**WAR SR 48 24.63**

**PID 120803**

**Programmatic Scope Narrative**

**Project Description:**

Construct a single lane modern roundabout at the intersection of SR-48 and E Lytle Five Points Rd in Warren County.

Upcoming work planned near this project includes:

1. There are no other planned ODOT projects within the 6-year capital workplan at this location at this time.

For more information on planned projects in the area, please visit [TIMS](https://gis.dot.state.oh.us/tims) or District 8’s MYWP site at <http://www.dot.state.oh.us/districts/D08/Pages/District-8-Multi-Year-Work-Plan.aspx>.

**Stakeholders:**

Stakeholders identified at the time of project initiation are as follows:

* ODOT District 8 and Central Office (plan review, detour coordination)
* Warren County Engineer’s Office (plan review, detour coordination)
* Clearcreek Township (plan review, detour coordination)
* Utilities within the project limits (plan review)
* Schools (detour notification)
* Emergency responders (detour notification)
* FHWA
* Environmental resource agencies (USACE, EPA, SHPO, USFW)
* Residents & business owners along the corridor (detour notification)

**Discipline specific scope items have been identified below.**

**Roadway:**

* Follow ODOT’s L&D Manuals for geometrics.
* The Intersection Design Vehicle for this project shall be a WB-67. The Intersection Check Vehicle shall be a WisDOT WB-92 traveling through the intersection on SR 48 with no turns to or from E Lytle Five Points Rd.
* The roundabout design should avoid Right-of-Way acquisition from Miami Valley Memory Gardens.
* The central truck apron and outside truck aprons shall be designed to accommodate the Design Check Vehicle.
	+ To accommodate lowboy trailers, the profile grade of the circulatory profile shall be within the range of 0.75% - 1.00%, and cross slopes of truck aprons shall be 1%.
* The design shall accommodate agricultural equipment.
	+ Provide 10’ graded shoulders beyond the back of Type 3 curb on SR 48 and E Lytle Five Points Rd to accommodate large agricultural equipment navigating around vertical elements. Provide a 2’ graded shoulder beyond the back of curb on outside truck aprons.
	+ Large tractors and combines will need to offtrack past the curb lines, thus curbs shall be easily mountable and not cause rubbing on tire sidewalls.
		- Use Type 3 curb rolled curb on the approaches to the roundabout.
		- Use Type 9 curb on the truck aprons.
		- Use a Type 9 style curb on splitter islands. A gutter does not need to be provided unless necessary for drainage.
	+ Offset the spacing of all vertical elements including utility poles, signs, light poles, etc. to avoid pinch points for wide agricultural equipment and oversized loads.
* A pre-stage 1 geometric submission will be required for the chosen alternative to set the roundabout design parameters. This review will be required prior to the designer completing detailed design efforts for the stage 1 submission. The following shall be included in this submission:
	+ Figure 403-2 Roundabout Design Parameters.
	+ Entry Angle.
	+ Fastest Path Analysis.
	+ Roundabout Geometric Layout.
	+ Roundabout Sight Distance.
	+ Turning Templates showing all movements of the Design and Check Vehicles.
	+ Plan view with aerial image and utility pole locations identified.
* Construct curb ramps with detectable warnings on all legs of the intersection. Design to accommodate future crosswalks, but they are not to be striped with this project. See roundabout at Lytle Five Points Rd & Bunnell Hill Rd.
	+ Provide grading behind curb, along the outside of the circulatory roadway for a future sidewalk connection. Culverts and BMP's should also be designed to accommodate future sidewalks. Assume a 5’ buffer and 6’ sidewalk. This area should also be clear of utility poles.

**Aesthetics**

* The ODOT District 8 Roundabout Aesthetic Design Elements guide shall be used to identify baseline treatments for the intersection.
* The ODOT Project Manager shall coordinate with Warren County Engineer’s Office and Clearcreek Township to confirm they support proceeding with the District 8 baseline aesthetics. If the local public agencies choose to construct upgraded central island aesthetics via permit after the project is constructed, then the central island shall be seeded in lieu of the District 8 baseline treatment.
* Detailed information and an example location has been uploaded to the FTP site.

