5.389	US 52-Sycamore St	**0.041**	**0.1149**	**0.1298**	-0.0138	**0.2719**
US52: 5.996	US 52-Walnut St	**0.0303**	**0.0617**	**0.0364**	**0.9443**	**1.0727**
US52: 6.443	US 52-Augusta St	-0.0063	-0.0172	-0.0195	-1.4098	-1.4528
US52: 6.638	US 52-Adamson St	-0.0009	-0.0017	-0.0009	-0.0434	-0.0469

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.005	0.0423	0.0523	1.2737	1.3733
US52: 5.389	US 52-Sycamore St	0.0047	0.0386	0.0476	1.1732	1.2641
US52: 5.996	US 52-Walnut St	0.0066	0.0545	0.0673	1.2342	1.3626
US52: 6.443	US 52-Augusta St	0.0062	0.0524	0.0646	1.1732	1.2964
US52: 6.638	US 52-Adamson St	0.0736	0.1786	0.1189	0.6391	1.0102

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0226	0.0170	-0.0056	0.1556
Head On	0.2048	0.1881	-0.0167	0.0132
Rear End	4.3989	3.6345	-0.7644	1.0227
Backing	1.4602	1.1445	-0.3157	0.0896
Sideswipe - Meeting	0.0151	0.0122	-0.0029	0.0294
Sideswipe - Passing	1.2779	1.0968	-0.1811	1.7086
Angle	2.6521	2.5960	-0.0561	1.8789
Parked Vehicle	0.5118	0.4270	-0.0848	0.0359
Pedestrian	0.0855	0.0974	**0.0119**	0.0095
Animal	0.0000	0.0000	0.0000	0.0536
Train	0.0065	0.0046	-0.0019	0.0002
Pedalcycles	0.0180	0.0157	-0.0023	0.0083
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0001
Fixed Object	1.1349	1.1193	-0.0156	0.7045
Other Object	0.0629	0.0540	-0.0089	0.0059
Overturning	0.0373	0.0430	**0.0057**	0.0147
Other Non-Collision	0.1315	0.1329	**0.0014**	0.1160
Left Turn	1.0244	0.9208	-0.1036	0.1526
Right Turn	0.5156	0.4317	-0.0839	0.3611

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
Site Characteristic Improvements (i.e. Lane widening)		$0.00			$0.00	$0.00	-3.549	$1,658,125
Site Characteristic Improvements (i.e. Lighting)		$0.00			$0.00	$0.00		
Site Characteristic Improvements (i.e. Signal Phasing)		$0.00			$0.00	$0.00		
Site Characteristic Improvements (i.e. Roundabout)	20	$9,646,935.03	$10,000.00	$5,788,161.02	$4,048,774.01	($2,725,946.51)		
		$0.00			$0.00	$0.00	-3.704	$852,490
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$9,646,935.03**	**$10,000.00**	**$5,788,161.02**	**$4,048,774.01**	**($2,725,946.51)**	**-7.253**	**$2,510,615**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Benefit - Cost Calculator

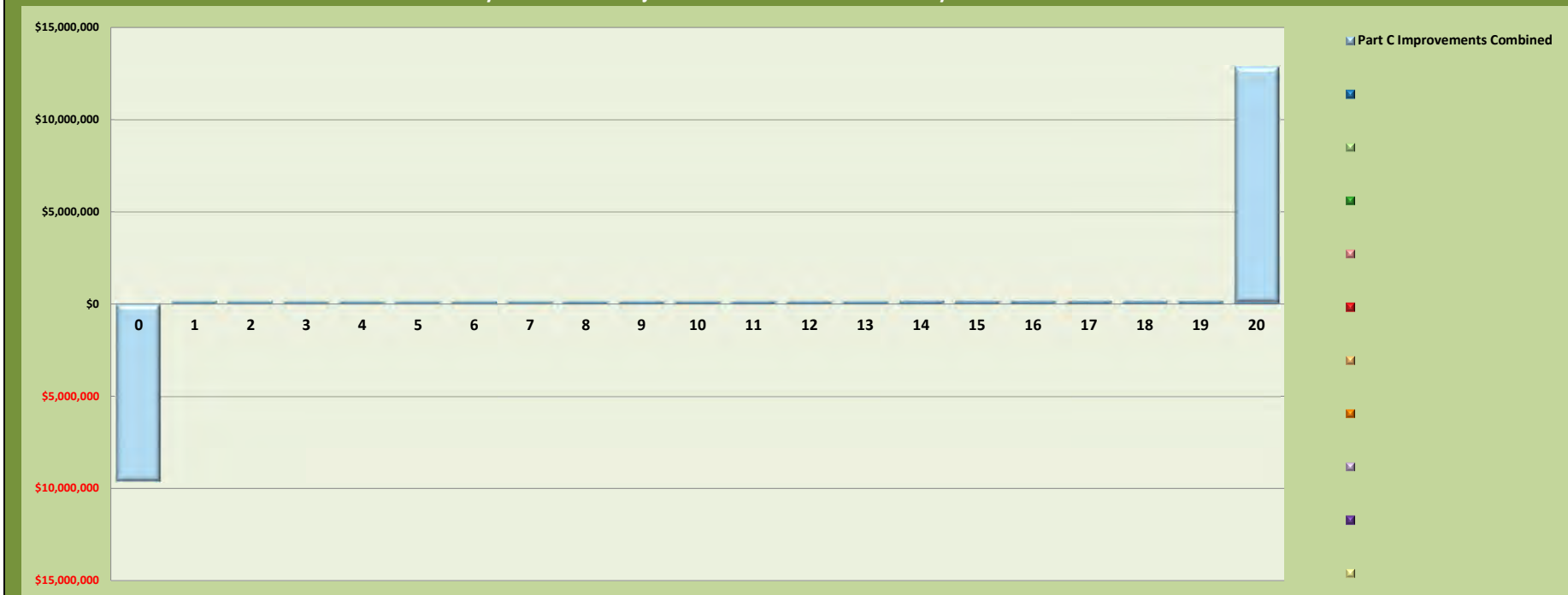
Net Present Value of Project	$4,048,774.01
Net Present Value of Safety Benefits	$2,510,614.83
Net Benefit	($1,538,159.18)
Benefit / Cost Ratio	0.62

