OHIO PUBLIC WORKS FOR YOU

Public Works Commission

Application for Financial Assistance

IMPORTANT: Please consult "Instructions for Financial Assistance for Capital Infrastructure Projects" for guidance in completion of this form.

Applicant

Applicant: City of Riverside Subdivision Code: 113-67468

District Number: 4 County: Montgomery Date: 08/18/2023

Contact: Kathy Bartlett Phone: (937) 233-1801
(The individual who will be available during business hours and who can best answer or coordinate the response to questions)

Email: kbartlett@riversideoh.gov FAX:

Project

Project Name: Woodman Drive Reconstruction Zip Code: 45431

Subdivision Type	Project Type (Select single largest component by $)	Funding Request Summary (Automatically populates from page 2)	
City	x 1. Road	Total Project Cost:	6,385,179 .00
SFN	2. Bridge/Culvert	1. Grant:	2,100,000 .00
	3. Water Supply	2. Loan:	0 .00
	4. Wastewater	3. Loan Assistance/ Credit Enhancement:	0 .00
	5. Solid Waste		
	6. Stormwater	Funding Requested:	2,100,000 .00

District Recommendation (To be completed by the District Committee)

Funding Type Requested (Select one)

- ☐ State Capital Improvement Program
- ☐ Local Transportation Improvement Program
- ☐ Revolving Loan Program
- ☐ Small Government Program

District SG Priority: _____

SCIP Loan - Rate: ____ % Term: ____ Yrs Amount: _____ .00

RLP Loan - Rate: ____ % Term: ____ Yrs Amount: _____ .00

Grant: Amount: _____ .00

LTIP: Amount: _____ .00

Loan Assistance / Credit Enhancement: Amount: _____ .00

For OPWC Use Only

STATUS

Project Number: _____

Release Date: _____

OPWC Approval: _____

Grant Amount: _____ .00

Loan Amount: _____ .00

Total Funding: _____ .00

Local Participation: _____ %

OPWC Participation: _____ %

Loan Type: ☐ SCIP ☐ RLP

Date Construction End: _____

Date Maturity: _____

Rate: _____ %

Term: _____ Yrs

1.0 Project Financial Information (All Costs Rounded to Nearest Dollar)

1.1 Project Estimated Costs

Engineering Services

Preliminary / Final Design: 0 .00

Construction Administration: 0 .00

Total Engineering Services:	a.)	0 .00	0 %
Right of Way:	b.)	0 .00	
Construction:	c.)	5,804,708 .00	
Permits, Advertising, Legal:	e.)	0 .00	
Construction Contingencies:	f.)	580,471 .00	
Total Estimated Costs:	g.)	6,385,179 .00	

1.2 Project Financial Resources

Local Resources

Local In-Kind or Force Account:	a.)	0 .00	
Local Revenues:	b.)	70,147 .00	
Other Public Revenues:			
Local / ODOT - Let: ODOT-Let	d.)	4,215,032 .00	
ODOT PID: 115003			
OEPA / OWDA:	e.)	0 .00	
CDBG:	f.)	.00	
Other:	g.)	0 .00	
Subtotal Local Resources:	i.)	4,285,179 .00	67.1 %

OPWC Funds (Check all requested and enter Amount)

Grant: 100 % of OPWC Funds	j.)	2,100,000 .00	
Loan: 0 % of OPWC Funds	k.)	0 .00	yrs
Loan Assistance / Credit Enhancement:	l.)	0 .00	
Subtotal OPWC Funds:	m.)	2,100,000 .00	32.9 %
Total Financial Resources:	n.)	6,385,179 .00	100 %

1.3 Availability of Local Funds

Attach a statement signed by the Chief Financial Officer listed in section 5.2 certifying all local resources required for the project will be available on or before the earliest date listed in the Project Schedule section. The OPWC Agreement will not be released until the local resources are certified. Failure to meet local share may result in termination of the project. Applicant needs to provide written confirmation for funds coming from other funding sources.

2.0 Repair / Replacement or New / Expansion

2.1 Total Portion of Project New / Expansion: 0 .00

3.0 Project Schedule

3.1 Engineering / Design / Right of Way	Begin Date:	06/09/2021	End Date:	12/06/2024
3.2 Bid Advertisement and Award	Begin Date:	12/06/2024	End Date:	02/13/2025
3.3 Construction	Begin Date:	04/08/2025	End Date:	08/05/2026

Construction cannot begin prior to release of executed Project Agreement and issuance of Notice to Proceed.

Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by project official of record and approved by the Commission once the Project Agreement has been executed.

4.0 Project Information

If the project is multi-jurisdictional, information must be consolidated in this section.

4.1 Useful Life / Cost Estimate / Age of Infrastructure

Project Useful Life: 26 Years Age: 1975 (Year built or year of last major improvement)

Attach Registered Professional Engineer's statement, with seal or stamp and signature confirming the project's useful life indicated above and detailed cost estimate.

4.2 User Information

Road or Bridge: Current ADT 23226 Year 2021

Water / Wastewater: Based on monthly usage of 4,500 gallons per household; attach current ordinances.

Residential Water Rate	Current $ 0	Number of households served:	
Residential Wastewater Rate	Current $ 0	Number of households served:	

Stormwater: Number of households served:

4.3 Project Description

A: SPECIFIC LOCATION (Supply a written location description that includes the project termini; a map does not replace this requirement.) 2000 character limit.

This project includes the reconstruction of approximately 2200 feet of Woodman Drive from US 35 to Eastman Avenue.

B: IDENTIFY THE PROBLEM (Describe the issue to be addressed) 2000 character limit.

This project is needed because of the deteriorating asphalt driving surface, the lack of proper, adequate stormwater drainage, inadequate pedestrian facilities, out-of-date traffic signals, and excessive accident rate. The intersection has a very high percentage of injury crashes at 56% (above 30% can be considered excessive) and high percentage of left turn crashes at 35% (well above the statewide average of 15% for similar intersections).

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C: PROJECT SCOPE (Describe the work to be completed) 2000 character limit.

Scope of work includes full-depth roadway reconstruction including median reconstruction (concrete and grass), addition of turn lanes, storm sewer improvements (piping, catch basins, and manholes), installation of crosswalks, curb ramps, bike path, and other pedestrian facilities, highway lighting, replacement of traffic signals, and full-depth replacement of the roadway including aggregate base and asphalt.

D. How do you intend to promote this project? 1000 character limit.

This project would be promoted via the City's website, social media, newsletter, resident/property owner notification letters, and potentially with press releases as construction nears.

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E: Additional Notes From Applicant - 1000 character limit.

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5.0 Project Officials

Changes in Project Officials must be submitted in writing from an officer of record.

5.1 Chief Executive Officer

(Person authorized in legislation to sign project agreements)

Name: Joshua Rauch

Title: City Manager

Address: 5200 Springfield Street, Suite 100

City: Riverside State: OH Zip: 45431

Phone: (937) 233-1801

FAX:

E-Mail: citymanager@riversideoh.gov

5.2 Chief Financial Officer

(Can not also serve as CEO)

Name: Thomas Garrett

Title: Director of Finance

Address: 5200 Springfield Street Suite 100

City: Riverside State: OH Zip: 45431

Phone: 937-233-1801

FAX:

E-Mail: tgarrett@riversideoh.gov

5.3 Project Manager

Name: Kathy Bartlett

Title: Director of Public Services

Address: 5200 Springfield Street, Suite 100

City: Riverside State: OH Zip: 45431

Phone: (937) 233-1801

FAX:

E-Mail: kbartlett@riversideoh.gov

6.0 Attachments / Completeness review

Confirm in the boxes below that each item listed is attached (Check each box)

X A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.

X A certification signed by the applicant's chief financial officer stating the amount of all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.

X A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's seal or stamp and signature.

A cooperative agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.

Farmland Preservation Review - The Governor's Executive Order 98-IIV, "Ohio Farmland Protection Policy" requires the Commission to establish guidelines on how it will take protection of productive agricultural and grazing land into account in its funding decision making process. Please include a Farm Land Preservation statement for projects that have an impact on farmland.

Capital Improvements Report. CIR Required by O.R.C. Chapter 164.06 on standard form.

X Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements which may be required by your local District Public Works Integrating Committee.

7.0 Applicant Certification

The undersigned certifies: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission as identified in the attached legislation; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement for this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding from the project.

Certifying Representative (Printed form, Type or Print Name and Title)

Original Signature / Date Signed

RECORD OF RESOLUTIONS

Resolution No. 23-R-2863 *Passed:* AUG 17 2023

Riverside, OH

A RESOLUTION AUTHORIZING THE CITY MANAGER TO SUBMIT AN APPLICATION TO THE OHIO PUBLIC WORKS COMMISSION FOR A GRANT IN THE AMOUNT OF $2.1 MILLION FOR WOODMAN DRIVE PHASE 1, PID 115003.

WHEREAS, the City of Riverside is eligible for a grant to be administered by the Ohio Public Works Commission in connection with the Woodman Drive Phase 1 (US 35 to Eastman), PID 115003 Project (herein referred as the "Project"); and

WHEREAS, funding assistance for the Project is desirable in that it would address critical roadway and infrastructure failures and serve to improve the health, safety, and wellness of the community.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF RIVERSIDE, STATE OF OHIO:

Section 1: That the City Manager is hereby authorized to sign and submit an application on behalf of the City of Riverside for a 33% grant in the amount of $2.1 million to the Ohio Public Works Commission in support of the total cost of $6,385,179 or 99% of the cost for the Woodman Drive Phase 1 PID 115003 Project.

Section 2: The City Manager and/or Finance Director are hereby authorized to sign agreements and receive funds on behalf of the City in connection with said grant should it be awarded.

Section 3: This Resolution shall take effect and be in force from and after the date of its passage.

PASSED THIS DAY OF AUG 17 2023.

APPROVED:

MAYOR

ATTEST:

CLERK

RECORD OF RESOLUTIONS

Resolution No. 23-R-2863 *Passed:* AUG 17 2023

CERTIFICATE OF THE CLERK

I, Katie Lewallen, Clerk of the City of Riverside, Ohio, do hereby certify that the foregoing Resolution is a true and correct copy of Resolution No. 23-R-2863 passed by the Riverside City Council on AUG 17 2023.

IN TESTIMONY WHEREOF, witness my hand and official seal this day AUG 17 2023.

CLERK

CHIEF FINANCIAL OFFICER'S CERTIFICATION OF LOCAL FUNDS

Date: 8/18/2023

I, **Director of Finance** of the **City of Riverside** hereby certify that **City of Riverside** has the amount of **$70,147.00** in the **General Fund** and that this amount will be used to pay the local share for the **Woodman Drive Reconstruction** when it is required.

Thomas Garrett

Thomas Garrett, Director of Finance

MIAMI VALLEY
Regional Planning Commission

10 North Ludlow St., Suite 700
Dayton, Ohio 45402

t: 937.223.6323
f: 937.223.9750
TTY/TDD: 800.750.0750
www.mvrpc.org

March 7, 2023

Mr. Joshua Rauch
City Manager
City of Riverside
5200 Springfield Street
Suite 100
Riverside, OH 45431

Dear Mr. Rauch;

Congratulations, on March 02, 2023 the MVRPC Board of Directors approved your request for regionally controlled funds as shown below and detailed on the attached project summary sheet(s).

- Woodman Drive Pedestrian Improvements - $ 847,250 CR

Pursuant to the Policies and Procedures for the STP, CMAQ, TA, and CR programs, approved projects must be fully programmed with ODOT and MVRPC within three months of the original approval. **This date must be met in order to maintain funding commitment to your locality.** Please contact your ODOT District office to schedule a meeting to begin this process. At this meeting, a detailed project scope and a tentative project development schedule will be determined with the assistance of both ODOT District and MVRPC staff. Based upon this determination, a final funding year will be recommended for inclusion in the MVRPC Transportation Improvement Program (TIP).

It is important to note that ODOT has implemented a MPO funds management policy which restricts MVRPC's ability to carry over funding for the STP, CMAQ, TA, and CR programs from year to year. As such, when requesting a funding year please know, that it is imperative that your project meets the requested timeframe. MVRPC's ability to fund projects beyond the approved funding year is restricted by the state policy. This requires adherence to the agreed upon schedule to avoid loss of funding for your project.

Also, please, be aware that all cost overruns realized at bid opening will be the sole responsibility of the project sponsor. Once approved, a project's scope cannot be changed without the Board's approval. The amount of funds available for reimbursement for a project will be capped at the approved amount shown in the summary. The matching federal funds will be reimbursed at the percentage shown in the summary.

Air Quality (CMAQ) Discretionary Program. This policy withdraws the CMAQ project selection authority from MPOs such as MVRPC. The authority to select and manage CMAQ projects is now the responsibility of a committee comprised of representatives from Ohio's 8 largest MPOS. The proposed CMAQ projects will be designated as "Candidate" projects by ODOT in Ellis pending approval by the Ohio Statewide Urban CMAQ Committee in December 2023.

All project sponsors must know and implement the U.S. Department of Transportation Standard Title VI Assurances and Nondiscrimination Provisions, which states "No person in the United States shall, on the grounds of race, color, national origin, sex, age, disability, low-income status, or limited English proficiency, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, for which the Recipient receives Federal financial assistance from DOT, including FHWA".

Please note that these federal funds are being awarded by MVRPC as the administrator of the funds for the Federal Highway Administration (FHWA). **As such, it is MVRPC's intention to be fully recognized as the provider of the funds as described above. Please make sure that any announcements, publications, press releases, etc. state that these federal funds are being provided through MVRPC. Also, in an effort to inform the public more about what kinds of services MVRPC provides to our member jurisdictions, we are suggesting that if project sponsors are already intending to provide and install some temporary project signage at the construction site during the duration of the project, that MVRPC's logo be included.**

If you have any questions concerning the attached material, please feel free to call Brad Daniel, 937-223-6323.

Sincerely,

Brian O. Martin

Brian O. Martin, AICP
Executive Director

Cc: Kath Bartlett
Scott Schmid – ODOT District 7

Total CR Funds Approved: $847,250

ODOT PID# _____

MVRPC DB# R22-07

Project Class: CR **Application Year:** 2022 **Project Approved:** Yes

Project Sponsor: City of Riverside **Local Priority:** 1

Project Name: Woodman Drive Pedestrian Improvements

Project Location: Woodman Drive from US 35 to Eastman Road.

Project Description: Pedestrian improvements including installation and replacement of sidewalks, the connection of new sidewalk to Richland Avenue, installation of a new 10' multi-use path connecting Woodman Park Drive to Eastman Avenue, installation of street lighting along the entire corridor, and pedestrian improvements to the intersection of Woodman Drive and Eastman Avenue including a signal upgrade that incorporates pedestrian/ADA facilities.

Funding Requested in Original Applicatation

Phase	Source	Amount	Year	Pro Rata
CE	CR	$77,023	2025	79%
	Local	$20,475	2025	21%
	Phase Total:	**$97,498**		
Con	CR	$770,227	2025	79%
	Local	$204,744	2025	21%
	Phase Total:	**$974,971**		

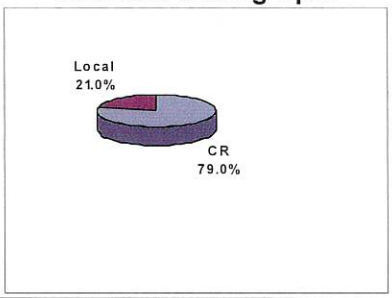
Project Total: $1,072,469

Final Funding Breakdown as Approved

Phase	Source	Amount	Year	Pro Rata
CE	CR	$77,023		79%
	Local	$20,475		21%
	Phase Total:	**$97,498**		
Con	CR	$770,227		79%
	Local	$204,744		21%
	Phase Total:	**$974,971**		

Project Total: $1,072,469

Overall Funding Split



MIAMI VALLEY Regional Planning Commission

Information current as of:
Thursday, March 2, 2023

From: Michael Goettemoeller
To: Mitch Thobe; Kaye Borchers
Subject: FW: Spring 2023 Formal Safety Funding - Woodman Drive/Eastman Avenue Application (PID 115003)
Date: Tuesday, August 8, 2023 7:11:52 AM
Attachments: image001.png

Riverside received partial funding. See below.

Thank you,

Michael Goettemoeller, PE, PTOE
Project Manager for **Choice One Engineering**
937.497.0200 **Office** | 937.251.5573 **Cell**

From: Mary.Hoy@dot.ohio.gov <Mary.Hoy@dot.ohio.gov>
Sent: Monday, August 7, 2023 4:32 PM
To: kbartlett@riversideoh.gov
Cc: Michael Goettemoeller <mkg@choiceoneengineering.com>; Scott.Schmid@dot.ohio.gov; Blake.Simpson@dot.ohio.gov
Subject: Spring 2023 Formal Safety Funding - Woodman Drive/Eastman Avenue Application (PID 115003)

Good Afternoon,

The award notices for the April 2023 Safety Project Applications have been made. As usual, decision making was difficult. ODOT districts and local governments submitted 39 projects worth more than $116 million this application round. These were reviewed and funding decision were made based on a variety of criteria including statewide/local priority, countermeasures identified, and available funding.

I am pleased to inform you that $500,000 has been approved for this project for Construction funding in FY 2025. This funding is capped. The amount awarded is different from what was requested.

The next step will be to get this funding programmed, which needs to occur before the end of August. Please expect to hear from us soon regarding the programming. If you have any questions in the meantime, let us know!

Respectfully,

Mary E. Hoy, P.E.
District Traffic Planning Engineer
ODOT District 7
1001 St. Marys Avenue, Sidney, Ohio 45365
(p) 937.497.6838
transportation.ohio.gov


OHIO DEPARTMENT OF
TRANSPORTATION

MIAMI VALLEY
Regional Planning Commission
10 North Ludlow St., Suite 700
Dayton, Ohio 45402-1855

t: 937.223.6323
f: 937.223.9750
TTY/TDD: 800.750.0750
www.mvrpc.org

March 4, 2021

Mr. C. Mark Carpenter
City Manager
City of Riverside
5200 Springfield Street
Suite 100
Riverside, Ohio 45431

Dear Mr. Carpenter;

Congratulations, on March 04, 2021 the MVRPC Board of Directors approved your request for regionally controlled funds as shown below and detailed on the attached project summary sheet(s).

- Woodman Drive Reconstruction - $2,867,782 STP

Pursuant to the Policies and Procedures for the STP, CMAQ, and TA programs, approved projects must be fully programmed with ODOT and MVRPC within three months of the original approval. **This date must be met in order to maintain funding commitment to your locality.** Please contact your ODOT District office to schedule a meeting to begin this process. At this meeting, a detailed project scope and a tentative project development schedule will be determined with the assistance of both ODOT District and MVRPC staff. Based upon this determination, a final funding year will be recommended for inclusion in the MVRPC Transportation Improvement Program (TIP).

It is important to note that ODOT has implemented a MPO funds management policy which restricts MVRPC's ability to carry over funding for the STP, CMAQ, and TA programs from year to year. As such, when requesting a funding year please know, that it is imperative that your project meets the requested timeframe. MVRPC's ability to fund projects beyond the approved funding year is restricted by the state policy. This requires adherence to the agreed upon schedule to avoid loss of funding for your project.

Also please, be aware that all cost overruns realized at bid opening will be the sole responsibility of the project sponsor. Once approved, a project's scope cannot be changed without the Board's approval. The amount of funds available for reimbursement for a project will be capped at the approved amount shown in the summary. The matching federal funds will be reimbursed at the percentage shown in the summary.

Additionally, ODOT has implemented a policy in regards to the Ohio Congestion Mitigation and Air Quality (CMAQ) Discretionary Program. This policy withdraws the CMAQ project selection authority from MPOs such as MVRPC. The authority to select and manage CMAQ projects is now the responsibility of a committee comprised of representatives from Ohio's 8 largest MPO's. The proposed CMAQ projects will be designated as "Candidate" projects by ODOT in Ellis pending approval by the Ohio Statewide Urban CMAQ Committee in December 2021.

All project sponsors must know and implement the U.S. Department of Transportation Standard Title VI Assurances and Nondiscrimination Provisions, which states "No person in the United States shall, on the grounds of race, color, national origin, sex, age, disability, low-income status, or limited English proficiency, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity, for which the Recipient receives Federal financial assistance from DOT, including FHWA".

Please note that these federal funds are being awarded by MVRPC as the administrator of the funds for the Federal Highway Administration (FHWA). **As such, it is MVRPC's intention to be fully recognized as the provider of the funds as described above. Please make sure that any announcements, publications, press releases, etc. state that these federal funds are being provided through MVRPC. Also, in an effort to inform the public more about what kinds of services MVRPC provides to our member jurisdictions, we are suggesting that if project sponsors are already intending to provide and install some temporary project signage at the construction site during the duration of the project, that MVRPC's logo be included.**

If you have any questions concerning the attached material, please feel free to call Brad Daniel, 937-223-6323.

Sincerely,

Brian O. Martin

Brian O. Martin, AICP
Executive Director

Cc: Kathy Bartlett
Ben Wiltheiss – ODOT District 7

Total STP Funds Approved: $2,867,782

ODOT PID# _____

MVRPC DB# S20-16

Project Class: STP | **Application Year:** 2020 | **Project Approved:** Yes

Project Sponsor: City of Riverside | **Local Priority:** 1

Project Name: Woodman Drive Reconstruction

Project Location: Woodman Drive from approximately 500' north of US 35 to Eastman Road.

Project Description: Roadway full depth reconstruction including storm sewer and aggregate base. The project will also include the installation and replacement of sidewalks and the replacement of traffic signals at the intersection of Woodman Drive and Eastman Road. The southern limit of this project will tie into the existing ODOT project at US 35.

