

# HAMILTON COUNTY ENGINEER'S

## SCOPE OF SERVICE

### 1. PROJECT IDENTIFICATION:

Road Name: Rybolt Road and Wesselman Road

Road No: 148 & 184

Project No. 509624

### 2. PROJECT INFORMATION:

Limits: Intersection improvement.

Length: See additional information sheet.

### 3. AGREEMENT BETWEEN CONSULTANT AND:

Hamilton County

### ADDITIONAL PARTIES INVOLVED IN PROJECT:

None

### 4. METHOD OF FINANCING:

Engineering: Hamilton County road and bridge funds.

Construction: Undetermined at this time.

### 5. WORK PHASES INCLUDED IN AGREEMENT:

**PHASE A Plan Submission:** Line, grade and typical sections on Base Sheets to be used in final plans.

Critical cross sections are to be plotted. Potential design problem areas are to be identified.

**PHASE B Plan Submission:** To conform to Phase A recommendations. Final review submission is to include Special General Notes and Specifications and quantities.

### 6. PLAN SCALES:

PLAN: 1" = 20' Min.

PROFILE: Hor. 1" = 20' Min. Vert. 1" = 5' Min.

CROSS SECTIONS: Hor. 1" = 5' Min. Vert. 1" = 5' Min.

**7. JOURNALIZED SPEED LIMIT:**

Rybolt Road – 35 mph; Wesselman Road – 35 mph

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**8. NUMBER OF LANES/ TYPICAL SECTION:**

Number of Lanes:

Left turn lanes are to be added to each leg of the intersection. Pavement to be widened as necessary to also provide through lanes in conformance with County standards.

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Lane Widths:

Unless otherwise directed by the Engineer, left-turn lanes will be a minimum width of eleven (11) feet. The width of the outside, traveled lanes will be determined by the edge treatment recommended by the Consultant. If curbs are not recommended, the traveled lane will be a minimum width of twelve (12) feet and the adjacent, paved berm(s) will be a minimum width of three (3) feet. If a rolled curb and gutter section is recommended, the lane width adjacent to the curb section will be a minimum width of eleven (11) feet. If a vertical curb section is recommended, the lane width adjacent to the curb will be a minimum width of twelve (12) feet. Interior traveled lanes will be a minimum width of twelve (12) feet.

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Pavement Section:

For areas of new roadway pavement and/or widening, the anticipated typical pavement section is eight (8) inches of Bituminous Aggregate Base, one and one-half (1 1/2) inches of Asphalt Concrete (Leveling course) and one and one-half (1 1/2) inches of Asphalt Concrete (Surface course). As part of the Phase A report, the Consultant shall utilize the information obtained from the geotechnical report and the ODOT L&D manual to verify that this typical section is adequate for the soil conditions present.

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Salvage Existing Pavement:     X    

In those areas where the existing pavement is to be salvaged, the Consultant shall recommend the pavement treatment necessary to rehabilitate/improve the existing pavement to a sufficient typical section based upon the pertinent design factors, such as the soil conditions of the area, traffic volumes, etc.

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Curbs: \_\_\_\_\_ Report to Recommend: XX

Type: As part of the Phase A submittal, the Consultant is to make a recommendation to the Engineer regarding curbs, i.e. whether the curbs are desired or may be necessitated by the detention requirements. If curbs are recommended, the Consultant shall also recommend the type of curb, i.e. vertical, curb & gutter, etc.

Shoulders/Berms: \_\_\_\_\_ Report to Recommend: \_\_\_\_\_

Type: \_\_\_\_\_

Safety Grading Criteria: \_\_\_\_\_ Partial: \_\_\_\_\_

Guardrail: \_\_\_\_\_ Type: \_\_\_\_\_

Median: \_\_\_\_\_

Clear Zone Grading: \_\_\_\_\_

Fencing: \_\_\_\_\_

Lighting: \_\_\_\_\_

**9. ALIGNMENT:**

Existing alignments are to be basically followed. Adjustments to the alignments may be necessitated by the proper alignment of the lanes through the intersection.

**10. PROFILE:**

Existing profile is to be followed as much as possible. Profile adjustments will be necessary to the north leg of Rybolt Road in order to achieve adequate sight distance to the intersection Other adjustments in profiles may be required to establish/maintain drainage patterns.