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.211
Number of Injury Crashes	-1.091
Number of Total Crashes	-7.253

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

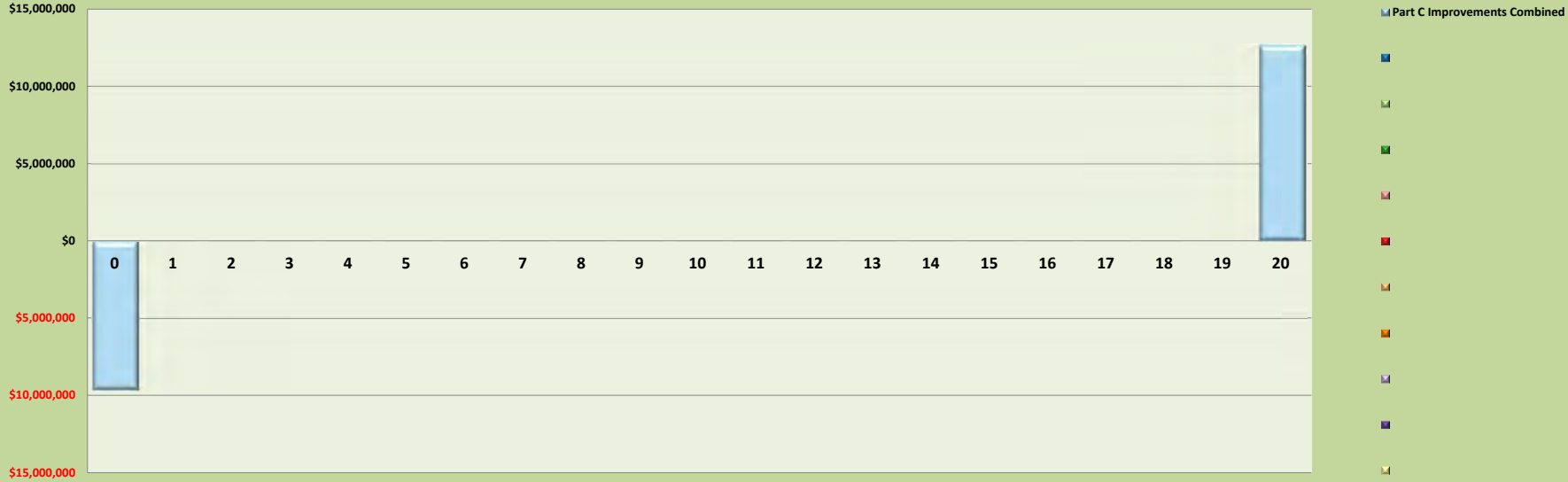


Safety Benefit - Cost Analysis

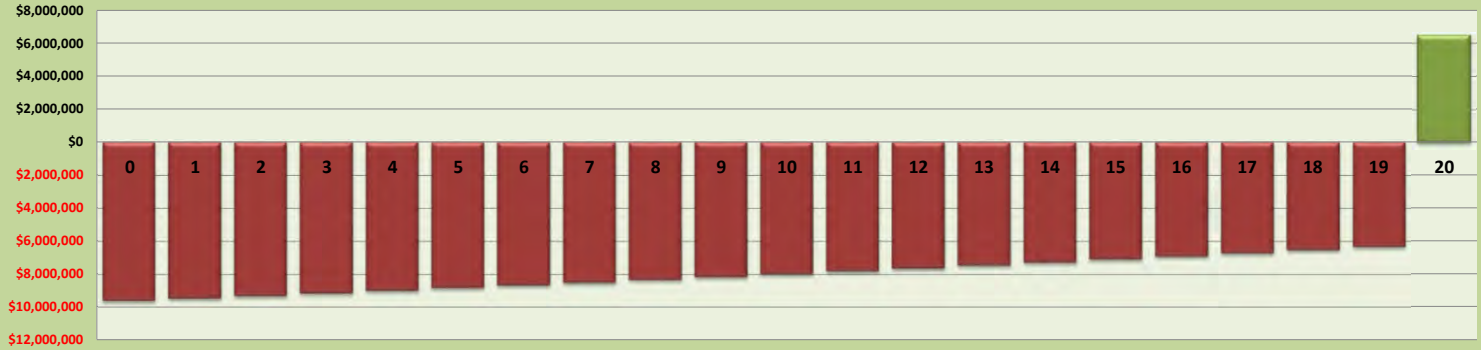
General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 2 Roundabout Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (20 years)