Funding Requested in Original Applicatation

Phase	Source	Amount	Year	Pro Rata
PE	Local	$435,152	2024	100%
Phase Total: $435,152				
R/W	Local	$14,713	2025	100%
Phase Total: $14,713				
CE	Local	$49,872	2026	21%
	STP	$187,612	2026	79%
Phase Total: $237,484				
Con	Local	$712,450	2026	21%
	STP	$2,680,170	2026	79%
Phase Total: $3,392,620				

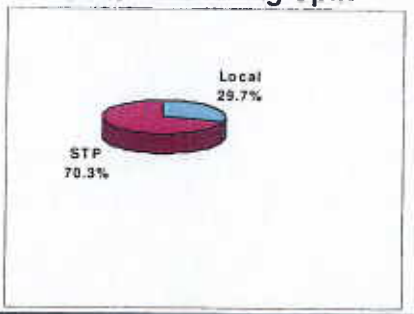
Project Total: $4,079,969

Final Funding Breakdown as Approved

Phase	Source	Amount	Year	Pro Rata
PE	Local	$435,152		100%
Phase Total: $435,152				
R/W	Local	$14,713		100%
Phase Total: $14,713				
CE	Local	$49,872		21%
	STP	$187,612		79%
Phase Total: $237,484				
Con	Local	$712,450		21%
	STP	$2,680,170		79%
Phase Total: $3,392,620				

Project Total: $4,079,969

Overall Funding Split



MIAMI VALLEY Regional Planning Commission

Information current as of: Thursday, March 4, 2021

MOT-WOODMAN DR. RECONSTRUCTION

CITY OF RIVERSIDE

PRELIMINARY CONSTRUCTION ESTIMATE (FOR OPWC)

June 6, 2023

ITEM NO.	DESCRIPTION	UNIT OF MEASURE	APPROX. QTY.	UNIT PRICE	TOTAL
	ROADWAY				
201	CLEARING AND GRUBBING	LUMP	1	$16,200.00	$16,200.00
202	HEADWALL REMOVED	LUMP	1	$2,160.00	$2,160.00
202	PAVEMENT REMOVED	S.Y.	20795	$16.20	$336,879.00
202	WALK REMOVED	S.F.	544	$4.32	$2,350.08
202	CONCRETE MEDIAN REMOVED	S.Y.	216	$27.00	$5,832.00
202	CURB REMOVED	FT.	3120	$6.48	$20,217.60
202	CURB AND GUTTER REMOVED	FT.	45	$32.40	$1,458.00
202	CONCRETE SLOPE PROTECTION REMOVED	S.Y.	32	$37.80	$1,209.60
202	PIPE REMOVED, 24" AND UNDER	FT.	5328	$24.84	$132,347.52
202	PIPE REMOVED, OVER 24"	FT.	16	$64.80	$1,036.80
202	PIPE REMOVED, OVER 24", AS PER PLAN	FT.	8	$1,296.00	$10,368.00
202	GUARDRAIL REMOVED	FT.	2556	$4.32	$11,041.92
202	CATCH BASIN REMOVED	EACH	14	$702.00	$9,828.00
202	REMOVAL MISC.: CONDUIT	FT.	50	$21.60	$1,080.00
202	REMOVAL MISC.: INSPECTION WELL	EACH	2	$540.00	$1,080.00
203	EXCAVATION	C.Y.	12850	$24.84	$319,194.00
203	EMBANKMENT	C.Y.	3980	$34.56	$137,548.80
203	EMBANKMENT, AS PER PLAN	C.Y.	15	$64.80	$972.00
204	SUBGRADE COMPACTION	S.Y.	18322	$2.97	$54,416.34
204	EXCAVATION OF SUBGRADE	C.Y.	4205	$27.00	$113,535.00
204	GRANULAR MATERIAL, TYPE C	C.Y.	4205	$75.60	$317,898.00
204	PROOF ROLLING	HOUR	8	$280.80	$2,246.40
204	GEOGRID	S.Y.	9762	$3.78	$36,900.36
606	GUARDRAIL, TYPE MGS	FT.	1800	$27.00	$48,600.00
606	ANCHOR ASSEMBLY, MGS TYPE E	EACH	3	$3,510.00	$10,530.00
607	ANCHOR ASSEMBLY, MGS TYPE T	EACH	2	$2,700.00	$5,400.00
608	FENCE, MISC.: WOOD FENCE	FT.	556	$118.80	$66,052.80
608	4" CONCRETE WALK, AS PER PLAN	S.F.	2824	$9.72	$27,449.28
608	CURB RAMP, AS PER PLAN	S.F.	1776	$24.84	$44,115.84
	ROADWAY CONSTRUCTION SUBTOTAL				**$1,737,947.34**
	EROSION CONTROL				
601	TIED CONCRETE BLOCK MAT, TYPE 2	S.Y.	44	$108.00	$4,752.00
601	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	C.Y.	34	$189.00	$6,426.00
659	TOPSOIL	C.Y.	1465	$37.80	$55,377.00
659	SEEDING AND MULCHING, CLASS 1	S.Y.	13160	$2.70	$35,532.00
659	REPAIR SEEDING AND MULCHING	S.Y.	660	$2.16	$1,425.60
659	INTER-SEEDING	S.Y.	660	$2.16	$1,425.60
659	COMMERCIAL FERTILIZER	TON	1.8	$1,080.00	$1,944.00
659	LIME	ACRE	2.72	$162.00	$440.64
659	WATER	MGAL	71	$5.40	$383.40
670	SLOPE EROSION PROTECTION	S.Y.	2114	$3.78	$7,990.92
832	STORM WATER POLLUTION PREVENTION PLAN	LUMP	1	$8,100.00	$8,100.00
832	STORM WATER POLLUTION PREVENTION INSPECTIONS	LUMP	1	$12,960.00	$12,960.00
832	STORM WATER POLLUTION PREVENTION SOFTWARE	LUMP	1	$7,020.00	$7,020.00
832	EROSION CONTROL	EACH	50000	$1.08	$54,000.00
	EROSION CONTROL CONSTRUCTION SUBTOTAL				**$197,777.16**
	DRAINAGE				
602	CONCRETE MASONRY	C.Y.	10	$1,836.00	$18,360.00
605	6" SHALLOW PIPE UNDERDRAINS	FT.	2790	$23.76	$66,290.40
605	6" BASE PIPE UNDERDRAINS	FT.	392	$21.60	$8,467.20
611	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	FT.	270	$27.00	$7,290.00
611	12" CONDUIT, TYPE B	FT.	1815	$91.80	$166,617.00
611	12" CONDUIT, TYPE C	FT.	154	$86.40	$13,305.60
611	12" CONDUIT, TYPE D	FT.	174	$86.40	$15,033.60
611	12" CONDUIT, TYPE F	FT.	102	$97.20	$9,914.40
611	15" CONDUIT, TYPE C	FT.	62	$108.00	$6,696.00
611	24" CONDUIT, TYPE C	FT.	36	$216.00	$7,776.00
611	30" CONDUIT, TYPE B	FT.	16	$486.00	$7,776.00
611	PLAN	FT.	8	$2,700.00	$21,600.00
611	CONDUIT, MISC.: TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE	FT.	50	$54.00	$2,700.00
611	CONDUIT, MISC.: TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE	FT.	50	$54.00	$2,700.00
611	CONDUIT, MISC.: TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	FT.	50	$54.00	$2,700.00
611	CATCH BASIN, NO. 3	EACH	1	$5,400.00	$5,400.00
611	CATCH BASIN, NO. 3A	EACH	19	$3,240.00	$61,560.00
611	CATCH BASIN, NO. 6	EACH	1	$2,430.00	$2,430.00
611	CATCH BASIN, NO. 6, AS PER PLAN	EACH	1	$3,240.00	$3,240.00
611	CATCH BASIN, NO. 2-2A	EACH	2	$2,700.00	$5,400.00
611	CATCH BASIN, NO. 2-2B	EACH	2	$2,700.00	$5,400.00
611	CATCH BASIN, NO. 2-4	EACH	1	$4,320.00	$4,320.00
611	MANHOLE, NO. 3	EACH	2	$5,400.00	$10,800.00
611	MANHOLE, NO. 3 WITH 84" BASE I.D. AND 6" WEIR	EACH	1	$9,180.00	$9,180.00
611	INSPECTION WELL	EACH	2	$810.00	$1,620.00
896	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 1	EACH	1	$24,300.00	$24,300.00
	DRAINAGE CONSTRUCTION SUBTOTAL				**$490,876.20**

	PAVEMENT				
252	FULL DEPTH PAVEMENT SAWING	FT.	1314	$3.24	$4,257.36
254	PAVEMENT PLANING, ASPHALT CONCRETE	S.Y.	1975	$6.48	$12,798.00
301	ASPHALT CONCRETE BASE, PG64-22	S.Y.	2302	$226.80	$522,093.60
304	AGGREGATE BASE	C.Y.	3112	$70.20	$218,462.40
407	NON-TRACKING TACK COAT	GAL	2050	$4.86	$9,963.00
441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22, (449)	C.Y.	38	$324.00	$12,312.00
441	ASPHALT CONCRETE SURFACE INTERMEDIATE COURSE, TYPE 2, (448), (449)	C.Y.	84	$297.00	$24,948.00
441	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), (449)	C.Y.	6	$594.00	$3,564.00
441	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), (DRIVEWAYS), (449)	C.Y.	12	$540.00	$6,480.00
442	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	C.Y.	706	$297.00	$209,682.00
442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	C.Y.	1060	$270.00	$286,200.00
452	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	S.Y.	144	$118.80	$17,107.20
609	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	FT.	4022	$32.40	$130,312.80
609	CURB, TYPE 6, AS PER PLAN	FT.	1922	$27.00	$51,894.00
609	6" CONCRETE TRAFFIC ISLAND, AS PER PLAN	S.Y.	42	$97.20	$4,082.40
690	SPECIAL - ASPHALT REJUVENATING AGENT	GAL	552	$37.80	$20,865.60
	PAVEMENT CONSTRUCTION SUBTOTAL				**$1,535,022.36**
	WATER WORK				
638	VALVE BOX ADJUSTED TO GRADE	EACH	1	$378.00	$378.00
	WATER WORK CONSTRUCTION SUBTOTAL				**$378.00**
	SANITARY SEWER				
611	MANHOLE ADJUSTED TO GRADE	EACH	4	$1,080.00	$4,320.00
	SANITARY SEWER CONSTRUCTION SUBTOTAL				**$4,320.00**
	LIGHTING				
611	4" CONDUIT, TYPE E	FT.	40	$27.00	$1,080.00
625	CONNECTION, FUSED PULL APART	EACH	58	$140.40	$8,143.20
625	CONNECTION, UNFUSED PERMANENT	EACH	6	$140.40	$842.40
625	LIGHT POLE, DECORATIVE, AS PER PLAN, (MONOARM LIGHT POLE (AT12B32.5))	EACH	29	$4,050.00	$117,450.00
625	LIGHT POLE FOUNDATION, 24" X 6' DEEP	EACH	29	$1,890.00	$54,810.00
625	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	FT.	12500	$2.97	$37,125.00
625	NO. 12 AWG POLE AND BRACKET CABLE	FT.	4900	$2.16	$10,584.00
625	CONDUIT, 2", 725.051	FT.	1980	$16.20	$32,076.00
625	CONDUIT, 3", 725.051	FT.	45	$37.80	$1,701.00
625	CONDUIT, JACKED OR DRILLED, 725.052, AS PER PLAN, 2"	FT.	1510	$37.80	$57,078.00
625	CONDUIT, JACKED OR DRILLED, 725.052, AS PER PLAN, 3"	FT.	110	$59.40	$6,534.00
625	LUMINAIRE, DECORATIVE, AS PER PLAN, (STERNBERG)	EACH	29	$2,430.00	$70,470.00
625	TRENCH	FT.	2025	$10.80	$21,870.00
625	PULL BOX, 725.08, 18"	EACH	2	$1,404.00	$2,808.00
625	GROUND ROD	EACH	30	$324.00	$9,720.00
625	POWER SERVICE, AS PER PLAN	EACH	1	$11,340.00	$11,340.00
625	PLASTIC CAUTION TAPE, UNDERGROUND WARNING/MARKING TAPE	FT.	2025	$3.24	$6,561.00
625	LIGHTING, MISC.: POWER CABLE, 3 CONDUCTOR, NO. 2 AWG	FT.	40	$10.80	$432.00
	LIGHTING CONSTRUCTION SUBTOTAL				**$450,624.60**
	TRAFFIC CONTROL				
626	BARRIER REFLECTOR, TYPE 2	EACH	26	$21.60	$561.60
630	GROUND MOUNTED SUPPORT, NO. 3 POST	FT.	329	$17.28	$5,685.12
630	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	EACH	9	$702.00	$6,318.00
630	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	EACH	1	$378.00	$378.00
630	SIGN, FLAT SHEET	S.F.	161	$30.24	$4,868.64
630	SIGN, FLAT SHEET, AS PER PLAN	S.F.	38	$37.80	$1,436.40
630	SIGN, STREET NAME, AS PER PLAN	EACH	4	$540.00	$2,160.00
630	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	EACH	16	$27.00	$432.00
630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	2	$27.00	$54.00
630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH	14	$27.00	$378.00
630	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	EACH	6	$54.00	$324.00
630	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	EACH	1	$27.00	$27.00
644	EDGE LINE, 6"	MILE	1.1	$5,940.00	$6,534.00
644	LANE LINE, 6"	MILE	1	$5,940.00	$5,940.00
644	CENTER LINE	MILE	0.1	$16,200.00	$1,620.00
644	CHANNELIZING LINE, 8"	FT.	2346	$2.43	$5,700.78
644	STOP LINE	FT.	194	$8.64	$1,676.16
644	CROSSWALK LINE	FT.	748	$8.64	$6,462.72
644	TRANSVERSE/DIAGONAL LINE	FT.	440	$8.64	$3,801.60
644	ISLAND MARKING	S.F.	70	$5.40	$378.00
644	SCHOOL SYMBOL MARKING, 96"	EACH	1	$648.00	$648.00
644	LANE ARROW	EACH	18	$145.80	$2,624.40
	TRAFFIC CONTROL CONSTRUCTION SUBTOTAL				**$58,008.42**
	TRAFFIC SIGNALS				
611	4" CONDUIT, TYPE E	FT.	100	$27.00	$2,700.00
625	BRACKET ARM, 10', AS PER PLAN	EACH	4	$1,620.00	$6,480.00
625	CONDUIT, 2", 725.051	FT.	198	$16.20	$3,207.60
625	CONDUIT, 3", 725.051	FT.	46	$37.80	$1,738.80
625	CONDUIT, 4", 725.051	FT.	43	$43.20	$1,857.60
625	CONDUIT, JACKED OR DRILLED, 725.052, AS PER PLAN, 4"	FT.	339	$75.60	$25,628.40
625	LUMINAIRE, DECORATIVE, AS PER PLAN, (STERNBERG)	EACH	4	$2,430.00	$9,720.00
625	TRENCH	FT.	287	$10.80	$3,099.60
625	PULL BOX, 725.08, 18"	EACH	2	$1,404.00	$2,808.00
625	PULL BOX, 725.08, 24"	EACH	3	$1,728.00	$5,184.00
625	GROUND ROD	EACH	11	$324.00	$3,564.00
625	PLASTIC CAUTION TAPE, UNDERGROUND WARNING/MARKING TAPE	FT.	287	$3.24	$929.88
632	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, (BLACK)	EACH	9	$1,080.00	$9,720.00
632	VEHICULAR SIGNAL HEAD, (LED), 4 SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, (BLACK)	EACH	2	$1,404.00	$2,808.00
632	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	EACH	8	$972.00	$7,776.00
632	COVERING OF VEHICULAR SIGNAL HEAD	EACH	11	$108.00	$1,188.00
632	COVERING OF PEDESTRIAN SIGNAL HEAD	EACH	8	$54.00	$432.00

632	PEDESTRIAN PUSHBUTTON, AS PER PLAN	EACH	8	$648.00	$5,184.00
632	SIGNAL CABLE, 3 CONDUCTOR, NO. 12 AWG	FT.	770	$3.24	$2,494.80
632	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG	FT.	1370	$3.51	$4,808.70
632	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	FT.	1374	$3.78	$5,193.72
632	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	FT.	1358	$4.32	$5,866.56
632	INTERCONNECT, MISC.: SPREAD SPECTRUM RADIO UNIT REMOVED AND REINSTALLED	EACH	1	$1,620.00	$1,620.00
632	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	EACH	4	$9,180.00	$36,720.00
632	PEDESTAL FOUNDATION	EACH	6	$1,620.00	$9,720.00
632	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	FT.	110	$10.80	$1,188.00
632	POWER SERVICE, AS PER PLAN	EACH	1	$4,320.00	$4,320.00
632	SIGNAL SUPPORT, MISC.: COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12	EACH	1	$25,380.00	$25,380.00
632	SIGNAL SUPPORT, MISC.: COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13	EACH	1	$28,080.00	$28,080.00
632	SIGNAL SUPPORT, MISC.: COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14	EACH	2	$30,240.00	$60,480.00
632	PEDESTAL, 5', TRANSFORMER BASE, AS PER PLAN	EACH	2	$1,620.00	$3,240.00
632	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	EACH	4	$2,430.00	$9,720.00
632	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	EACH	1	$5,940.00	$5,940.00
633	CABINET, TYPE TS-2, AS PER PLAN	EACH	1	$17,280.00	$17,280.00
633	CABINET FOUNDATION	EACH	1	$3,780.00	$3,780.00
633	CONTROLLER WORK PAD, AS PER PLAN	EACH	1	$1,620.00	$1,620.00
633	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	EACH	1	$7,560.00	$7,560.00
809	ADVANCE RADAR DETECTION, AS PER PLAN	EACH	2	$9,720.00	$19,440.00
809	STOP LINE RADAR DETECTION, AS PER PLAN	EACH	4	$9,720.00	$38,880.00
809	ATC V6.24 CONTROLLER (ATC CONTROLLER, AS PER PLAN)	EACH	1	$7,020.00	$7,020.00
	TRAFFIC SIGNALS CONSTRUCTION SUBTOTAL				**$394,377.66**
	RETAINING WALLS				
503	UNCLASSIFIED EXCAVATION	LUMP	1	$2,700.00	$2,700.00
509	EPOXY COATED REINFORCING STEEL	LB.	3375	$2.70	$9,112.50
511	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING	C.Y.	22.5	$1,080.00	$24,300.00
512	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	S.Y.	30	$64.80	$1,944.00
516	1" PREFORMED EXPANSION JOINT FILLER	S.F.	12	$10.80	$129.60
517	RAILING, MISC.: PEDESTRIAN HAND RAILING APPROVED BY THE CITY	FT.	32	$108.00	$3,456.00
518	POROUS BACKFILL WITH GEOTEXTILE FABRIC	C.Y.	10	$135.00	$1,350.00
	RETAINING WALLS CONSTRUCTION SUBTOTAL				**$42,992.10**
	STRUCTURE REPAIR				
503	COFFERDAMS AND EXCAVATION BRACING	LUMP	1	$2,700.00	$2,700.00
503	UNCLASSIFIED EXCAVATION	LUMP	1	$5,400.00	$5,400.00
509	EPOXY COATED REINFORCING STEEL	LB.	5700	$2.70	$15,390.00
511	CLASS QC1 CONCRETE, RETAINING/WINGWALL INCLUDING FOOTING	C.Y.	38	$1,080.00	$41,040.00
512	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	S.Y.	52	$64.80	$3,369.60
516	1" PREFORMED EXPANSION JOINT FILLER	S.F.	51	$10.80	$550.80
518	POROUS BACKFILL WITH GEOTEXTILE FABRIC	C.Y.	14	$135.00	$1,890.00
	STRUCTURE REPAIR CONSTRUCTION SUBTOTAL				**$70,340.40**
	MAINTENANCE OF TRAFFIC				
608	3" ASPHALT CONCRETE WALK	S.F.	292	$8.64	$2,522.88
614	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	HOUR	32	$113.40	$3,628.80
614	INCREASED BARRIER DELINEATION	FT.	650	$4.32	$2,808.00
614	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	EACH	27	$2,268.00	$61,236.00
614	DETOUR SIGNING	LUMP	1	$21,600.00	$21,600.00
614	REPLACEMENT SIGN	EACH	20	$216.00	$4,320.00
614	REPLACEMENT DRUM	EACH	50	$75.60	$3,780.00
614	BARRIER REFLECTOR, TYPE 1, (ONE WAY)	EACH	170	$21.60	$3,672.00
614	BARRIER REFLECTOR, TYPE 2, (ONE WAY)	EACH	60	$27.00	$1,620.00
614	OBJECT MARKER, ONE WAY	EACH	170	$27.00	$4,590.00
614	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	MILE	0.1	$5,400.00	$540.00
614	WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT	MILE	4.1	$1,620.00	$6,642.00
614	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	FT.	1344	$1.08	$1,451.52
614	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	FT.	534	$1.08	$576.72
614	WORK ZONE STOP LINE, CLASS I, 642 PAINT	FT.	288	$5.40	$1,555.20
614	WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	FT.	1083	$5.40	$5,848.20
614	WORK ZONE GORE MARKING, CLASS II, 642 PAINT	FT.	106	$5.40	$572.40
614	WORK ZONE ARROW, CLASS I, 642 PAINT	EACH	10	$70.20	$702.00
615	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	S.Y.	630	$91.80	$57,834.00
616	WATER	MGAL	67.3	$43.20	$2,907.36
622	PORTABLE BARRIER, 32"	FT.	8330	$19.44	$161,935.20
	MAINTENANCE OF TRAFFIC CONSTRUCTION SUBTOTAL				**$350,342.28**
	INCIDENTALS				
103	PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	LUMP	1	$30,446.00	$30,446.00
614	MAINTAINING TRAFFIC	LUMP	1	$227,000.00	$227,000.00
619	FIELD OFFICE, TYPE C	MONTH	18	$2,592.00	$46,656.00
623	CONSTRUCTION LAYOUT STAKE AND SURVEYING	LUMP	1	$54,000.00	$54,000.00
623	SPECIAL - CONSTRUCTION LAYOUT STAKES AND SURVEYING PRECONSTRUCTION SURVEY MONUMENT VERIFICATION	LUMP	1	$5,400.00	$5,400.00
623	SPECIAL - CONSTRUCTION LAYOUT STAKES AND SURVEYING POSTCONSTRUCTION SURVEY MONUMENT VERIFICATION	LUMP	1	$5,400.00	$5,400.00
624	MOBILIZATION	LUMP	1	$102,800.00	$102,800.00
	INCIDENTALS CONSTRUCTION SUBTOTAL				**$471,702.00**
	CONSTRUCTION SUBTOTAL				**$5,804,708.52**
	CONTINGENCY (10%)				**$580,470.85**
	CONSTRUCTION TOTAL				**$6,385,179.37**

ChoiceOne Engineering

We make no warranty, express or implied, that the actual construction cost of the work associated with these estimated quantities and costs will not vary. The cost reflects our opinion of current probable construction cost.