**11. SIGNAGE:**

Phase A: \_\_\_\_\_

Phase B: X



**15. DRAINAGE:**

Drainage Criteria: State \_\_\_\_\_ County  X  Public Works  X   
Other \_\_\_\_\_

Phase A Preliminary Plan:  X

Existing: Surface  X  Closed \_\_\_\_\_

Proposed: Surface  X  Closed  X

Special Flood Hazard Area (SFHA):  X

Storm Water Pollution Prevention Plan: \_\_\_\_\_

Flood Plain Study Required: \_\_\_\_\_

Channel Change Study Required: \_\_\_\_\_

**16. BRIDGE CROSSINGS:**

Number of Bridges:  One – south leg of Rybolt Road. See additional information sheet.

Cross Roads: \_\_\_\_\_

Streams: \_\_\_\_\_

Supplemental Site Plan for Streams: \_\_\_\_\_

Culverts: \_\_\_\_\_

Alternates Required: \_\_\_\_\_

Railroads: \_\_\_\_\_

Railroad Location Plan: \_\_\_\_\_

Railroad Site Plan: \_\_\_\_\_

Pedestrian: \_\_\_\_\_

Mass Transit: \_\_\_\_\_

Other: \_\_\_\_\_

**17. MISCELLANEOUS DESIGN CONSIDERATIONS:**

Sidewalks: \_\_\_\_\_

Bikeways: \_\_\_\_\_

Railroads: \_\_\_\_\_

Mass Transit: \_\_\_\_\_

Service Roads: \_\_\_\_\_

\_\_\_\_\_

**18. RETAINING WALLS:**

Number of Retaining Walls: Retaining walls will probably be required in the northwest and northeast quadrants of the intersection. Consultant to determine the necessity and the locations of the walls.

Type(s) of Retaining Walls: Consultant to recommend.

Phase A: \_\_\_\_\_ Wall Justification: \_\_\_\_\_

Phase B: \_\_\_\_\_

Any wall over three (3) feet in height, as measured from the top of the footer to the top of the wall, **MUST** be engineered and a wall profile, indicating the height of the wall, and other pertinent wall details **MUST** be included in the plans. The plan view(s) or a detail for the wall **MUST** indicate the length of any tie-back systems that are required for the construction of the wall. **ALL** pre-manufactured walls, i.e. Keystone walls, **MUST** be designed in strict accordance with the Manufacturer's requirements.

**19. MAINTENANCE OF TRAFFIC:**

Maintenance of Pedestrian Traffic: \_\_\_\_\_

Maintenance of Railroad Traffic: \_\_\_\_\_

Maintenance of Vehicular Traffic: X

Temporary Road(s): \_\_\_\_\_ Phase A to Recommend: \_\_\_\_\_

Temporary Road Plans & Notes by: County \_\_\_\_\_ Consultant \_\_\_\_\_

Detour Plan Prepared by: County \_\_\_\_\_ Consultant \_\_\_\_\_

At this time, it is presumed that construction is to be completed under traffic. To the satisfaction of and subject to the Engineer's review and approval, a tentative outline for the sequence of construction, a maintenance of traffic plan and/or maintenance of traffic notes in sufficient detail for the proper control of traffic through the project, especially involving ingress to and egress from the abutting properties within the project area shall be prepared.

As may be applicable during the preparation of the plans, the Consultant shall work with the Engineer to determine if alternative methods of handling traffic would be warranted and desirable during the construction of the project. These measures may include, but not be limited to, the detouring of all through traffic while maintaining local traffic or the maintaining of through traffic on a one-way only basis. If the Engineer authorizes other methods, the Consultant will work with the Engineer to determine if special restrictions are to be enforced during the implementation of the alternate measure(s), i.e. a total time duration, a daily time/hour restriction, etc. The Consultant will also work with the Engineer's Traffic Department to determine the detour route and prepare the necessary detour plan(s). As necessary for the alternative measures, the Consultant is to prepare a tentative outline for the sequence of construction, a maintenance of traffic plan and/or maintenance of traffic notes in sufficient detail for the proper control of traffic through the project, especially involving ingress to and egress from the abutting properties within the project area.

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This item of work shall also include the preparation of any necessary plans that indicate temporary work zone pavement markings and/or signs that are to be included in the project, especially where the number of traveled lanes and/or the width of traveled pavement are to be decreased during construction.

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All items of work relating to the maintenance of traffic are to be submitted with the final plan review submission.