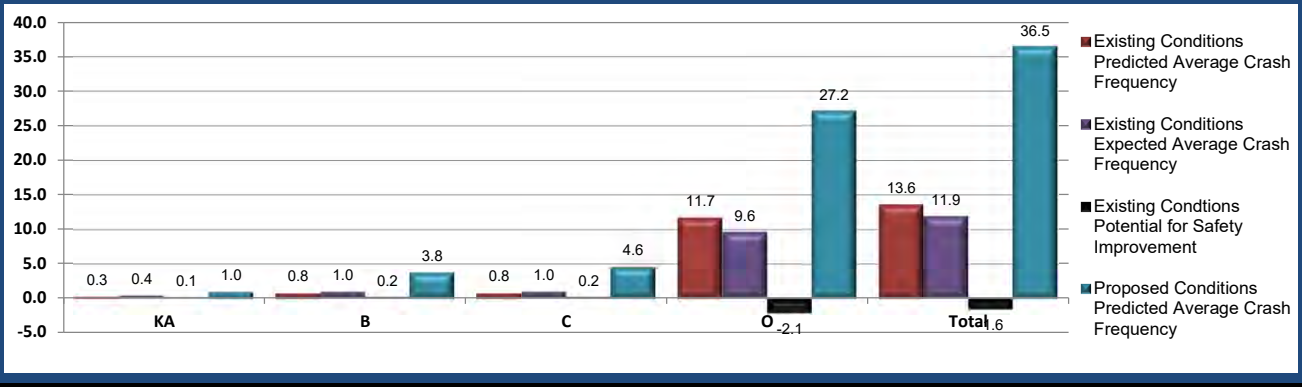
Percentage of Service Life to observe a continuous Positive Return on Investment: 05.00%

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary of Anticipated Safety Performance of the Project (average crashes/year)



Project Summary Results (Without Animal Crashes)

	KA	B	C	O	Total
$N_{predicted}$ - Existing Conditions	0.3069	0.7969	0.7999	11.6563	13.5600
$N_{expected}$ - Existing Conditions	0.3825	0.9874	0.9828	9.5828	11.9355
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0756**	**0.1905**	**0.1829**	-2.0735	-1.6245
$N_{expected}$ - Proposed Conditions	0.9505	3.7816	4.5736	27.1952	36.5009

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

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Existing Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0808	0.2278	0.2575	3.8254	4.3915
US52: 5.389	US 52-Sycamore St	0.084	0.2375	0.2682	3.9192	4.5089
US52: 5.996	US 52-Walnut St	0.0698	0.1435	0.0848	0.715	1.0131
US52: 6.443	US 52-Augusta St	0.0516	0.1455	0.1643	2.9233	3.2847
US52: 6.638	US 52-Adamson St	0.0207	0.0426	0.0251	0.2734	0.3618

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Project and Site Co

Existing Conditions Project Element Expected Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.0923	0.2606	0.2946	2.2746	2.9221
US52: 5.389	US 52-Sycamore St	0.125	0.3524	0.398	3.9054	4.7808
US52: 5.996	US 52-Walnut St	0.1001	0.2052	0.1212	1.6593	2.0858
US52: 6.443	US 52-Augusta St	0.0453	0.1283	0.1448	1.5135	1.8319
US52: 6.638	US 52-Adamson St	0.0198	0.0409	0.0242	0.23	0.3149

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Existing Conditions Project Element Potential for Safety Improvement Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	**0.0115**	**0.0328**	**0.0371**	-1.5508	-1.4694
US52: 5.389	US 52-Sycamore St	**0.041**	**0.1149**	**0.1298**	-0.0138	**0.2719**
US52: 5.996	US 52-Walnut St	**0.0303**	**0.0617**	**0.0364**	**0.9443**	**1.0727**
US52: 6.443	US 52-Augusta St	-0.0063	-0.0172	-0.0195	-1.4098	-1.4528
US52: 6.638	US 52-Adamson St	-0.0009	-0.0017	-0.0009	-0.0434	-0.0469

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Proposed Conditions Project Element Predicted Crash Summary (Without Animal Crashes)

Project Element ID	Common Name	Crash Severity Level				
		KA	B	C	O	Total
US52: 4.685	US 52-Front St	0.2064	0.8775	1.1094	6.6295	8.8228
US52: 5.389	US 52-Sycamore St	0.2086	0.887	1.1212	6.7004	8.9172
US52: 5.996	US 52-Walnut St	0.2019	0.8584	1.085	6.4841	8.6294
US52: 6.443	US 52-Augusta St	0.1913	0.814	1.0288	6.148	8.1821
US52: 6.638	US 52-Adamson St	0.1423	0.3447	0.2292	1.2332	1.9494

Project Safety Performance Report

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Summary by Crash Type

Crash Type	Existing			Proposed
	Predicted Crash Frequency	Expected Crash Frequency	PSI	Predicted Crash Frequency
Unknown	0.0226	0.0170	-0.0056	0.0469
Head On	0.2048	0.1881	-0.0167	0.2696
Rear End	4.3989	3.6345	-0.7644	15.6368
Backing	1.4602	1.1445	-0.3157	1.7241
Sideswipe - Meeting	0.0151	0.0122	-0.0029	0.7554
Sideswipe - Passing	1.2779	1.0968	-0.1811	2.4689
Angle	2.6521	2.5960	-0.0561	7.7337
Parked Vehicle	0.5118	0.4270	-0.0848	1.3581
Pedestrian	0.0855	0.0974	**0.0119**	0.3305
Animal	0.0000	0.0000	0.0000	0.0000
Train	0.0065	0.0046	-0.0019	0.0003
Pedalcycles	0.0180	0.0157	-0.0023	0.2198
Other Non-Vehicle	0.0000	0.0000	0.0000	0.0001
Fixed Object	1.1349	1.1193	-0.0156	2.5248
Other Object	0.0629	0.0540	-0.0089	0.0815
Overturning	0.0373	0.0430	**0.0057**	0.1575
Other Non-Collision	0.1315	0.1329	**0.0014**	0.2229
Left Turn	1.0244	0.9208	-0.1036	2.9700
Right Turn	0.5156	0.4317	-0.0839	0.0000