Mitchell J. Thobe, PE

8/15/2023
Date

A weighted useful life statement stamped/sealed and signed by a licensed professional engineer must be included with the project application.

This spreadsheet has formulas to make a weighted useful life calculation and is populated with an example for illustrative purposes. Items can be added to column a.

WOODMAN RECONSTRUCTION - RIVERSIDE

Weighted Useful Life & Design Service Capacity Calculations

Major Component	Cost ($1,000)	Portion Repair / Replacement (%)	Repair / Replace Product	Useful Life (Years)	Useful Life Product
Full-depth road construction w/ drainage	4980.3605			25	124509
Full-depth road construction w/o drainage				25	
Partial-depth road construction w/ drainage	596.84526			15	8952.679
Partial-depth road construction w/o drainage				15	
Storm Sewers	683.3079			40	27332.32
Sanitary Sewers				40	
Water Lines				40	
Culvert/Bridge	77.37444			50	3868.722
Pumps, Lift Stations				15	
Retaining Wall	47.29131			50	2364.566
Totals	6385.17937				167027.3

Weighted Useful Life: 26.2 Years

Design Service Capacity (Project Application, Section 2.0):

Portion Repair / Replace %

Portion New / Expansion 100 %

Mitchell J. Thobe, PE

8/15/2023

Date

OHIO PUBLIC WORKS COMMISSION
DISTRICT 4
FY25 Supplemental Questionnaire

Applicant: City of Riverside

Project Title: Woodman Drive Reconstruction

Application Summary:

Briefly describe the project:

This project includes the full reconstruction of approximately 2200 feet of Woodman Drive from US 35 to Eastman Avenue. Details of the project include full-depth reconstruction including median reconstruction (concrete and grass), storm sewer improvements (piping, catch basins, and manholes), installation of crosswalks, curb ramps, bike path, and other pedestrian facilities, highway lighting, replacement of traffic signals, and full-depth replacement of the roadway surface including aggregate base and asphalt.

Also included are intersection and pedestrian/bicycle improvements, as well as a pedestrian connection between Richland Avenue and Woodman Drive. Details of this portion of the project include replacement of crosswalks, curb ramps, installation of a multi-use path, sidewalks, and other pedestrian facilities, replacement of highway lighting, and replacement of traffic signals (including addition of pedestrian heads).

Additionally, this project includes the following improvements to Woodman Drive & Eastman Avenue to mitigate the excessive accident rate at the intersection: extension of the southbound left turn lane, realignment of the mainline (Woodman Drive) left turn lanes, new traffic signal, and ADA compliant pedestrian facilities. See attached Safety Study, Page 4 for documentation of the excessive accident rate.

Priority:

Is this application your priority project? (Circle One)	
Yes ◉	No ○

Generation of Revenue:

Will new user fees or assessments be assessed as part of this project? (Circle One)	
Yes ○	No ◉
What will the new user fees or assessments be used for?	

Additional Funding:

Will OPWC match, in part, a committed grant or loan? (Circle One)	
Yes ◉	No ○
If no, was the project submitted to an appropriate agency for funding, but denied due to lack of funding? (Circle One)	
Yes – Appropriate Documentation Attached ○	No ○

Readiness of Project:

Will this project be <u>substantially</u> underway on or before June 1, 2025? (Circle One)	
Yes ◉	No ○

Health & Safety:

Describe the specific health or safety issue being addressed by this project. What deficiency or condition is causing the health or safety issue?
This project is needed because of the deteriorating asphalt driving surface, the lack of proper, adequate stormwater drainage, inadequate pedestrian facilities, out-of-date traffic signals, a deteriorating culvert under the roadway, and an excessive accident rate at the intersection of Eastman and Woodman. The roadway, as it exists, does not produce positive drainage for stormwater. Existing curbing has been paved over, and many catch basins are blocked/non-functioning. Because stormwater pools in the driving lanes, motorists risk hydroplaning or, in cold weather, icy conditions. The new, smoother traveling surface will provide a smoother drive for motorists and cyclists, enhancing safety. With the improvement of pedestrian facilities throughout the route, motorists, pedestrians and cyclists will be far safer than in current conditions. With the separated sidewalk and bike path, all modes will be able to travel this route for access to residential areas, a middle school, an urgent care facility, and various retail establishments. The route will also be enhanced for safety with replacement highway lighting as well. The excessive accident rate at the intersection of Woodman & Eastman will be addressed with the extension of turn lanes and alignment improvements. The intersection has a very high percentage of injury crashes at 56% and high percentage of left turn crashes at 35% (well above the statewide average of 15% for similar intersections). See page 4 of the attached Safety Study.

Addresses District Infrastructure Needs:

Is this project located in more than one community? (Circle One)		
Yes ○		No ◉
What percentage of the community will be served by this project? (Circle One)		
Less than 25% ○	25% to 40% ○	More than 40% ◉

Economic Development

How many jobs are being created as a result of this project?	
How many jobs will be retained as a result of this project?	
Why is it necessary to fund this improvement to secure this development?	
What type of industry is proposed in this development?	

Relieve Existing Traffic Congestion:

What is the level of service?	LOS A

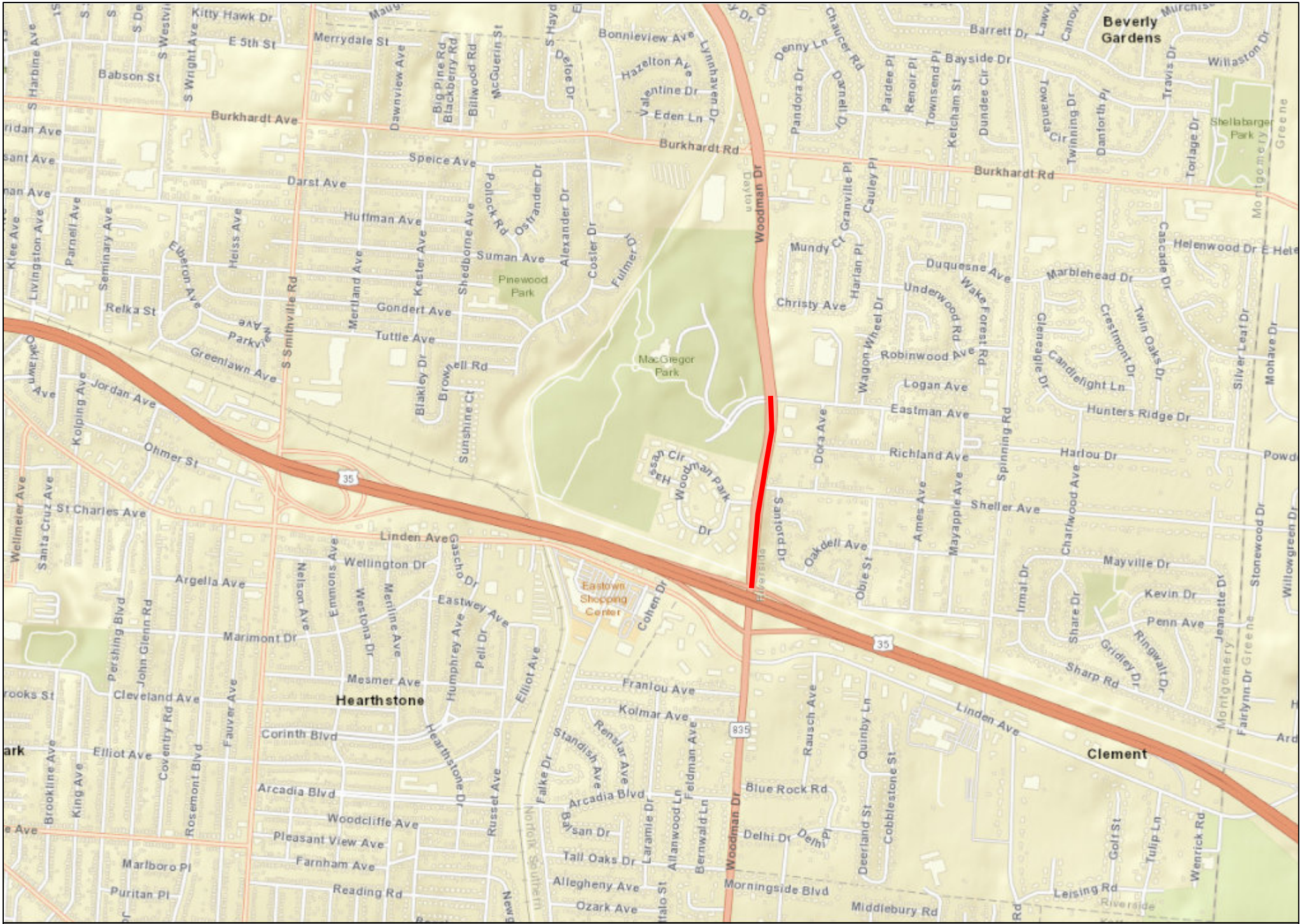
Other Factors

What other factors exist that make this project more important than other like projects?

This route intersects the Creekside Trail, which connects Dayton with Xenia. Nearby destinations off of this interchange with US 35 include a retail area with restaurants and shopping, several schools, service agencies including employment/staffing disability support, urgent care, and childcare centers, thousands of homes, and Riverside Fire Station No. 6, which accesses US 35 via this section of Woodman Drive. This section of roadway and its associated multi-use trail and sidewalks, also provides access to the southwest side Wright-Patterson Air Force Base from US 35, which is the area's largest employer. Providing a safe, functioning roadway for all users of all modes of transportation is a top priority for the City and the region.

This project includes a pedestrian connection between Richland Avenue and Woodman Drive, creating a new access point for the residential areas east of Woodman between Eastman and US 35. This new connection will allow for all users to access the transit stops at Woodman and Eastman and urgent care medical complex at Woodman and Eastman, as well as MacGregor Park and any points north and west of Woodman Drive. This access point will also allow users to reach the Creekside Trail more quickly/easily by using the connection to then travel south on the newly provided walks/trail on Woodman and access the Creekside Trail.

This project is listed as a priority component in the City of Riverside's Major Thoroughfare Assessment; General Road Condition Improvement, August 2014.



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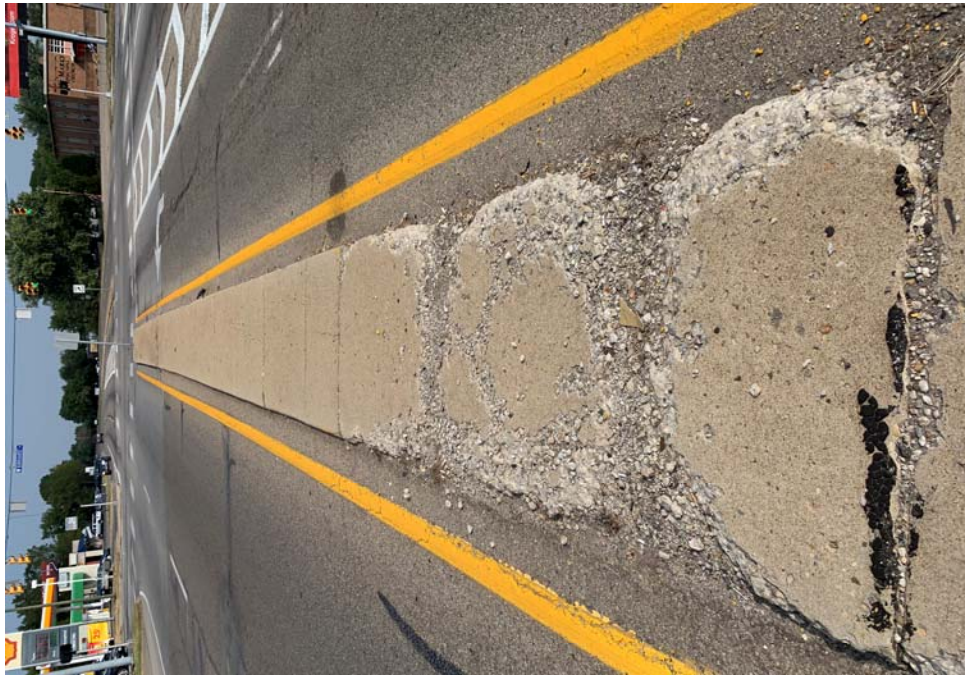
Project Route

Woodman Drive Reconstruction, City of Riverside; October 2020


East
Dayton
Christian
School



OHIO DEPARTMENT OF TRANSPORTATION

TCDS Help MS2

Transportation Data Management System

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Record 1 of 1 Goto Record go

Location ID	2655798	MPO ID	
Type	SPOT	HPMS ID	
On NHS	Yes	On HPMS	Yes
LRS ID	CMOTCR00074**C	LRS Loc Pt.	5.2
SF Group	URBAN_OTHER_PRINCIPAL_ARTERIAL	Route Type	CR
AF Group	URBAN_OTHER_PRINCIPAL_ARTERIAL	Route	00074
GF Group	URBAN_OTHER_PRINCIPAL_ARTERIAL	Active	Yes
Class Dist Grp		Category	Local
Seas Clss Grp	URBAN_OTHER_PRINCIPAL_ARTERIAL		
WIM Group			
QC Group	Default		
Fnct'l Class	3 - Other Principal Arterial	Milepost	
Located On	WOODMAN DR		
Loc On Alias			
BETWEEN	US-35 EXPY AND AIRWAY RD		

More Detail

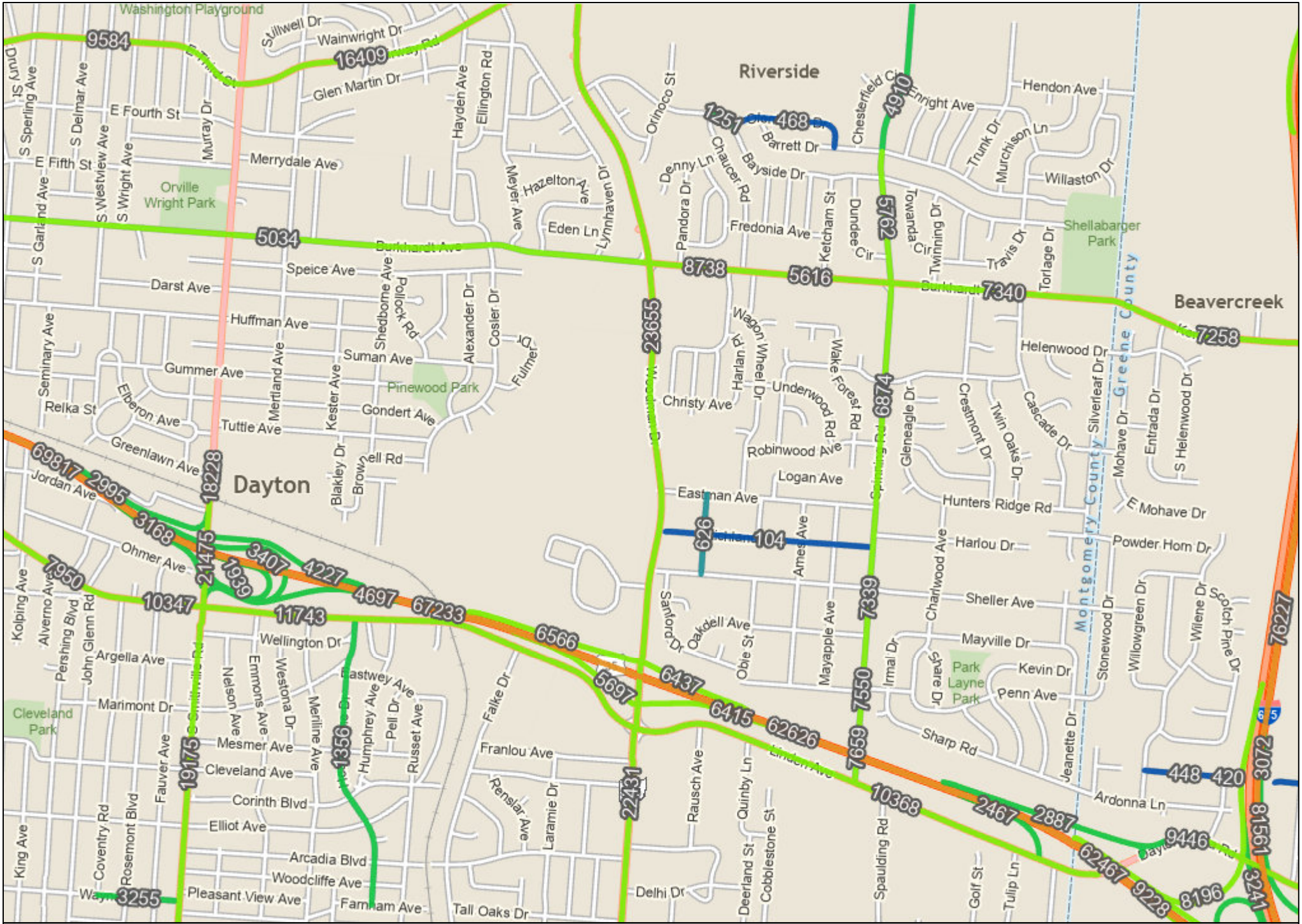
STATION DATA

Directions: 2-WAY NB 1 2 SB 1 2

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2022	23,182[3]		9	53	22,762 (98%)	420 (2%)	Grown from 2021
	2021	23,655[3]		9	53	23,226 (98%)	429 (2%)	Grown from 2020
	2020	21,524[3]		9	53	21,134 (98%)	390 (2%)	Grown from 2019
	2019	24,571	2,305	9	53	24,126 (98%)	445 (2%)	
	2018	25,278[3]		8	52	24,612 (97%)	666 (3%)	Grown from 2017

|<< < > >>| 1-5 of 11



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Date: 6/7/2023

ChoiceOne Engineering

City of Riverside

Woodman Drive & Eastman Avenue Safety Study

February 2023

W. Central Ohio/E. Indiana
440 E. Hoewisher Rd.
Sidney, OH 45365
937.497.0200 Phone

S. Ohio/N. Kentucky
8956 Glendale Milford Rd., Suite 1
Loveland, OH 45140
513.239.8554 Phone

www.CHOICEONEENGINEERING.com

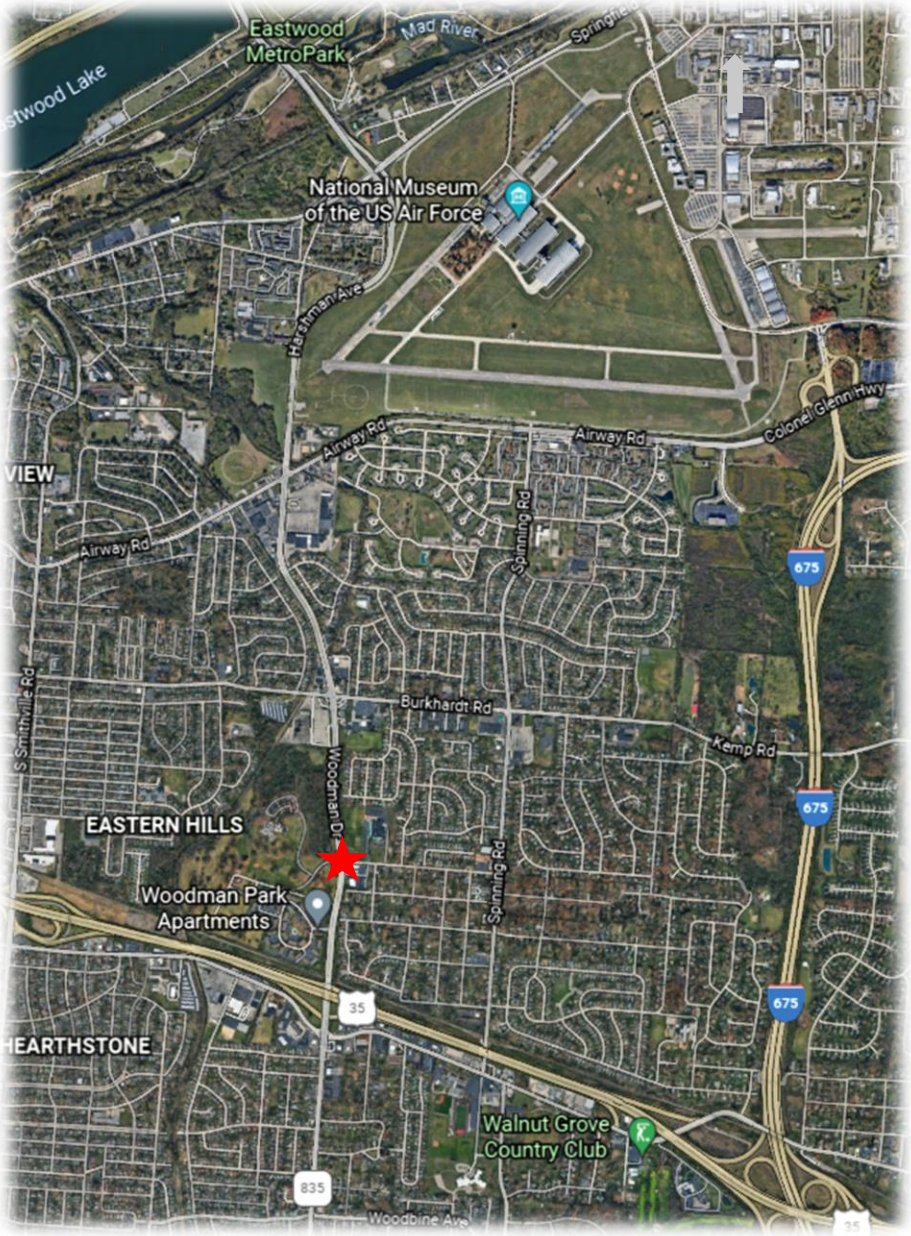
Table of Contents

Safety Study

Analysis Snapshot

The City of Riverside retained Choice One Engineering Corporation (COEC) to prepare a safety study and present safety improvement countermeasures for the signalized intersection of Woodman Drive & Eastman Avenue in the City of Riverside, Montgomery County, Ohio. This Safety Study includes Project Description, Analysis Snapshot, Purpose & Need, Roadway Conditions, Intersection Conditions, Crash Analysis, Existing Traffic Volumes, Turn Lane Analysis, Proposed Countermeasure Evaluation, and Recommendations.