**Traffic Control:**

* Replace existing pavement markings. Use Item 644 - Thermoplastic on asphalt surfaces and Item 646 - Epoxy on concrete surfaces.
* Install RPMs on SR-48. Coordinate with Warren County Engineer’s Office regarding RPM’s on E Lytle Five Points Rd.
* Replace the traffic signal ahead signs with the appropriate intersection warning signs for a roundabout, with advisory speed, per the OMUTCD and ODOT’s TEM.
* Install all new signs per the OMUTCD and ODOT’s TEM.
* Remove the existing traffic signal at the intersection, including the cabinet, any associated wiring, and any associated conduit.
	1. All traffic signal components (including cabinet, controller, radars, etc.) shall be salvaged and returned to ODOT District 8.
* Intersection lighting for the new roundabout will be required per ODOT standards. All light poles shall be offset 10’ from the back of curb on roadway approaches to allow space for agricultural equipment.
* Signs shall be located 10’ from the back of curb on roadway approaches to allow space for agricultural equipment.
* Construct curb ramps with detectable warnings on all legs of the intersection. Design to accommodate future crosswalks, but they are not to be striped with this project. See roundabout at Lytle Five Points Rd & Bunnell Hill Rd.

**Traffic Analysis:**

Not applicable. Traffic analysis was previously completed by ODOT.

**Design Designations:**

The design designations were developed by utilizing ODOT’s Traffic Forecast Management System.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LOCATION | SR-48SLM: 23.91-24.63 | SR-48SLM: 24.63-25.54 | Lytle Five Points Rd west of SR-48 | Lytle Five Points Rd east of SR-48 |
| Functional Classification | 03 Principal Arterial (Urban) | 03 Principal Arterial (Urban) | 05 Major Collector (Urban) | 07 Local Road (Urban) |
| OPENING YEAR AADT (2028) | 10,500 | 11,500 | 1,800 | 950 |
| DESIGN YEAR AADT (2048) | 11,500 | 12,000 | 1,900 | 1,000 |
| DESIGN HOURLY VOLUME (2048) | 1,400 | 1,400 | 200 | 100 |
| DIRECTIONAL DISTRIBUTION | 0.53 | 0.51 | 0.51 | 0.52 |
| TRUCKS (24 HOUR B&C) | 2% | 2% | 3% | 5% |
| TRUCKS (DESIGN HOUR) | 1% | 1% | 2% | 2% |
| NHS PROJECT | YES | YES | No | No |

**Survey:**

* ODOT will complete all necessary survey for the project and provide it to the consultant upon authorization to proceed.

**Railroads:**

Not applicable. There are no railroads within the project limits.

**Maintenance of Traffic:**

Maintain traffic as follows:

* MOT scheme will depend on the final location of the roundabout. If it is shifted North-West, it may be plausible to begin work off-line while maintaining traffic.
* At some point, a full closure of both SR-48 and E Lytle Five Points Rd will likely be needed.
	+ Coordinate with ODOT, WCEO and Clearcreek Township to develop an official detour route.
	+ Provide a detour map for each road being closed.
	+ Include a window contract to require the closure during the Schools summer break. The closure duration shall not exceed 60 days.

**Geotechnical:**

* Follow ODOT’s Specifications for Geotechnical Explorations (SGE) Manual.
* Geotechnical borings will be required for design of this project.

**Drainage:**

* There are 2 existing culverts in ODOT’s Asset Database near the project limits. Impacts are not expected.
* CFN 1856045: SR 48
* CFN 1856044: SR 48
* There are culverts at the intersection not in ODOT’s Asset Database. Full replacements are assumed for these pipes.
* There is a culvert along SR-48 south of the intersection with a sink hole. Further investigation is ongoing if any repair needs to be included in this project.
* If project earth disturbed area exceeds 1 acre, then post construction BMPs will be required. Design for BMPs early as they can impact the project right of way needs.
	+ Attempt to utilize Vegetated BMP in the Northeast quadrant since we will have ROW and the roundabout will likely shift the roadway away from this area. ODOT preference is to not have manufactured systems.

**Structures:**

There is 1 existing structure on E Lytle Five Points Rd, approximately 1,000 ft west of SR-48. The bridge is not anticipated to be impacted by construction of a roundabout.

**Environmental:**

The environmental document for this project is to be completed by the consultant team.

* This project will be a C2 Level CE document.
* ODOT will complete the Section 106-Cultural Resources scoping request form.
* See RMR, PI and all other Environmental requirements below.