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Select Site Types to be used in Benefit-Cost Analysis:

All Sites

Comments:

Countermeasure Service Lives, Costs, and Safety Benefits

Countermeasures	Service Life (Years)	Initial Cost of Countermeasure	Annual Maintenance & Energy Costs	Salvage Value	Net Present Cost of Countermeasure	Total Cost of Countermeasures	Summary of Annual Crash Modifications	Net Present Value of Safety Benefits
Site Characteristic Improvements (i.e. Lane widening)		$0.00			$0.00	$0.00	22.941	($11,419,811)
Site Characteristic Improvements (i.e. Lighting)		$0.00			$0.00	$0.00		
Site Characteristic Improvements (i.e. Signal Phasing)		$0.00			$0.00	$0.00		
Site Characteristic Improvements (i.e. Signalized Intersection)	20	$4,059,390.00	$150,000.00	$10,000.00	$6,899,390.00	$8,682,859.03		
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
		$0.00			$0.00	$0.00	0.000	$0
Totals		**$4,059,390.00**	**$150,000.00**	**$10,000.00**	**$6,899,390.00**	**$8,682,859.03**	**22.941**	**($11,419,811)**

Safety Benefit - Cost Analysis

General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Benefit - Cost Calculator

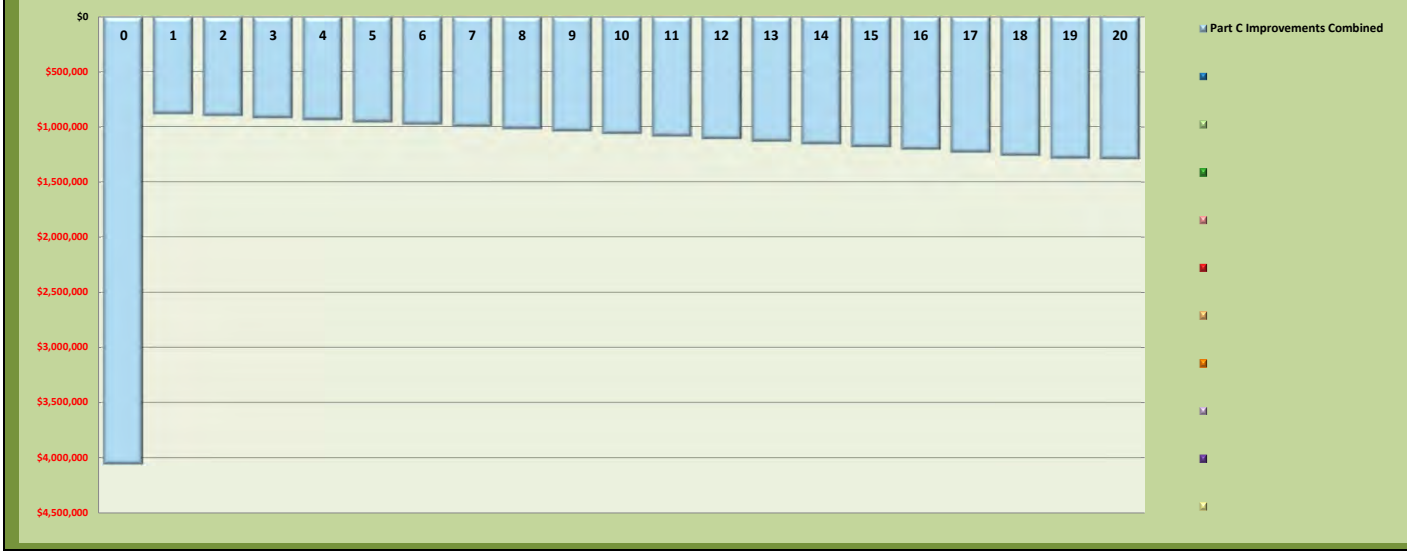
Net Present Value of Project	$6,899,390.00
Net Present Value of Safety Benefits	($11,419,810.72)
Net Benefit	($18,319,200.72)
Benefit / Cost Ratio	-1.66

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	0.644
Number of Injury Crashes	7.402
Number of Total Crashes	22.941