Figure 1: Vicinity Map



Purpose and Need

The City of Riverside is concerned with the rate of injury crashes and pedestrian safety at the intersection of Woodman Drive & Eastman Avenue. Therefore, safety funding is being pursued to improve the intersection. Recommended improvements will be intended to enhance safety for roadway users, pedestrians, cyclists, those using mobility devices, and those accessing public transportation.

The purpose of the safety study is to identify site-specific safety countermeasures to reduce injury crashes and enhance pedestrian safety.

MOT-Woodman Drive Reconstruction (PID 115003)

The intersection of Woodman Drive & Eastman Avenue is within the project limits of MOT-Woodman Drive Reconstruction (PID 115003). This project includes the full reconstruction of Woodman Drive between US 35 and Eastman Avenue, installation and replacement of sidewalks, the connection of new sidewalk to Richland Avenue, installation of a new 10-foot multi-use path connecting Woodman Park Drive to Eastman Avenue, and installation of street lighting along the entire corridor. Additionally, this project includes the following improvements to Woodman Drive & Eastman Avenue: extension of the southbound left turn lane, realignment of the mainline (Woodman Drive) left turn lanes, new traffic signal, and ADA compliant pedestrian facilities. The City of Riverside is working on multiple project phases to modernize Woodman Drive from US 35 to Springfield Street (Wright-Patterson Air Force Base) to benefit all modes of travel. The $6.3 million project is in the process of Stage 2 design and has already received Ohio Department of Transportation (ODOT) Surface Transportation Program (STP) and Transportation Alternatives Program (TAP) funding. This funding request focuses on the safety issues at the intersection of Woodman Drive & Eastman Avenue.

Roadway Conditions

Woodman Drive is classified as a major collector that traverses in a north-south direction. The posted speed limit is 45 miles per hour in the section. The 2019 reported ADT is 24,571. This section of Woodman Drive has four total lanes including two traveling lanes in each direction.

Eastman Avenue is classified as a local road that traverses in an east-west direction. The posted speed limit is 25 miles per hour in the section.

Intersection Conditions

Woodman Drive & Eastman Avenue: The eastbound approach (AES's private drive) consists of one exclusive left-turn lane and one shared through/right lane. The westbound approach (Eastman Avenue) consists of one exclusive left-turn lane and one shared through/right lane. The northbound approach (Woodman Drive) consists of one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane. The southbound approach (Woodman Drive) consists of one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane.

Several existing conditions affect the operation of Woodman Drive & Eastman Avenue including geometrics and lack of pedestrian facilities as described below.

- **Geometrics:** The mainline (Woodman Drive) left turn lanes have a negative 7-foot offset. This can be a contributing factor to left-turn crashes.
- **Turn Lane Length:** The existing southbound left turn lane length is too short. This can be a contributing factor to sideswipe and rear-end crashes.
- **Pedestrian Facilities:** There are no ADA compliant pedestrian facilities at this intersection.

Crash Analysis

Detailed crash data and related graphs are included in Appendix A. An overview is shown below in Figure 2. The crash reports are available upon request.

Figure 2: Crash Overview

Fatalities	0
Serious Injuries	2
Other Injuries	19

Crashes Per Year	7.67
Fatal and All Injury Crashes	13
Percent Injury	56.5%
Equivalent PDO Index Value	5.45

Crash Severity	Crashes	%
(2) Serious Injury Suspected	1	4.35%
(3) Minor Injury Suspected	8	34.78%
(4) Injury Possible	4	17.39%
(5) PDO/No Injury	10	43.48%
Grand Total	23	100.00%

Year	Crashes	%
2019	9	39.13%
2020	3	13.04%
2021	11	47.83%
Grand Total	23	100.00%

Day of Week	Crashes	%
(1) Sunday	1	4.35%
(2) Monday	4	17.39%
(3) Tuesday	3	13.04%
(4) Wednesday	3	13.04%
(5) Thursday	7	30.43%
(6) Friday	2	8.70%
(7) Saturday	3	13.04%
Grand Total	23	100.00%

Crash Type	Crashes	%
Rear End	8	34.78%
Left Turn	8	34.78%
Sideswipe - Passing	3	13.04%
Pedestrian	1	4.35%
Fixed Object	1	4.35%
Backing	1	4.35%
Other Non-Collision	1	4.35%
Grand Total	23	100.00%

Light Condition	Crashes	%
Daylight	18	78.26%
Dawn/Dusk	2	8.70%
Dark - Lighted Roadway	2	8.70%
Dark - Roadway Not Lighted	1	4.35%
Grand Total	23	100.00%

Month	Crashes	%
2	1	4.35%
3	2	8.70%
4	3	13.04%
5	2	8.70%
8	6	26.09%
9	2	8.70%
11	5	21.74%
12	2	8.70%
Grand Total	23	100.00%

Unit 1 Contributing Factor	Crashes	%
Following Too Closely/ACDA	9	39.13%
Failure to Yield	5	21.74%
Ran Red Light	3	13.04%
Improper Backing	1	4.35%
Other Improper Action	1	4.35%
Drove off Road	1	4.35%
Swerving to Avoid	1	4.35%
Improper Lane Change	1	4.35%
None	1	4.35%
Grand Total	23	100.00%

Hour of Day	Crashes	%
8	4	17.39%
11	2	8.70%
13	2	8.70%
14	2	8.70%
15	4	17.39%
16	1	4.35%
17	4	17.39%
18	2	8.70%
19	1	4.35%
20	1	4.35%
Grand Total	23	100.00%

Weather Condition	Crashes	%
Clear	11	47.83%
Cloudy	9	39.13%
Rain	3	13.04%
Grand Total	23	100.00%

Road Condition	Crashes	%
Dry	17	73.91%
Wet	6	26.09%
Grand Total	23	100.00%

The following crash types and conditions are overrepresented at the study location compared to the statewide averages for signalized, urban, four-leg intersection locations.

Figure 3 – Safety Issues

	Study Location	Statewide Averages
Sideswipe-Passing Crashes	13%	11%
Left Turn Crashes	35%	15%
Pedestrian Crashes	4%	1%
Total Crashes	**23**	-

Existing Traffic Volumes

Turning movement counts were collected by Choice One Engineering on Tuesday, September 14, 2021, at the intersection of Woodman Drive & Eastman Avenue. Data was collected from 6:00AM to 7:00PM. The peak hours are from 7:30 to 8:30AM and 4:30 to 5:30PM. The existing traffic volumes are attached in Appendix B.

Turn Lane Analysis

Primarily, reviewing the existing turn lanes was initiated to verify adequate length for safety benefits rather than the operational (i.e. LOS) benefits. **The southbound approach of Woodman Drive has a dedicated 200 foot (including 150-foot diverging taper) left turn lane.** Turn lane length calculations were performed at the intersection based on the specifications set forth in Section 400 of the *ODOT L&D Manual: Volume 1 Roadway Design*. **From *ODOT L&D Manual: Volume 1 Roadway Design* Figures 401-9E and 401-10E, based on a design speed of 50 mph, the southbound left turn lane length is required to be 225 feet (including a 50-foot diverging taper).** The turn lane analysis is attached in Appendix C.

Signal Warrant Analysis

In accordance with the *2012 Ohio Manual of Uniform Traffic Control Devices* (OMUTCD), Chapter 4C, using the existing traffic volumes and lane setup, the intersection of Woodman Drive & Eastman Avenue was tested against the following three signal warrants:

Warrant 1 – Eight Hour Vehicular Volume
Warrant 2 – Four Hour Vehicular Volume
Warrant 3 – Peak Hour

The Eight Hour Vehicular Volume warrant requires that an intersection has eight separate hours where the volume of vehicles approaching the intersection is above a given threshold determined by ODOT. The Four-Hour Vehicular Volume and the Peak Hour Vehicular Volume warrants require that an intersection has four separate hours and a single hour, respectively, where the volume of vehicles approaching the intersection is above a given threshold.

At this intersection, the volume of vehicles approaching the intersection on the Major Street (Woodman Drive) and the minor street (Eastman Avenue) meet the required volume to satisfy Warrants 1, 2, and 3 at the 100 percent values. The signal warrant analysis is attached in Appendix D.

Proposed Countermeasure Evaluation

Based on field observations, crash data, and analysis of the location, there are several improvements that can be made to potentially reduce crashes and increase safety. These potential improvements are described in this section.

First, this intersection will benefit from the installation a new traffic signal with backplates, stop bar and advanced radar detection, left turn arrows for the Woodman Drive approaches, pedestrian crosswalks, and intersection lighting. These countermeasures could reduce left turn crashes at this intersection. The pedestrian crosswalks could also help avoid crashes or collisions involving pedestrians, as it would encourage pedestrians to cross at a lighted, marked crosswalk.

Second, it is recommended the northbound and southbound left turn lanes along Woodman Drive be realigned. Currently, there is a negative offset between the turn lanes of approximately 7 feet, which leads to decreased sight distance, thereby leading to the high percentage left

turn crashes at the intersection. Improving the left-turn offsets to make the left-turns have a zero or positive offset is a proven countermeasure to reduce crashes.

Third, it is recommended to extend the southbound left turn lane along Woodman Drive. The existing storage lane is significantly shorter than the ODOT calculated length, which could be contributing to the sideswipe and rear end crashes.

Recommendations

Based on the analysis results of the existing and future conditions, COEC recommends the following improvements to the surrounding roadway network:

1. Install a new mast arm traffic signal.
    a. Install backplates.
    b. Include five section signal heads for protected mainline left turn movements.
    c. Install stop bar and advanced radar detection.
2. Install pedestrian signal, crosswalks and curb ramps that meet ADA standards.
3. Realign the northbound and southbound left turn lanes to remove the negative offset.
4. Extend the southbound left turn lane length to be 260 feet (which includes a 50-foot diverging taper).

A preliminary construction estimate for the recommended improvements is $2,100,798, which includes construction and inflation. The City is prepared to contribute $210,080 (10%) and is applying for $1,890,719 (90%) safety funds to pay for construction only. The City of Riverside has additional local investment in the other portions of the project.

The ECAT Analysis is attached in Appendix E. A recommendations concept is attached in Appendix F. The project cost estimate is attached in Appendix G. A project funding table and schedule is attached in Appendix H.

APPENDIX

Appendix A- Crash Data

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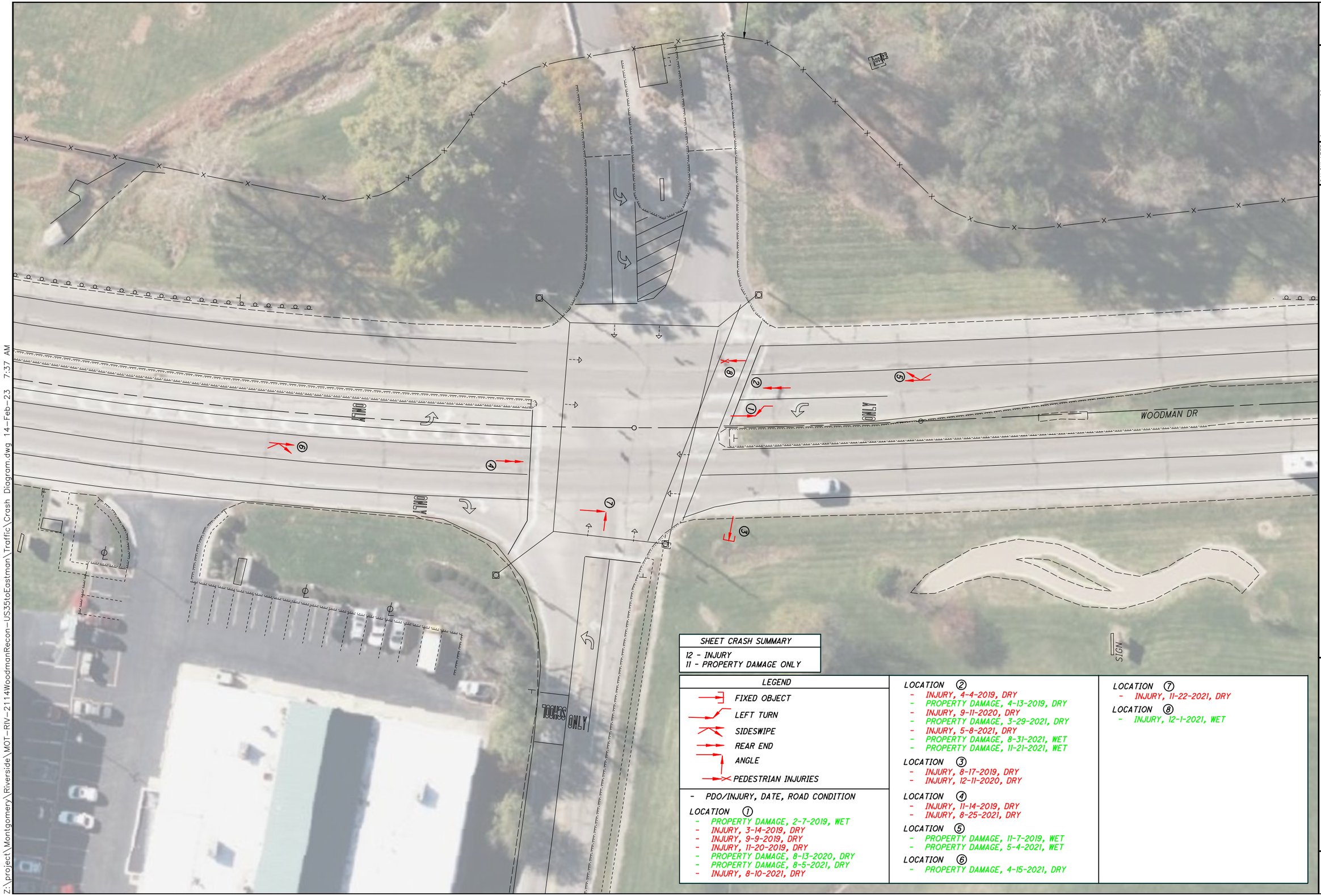
MOT-WOODMAN DR RECONSTRUCTION	**WOODMAN DRIVE & EASTMAN AVENUE SAFETY STUDY** **EXISTING CONDITION DIAGRAM**	CALCULATED ADG CHECKED MKG	0 30 15 60 HORIZONTAL SCALE IN FEET	N



SHEET CRASH SUMMARY
12 - INJURY
11 - PROPERTY DAMAGE ONLY

LEGEND
FIXED OBJECT
LEFT TURN
SIDESWIPE
REAR END
ANGLE
PEDESTRIAN INJURIES

- PDO/INJURY, DATE, ROAD CONDITION

LOCATION ①
- PROPERTY DAMAGE, 2-7-2019, WET
- INJURY, 3-14-2019, DRY
- INJURY, 9-9-2019, DRY
- INJURY, 11-20-2019, DRY
- PROPERTY DAMAGE, 8-13-2020, DRY
- PROPERTY DAMAGE, 8-5-2021, DRY
- INJURY, 8-10-2021, DRY

LOCATION ②
- INJURY, 4-4-2019, DRY
- PROPERTY DAMAGE, 4-13-2019, DRY
- INJURY, 9-11-2020, DRY
- PROPERTY DAMAGE, 3-29-2021, DRY
- INJURY, 5-8-2021, DRY
- PROPERTY DAMAGE, 8-31-2021, WET
- PROPERTY DAMAGE, 11-21-2021, WET

LOCATION ③
- INJURY, 8-17-2019, DRY
- INJURY, 12-11-2020, DRY

LOCATION ④
- INJURY, 11-14-2019, DRY
- INJURY, 8-25-2021, DRY

LOCATION ⑤
- PROPERTY DAMAGE, 11-7-2019, WET
- PROPERTY DAMAGE, 5-4-2021, WET

LOCATION ⑥
- PROPERTY DAMAGE, 4-15-2021, DRY

LOCATION ⑦
- INJURY, 11-22-2021, DRY

LOCATION ⑧
- INJURY, 12-1-2021, WET

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED ADG
CHECKED MKG

WOODMAN DRIVE & EASTMAN AVENUE SAFETY STUDY
CRASH DIAGRAM

MOT-WOODMAN DR RECONSTRUCTION

1 1

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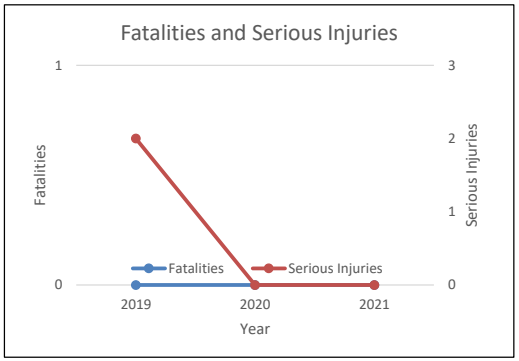
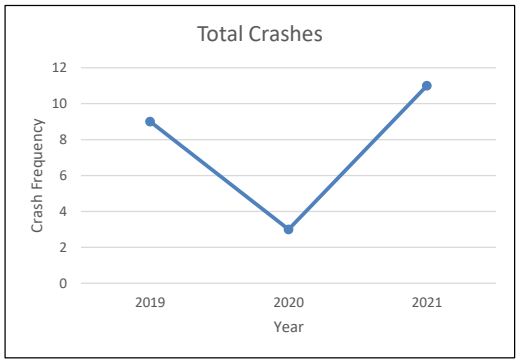
2019-2021 Woodman & Eastman

Crash Summary Sheet

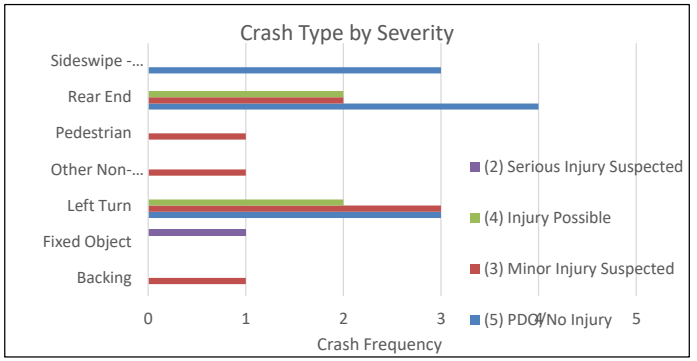
Crashes Per Year	7.67	Percent Injury	56.5%	EPDO	5.45

Year	Total Crashes	Fatalities	Serious Injuries
2019	9	0	2
2020	3	0	0
2021	11	0	0
Grand Total	23	0	2





Total Crashes Crash Type	Injury Level (2) Serious Inju	(3) Minor Injury	(4) Injury Possi	(5) PDO/No Inj	Grand Total
Rear End	0	2	2	4	8
Left Turn	0	3	2	3	8
Sideswipe - Passing	0	0	0	3	3
Pedestrian	0	1	0	0	1
Fixed Object	1	0	0	0	1
Backing	0	1	0	0	1
Other Non-Collision	0	1	0	0	1
Grand Total	1	8	4	10	23



2019-2021 Woodman & Eastman
Crash Summary Sheet

Crashes Per Year	7.67	Percent Injury	56.5%	EPDO	5.45

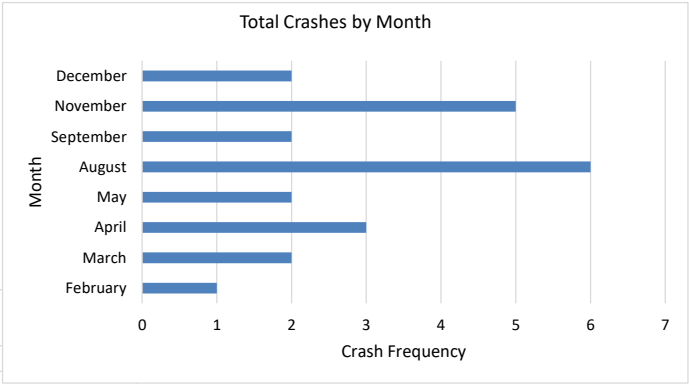
Road Condition	Total Crashes	Fatalities	Serious Injuries
Dry	17	0	2
Wet	6	0	0
Grand Total	23	0	2

Hour of Day	Total Crashes
8	4
11	2
13	2
14	2
15	4
16	1
17	4
18	2
19	1
20	1
Grand Total	23

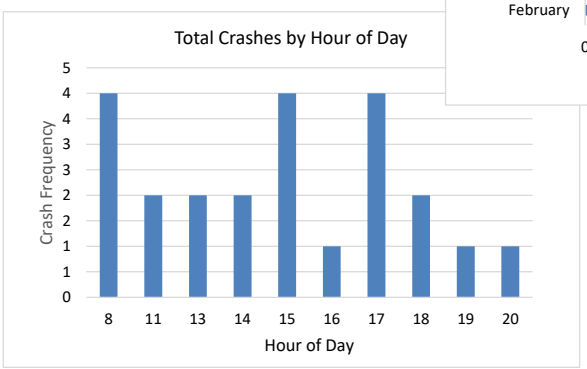
Month	Total Crashes
February	1
March	2
April	3
May	2
August	6
September	2
November	5
December	2
Grand Total	23

Weather	Total Crashes	Fatalities	Serious Injuries
Clear	11	0	2
Cloudy	9	0	0
Rain	3	0	0
Grand Total	23	0	2

Day in Week	Total Crashes
(1) Sunday	1
(2) Monday	4
(3) Tuesday	3
(4) Wednesday	3
(5) Thursday	7
(6) Friday	2
(7) Saturday	3
Grand Total	23



Crash Location	Total Crashes	Fatalities	Serious Injuries
Four-Way Intersection	12	0	0
Not An Intersection	7	0	2
T-Intersection	4	0	0
Grand Total	23	0	2