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**20. UTILITIES AND OTHER AGENCIES:**

|              |        |          |        |
|--------------|--------|----------|--------|
| Water        | ( XX ) | Sanitary | ( XX ) |
| Electric     | ( XX ) | Gas      | ( XX ) |
| Telephone    | ( XX ) | Cable TV | ( XX ) |
| Public Works | ( XX ) | ODOT     | ( )    |

Others: \_\_\_\_\_

**ALL** utility companies and other agencies, including any that may have facilities within the project limits and **ARE NOT** listed above, shall be contacted in writing. **ALL** existing facilities and utilities, including house connections, shall be indicated on the plans as required by Section 153.64 O.R.C. (H.B.538).

**ALL** utilities and other agencies shall be furnished with the necessary copy/copies of the preliminary plans so that utility or agency may indicate and/or verify the location of any facility.

**ALL** utilities and other agencies shall be also be furnished with a copy of the final, detailed plans for final review and approval as necessary.

A copy of **ALL** transmittal letters and a copy of **ALL** responses shall be submitted to the Engineer.

**21. ESTIMATED QUANTITIES:**

Phase A: \_\_\_\_\_

Phase B: \_\_\_\_\_ X \_\_\_\_\_

Quantity Splits: \_\_\_\_\_

**22. CONSTRUCTION COST ESTIMATE:**

Submit with Letter of Interest: \_\_\_\_\_ X \_\_\_\_\_

Phase A: \_\_\_\_\_

Phase B: \_\_\_\_\_



**25. TRAFFIC DATA:**

State \_\_\_\_\_ County  X  Consultant  X

The County will supply information on existing counts if this information is currently on file. The Consultant shall determine if adjustments to these counts are warranted or if additional counts are required. The Consultant will be responsible for the adjustments or for the additional counts. The Traffic Department must approve all traffic data prior to use in design.

**26. GEOTECHNICAL/SUBSURFACE INVESTIGATION:**

State \_\_\_\_\_ County  X  Consultant \_\_\_\_\_  
Other \_\_\_\_\_

Work to be completed as needed. The Consultant is to determine, in conjunction with the Engineer, the amount and type of work to be performed. The Consultant shall work with the geotechnical firm to ensure that the geotechnical information necessary for the design of the various components of the improvements, i.e. pavement section, retaining walls, is obtained. This information may include the determination of the CBR, the Attenburg limits and the moisture content of the soil. The Consultant will be responsible for establishing the required field control and for field locating the boring locations.

**27. PRIOR STUDIES:**

None.

**28. PUBLIC HEARINGS/INFORMATIONAL MEETINGS:**

Public information meeting(s) may be scheduled.

Consultant's Responsibility: Prepare the necessary exhibits and attend the meeting(s) if scheduled. Required Exhibits will show the proposed location of improvements, the proposed profile and critical and/or typical cross-sections and the preliminary Right-of-way.

## **ADDITIONAL INFORMATION**

### **RYBOLT ROAD AND WESSELMAN ROAD INTERSECTION**

**509624**

- 1) As noted in the Scope, the existing pavement is to be salvaged to the greatest extent possible. As may be necessary, the Consultant shall determine and field mark the locations where pavement cores are to be taken. The County will arrange for a testing company to take the pavement cores.
- 2) In those areas where the existing pavement is to be salvaged, the Consultant shall recommend the pavement treatment necessary to rehabilitate/improve the existing pavement to a sufficient typical section based upon the pertinent design factors, such as the soil conditions of the area, traffic volumes, etc.
- 3) As necessary, the Consultant shall work with the geotechnical firm to ensure that the soil data that is necessary for the design of the various components of the improvements, i.e. pavement section, retaining walls, is obtained. This information may include the determination of the CBR, the Attenburg limits and the moisture content of the soil.
- 4) The maintenance of traffic will be extremely problematic, especially during the construction of any profile changes.

Consultant is to prepare a tentative outline for the sequence of construction, a maintenance of traffic plan and/or maintenance of traffic notes in sufficient detail for the proper control of traffic through the project, especially to the local properties. The Consultant shall also work the Engineer to determine if through traffic is to be detoured during construction. If the Engineer authorizes a detour, the Consultant shall work with the Engineer to determine the time duration of the detour and with the Engineer's Traffic Department to determine the detour route. The necessary items of work are to be submitted with the final review submission.

- 5) Consultant is to determine the length of the improvement on each leg of the intersection based upon design criteria such as the traffic volumes, the signal timing, the required length of the left-turn lanes, etc.
- 6) The deck of the existing bridge located on the south leg of Rybolt Road is to be totally removed. The concrete cantilever abutments and other substructure are to be widened and/or modified as necessary and a new concrete deck and railings are to be constructed.