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

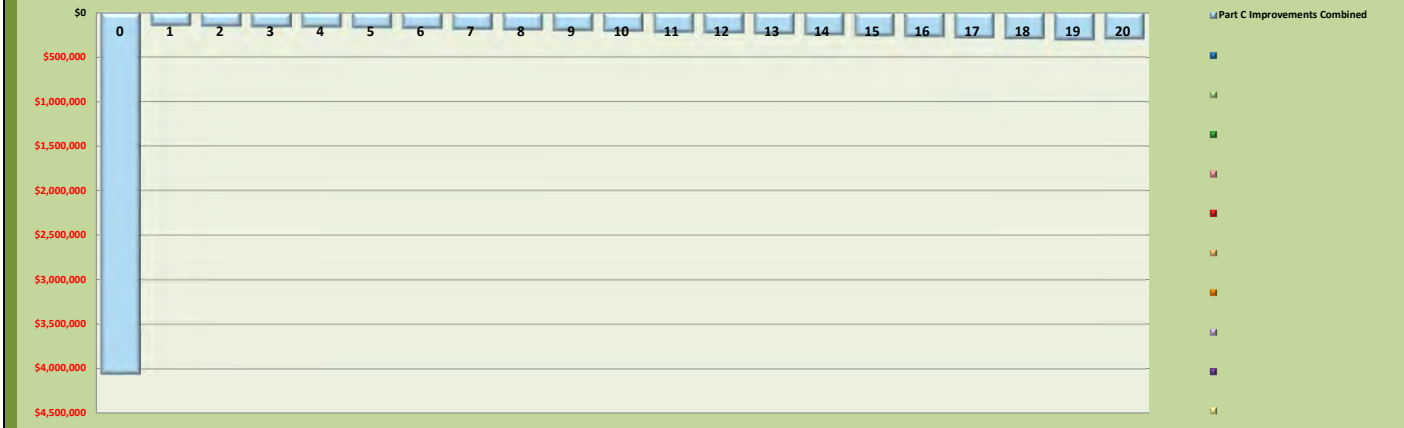


Safety Benefit - Cost Analysis

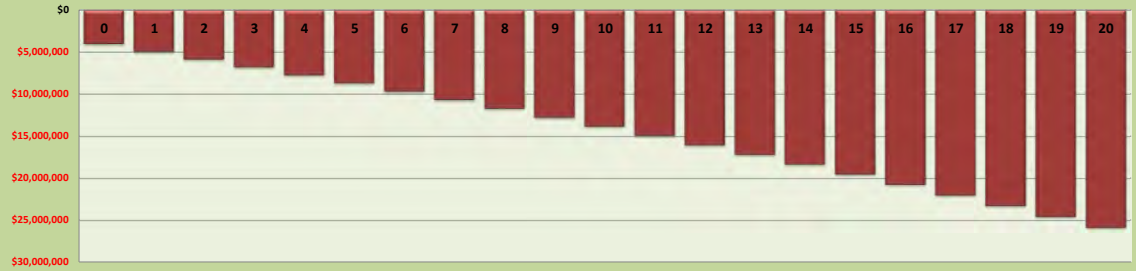
General Information

Project Name	CLE-US 52-4.67 New Richmond	Contact Email	143Engineers@gmail.com
Project Description	US 52	Contact Phone	513.476.6271
Reference Number	Alternative 3 Signalized Intersection	Date Performed	10.02.25
Analyst	Caroline Duffy	Analysis Year	2011-2022
Agency/Company	143Engineers		

Project Costs Only Cash Flows By Countermeasure Per Year



Return on Investment (Safety Benefits and Project Investments)



First year to observe a positive return on investiment: Unknown (Unknown years)

Percentage of Service Life to observe a continuous Positive Return on Investment: Unknown%

Appendix H – Comment Letters

From: Amy Donley <amy.donley.99@gmail.com>
Sent: Friday, October 10, 2025 1:03 PM
To: Kathryn Gail Bailey <kbailey@newrichmond.org>
Subject: Roundabouts on St 52

Dear Ms. Bailey,

I'm writing in regard to the possible installation of roundabouts along State Route 52 in New Richmond. I strongly support this initiative, as I believe the roundabouts will make these intersections significantly safer.

Roundabouts naturally encourage drivers to slow down as they navigate through them, which helps reduce the likelihood of high-speed collisions. From my own experience using roundabouts in other parts of the country, they also improve the overall flow of traffic.

As a former first responder, I've seen firsthand how many motor vehicle crashes result from speeding and drivers running red lights. I truly believe these changes could help prevent such incidents and save lives. As a resident, I often find myself looking both ways multiple times even after the light turns green—simply because of how unpredictable these intersections can be.

I hope my perspective adds to the conversation in favor of implementing roundabouts in our community. Thank you for your time and consideration.

Sincerely,

Amy Donley

US52 Roundabouts project 2026

SN

Scott Noel <snoel@newrichmond.org>
To Scott.Brown@dot.ohio.gov; Anthony.Pankala@dot.ohio.gov; c Duffy

To

To whom it may concern,

My name is Scott Noel and I am the current police chief of the Village of New Richmond. I am writing today in support of the roundabout project. My support comes after looking at all the documents provided to me, after reviewing crash data which includes the loss of life and many injuries, and personally witnessing current road conditions and the driving habits within the Village. Having seen the successes of other area roundabout projects including several in the City of Blue Ash (my prior employer), I believe the same successes could be achieved in the Village of New Richmond.

Respectfully,

Scott

Scott D. Noel

Chief of Police

Village of New Richmond

Light Ashburn Building

102 Willow Street

New Richmond, Ohio 45157

513-553-8712

snoel@newrichmond.org

From: Douglass McDonald <doug@ngogro.com>
Sent: Tuesday, September 9, 2025 11:57 AM
To: Scott.Brown@dot.ohio.gov; Anthony.Pankala@dot.ohio.gov
Cc: Kathryn Gail Bailey <kbailey@newrichmond.org>; Carolyn Duffy <143engineers@gmail.com>; Larry Prues <lprues@newrichmond.org>; Glenn Ewing <gewing@newrichmond.org>
Subject: Public Comment – US 52 Roundabouts Project - New Richmond

Dear Mr. Brown and Mr. Pankala,
I have lived in the Ohio River region for the past 25 years, while also spending 20 years prior to that in Hamilton County, Indiana. As a Noblesville City Council member for 15 years, I had the privilege of witnessing the remarkable growth of Carmel and Noblesville during my tenure and after I left. These communities were among the first in the nation to embrace roundabouts as an alternative to traditional traffic signals.

The transition was not without humorous conversations and even some ill-informed political pushback at the time, but as a public policy matter—focused on cost, efficiency, and safety—it has been a remarkable success. Carmel alone has now replaced nearly all of its traffic lights with roundabouts, installing more than 120 since 1996. The results are clear: a 40% reduction in all accidents and a 90% reduction in fatal accidents. Each roundabout saves approximately $180,000 in long-term maintenance and conserves 24,000 gallons of fuel per year. These are real, measurable benefits.