Roadway Contour	Total Crashes	Fatalities	Serious Injuries
Straight Level	16	0	0
Straight Grade	6	0	0
Curve Level	1	0	2
Grand Total	23	0	2

Appendix B- Turning Movement Counts

Study Name **Woodman Drive & Eastman Avenue**
Start Date **09/14/2021**
Start Time **6:00 AM**
Site Code

	Woodman Drive Southbound						Eastman Avenue Westbound						Woodman Drive Northbound						Private Drive Eastbound					
Start Time	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total	Right	Thru	Left	U-Turn	Peds	App Total
6:00 AM	0	82	2	0	0	84	2	0	11	0	0	13	2	66	0	0	0	68	1	0	0	0	0	1
6:15 AM	0	120	2	0	0	122	2	0	11	0	0	13	5	83	2	0	0	90	0	0	0	0	0	0
6:30 AM	0	143	3	0	0	146	9	0	14	0	0	23	10	114	3	0	0	127	1	0	0	0	0	1
6:45 AM	1	144	1	0	0	146	6	0	11	0	0	17	7	159	0	0	0	166	0	0	0	0	0	0
Hourly Total	**1**	**489**	**8**	**0**	**0**	**498**	**19**	**0**	**47**	**0**	**0**	**66**	**24**	**422**	**5**	**0**	**0**	**451**	**2**	**0**	**0**	**0**	**0**	**2**
7:00 AM	2	186	5	0	0	193	11	0	22	0	0	33	11	162	2	0	0	175	0	0	0	0	0	0
7:15 AM	0	186	15	0	0	201	7	0	26	0	0	33	25	163	3	1	0	192	0	0	0	0	0	0
7:30 AM	2	278	30	1	0	311	15	0	31	0	0	46	31	213	1	0	0	245	1	0	0	0	0	1
7:45 AM	2	283	35	0	0	320	24	0	61	0	0	85	51	202	3	0	0	256	0	0	0	0	0	0
Hourly Total	**6**	**933**	**85**	**1**	**0**	**1025**	**57**	**0**	**140**	**0**	**0**	**197**	**118**	**740**	**9**	**1**	**0**	**868**	**1**	**0**	**0**	**0**	**0**	**1**
8:00 AM	1	199	33	0	0	233	25	0	31	0	0	56	26	189	5	0	0	220	0	0	0	0	0	0
8:15 AM	0	189	39	0	0	228	26	0	34	0	0	60	15	154	1	0	0	170	1	0	0	0	0	1
8:30 AM	1	194	73	0	0	268	51	1	35	0	0	87	16	153	6	0	0	175	0	1	0	0	0	1
8:45 AM	2	170	21	0	0	193	40	0	30	0	0	70	16	146	2	0	0	164	0	0	1	0	0	1
Hourly Total	**4**	**752**	**166**	**0**	**0**	**922**	**142**	**1**	**130**	**0**	**0**	**273**	**73**	**642**	**14**	**0**	**0**	**729**	**1**	**1**	**1**	**0**	**0**	**3**
9:00 AM	1	148	6	0	0	155	9	0	18	0	0	27	7	117	3	1	0	128	1	0	0	0	0	1
9:15 AM	1	151	6	0	0	158	7	0	12	0	0	19	7	138	0	0	0	145	0	0	0	0	0	0
9:30 AM	2	158	4	0	0	164	6	0	15	0	0	21	13	138	0	1	0	152	1	0	0	0	0	1
9:45 AM	1	156	15	1	0	173	4	0	23	0	0	27	7	120	3	0	0	130	0	0	0	0	0	0
Hourly Total	**5**	**613**	**31**	**1**	**0**	**650**	**26**	**0**	**68**	**0**	**0**	**94**	**34**	**513**	**6**	**2**	**0**	**555**	**2**	**0**	**0**	**0**	**0**	**2**
10:00 AM	1	133	4	0	0	138	8	0	15	0	0	23	9	114	1	1	0	125	4	0	1	0	0	5
10:15 AM	0	157	7	0	0	164	11	1	11	0	0	23	14	134	3	0	0	151	2	1	0	0	0	3
10:30 AM	1	155	9	0	0	165	8	0	14	0	0	22	15	141	2	0	0	158	3	0	3	0	0	6
10:45 AM	4	158	6	0	0	168	11	0	15	0	0	26	11	146	1	0	0	158	0	0	1	0	0	1
Hourly Total	**6**	**603**	**26**	**0**	**0**	**635**	**38**	**1**	**55**	**0**	**0**	**94**	**49**	**535**	**7**	**1**	**0**	**592**	**9**	**1**	**5**	**0**	**0**	**15**
11:00 AM	0	137	9	0	0	146	9	0	13	0	0	22	10	130	3	1	0	144	1	1	0	0	0	2
11:15 AM	0	164	9	1	0	174	7	1	10	0	0	18	14	146	0	1	0	161	0	1	0	0	0	1
11:30 AM	0	145	6	0	0	151	8	0	14	0	0	22	9	172	1	3	0	185	3	0	1	0	0	4
11:45 AM	0	164	5	0	0	169	8	0	12	0	0	20	17	177	3	0	0	197	2	0	0	0	0	2
Hourly Total	**0**	**610**	**29**	**1**	**0**	**640**	**32**	**1**	**49**	**0**	**0**	**82**	**50**	**625**	**7**	**5**	**0**	**687**	**6**	**2**	**1**	**0**	**0**	**9**
12:00 PM	0	137	6	0	0	143	12	0	12	0	0	24	9	167	3	1	0	180	2	0	3	0	0	5
12:15 PM	2	179	11	0	0	192	10	0	11	0	0	21	18	166	0	0	0	184	0	0	0	0	0	0
12:30 PM	0	154	7	0	0	161	10	0	16	0	0	26	17	154	1	3	0	175	0	0	0	0	0	0
12:45 PM	1	175	7	0	0	183	3	0	11	0	0	14	21	157	0	0	0	178	0	0	1	0	0	1
Hourly Total	**3**	**645**	**31**	**0**	**0**	**679**	**35**	**0**	**50**	**0**	**0**	**85**	**65**	**644**	**4**	**4**	**0**	**717**	**2**	**0**	**4**	**0**	**0**	**6**
1:00 PM	1	157	4	0	0	162	9	0	17	0	0	26	11	156	2	0	0	169	0	0	0	0	0	0
1:15 PM	2	155	11	1	0	169	2	0	16	0	0	18	13	159	1	0	0	173	0	0	0	0	0	0
1:30 PM	0	121	16	0	0	137	4	0	26	0	0	30	16	177	1	0	0	194	0	0	1	0	0	1
1:45 PM	0	133	12	0	0	145	5	0	19	0	0	24	11	163	0	1	0	175	2	0	0	0	0	2
Hourly Total	**3**	**566**	**43**	**1**	**0**	**613**	**20**	**0**	**78**	**0**	**0**	**98**	**51**	**655**	**4**	**1**	**0**	**711**	**2**	**0**	**1**	**0**	**0**	**3**
2:00 PM	0	145	13	0	0	158	13	0	21	0	0	34	15	194	1	1	0	211	2	0	0	0	0	2
2:15 PM	0	177	5	0	0	182	15	0	30	0	0	45	21	206	0	0	0	227	0	0	0	0	0	0
2:30 PM	0	184	10	0	0	194	18	0	29	0	0	47	20	215	0	0	0	235	2	0	0	0	0	2
2:45 PM	0	186	14	0	0	200	12	0	18	0	0	30	32	201	1	0	0	234	2	0	0	0	0	2
Hourly Total	**0**	**692**	**42**	**0**	**0**	**734**	**58**	**0**	**98**	**0**	**0**	**156**	**88**	**816**	**2**	**1**	**0**	**907**	**6**	**0**	**0**	**0**	**0**	**6**
3:00 PM	0	193	14	0	0	207	21	0	46	0	0	67	40	224	0	4	0	268	1	0	0	0	0	1
3:15 PM	1	192	29	0	0	222	12	0	24	0	0	36	28	269	1	0	0	298	3	0	0	0	0	3
3:30 PM	1	244	42	0	0	287	17	0	23	0	0	40	39	249	2	2	0	292	3	0	1	0	0	4
3:45 PM	0	234	38	0	0	272	62	0	47	0	0	109	36	256	1	0	0	293	5	0	1	0	0	6
Hourly Total	**2**	**863**	**123**	**0**	**0**	**988**	**112**	**0**	**140**	**0**	**0**	**252**	**143**	**998**	**4**	**6**	**0**	**1151**	**12**	**0**	**2**	**0**	**0**	**14**
4:00 PM	0	238	10	0	0	248	50	0	42	0	0	92	28	217	0	1	0	246	5	0	0	0	0	5
4:15 PM	1	270	6	0	0	277	16	0	28	0	0	44	18	250	0	0	0	268	0	0	1	0	0	1
4:30 PM	0	254	10	1	0	265	8	0	21	0	0	29	29	276	1	0	0	306	3	0	2	0	0	5
4:45 PM	0	258	12	0	0	270	14	0	15	0	0	29	30	303	0	1	0	334	2	0	0	0	0	2
Hourly Total	**1**	**1020**	**38**	**1**	**0**	**1060**	**88**	**0**	**106**	**0**	**0**	**194**	**105**	**1046**	**1**	**2**	**0**	**1154**	**10**	**0**	**3**	**0**	**0**	**13**
5:00 PM	1	273	11	0	0	285	9	0	25	0	0	34	29	303	0	1	0	333	2	0	0	0	0	2
5:15 PM	0	254	15	0	0	269	15	0	19	0	0	34	20	323	0	1	0	344	2	0	0	0	0	2
5:30 PM	0	262	12	0	0	274	10	0	12	0	0	22	25	234	1	1	0	261	2	0	0	0	0	2
5:45 PM	0	237	8	0	0	245	7	0	13	0	0	20	19	245	1	1	0	266	1	0	1	0	0	2
Hourly Total	**1**	**1026**	**46**	**0**	**0**	**1073**	**41**	**0**	**69**	**0**	**0**	**110**	**93**	**1105**	**2**	**4**	**0**	**1204**	**7**	**0**	**1**	**0**	**0**	**8**
6:00 PM	0	184	3	0	0	187	3	0	21	0	0	24	13	205	0	1	0	219	6	0	1	0	0	7
6:15 PM	0	198	12	1	0	211	4	0	16	0	0	20	19	206	0	0	0	225	0	0	0	0	0	0
6:30 PM	0	202	3	0	0	205	6	0	17	0	0	23	14	181	0	0	0	195	0	0	0	0	0	0
6:45 PM	1	168	5	0	0	174	7	0	11	0	0	18	15	209	0	1	0	225	1	0	0	0	0	1
Hourly Total	**1**	**752**	**23**	**1**	**0**	**777**	**20**	**0**	**65**	**0**	**0**	**85**	**61**	**801**	**0**	**2**	**0**	**864**	**7**	**0**	**1**	**0**	**0**	**8**

Appendix C- Turn Lane Analysis

Turn Lane Lengths

Movement	Turning Vol. (AM)	Turning Vol. (PM)	Cycles/ Hour	Veh/Cycle (AM)	Veh/Cycle (PM)	Avg. Veh/Cycle	Storage Length (ft.)	Condition "A"	Condition "B"	Condition "C"	ODOT Calculated Length (ft.)	Existing Turn Lane Length (ft.)	Rec. Length (ft.)	Posted Speed	Design Speed	Existing Control	Proposed Control	Jurisdiction
1NBL	10	1	60	0.167	0.017	0.2	50		225	195	225	500	NC	45	50	Signalized	Signalized	City of Riverside
1NBR	123	108	60	2.050	1.800	2.1	105		225	250	250	350	NC	45	50	Signalized	Signalized	City of Riverside
1SBL	137	48	60	2.283	0.800	2.3	115		225	260	260	200	260	45	50	Signalized	Signalized	City of Riverside

Intersection Legend

1-Woodman Drive & Eastman Avenue/AES Drive

Appendix D- Signal Warrant Analysis

STUDY AND ANALYSIS INFORMATION

Municipality:	City of Riverside	**Traffic Volumes Obtained By:**	Choice One Engineering
County:	Montgomery	**Analysis Date:**	10/7/2021
ODOT Engineering District:	7	**Agency/ Company Name Performing Warrant Analysis:**	Choice One Engineering

Analysis Information

Data Collection Date: 9/14/2021

Day of the Week: Tuesday

Is the intersection in a built-up area of an isolated community of <10,000 population? No

Existing Traffic Signal at intersection: Yes

Total Number of Approaches at Intersection: 4

Major Street Information

Major Street Name and Route Number: Woodman Drive

Major Street Approach Direction: N-Bound / S-Bound

Number of Thru Lanes on Each Major Street Approach: 2 **LANE(S)**

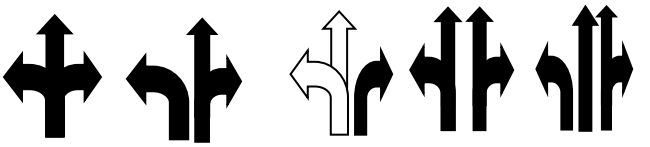
Speed Limit or 85th Percentile Speed on the Major Street*: 45 **MPH**

*Unknown assumes below 45 mph

Minor Street Information

Minor Street Name and Route Number: Eastman Avenue

Minor Street Approach Configuration: 2 E-Bound / 2 W-Bound



1 2 3 4 5

Number of Thru Lanes on Each Minor Street Approach: 1 **LANE(S)**

Apply Right Turn Lane Reduction*: Yes

*Right Turn Lane Reduction Shall be used for Warrants 1, 2, & 3 for New ODOT Signals. Please refer to TEM 402-3.2 for clarification and criteria under which Right Turn Reduction is not required.

TRAFFIC SIGNAL WARRANT ANALYSIS FINDINGS

	Applicable?	Warrant Satisfied?	Notes and Comments:	
Warrant 1, Eight-Hour Vehicular Volume	Yes	**Yes**	Condition B was met. Condition B (70%) was met.	
Warrant 2, Four-Hour Vehicular Volume	Yes	**Yes**	Figure 4C-1 (100%)	
Warrant 3, Peak Hour	Yes	**Yes**	Signals installed under Warrant 3 should be traffic actuated.	**Peak Hour** 7:45 AM 8:45 AM
For Warrants 1-3, new ODOT signals must be based off of 100% volume thresholds (TEM 402-3.2)				
Warrant 4, Pedestrian Volume	No		If this warrant is met, and a traffic control signal is justified by an engineering study, the traffic control signal shall be equipped with pedestrian signal heads complying with the provisions set forth in Chapter 4E of the OMUTCD.	**Peak Hour** 4:30 PM 5:30 PM
Warrant 5, School Crossing	No		N/A	
Warrant 6, Coordinated Signal System	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 7, Crash Experience	No		If this is the sole warrant, signal must be semi-actuated with control devices which provide proper coordination if installed at an intersection within a coordinated system and normally should be fully traffic actuated if installed at an isolated intersection.	
Warrant 8, Roadway Network	No		(Shall not be used as the sole warrant in the analysis)	
Warrant 9, Intersection Near a Grade Crossing	No		Figure 4C-9	
Multi-Way Stop Warrant	No		May be used as an interim measure if traffic signal warrants are satisfied.	

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

If no warrants are satisfied, additional options may be considered:

1. An engineering study, performed by a firm prequalified by ODOT for signal design, if approved by the ODOT district, may be used to justify a new signal installation or retention of an existing signal that otherwise does not meet the published warrants. An example of such an instance is a traffic signal in proximity to a railroad crossing that serves to reduce queuing across the tracks.
2. According to TEM 402-2, If the actual turning movement counts fail to satisfy a signal warrant, it may be acceptable to use traffic volumes projected to the second year after project completion. The **Modeling and Forecasting Section** should provide the projected traffic volumes.
3. A pedestrian hybrid beacon may be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants (see Chapter 4C of TEM) or at a location that meets traffic signal warrants under Sections 4C.05 and/or 4C.06 but a decision is made to not install a traffic control signal. **Please fill inputs on PHB Score Sheet and submit to ODOT.**

Considerations such as geometrics and lack of sight distance generally have not been accepted in lieu of satisfying signal warrants. These considerations may allow an otherwise unwarranted traffic signal to be retained at **100 percent** local cost. Please review TEM 402-4 for details.

Conclusion: Install New Traffic Signal

Notes:

OMUTCD WARRANT 1, EIGHT-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach	
Major Street:	2 or More Lanes
Minor Street:	1 Lane

Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street? Yes

**Only applicable after an adequate trial of other alternatives (See section 4C.02.06 of the 2012 OMUTCD)*

Lanes Major/ Minor	Adjusted Volumes		Condition A				Condition B				Combination A/B*							
											Cond. A		Cond. B		Cond. A		Cond. B	
	Major	Minor	100%		70%		100%		70%		80%		80%		56%		56%	
			Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.	Maj.	Min.
1 / 1			500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1	X		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+			600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+			500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
12:00 AM	0	0																
12:15 AM	0	0																
12:30 AM	0	0																
12:45 AM	0	0																
1:00 AM	0	0																
1:15 AM	0	0																
1:30 AM	0	0																
1:45 AM	0	0																
2:00 AM	0	0																
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4:00 AM	0	0																
4:15 AM	0	0																
4:30 AM	0	0																
4:45 AM	0	0																
5:00 AM	0	0																
5:15 AM	152	12																
5:30 AM	364	24													1			
5:45 AM	637	42	1		1				1		1						1	1
6:00 AM	949	55					1						1					
6:15 AM	1165	70																
6:30 AM	1346	87													1	1		
6:45 AM	1629	106	1		1	1			1	1	1						1	1
7:00 AM	1893	163					1	1					1	1				
7:15 AM	1978	178																
7:30 AM	1983	193													1	1		
7:45 AM	1870	213	1	1	1	1			1	1	1	1					1	1
8:00 AM	1651	188					1	1					1	1				
8:15 AM	1481	169																
8:30 AM	1386	139													1	1		
8:45 AM	1259	100	1		1				1	1	1						1	1
9:00 AM	1205	79					1	1					1	1				
9:15 AM	1185	75																
9:30 AM	1197	77													1			
9:45 AM	1204	77	1		1				1	1	1						1	1
10:00 AM	1227	72					1						1	1				
10:15 AM	1254	70																
10:30 AM	1274	67													1			
10:45 AM	1287	67	1		1				1	1	1						1	1
11:00 AM	1327	63					1						1	1				
11:15 AM	1360	63																
11:30 AM	1401	65													1			
11:45 AM	1401	67	1		1				1	1	1						1	1
12:00 PM	1396	64					1						1	1				
12:15 PM	1404	68																
12:30 PM	1370	70													1			
12:45 PM	1365	78	1		1				1	1	1						1	1
1:00 PM	1324	86					1	1					1	1				
1:15 PM	1362	92																
1:30 PM	1429	111													1	1		
1:45 PM	1527	120	1		1	1			1	1	1	1					1	1
2:00 PM	1641	125					1	1					1	1				
2:15 PM	1747	153																
2:30 PM	1858	146													1	1		
2:45 PM	2008	139	1		1	1			1	1	1	1					1	1
3:00 PM	2139	196					1	1					1	1				
3:15 PM	2158	200																
3:30 PM	2183	206													1	1		
3:45 PM	2175	206	1	1	1	1			1	1	1	1					1	1
4:00 PM	2214	150					1	1					1	1				
4:15 PM	2338	113																
4:30 PM	2406	106													1	1		
4:45 PM	2370	95	1		1				1	1	1						1	1
5:00 PM	2277	90					1	1					1	1				
5:15 PM	2065	83																
5:30 PM	1888	73													1			
5:45 PM	1753	76	1		1				1	1	1						1	1
6:00 PM	1641	74					1						1	1				
6:15 PM	1235	51																
6:30 PM	799	34													1			
6:45 PM	399	14																
7:00 PM	0	0																
7:15 PM	0	0																
7:30 PM	0	0																
7:45 PM	0	0																
8:00 PM	0	0																
8:15 PM	0	0																
8:30 PM	0	0																
8:45 PM	0	0																
9:00 PM	0	0																
9:15 PM	0	0																
9:30 PM	0	0																
9:45 PM	0	0																
HOURS MET			**13**	**2**	**13**	**5**	**13**	**8**	**13**	**12**	**13**	**4**	**13**	**12**	**14**	**7**	**13**	**13**
WARRANT SATISFIED?			**NO**		**NO**		**YES**		**YES**		**NO**				**NO**			

Warrant Met: Yes

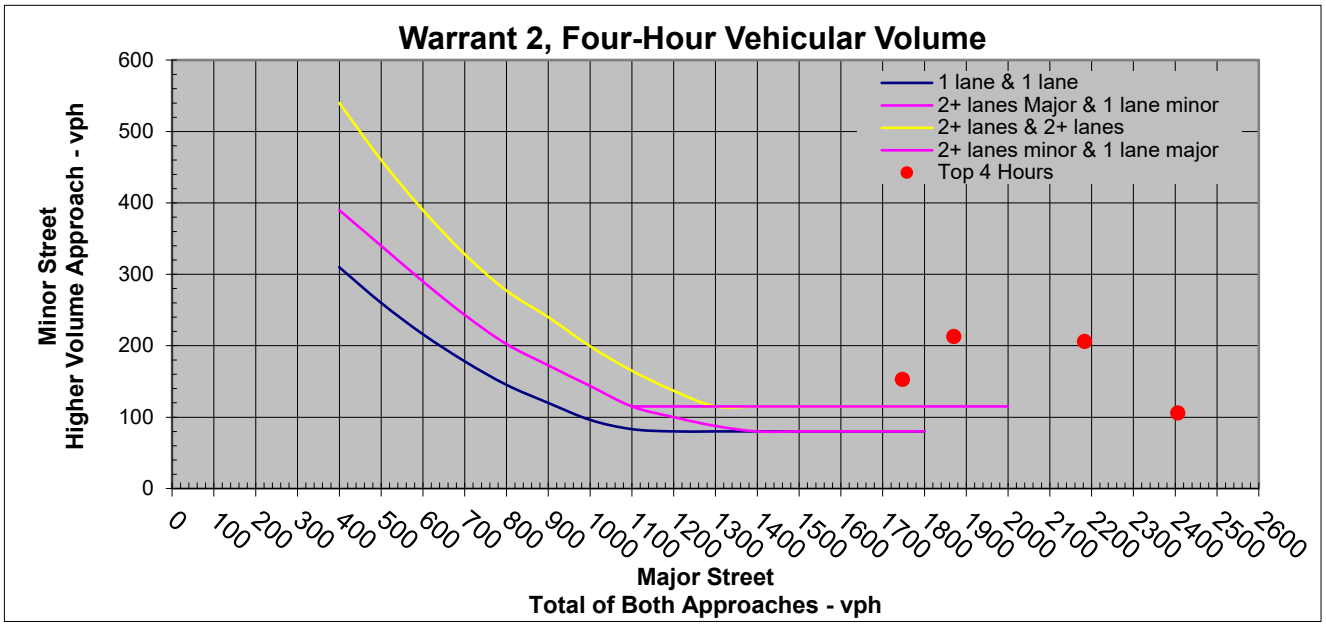
Notes: Condition B was met. Condition B (70%) was met.