**Pavements:**

* **ODOT will develop the pavement composition for this project.**

**Public Involvement:**

* The consultant team will develop a static, virtual open house meeting on a Public Input website to inform the public about the project. The website should focus on the project history, purpose and need, crash history, impacts, and general roundabout information. There will not be a formal public involvement meeting, so a newspaper advertisement will not be needed. The Public Input website should be active after the stage 1 plan review is complete.
* The consultant team shall develop a 1-page plan view graphic to represent the project for use on the website. This graphic shall be an aerial image with the roundabout design shaded in, approximate construction limits, proposed R/W limits, street names, addresses of homes, north arrow, scale, etc.
* The consultant team will be required to send property owner notification letters. ODOT will send project information letters to adjacent property owners and project stakeholders.
* Right of entry notification letters shall be sent by the consultant team prior to beginning survey work for the project. These letters should be sent to only adjacent property owners.
* Project information letters shall be sent by ODOT after the stage 1 plan review is complete. These letters should include basic project information, road closure information, detour information, and a link/QR code to the Public Input website. These letters should be sent to adjacent property owners and project stakeholders (local public agencies, schools, police, EMS, and fire per NEPA and ODOT guidelines).
* Coordinate draft PI materials with ODOT District 8 staff.

**Real Estate:**

* Consultant team to develop right of way plan sheets.
* At this time, it is expected that 3 parcels could be impacted.
* The roundabout design should avoid Right-of-Way acquisition from Miami Valley Memory Gardens.

**Utilities:**

* There are multiple overhead utilities within the project limits which may be impacted by the project.
* The layout of the roundabout shall be placed to limit impacts to the overhead utility lines on SR 48.
* Given the MOT closure duration of 60 days, it will be imperative to have all utilities relocated prior to the beginning of the closure to ensure the roundabout can be constructed on schedule.
* All utility poles on approaches shall be offset a minimum of 10’ behind curb to allow space for agricultural equipment to pass through the intersection.

Consultant to try to avoid utility conflicts throughout design while holding to the scope of work.  If utility conflicts cannot be avoided, they should be minimized.  Consultant to provide a copy of the OUPS ticket information to ODOT PM (if applicable).  Up to date utility contacts shall be used at each plan submission.  Utility contact information can be requested by consultant from ODOT PM.  If OUPS and OGPUPS ticket are more than two (2) years old, a design non-marking ticket shall be requested to obtain most up to date Utility Members List.  The ticket does not need to be submitted to obtain the Utility Members List.

Consultant to provide a utility set of plans with the utility lines shown in color using the most recent version of ODOTcadd\_UTPen.tbl at each plan submission.  This file is found in the standard ODOTcadd executable file that can be downloaded from the [CADD services webpage](https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.dot.state.oh.us%2FDivisions%2FEngineering%2FCaddMapping%2FCADD_Services%2FStandards%2FPages%2FFiles.aspx&data=04%7C01%7CAlexander.Genbauffe%40dot.ohio.gov%7C0187db7dd94e4b4e741008d9453809e0%7C50f8fcc494d84f0784eb36ed57c7c8a2%7C0%7C0%7C637616929883462410%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=HeMwCOUx5Xtx%2F6ryT6b1GNCaL7yD2rarhfSMPst%2Ff%2Bg%3D&reserved=0).

Consultant to prepare a summary of potential utility conflicts at each plan submission. Summary to be provided to Utility Companies at each plan submission. Summary to include, but not limited to station and offset of conflict, type of conflict (direct, decreased cover, proximity, etc.), utility owner (if known) and utility type.

Consultant to compile Utility Company responses and forward to the ODOT PM. Final compilation of utility correspondence is due 35 days after plan submission to utilities.  A “no response” from a utility on a plan submission review cannot be considered as “no comment”, “no conflicts” and/or “a confirmation of the consultant’s findings” from the utility.  A written response (email is sufficient) must be received from the utility verifying that they have no comments, no conflicts and/or they agree with the conflicts identified by the consultant.

Consultant to review the Utility Company responses and evaluate. The evaluation of the responses shall include validating that a conflict does exist or that a utility may remain in place. If a conflict does exist, consultant should provide an evaluation of the feasibility of potential resolutions.  A disposition of utility status (i.e. utility to stay in place, utility facility relocation plan in writing or plan format) is required at the Stage 3 submission.  This disposition shall be included to the utilities with the Stage 3 plan submission.  This disposition shall be formulated based on utility responses from previous plan submissions.

**Project Management:**

The project will require submissions for preliminary R/W plans, compliance R/W plans, pre-stage 1 geometrics, stage 1 plans, stage 2 plans, stage 3 plans, and final tracings.

The programmatic scope narrative, project initiation package, and other relevant project information has been uploaded to the project FTP site:

[ftp.dot.state.oh.us - /pub/Districts/D08/PID 120803/](https://ftp.dot.state.oh.us/pub/Districts/D08/PID%20120803/)

**Funding:**

This project will utilize 100% federal safety funds (4HJ7).

There is 1 plan split for this project: 01/SAE/21.

This project is funded in FY2028, but is FY2027 reservoir project.

**Schedule:**