Driving US 52 often between Cincinnati and Ripley, I know that the greatest risks along the corridor occur at intersections where drivers attempt to dash across a divided highway and fail to see oncoming traffic. Roundabouts are a proven solution that eliminates much of this danger. In Carmel, the roundabouts have also become part of the community's identity. Sculptures and public art in their centers tell the history of the city and create a sense of place. For New Richmond, a roundabout could do the same—improving safety while also offering an opportunity to slow traffic, encourage people to stop, and discover this remarkable riverfront village.

For all these reasons—public safety, sound economics, reduced long-term costs, environmental benefits, and community development—I strongly support the inclusion of roundabouts in the ODOT design for US 52 through New Richmond.

Thank you for your consideration of this important project and for inviting public input.

Sincerely,
Douglass McDonald
Ripley, Ohio

Douglass W. McDonald
Founder | NGOgro, LLC
"Growing Non-Governmental Organizations to change the world."
Email: Doug@NGOgro.com
Phone: (513) 708-2000
Website: NGOgro.com

Carmel, Indiana has replaced nearly all of its traffic lights with roundabouts – over 120 since 1996 – resulting in an estimated 40% reduction in all accidents and 90% reduction in fatal accidents. Each roundabout saves about $180,000 in long-term maintenance, 24,000 gallons of fuel per year, and helps reduce emissions.



From: Kelley Snider
To: scott.brown@dot.ohio.gov; anthony.pankala@dot.ohio.gov; 143engineers@gmail.com
Subject: 52 Project in New Richmond Ohio
Date: Thursday, July 31, 2025 3:00:49 PM

Some people who received this message don't often get email from kelleysnider59@gmail.com. Learn why this is important

To whom it may concern.

I am all in favor of the 52 Roundabout Project.

There are many reasons. Speed, crashes/fatalties just to name a few.

Cannot wait til they get here.

Jacqueline Snider
980 Old US 52

CAUTION: This is an external email and may not be safe. If the email looks suspicious, please do not click links or open attachments and forward the email to csc@ohio.gov or click the Phish Alert Button if available.

From:	Jennifer Conroy
To:	scott.brown@dot.ohio.gov; anthony.pankala@dot.ohio.gov; 143engineers@gmail.com
Cc:	Kathy Bailey (kbailey@newrichmond.org)
Subject:	US 52 Roundabout project 2026
Date:	Monday, September 8, 2025 1:33:21 PM

I would like to express my support for the CLE-US52-4.67 New Richmond roundabout and shared use path project to provide a safer crossing at this location, reduce the travel speed in the Village along US 52 to 35 mph, and reconnect the two sides of the Village that US 52 bisects. I live in Dublin, Ohio and we just opened our 30th roundabout – I am a fan! Traffic flow is so much better than signaled intersections. And I know the data supports a drastic reduction in fatal crashes.

Jennifer Conroy, PE, CPESC
Project Manager

Burgess & Niple, Inc.
614.459.7272 x1470
330 Rush Alley | Suite 700
Columbus, OH 43215
burgessniple.com

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To Whom It May Concern, 08/27/25

I purchased my home at 807 Front Street in 2016 after having lived in neighboring Anderson Township my entire life. I was looking forward to the smaller community with walkability to a post office, bank, library, pharmacy, and dining.

I quickly learned that walking to the library, grocery store, and pharmacy was not an option. The intersection of US 52 and Cobra Rd is not safe for vehicles, much less pedestrians. I immediately started picking 'strangers' up in my car when I saw they were headed to the intersection on foot. That is something I would never have considered previously but these are often older residents trying to get their groceries, or younger adults walking to work.

While there are 2 lanes approaching US 52 from both Cobra Rd and Old 52 (the busiest intersection in the village) *there are no painted lane lines, no directional arrows painted on the road, and no directional arrow signs hanging with the stop lights*. This means that cross traffic has no indication of whether they are in a lane that is meant to go straight, or turn left, or turn right. EACH and EVERY time the light cycles the cross-traffic plays 'dodge em' trying to navigate the intersection. This is the same situation at each traffic light through the village – Cobra, Sycamore, and Augusta. Walnut doesn't have a traffic light at all. Crosswalks don't exist! Throwing a pedestrian into those conditions ***is not acceptable***.

Please ensure the New Richmond project continues to move forward. It is 2025 and our village has been navigating a situation that should have been considered obsolete and unsafe from its inception.

Thank you very much for your consideration.

Respectfully,

Jenny Bramlage

To whom it may concern, 08/25/2025

I am writing today to express my strong support for the proposed roundabouts along US Route 52 in the Village of New Richmond, OH.

In my travels through other municipalities across the country, I have seen firsthand how roundabouts provide an effective solution for both traffic flow and safety. They naturally calm traffic without creating unnecessary congestion, allowing vehicles to move efficiently while significantly reducing the likelihood of serious accidents.

I believe that implementing roundabouts in New Richmond will not only improve roadway safety and efficiency for drivers but will also enhance the overall livability of our community. This is a forward-looking step that reflects proven traffic management practices used successfully nationwide.

From the plans shared in recent meetings, I am also encouraged to see the inclusion of a dedicated bike and walking trail—something our community desperately needs. This addition will provide a safe and accessible option for pedestrians, runners, and cyclists, while also supporting the Ohio River Way initiative to expand recreational amenities along the river.