OMUTCD WARRANT 2, FOUR-HOUR VEHICULAR VOLUME

Number of Lanes for Moving Traffic on Each Approach		Total Number of Unique Hours Met on Figure 4C-1	8
Major street:	2 or More Lanes	Total Number of Unique Hours Met on Figure 4C-2 (70% Factor)	12
Minor Street:	1 Lane		

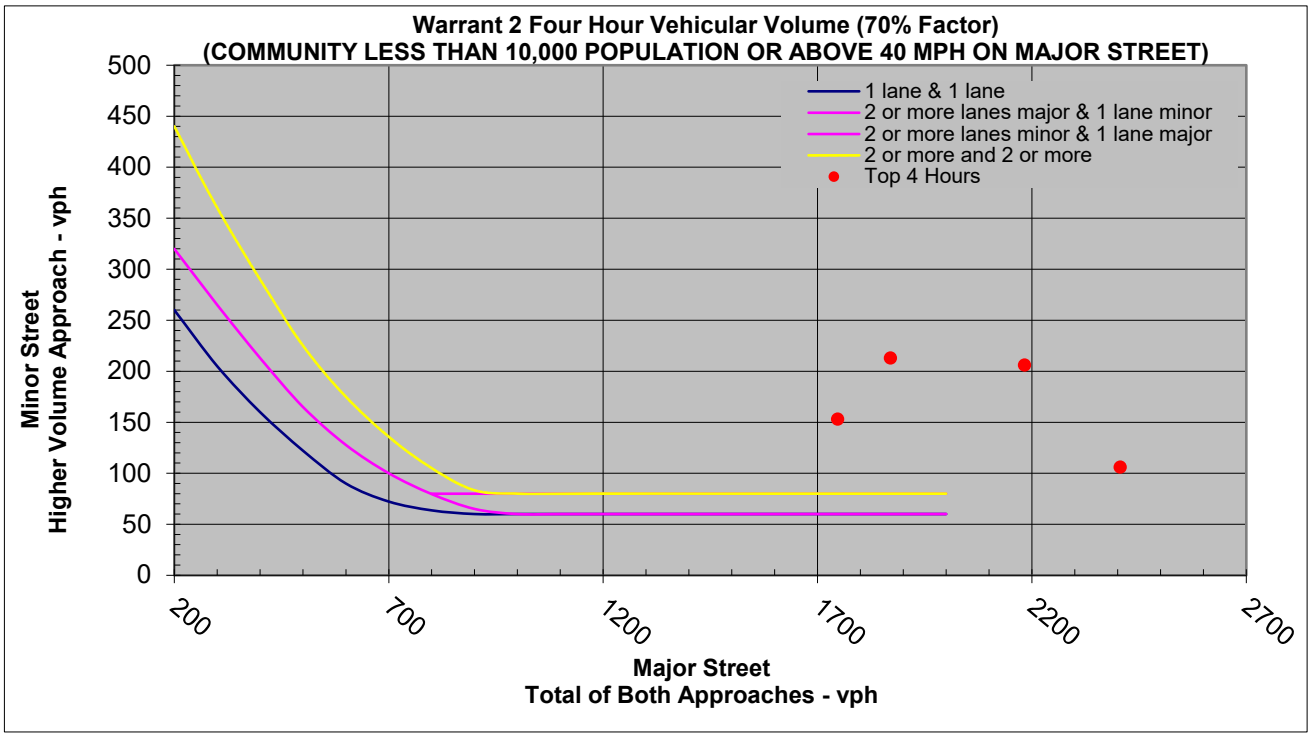
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

Hour Interval Beginning At	Raw Traffic Counts				Total Major Approach Volumes	Highest Actual Minor Street Approach Volumes	Hour Met?	Hour Met? (70% Factor)
	Major - Woodman Drive		Minor - Eastman Avenue					
	N-Bound	S-Bound	W-Bound	E-Bound				
6:00 AM	451	498	55	1	949	55		
6:15 AM	558	607	70	1	1165	70		Met
6:30 AM	660	686	87	1	1346	87	Met	
6:45 AM	778	851	106	1	1629	106		
7:00 AM	868	1025	163	1	1893	163		
7:15 AM	913	1065	178	1	1978	178		Met
7:30 AM	891	1092	193	2	1983	193	Met	
7:45 AM	821	1049	213	2	1870	213		
8:00 AM	729	922	188	3	1651	188		
8:15 AM	637	844	169	4	1481	169		Met
8:30 AM	612	774	139	3	1386	139	Met	
8:45 AM	589	670	100	2	1259	100		
9:00 AM	555	650	79	1	1205	79		
9:15 AM	552	633	75	3	1185	75		Met
9:30 AM	558	639	77	5	1197	77		
9:45 AM	564	640	77	9	1204	77		
10:00 AM	592	635	72	10	1227	72		
10:15 AM	611	643	70	10	1254	70		Met
10:30 AM	621	653	67	9	1274	67		
10:45 AM	648	639	67	7	1287	67		
11:00 AM	687	640	63	7	1327	63		
11:15 AM	723	637	63	8	1360	63		Met
11:30 AM	746	655	65	7	1401	65		
11:45 AM	736	665	67	5	1401	67		
12:00 PM	717	679	64	5	1396	64		
12:15 PM	706	698	68	1	1404	68		Met
12:30 PM	695	675	70	1	1370	70		
12:45 PM	714	651	78	2	1365	78		
1:00 PM	711	613	86	2	1324	86	Met	
1:15 PM	753	609	92	3	1362	92		Met
1:30 PM	807	622	111	3	1429	111		
1:45 PM	848	679	120	3	1527	120		
2:00 PM	907	734	125	3	1641	125	Met	
2:15 PM	964	783	153	3	1747	153		Met
2:30 PM	1035	823	146	4	1858	146		
2:45 PM	1092	916	139	6	2008	139		
3:00 PM	1151	988	196	8	2139	196	Met	
3:15 PM	1129	1029	200	10	2158	200		Met
3:30 PM	1099	1084	206	10	2183	206		
3:45 PM	1113	1062	206	11	2175	206		
4:00 PM	1154	1060	150	8	2214	150	Met	
4:15 PM	1241	1097	113	7	2338	113		Met
4:30 PM	1317	1089	106	7	2406	106		
4:45 PM	1272	1098	95	4	2370	95		
5:00 PM	1204	1073	90	5	2277	90	Met	
5:15 PM	1090	975	83	8	2065	83		Met
5:30 PM	971	917	73	7	1888	73		
5:45 PM	905	848	76	6	1753	76		
6:00 PM	864	777	74	4	1641	74		
6:15 PM	645	590	51	1	1235	51		
6:30 PM	420	379	34	1	799	34		
6:45 PM	225	174	14	1	399	14		
7:00 PM	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0		



Top Hours for Figure 4C-1	Start Time	End Time	Major Street	Minor Street
Top Hour	7:45 AM	8:45 AM	1870	213
2nd Highest Hour	3:30 PM	4:30 PM	2183	206
3rd Highest Hour	2:15 PM	3:15 PM	1747	153
4th Highest Hour	4:30 PM	5:30 PM	2406	106

Top Hours for Figure 4C-2	Start Time	End Time	Major Street	Minor Street
Top Hour	7:45 AM	8:45 AM	1870	213
2nd Highest Hour	3:30 PM	4:30 PM	2183	206
3rd Highest Hour	2:15 PM	3:15 PM	1747	153
4th Highest Hour	4:30 PM	5:30 PM	2406	106



Are the requirements for Warrant 2 met?: **Yes**

OMUTCD WARRANT 3, PEAK HOUR

Number of Lanes for Moving Traffic on Each Approach		Peak Hour Start time	7:45 AM
Major Street:	2 or More Lanes	Peak Hour End Time	8:45 AM
Minor Street:	1 Lane		

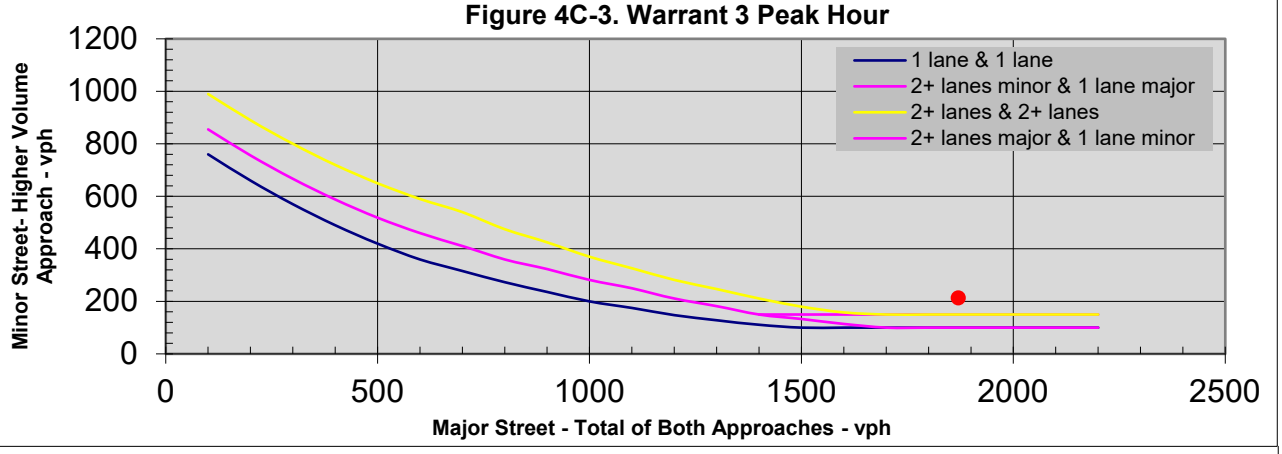
Built up Isolated Community with Less Than 10,000 Population or Above 40 MPH on Major Street?	Yes

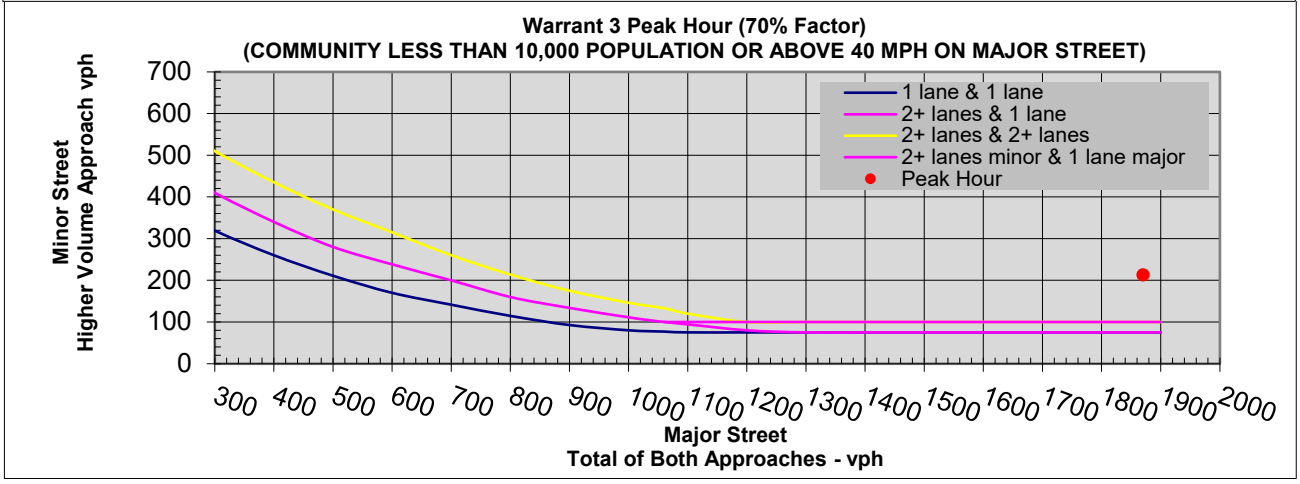
Is this signal warrant being applied for an unusual case, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time?	No

Indicate whether all three of the following conditions for the same 1 hour (any four consecutive 15-minute periods) of an average day are present*	
Does the total stopped time delay experienced by the traffic on one minor-street approach (one direction only) controlled by a STOP sign equal or exceed 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach?	No
Does the volume on the same minor-street approach (one direction only) equal or exceed 100 vehicles per hour for one moving lane of traffic or 150 vehicles per hour for two moving lanes?	Yes
Does the total entering volume serviced during the hour equal or exceed 650 vehicles per hour for intersection with three approaches or 800 vehicles per hour for intersections with four or more approaches?	Yes
**If applicable, attach all supporting calculations and documentation.*	

Are the requirements for Warrant 3 met?: Yes

Figure 4C-3. Warrant 3 Peak Hour





Hour Vehicular Volume				
Hour Interval Beginning At	Major Street Combined Vehicles Per Hour (VPH)	Highest Minor Street Approach Vehicles Per Hour (VPH)	Sum of Major Street and Highest Minor Street	Sum of Major Street and Combined Minor Street
6:00 AM	949	55	1004	1005
6:15 AM	1165	70	1235	1236
6:30 AM	1346	87	1433	1434
6:45 AM	1629	106	1735	1736
7:00 AM	1893	163	2056	2057
7:15 AM	1978	178	2156	2157
7:30 AM	1983	193	2176	2178
7:45 AM	1870	213	2083	2085
8:00 AM	1651	188	1839	1842
8:15 AM	1481	169	1650	1654
8:30 AM	1386	139	1525	1528
8:45 AM	1259	100	1359	1361
9:00 AM	1205	79	1284	1285
9:15 AM	1185	75	1260	1263
9:30 AM	1197	77	1274	1279
9:45 AM	1204	77	1281	1290
10:00 AM	1227	72	1299	1309
10:15 AM	1254	70	1324	1334
10:30 AM	1274	67	1341	1350
10:45 AM	1287	67	1354	1361
11:00 AM	1327	63	1390	1397
11:15 AM	1360	63	1423	1431
11:30 AM	1401	65	1466	1473
11:45 AM	1401	67	1468	1473
12:00 PM	1396	64	1460	1465
12:15 PM	1404	68	1472	1473
12:30 PM	1370	70	1440	1441
12:45 PM	1365	78	1443	1445
1:00 PM	1324	86	1410	1412
1:15 PM	1362	92	1454	1457
1:30 PM	1429	111	1540	1543
1:45 PM	1527	120	1647	1650
2:00 PM	1641	125	1766	1769
2:15 PM	1747	153	1900	1903
2:30 PM	1858	146	2004	2008
2:45 PM	2008	139	2147	2153
3:00 PM	2139	196	2335	2343
3:15 PM	2158	200	2358	2368
3:30 PM	2183	206	2389	2399
3:45 PM	2175	206	2381	2392
4:00 PM	2214	150	2364	2372
4:15 PM	2338	113	2451	2458
4:30 PM	2406	106	2512	2519
4:45 PM	2370	95	2465	2469
5:00 PM	2277	90	2367	2372
5:15 PM	2065	83	2148	2156
5:30 PM	1888	73	1961	1968
5:45 PM	1753	76	1829	1835
6:00 PM	1641	74	1715	1719
6:15 PM	1235	51	1286	1287
6:30 PM	799	34	833	834
6:45 PM	399	14	413	414
7:00 PM	0	0	0	0
7:15 PM	0	0	0	0
7:30 PM	0	0	0	0
7:45 PM	0	0	0	0
8:00 PM	0	0	0	0

Actual Peak Hour Major Traffic Volume	Actual Peak Hour Minor Traffic Volume	Required Peak Hour Minor Traffic Volume for Fig. 4C-3	Required Peak Hour Minor Traffic Volume for Fig. 4C-4
1870	213	100	75

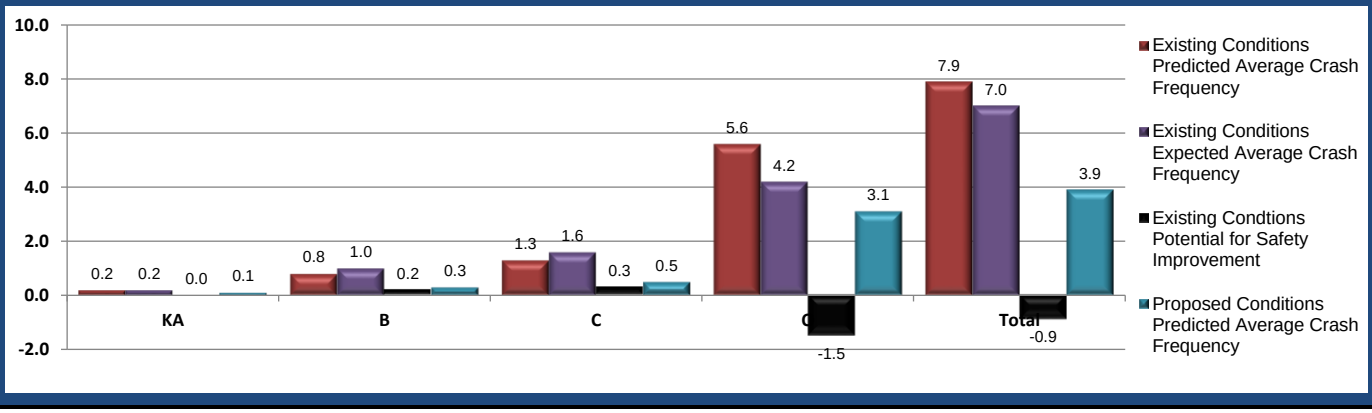
Appendix E- ECAT Analysis

Project Safety Performance Report

General Information

Project Name	Woodman Drive & Eastman Avenue	Contact Email	mkg@choiceoneengineering.com
Project Description	Intersection Improvements	Contact Phone	937-497-0200
Reference Number		Date Performed	2/13/2023
Analyst	MKG	Analysis Year	2023
Agency/Company	Choice One Engineering		

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	0.1510	0.8240	1.3063	5.6137	7.8950
$N_{expected}$ - Existing Conditions	0.1829	1.0077	1.6405	4.1532	6.9843
$N_{potential\ for\ improvement}$ - Existing Conditions	**0.0319**	**0.1837**	**0.3342**	-1.4605	-0.9107
$N_{predicted}$ - Proposed Conditions	0.0551	0.3045	0.4929	3.0657	3.9182

Safety Benefit - Cost Analysis

General Information

Project Name	Woodman Drive & Eastman Avenue	Contact Email	mkg@choiceoneengineering.com
Project Description	Intersection Improvements	Contact Phone	937-497-0200
Reference Number		Date Performed	2/13/2023
Analyst	MKG	Analysis Year	2023
Agency/Company	Choice One Engineering		

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	-0.231	$93,983
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. Added Right Turn Lane)		$0.00			$0.00	$0.00		
CMF 1 - Improve Signal Visibility	20	$259,000.00			$259,000.00	$259,000.00	-0.643	$702,230
CMF 2 - Improve Left Turn Lane offset to create positive offset	20	$1,490,729.00			$1,490,729.00	$1,490,729.00	-2.373	$835,381
CMF 3 - Advanced radar detection (all directions)	20	$54,000.00			$54,000.00	$54,000.00	-0.381	$134,445
CMF 4 - Install additional signal heads (to have one over each lane)	20	$12,000.00			$12,000.00	$12,000.00	-0.349	$155,516
		$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		**$1,815,729.00**	**$0.00**	**$0.00**	**$1,815,729.00**	**$1,815,729.00**	**-3.977**	**$1,921,555**

Safety Benefit - Cost Analysis

General Information

Project Name	Woodman Drive & Eastman Avenue	Contact Email	mkg@choiceoneengineering.com
Project Description	Intersection Improvements	Contact Phone	937-497-0200
Reference Number		Date Performed	2/13/2023
Analyst	MKG	Analysis Year	2023
Agency/Company	Choice One Engineering		

Benefit - Cost Calculator

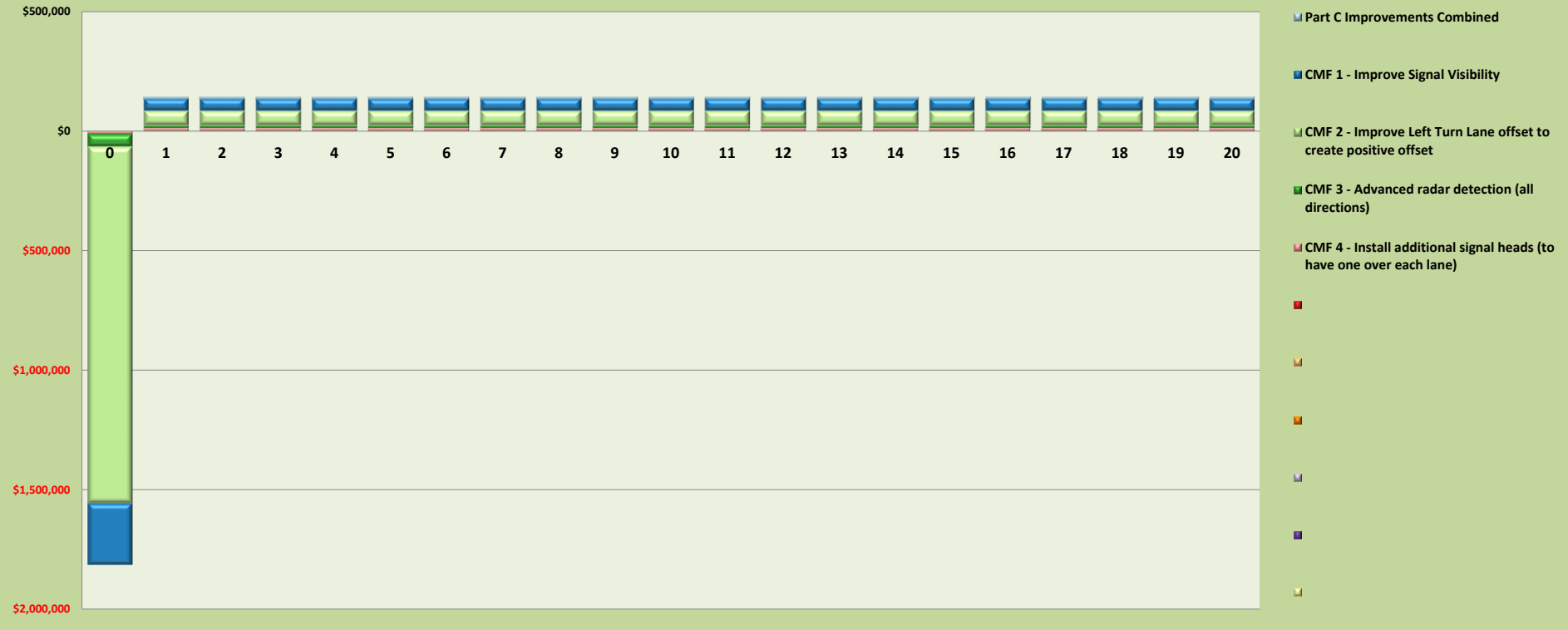
Net Present Value of Project	$1,815,729.00
Net Present Value of Safety Benefits	$1,921,554.54
Net Benefit	$105,825.54
Benefit / Cost Ratio	1.06

Expected Annual Crash Adjustment

Number of Fatal & Incapacitating Injury Crashes	-0.096
Number of Injury Crashes	-1.429
Number of Total Crashes	-3.977

Comments:

Safety Benefits and Project Costs Combined Cash Flows By Countermeasure Per Year

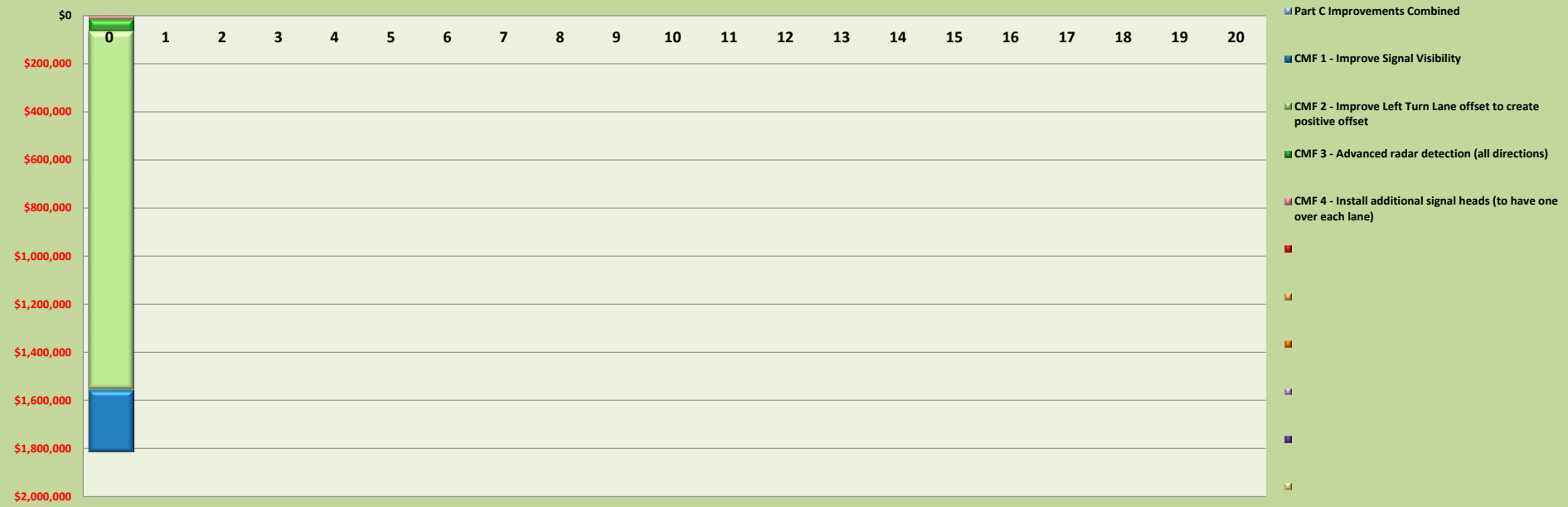


Safety Benefit - Cost Analysis

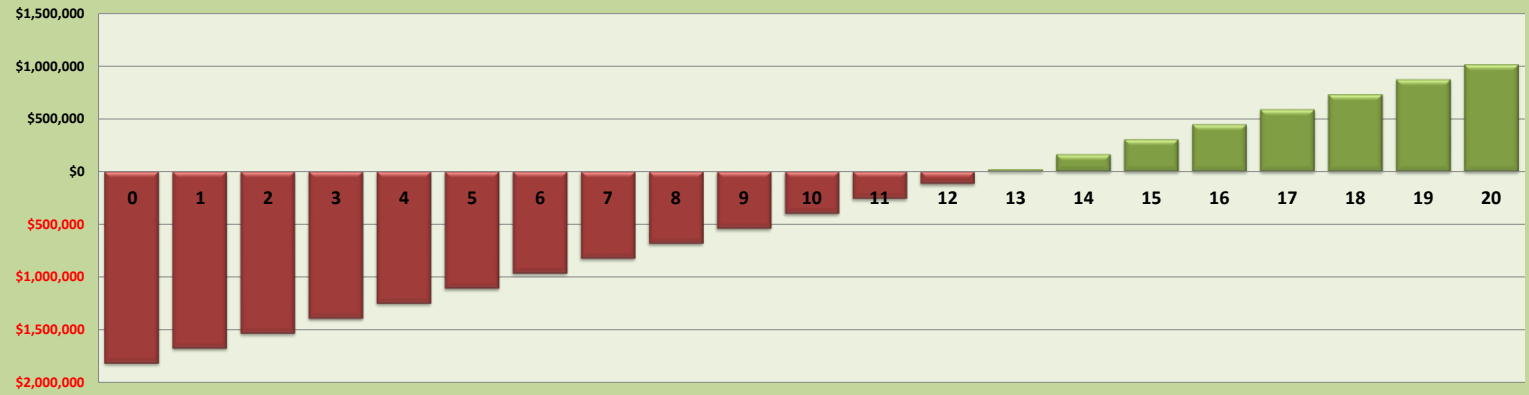
General Information

Project Name	Woodman Drive & Eastman Avenue	Contact Email	mkg@choiceoneengineering.com
Project Description	Intersection Improvements	Contact Phone	937-497-0200
Reference Number		Date Performed	2/13/2023
Analyst	MKG	Analysis Year	2023
Agency/Company	Choice One Engineering		

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: 2036 (13 years)

Percentage of Service Life to observe a continuous Positive Return on Investment: 40.00%

Appendix F- Concept

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

MOT-WOODMAN DR RECONSTRUCTION

CITY OF RIVERSIDE
CITY OF DAYTON
MONTGOMERY COUNTY, OHIO

INDEX OF SHEETS:

LATITUDE: 39° 44′ 60″ LONGITUDE: 84° 07′ 12″

SCALE IN MILES

0 0.25 0.5 0.75 1

N

PORTION TO BE IMPROVED _____

STATE & FEDERAL ROUTES _____

OTHER ROADS _____

DESIGN DESIGNATION

CURRENT ADT (2025)	25278
DESIGN YEAR ADT (2045)	27806
DESIGN HOURLY VOLUME (2045)	2538
DIRECTIONAL DISTRIBUTION	52%
TRUCKS (24 HOUR B&C)	445
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH
DESIGN FUNCTIONAL CLASSIFICATION: 03 PRINCIPAL ARTERIAL (URBAN)	
NHS PROJECT	YES

DESIGN EXCEPTIONS: NONE REQUIRED

ADA DESIGN WAIVERS: NONE REQUIRED

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:

ChoiceOne Engineering
440 E. HOEWISHER ROAD ♦ SIDNEY, OHIO 45365 ♦ 937.497.0200
8956 GLENDALE MILFORD ROAD, SUITE 1 ♦ LOVELAND, OHIO 45140 ♦ 513.239.8554
www.CHOICEONEENGINEERING.com

ENGINEERS SEAL

FOR ENTIRE PLAN EXCEPT ELECTRICAL & SIGNAL PLAN

STATE OF OHIO DANE M SOMMER 80115 REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____

DATE: _____

ENGINEERS SEAL

FOR ELECTRICAL & SIGNAL PLAN

STATE OF OHIO ALLAN J HEITBRINK 82274 REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____

DATE: _____

INDEX OF SHEETS:

STAGE 1 SUBMITTAL
7-22-2022

OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
STANDARD DRAWINGS AND SPEC'S TO BE COMPLETED AT STAGE 2		

PROJECT DESCRIPTION

PROJECT CONSISTS OF THE COMPLETE RECONSTRUCTION OF WOODMAN DRIVE BETWEEN U.S. 35 AND EASTMAN ROAD INCLUDING THE INSTALLATION OF A SHARED USE PATH, ADDITION OF SIDEWALKS, INSTALLATION OF STREET LIGHTING, AND REPLACEMENT OF STORM SEWER. IN ADDITION, THE IMPROVEMENT WILL REPLACE THE TRAFFIC SIGNAL AT THE INTERSECTION OF WOODMAN AND EASTMAN.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	6.3 ACRES
ESTIMATED CONTRACTOR E.D.A.:	0.2 ACRES
NOTICE OF INTENT E.D.A.:	6.5 ACRES

2019 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 EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS XX AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
PUBLIC SERVICE DIRECTOR - RIVERSIDE
DATE _____

APPROVED _____
DISTRICT DEPUTY DIRECTOR
DATE _____

APPROVED _____
DIRECTOR, DEPARTMENT OF TRANSPORTATION
DATE _____

FEDERAL PROJECT NO. E210 (205)

PID NO. 115003

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

MOT-WOODMAN DR RECONSTRUCTION

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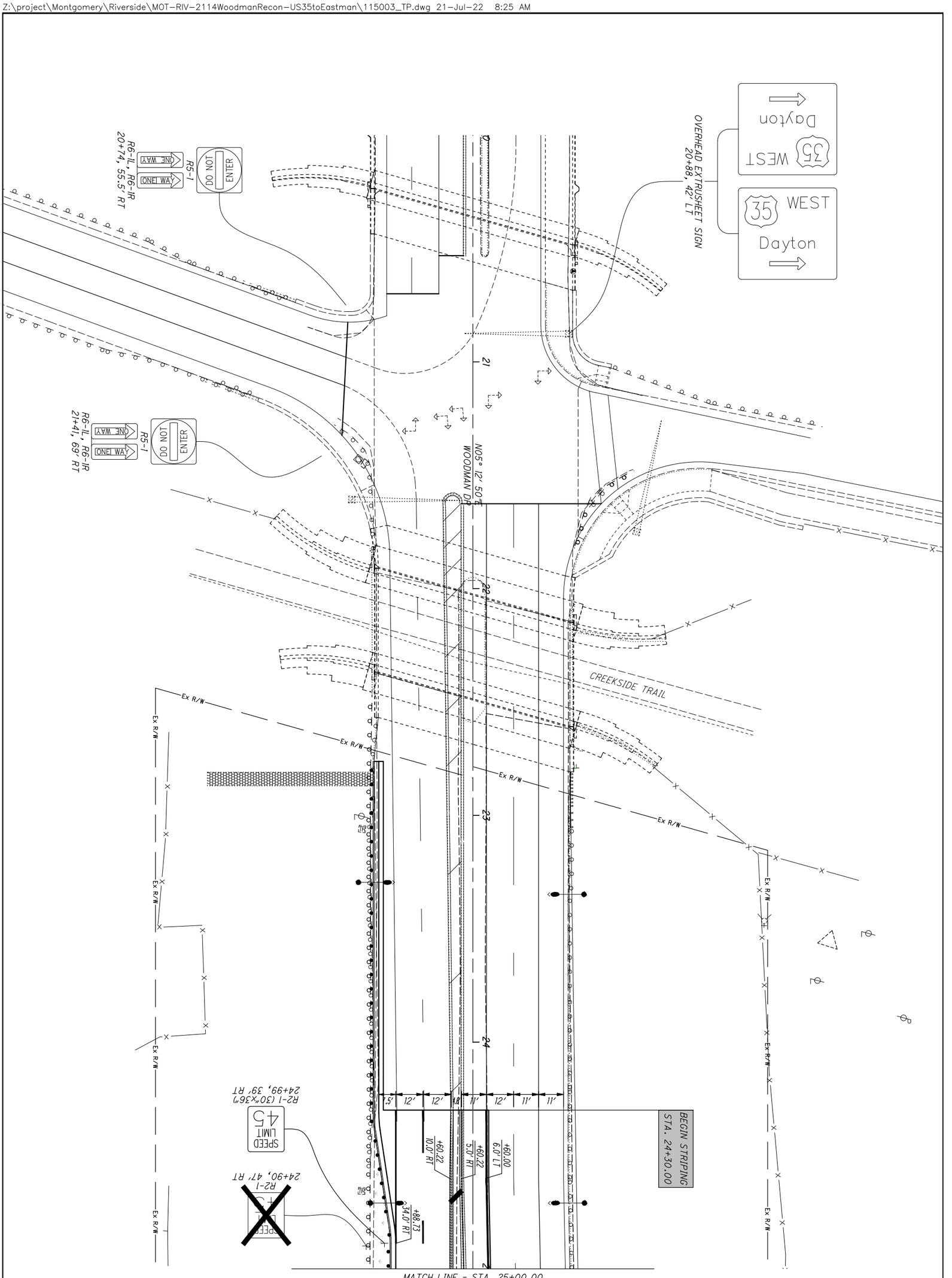
Z:\project\Montgomery\Riverside\MOT-RIV-2114WoodmanRecon-US35toEastman\115003_TP.dwg 21-Jul-22 8:25 AM



MOT-WOODMAN DR RECONSTRUCTION

TRAFFIC CONTROL PLAN
STA. 20+00 TO STA. 25+00

CALCULATED DMS
CHECKED MJT

0 20
10 40
HORIZONTAL SCALE IN FEET

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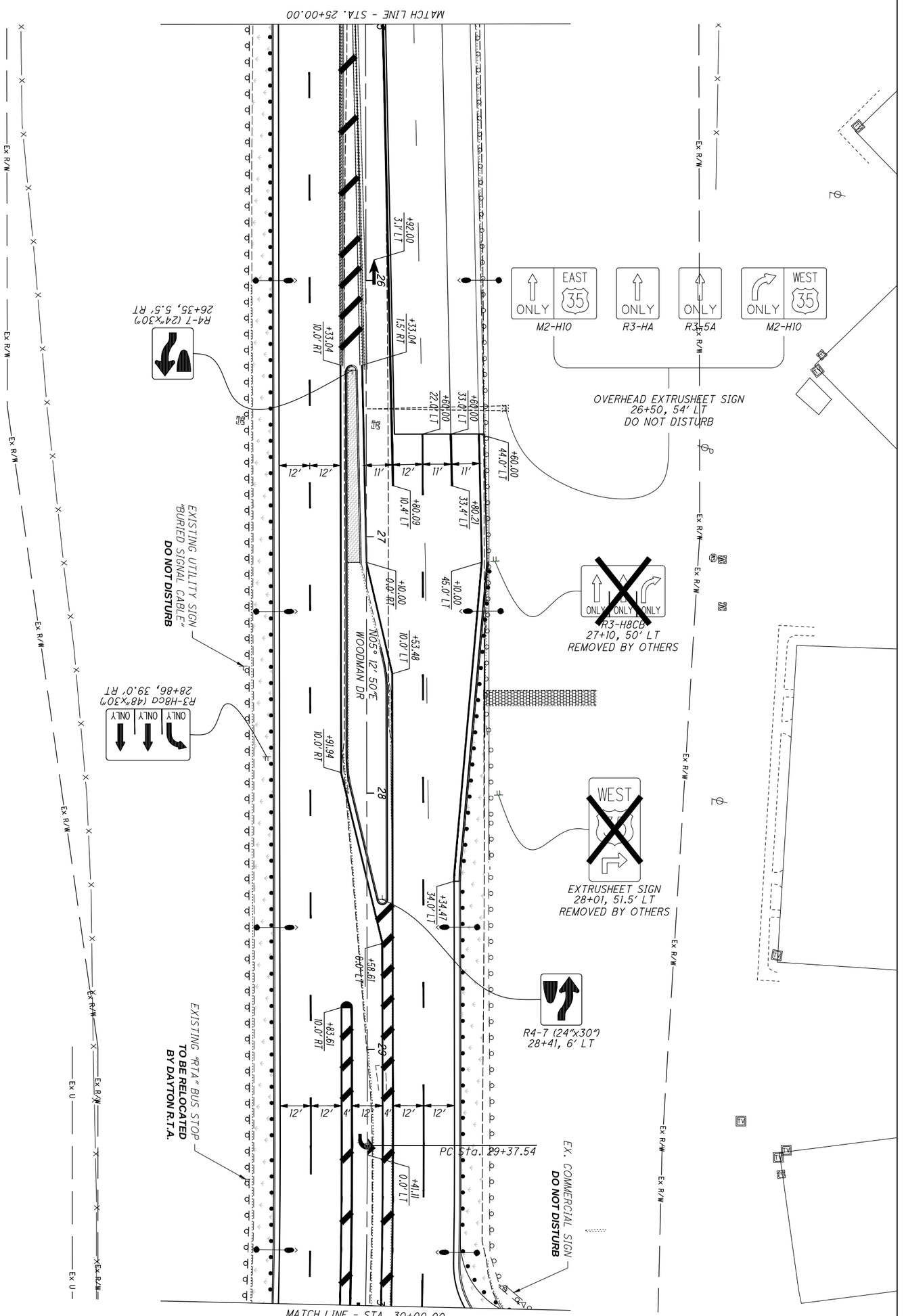

80/106

MOT-WOODMAN DR RECONSTRUCTION

TRAFFIC CONTROL PLAN
STA. 25+00 TO STA. 30+00

CALCULATED DMS
CHECKED MJT

0 10 20 40
HORIZONTAL SCALE IN FEET

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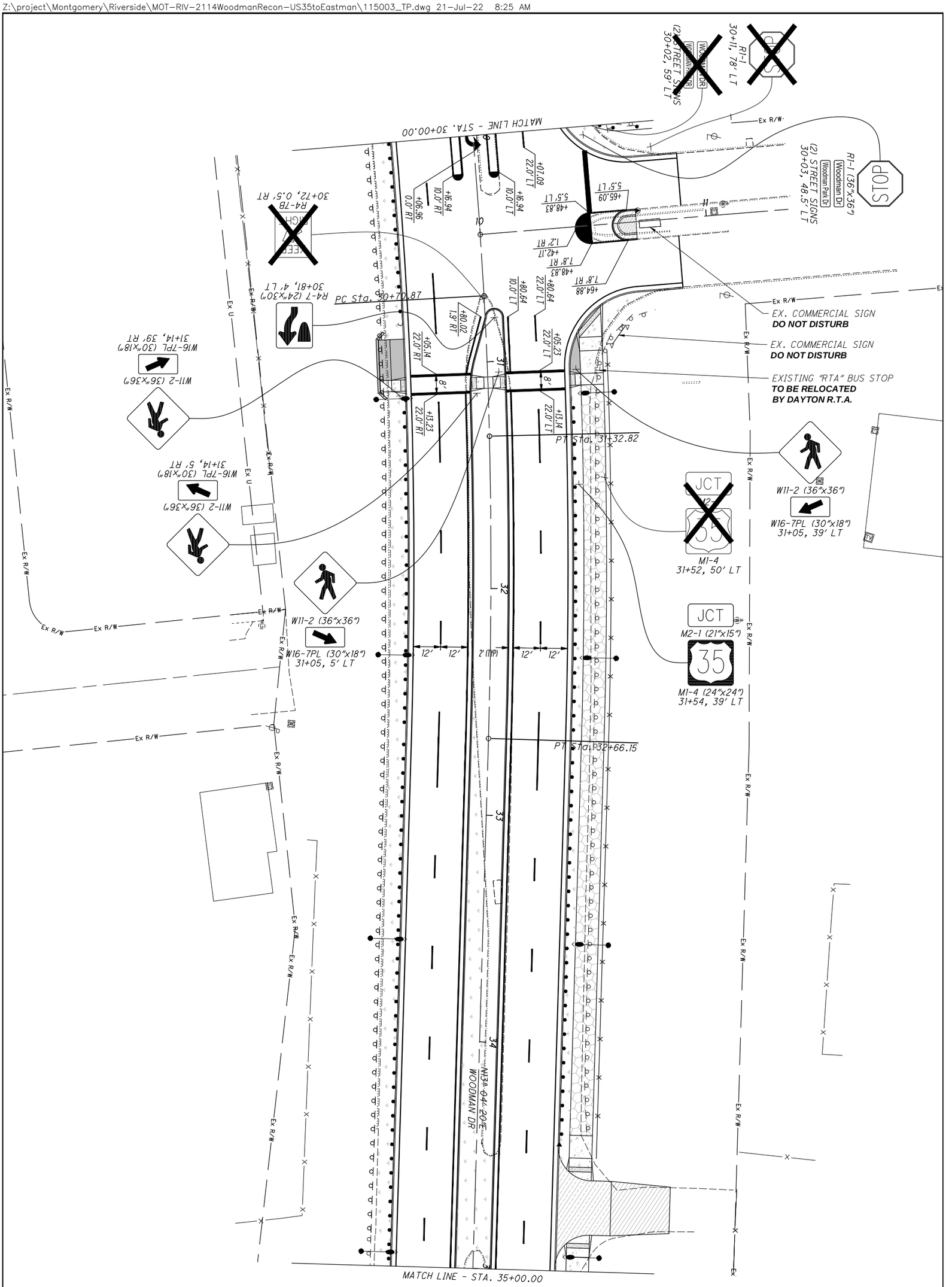