As a runner myself, I have often used the current “bike trail” along US 52, which is essentially part of the roadway. Too many times, I have experienced or witnessed near accidents, whether involving cars swerving near pedestrians or vehicles narrowly avoiding one another. A clear separation between traffic lanes and pedestrian/bike lanes would make an immediate and lasting impact on safety for everyone who uses the corridor.

Beyond safety, this project represents a much-needed investment in the revitalization of New Richmond. Our town is at a crossroads, and initiatives like this can breathe new life into the community—attracting residents, visitors, and businesses while fostering pride and growth for the future.

Thank you for your consideration of this important project. I strongly encourage you to move forward with the installation of roundabouts along US Route 52, for the benefit of residents, commuters, and visitors alike.

Sincerely,

Katie Stewart
1421 Maple Ridge
New Richmond, OH 45157
859-663-1945

To Whom It May Concern, Aug 18, 2025

I am writing to express my strong support for the proposed US Highway 52 Roundabouts project in the Village of New Richmond. This initiative represents a critical step forward in improving the safety, accessibility, and overall quality of life for our community.

As residents and regular users of US 52, we have personally witnessed—and narrowly avoided—numerous dangerous incidents that underscore the urgent need for change. Vehicles frequently run red lights at intersections throughout New Richmond, resulting in near misses that could have easily been fatal or caused serious injuries. One particularly alarming experience involved a vehicle swerving to avoid rear-ending another, only to lose control and veer across the intersection into oncoming traffic. These are not isolated events—they are recurring threats to everyone who travels this corridor.

Beyond vehicle safety, US 52 poses significant risks to pedestrians and cyclists. Every day, individuals attempt to cross its four lanes, often without safe infrastructure to support them. The current design is simply not pedestrian-friendly, and this lack of accessibility puts lives at risk. The roundabouts and associated improvements proposed for US 52 will directly address these issues. By calming traffic, reducing high-speed collisions, and creating safer crossing points, the project will make the highway more navigable for all users—drivers, cyclists, and pedestrians alike. Moreover, the benefits extend beyond safety. The project promises to enhance the social and economic vitality of New Richmond. Safer roads encourage foot traffic and local commerce, while improved infrastructure attracts investment and fosters community pride. These changes will help our village thrive both socially and economically.

We are excited about the positive impact this project will bring and deeply appreciate your support in making it a reality. Thank you for prioritizing the safety and well-being of our community.

Sincerely,
Kerri Brothers
Senior Information Systems Project Manager
Village of New Richmond Resident

From:	Larry Prues
To:	Anthony; Scott Brown
Cc:	Kathryn Gail Bailey; c Duffy
Subject:	State Route 52 Roundabouts
Date:	Tuesday, October 7, 2025 12:18:01 PM
Attachments:	Outlook-flf0bsxg.png

Dear Mr. Brown and Mr. Pankala,

I live in the Village of New Richmond and have witnessed many serious accidents on State Route 52 at the traffic light intersections, I believe there is ample empirical evidence to justify the replacement of the traffic lights with roundabouts at these intersections. In addition, the village has been divided by this four-lane highway and the roundabouts by adding the bike trail will go a long way towards bringing the village back together again.

I strongly support the inclusion of roundabouts in the ODOT design for US 52 through New Richmond.

Thank you.

Sincerely,

Lawrence Prues

Vice-Mayor
Village of New Richmond
lprues@newrichmond.org
513-379-5556
newrichmond.org

From:	Mike Snider
To:	scott.brown@dot.ohio.gov
Cc:	anthony.pankala@dot.ohio.gov; 143Engineers@gmail.com
Subject:	US 52 Project
Date:	Thursday, July 31, 2025 2:41:10 PM

Some people who received this message don't often get email from mikesnider129@gmail.com. Learn why this is important

I am in favor of the US 52 Project.

#1. I've been through a bunch of roundabouts and since they have been in existence I have never heard of a single death from an accident I'm them but I can name 3 people I have personally known that have been killed in 3 different interactions in our village and 2 people that have injuries that left them handicapped.

#2. It will slow down speeding in New Richmond.

#3. They can be built in a way to make them pretty and the highway no longer will just be a road it will help make the town pretty.

Thank you,
Mike Snider
980 Old US 52
New Richmond, OH

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Roundabouts on US 52 new Richmond

RV

Rebecca Vaske <rebeccavaske@gmail.com>

To scott.brown@dot.ohio.ggy; anthony.pankala@dot.ohio; 143engineers@gmail.com

3:45 PM

To whom it may concern ;
As a life long resident and also business owner , I am supportive of the project for safety and speed issues. I am hopeful this will bring down the number of fatal accidents on 52 due to speed and people running the traffic lights . Thank you for your time.



Renaissance New Richmond Inc

Po Box 283

New Richmond, Ohio 45157

Date August 13, 2025

To: Ohio Department of Transportation

505 S. State Route 741

Lebanon, OH 45036

RE: CLE US 52 4.67 New Richmond (PID 114042) Project

To Whom it May Concern:

I am a resident of the Village of New Richmond, Ohio. For years our Village has been bisected by US 52, a limited access highway that literally cut our village in half with no consideration for our residents that makes it difficult for pedestrians, bicyclist, and golf carts to cross at the intersections in the Village. Frequently, there are pedestrians that are utilizing the marked bike path on the shoulder to walk along US 52 from their home on one side of US 52 to businesses on the other sides of US 52. These people then need to navigate the intersections where no crossing signal timing, crossing signals, or crossing push buttons exist. The police department facilitates school children walking across US 52 at the Walnut Street intersection at arrival and dismissal times as it is very dangerous to cross without police protection. In addition, the police are utilized to aid in intersection crossings for numerous events held in the Village.

The excessive speed along US 52 above the posted 50 mph makes it difficult for vehicles, pedestrians, bicyclist, and golf carts to cross US 52 at the intersections. I feel a constant sense of nervousness at these intersections as they are currently operating. Cars rush past well above the speed limit, the sound of engines and tires a reminder of how little margin for error there is. If I must walk across the intersection, it is more like a gamble than a guarantee of safety — drivers often do not slow down, and some even barrel through the intersection long after the light has turned red, and these instances go unreported. Each time you try to cross, whether on foot or in a vehicle, you find yourself scanning in all directions, bracing for someone who might ignore the signal or try to beat the light. It does not feel like you have the right-of-way — it feels like you are intruding into a space dominated by speeding vehicles.

I am in favor of the CLE-US52-4.67 New Richmond project as it will replace the signals at these dangerous intersections with a road diet and roundabout. The combination of changes will reduce the travel speed in the

Village along US 52 to 35 mph, thus reconnecting the Village. The roundabouts will provide slower speeds at the intersections and shorter crossing distance for pedestrians, bicyclist, and golf carts alike. A shared use path will provide a separate facility for pedestrians, bicyclist, and golf carts to walk along US 52. New development opportunity will be provided along the shared use path. Severity and number of crashes will be reduced along the corridor.

This project has been needed in New Richmond for over 50+ years. I am looking forward to the traffic calming at the US 52 intersections and along US 52. Please move this project forward!

I remember well when US 52 was developed into a limited access highway. Up until that time there had never been a traffic fatality in our village. Since then, we have had at least 10 deaths and scores of injuries occur. Traffic deaths include two of my favorite school teachers and my youngest sister and injuries to by youngest brothers and to my mother in just one of the accidents.

Sincerely yours

Robert G. Lees

President

Renaissance New Richmond Inc
PO Box 283
New Richmond, Oh 45157





Late News

Clermont records 2 traffic deaths

Car strikes

My youngest sister Patty who I mentioned in my US 52 safety support letter is pictured between brothers Chuck and Joe. Today, August 13, is her birthday.

Ohio Department of Transportation

505 S. State Route 741

Lebanon, OH 45036

RE: CLE US 52 4.67 New Richmond (PIO 114042) Project

To Whom it May Concern:

My name is Tim Feldkamp Fire Chief of the New Richmond Fire & EMS and a resident of the Village of New Richmond, Ohio. For years our Village has been bisected by US 52, a limited access highway that makes it difficult for pedestrians, bicyclist, and golf carts to cross at the intersections in the Village. Frequently, there are pedestrians that are utilizing the marked bike path on the shoulder to walk along US 52 from their home on one side of US 52 to businesses on the other sides of US 52. These people then need to navigate the intersections where no crossing signal timing, crossing signals, or crossing push buttons exist. The police department facilitates school children walking across US 52 at the Walnut Street intersection at arrival and dismissal times as it is very dangerous to cross without police protection. In addition, the police and firefighters are utilized to aid in intersection crossings for numerous events held in the Village.

In the 30 years with the New Richmond Fire & EMS I have seen numerous accidents in and near these intersections, some severe and some minor. I have seen lacerations, broken bones, internal injuries, head injuries and fatalities just to name a few. Every accident that has happened in these intersections is an unnecessary life-changing event for the injured, for the families of the injured, the families that have lost loved ones and for the first responders that had to deal with it.

I am in favor of the CLE-US52-4.67 New Richmond project as it will replace the signals at these dangerous intersections with a road diet and roundabout. The combination of changes will reduce the travel speed in the Village along US 52 to 35 mph, thus reconnecting the Village. The roundabouts will provide slower speeds at the intersections and shorter crossing distance for pedestrians, bicyclists, and carts alike. A shared use path will provide a separate facility for pedestrians, bicyclists, and golf carts to walk along US 52. New development opportunities will be provided along the shared use path. Severity and number of crashes will be reduced along the corridor.

This project has been needed in New Richmond for over 50+ years. I am looking forward to the traffic calming at the US 52 intersections and along US 52. Please move this project forward!

Thank you,

Tim Feldkamp

Scanned with CamScanner

143engineers@gmail.com

From: gjf357@zoomtown.com
Sent: Saturday, August 30, 2025 10:54 AM
To: Scott brown; Anthony Pankala; 143engineers@gmail.com
Subject: New Richmond roundabouts

Gentlemen,
I am writing in opposition to the proposed roundabouts for US 52, in New Richmond, Ohio, Clermont County. As a nearly lifelong resident of the area, I first see no need for this expensive project. I drive the stretch of highway daily. When I see the volume of traffic and think what it will look like when reduced to one lane in each direction, I can see serious traffic backups on an ongoing basis. Think of what happens at construction sites when a lane is blocked. Add reduction in speed to 35 and the problem is only compounded. Being a US highway with a great deal of commercial vehicles
(tractor/trailers) now sharing just one lane in each direction, I see potential serious consequences. If the issue is making turns at the intersections within the village, I have a simple much less expensive remedy. There are already turn lanes in place at each intersection. All but one of the intersections have traffic lights. You can simply rework the traffic lights to include turn signals for the current turn lanes. Since turn lanes are already in place, the cost for this verse's roundabouts would be a fraction of taxpayer's money. The savings could be used to make repairs to US 52 that are badly needed. I would gladly make myself available for discussion if requested.
Regards,

Greg Feldkamp
1208 Bethel New Richmond Road
New Richmond, Ohio 45157
513-335-7886