81
106

MOT-WOODMAN DR RECONSTRUCTION

TRAFFIC CONTROL PLAN
STA. 30+00 TO STA. 35+00

CALCULATED DMS
CHECKED MJT

0 20
10 40
HORIZONTAL SCALE IN FEET

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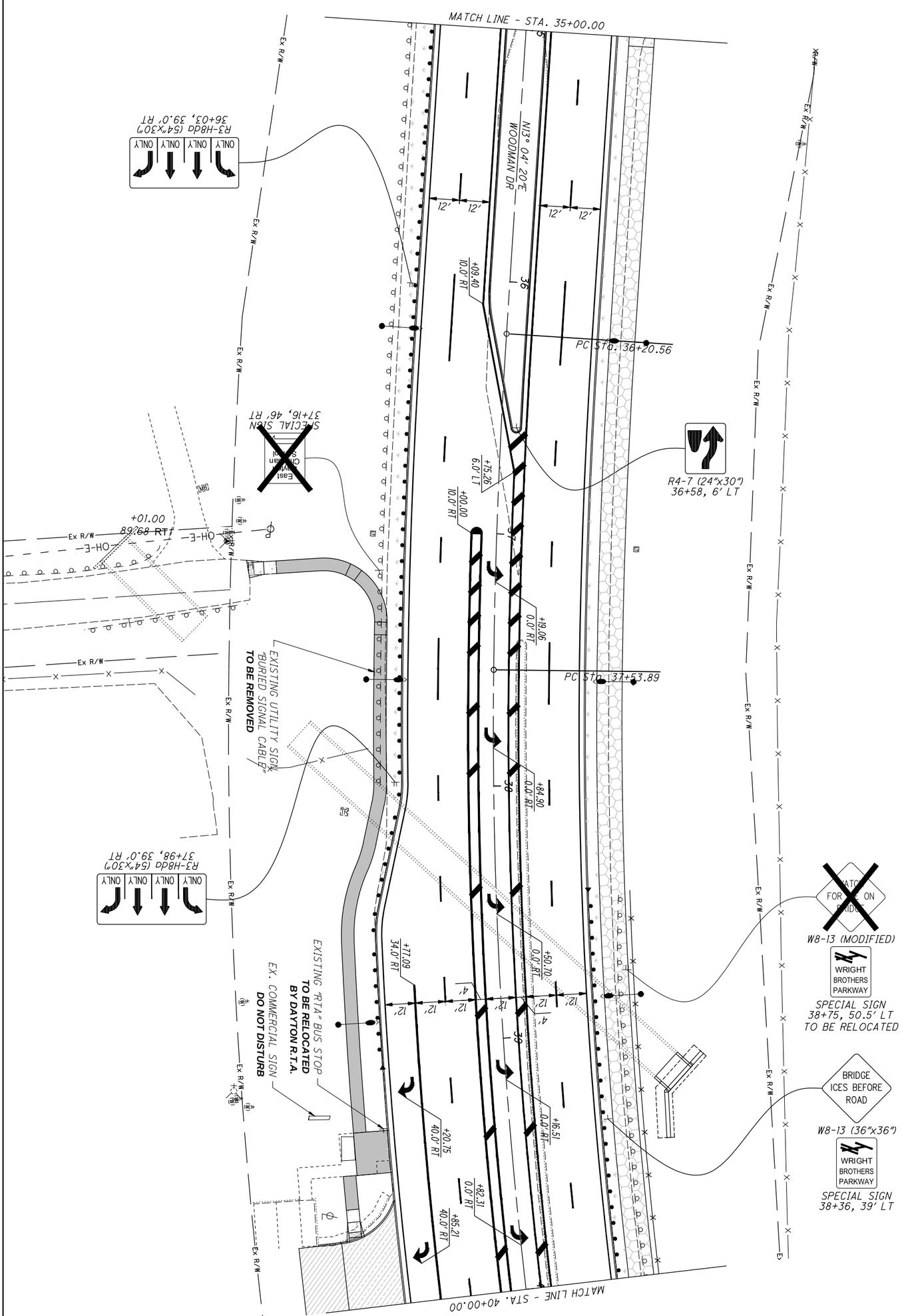

82/106

MOT-WOODMAN DR RECONSTRUCTION

TRAFFIC CONTROL PLAN
STA. 35+00 TO STA. 40+00

CALCULATED DMS
CHECKED MJT

0 20
10 40
HORIZONTAL SCALE IN FEET

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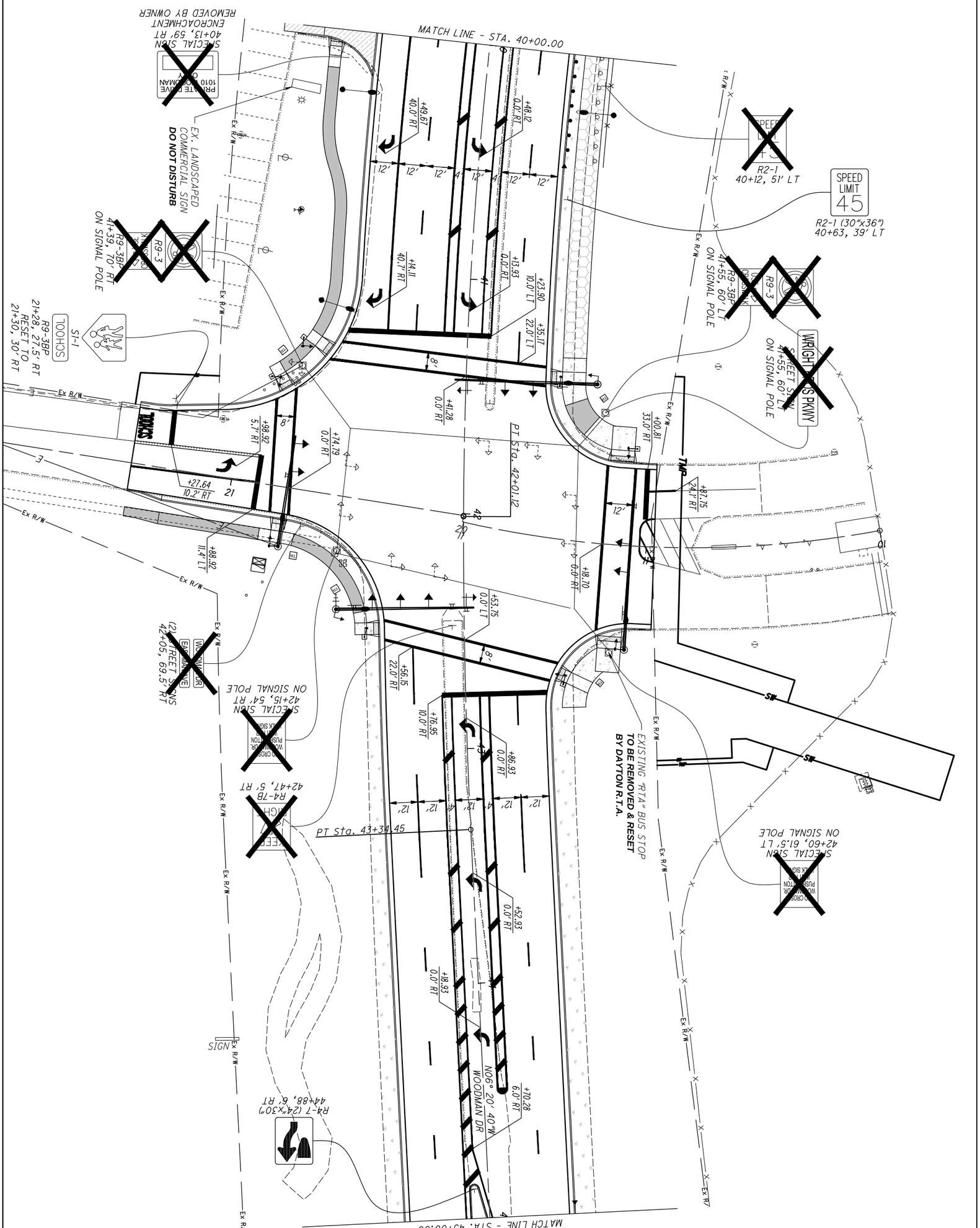

83/106	MOT-WOODMAN DR RECONSTRUCTION	**TRAFFIC CONTROL PLAN** **STA. 40+00 TO STA. 45+00**	CALCULATED DMS CHECKED MJT	0 20 10 40 HORIZONTAL SCALE IN FEET

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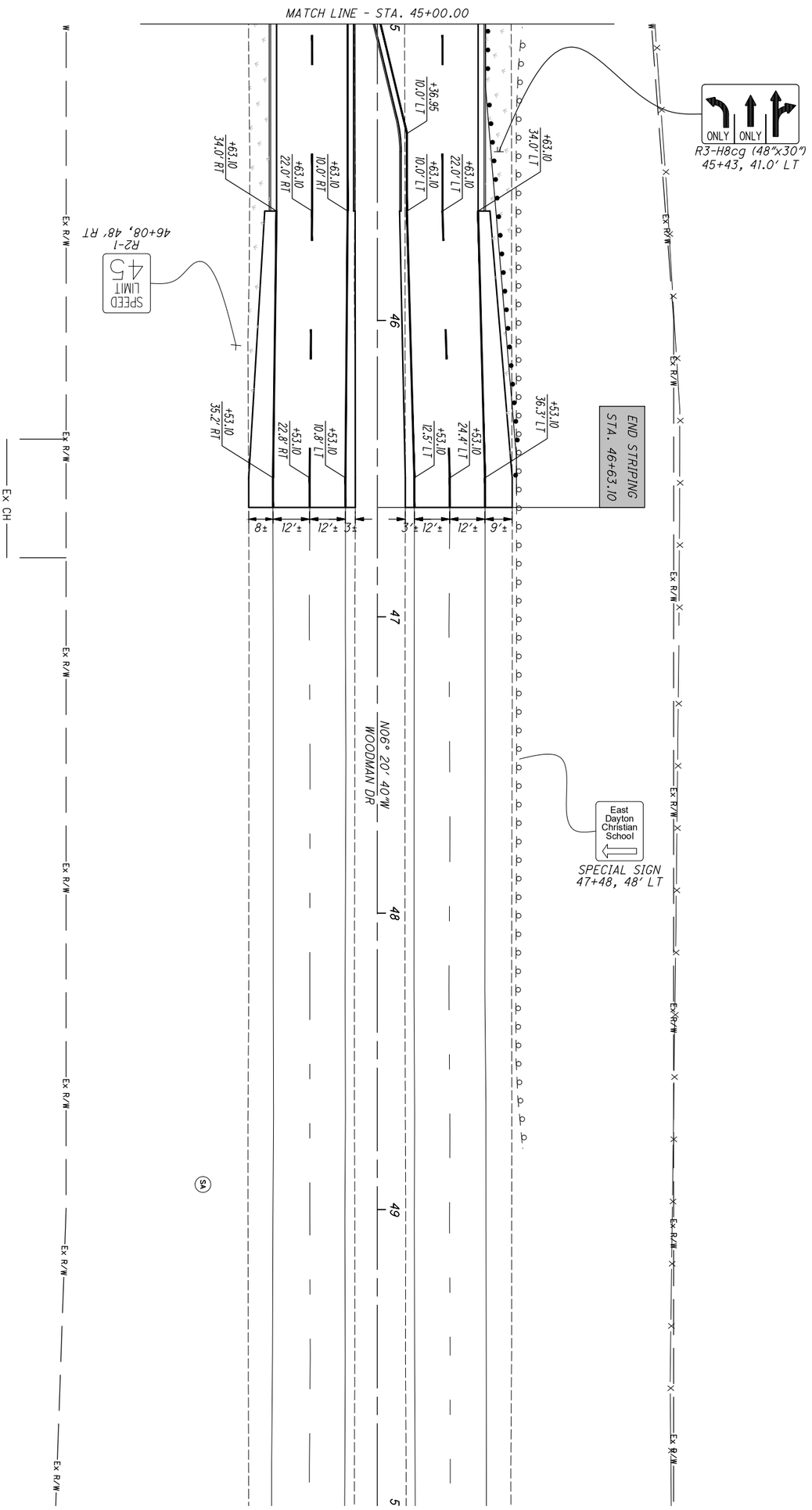

MOT-WOODMAN DR RECONSTRUCTION

TRAFFIC CONTROL PLAN
STA. 45+00 TO STA. 50+00

CALCULATED DMS
CHECKED MJT

0 10 20 40
HORIZONTAL SCALE IN FEET

Appendix G- Cost Estimates

MOT-WOODMAN DR RECONSTRUCTION (PID 115003)

CITY OF RIVERSIDE, OHIO

ENGINEER'S ESTIMATE - HSIP FUNDING

Road reconstruction between STA. 36+00 to 46+63 plus new traffic signal

February 15, 2023

ITEM NO.	DESCRIPTION	UNIT OF MEASURE	APPROX. QTY.	UNIT PRICE	TOTAL
202	PAVEMENT REMOVED	SY	10363	$15.00	$155,445.00
202	CONCRETE MEDIAN REMOVED	SY	139	$25.00	$3,475.00
202	CURB REMOVED	FT	1474	$6.00	$8,844.00
202	PIPE REMOVED, 24" AND UNDER	FT	923	$23.00	$21,229.00
202	PIPE REMOVED, OVER 24"	FT	16	$60.00	$960.00
202	CATCH BASIN REMOVED	EACH	6	$650.00	$3,900.00
203	EXCAVATION	CY	4500	$23.00	$103,500.00
204	SUBGRADE COMPACTION	SY	9511	$2.75	$26,155.25
204	EXCAVATION OF SUBGRADE	CY	2784	$25.00	$69,600.00
204	GRANULAR MATERIAL, TYPE C	CY	2784	$70.00	$194,880.00
204	PROOF ROLLING	HOUR	5	$260.00	$1,300.00
204	GEOGRID	SY	4582	$3.50	$16,037.00
254	PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICK)	SY	569	$6.00	$3,414.00
301	ASPHALT CONCRETE BASE, PG64-22, (449)	CY	1350	$210.00	$283,500.00
304	AGGREGATE BASE	CY	1613	$65.00	$104,845.00
407	NON-TRACKING TACK COAT	GAL	1106	$4.50	$4,977.00
442	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (448)	CY	389	$275.00	$106,975.00
442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	CY	583	$250.00	$145,750.00
605	6" SHALLOW PIPE UNDERDRAINS	FT	1450	$22.00	$31,900.00
609	COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN	FT	2022	$30.00	$60,660.00
609	CURB, TYPE 6, AS PER PLAN	FT	162	$25.00	$4,050.00
611	4" CONDUIT, TYPE E (TRAFFIC CONTROL, PULL BOX DRAINS)	FT	100	$25.00	$2,500.00
611	12" CONDUIT, TYPE B	FT	469	$85.00	$39,865.00
611	12" CONDUIT, TYPE C	FT	114	$80.00	$9,120.00
611	12" CONDUIT, TYPE D	FT	86	$80.00	$6,880.00
611	15" CONDUIT, TYPE D	FT	44	$100.00	$4,400.00
611	30" CONDUIT, TYPE B	FT	16	$450.00	$7,200.00
611	CATCH BASIN, NO. 3	EACH	1	$5,000.00	$5,000.00
611	CATCH BASIN, NO. 3A	EACH	8	$3,000.00	$24,000.00
611	CATCH BASIN, NO. 6, AS PER PLAN	EACH	1	$3,000.00	$3,000.00
611	CATCH BASIN, NO. 2-2A	EACH	2	$2,500.00	$5,000.00
611	CATCH BASIN, NO. 2-2B	EACH	1	$2,500.00	$2,500.00
611	CATCH BASIN, NO. 2-4	EACH	1	$4,000.00	$4,000.00
611	MANHOLE, NO. 3	EACH	2	$5,000.00	$10,000.00
625	BRACKET ARM, 10', AS PER PLAN	EACH	4	$1,500.00	$6,000.00
625	LUMINAIRE, DECORATIVE, AS PER PLAN (STERNBERG)	EACH	4	$2,250.00	$9,000.00
630	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	EACH	9	$650.00	$5,850.00
630	SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN	EACH	1	$350.00	$350.00
632	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK	EACH	9	$1,000.00	$9,000.00
632	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK	EACH	2	$1,300.00	$2,600.00
632	PEDESTRIAN SIGNAL HEAD, (LED), TYPE D2, COUNTDOWN, AS PER PLAN	EACH	8	$900.00	$7,200.00
632	COVERING OF VEHICULAR SIGNAL HEAD	EACH	11	$100.00	$1,100.00
632	COVERING OF PEDESTRIAN SIGNAL HEAD	EACH	8	$50.00	$400.00
632	PEDESTRIAN PUSHBUTTON, AS PER PLAN	EACH	8	$600.00	$4,800.00
632	SIGNAL CABLE, 3-CONDUCTOR, NO. 12 AWG	FT.	790	$3.00	$2,370.00
632	SIGNAL CABLE, 3-CONDUCTOR, NO. 14 AWG	FT.	1020	$3.25	$3,315.00
632	SIGNAL CABLE, 5-CONDUCTOR, NO. 14 AWG	FT.	1430	$3.50	$5,005.00
632	SIGNAL CABLE, 7-CONDUCTOR, NO. 14 AWG	FT.	1400	$4.00	$5,600.00
632	INTERCONNECT, MISC.: SPREAD SPECTRUM RADIO UNIT REMOVED AND REINSTALLED	EACH	1	$1,500.00	$1,500.00
632	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	EACH	4	$8,500.00	$34,000.00
632	PEDESTAL FOUNDATION	EACH	6	$1,500.00	$9,000.00
632	POWER CABLE, 3 CONDUCTOR, NO. 2 AWG.	FT	110	$10.00	$1,100.00
632	POWER CABLE, 3-CONDUCTOR, NO. 6 AWG.	FT.	40	$10.00	$400.00
632	POWER SERVICE, AS PER PLAN	EACH	1	$4,000.00	$4,000.00
632	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	EACH	1	$23,500.00	$23,500.00
632	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	EACH	1	$26,000.00	$26,000.00
632	COMBINATION SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	EACH	2	$28,000.00	$56,000.00
632	PEDESTAL, 5', TRANSFORMER BASE, AS PER PLAN	EACH	2	$1,500.00	$3,000.00
632	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	EACH	4	$2,250.00	$9,000.00
632	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	LUMP	1	$5,500.00	$5,500.00
633	CABINET, TYPE TS-2, AS PER PLAN	EACH	1	$16,000.00	$16,000.00
633	CABINET FOUNDATION	EACH	1	$3,500.00	$3,500.00
633	CONTROLLER WORK PAD, AS PER PLAN	EACH	1	$1,500.00	$1,500.00
633	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	EACH	1	$7,000.00	$7,000.00
644	LANE LINE, 6"	MILE	0.4	$5,500.00	$2,200.00
644	CENTER LINE	MILE	0.34	$5,000.00	$1,700.00
644	CHANNELIZING LINE, 8"	FT	1505	$2.25	$3,386.25
644	STOP LINE	FT	150	$8.00	$1,200.00
644	CROSSWALK LINE, 24"	FT	568	$8.00	$4,544.00
644	TRANSVERSE/DIAGONAL LINE	FT	159	$8.00	$1,272.00
644	SCHOOL SYMBOL MARKING, 96"	EACH	1	$450.00	$450.00
644	LANE ARROW	EACH	15	$135.00	$2,025.00
809	ADVANCE RADAR DETECTION, AS PER PLAN	EACH	2	$9,000.00	$18,000.00
809	STOP-LINE RADAR DETECTION, AS PER PLAN	EACH	4	$9,000.00	$36,000.00
809	ATC CONTROLLER, AS PER PLAN	EACH	1	$6,500.00	$6,500.00
	CONSTRUCTION SUBTOTAL				**$1,815,729.00**
	INFLATION (15.7%)				$285,069.00
	TOTAL				**$2,100,798.00**

ChoiceOne Engineering

We make no warranty, express or implied, that the actual construction cost of the work associated with these estimated quantities and costs will not vary. The cost reflects our opinion of current probable construction cost.

Appendix H- Funding Table & Cost Estimates

Project Information

PID	115003	**Project Name**	MOT Woodman Dr Reconstruction
District	7	**Locale**	Montgomery
Project / Letting Type	Let / ODOT Let	**Status**	Active

Milestones

Milestone	Commit Date	Actual Date	Baseline Date
Initial Project Scope Complete	06/09/2021	06/09/2021	
Feasibility Study - Submitted	04/15/2022	04/15/2022	
Feasibility Study - Approved	05/18/2022	05/18/2022	
NEPA Start Date	05/23/2022	05/23/2022	
Stage 1 Plans - Submitted	07/22/2022	07/22/2022	
Stage 1 Plans - Complete	09/16/2022	09/16/2022	
Stage 2 Plans - Submitted	02/24/2023		
Final R/W Plans Submitted	02/24/2023		
Stage 2 Plans - Complete	04/10/2023		
Environmental Document Approved	06/05/2023		
Final R/W Plans - Approved	06/23/2023		
Stage 3 Plans - Submitted	02/23/2024		
Stage 3 Plans - Complete	04/09/2024		
Local Let PS&E Package to District	10/11/2024		
District R/W Certification	11/08/2024		
Plan Package Received in C.O.	12/06/2024		
Sale	02/06/2025		
Award	02/13/2025		
Estimated Begin Construction	04/08/2025		
Estimated End Construction	08/05/2026		

Funding Table

Project Cost Summary						Funding Splits		
Project Phase	Base Cost	Apply Contingency	Contingency	Inflation	Total Cost	Match	Safety Funds	Local Funds
Construction	$ 1,815,729	No	$ -	$ 285,069	$ 2,100,798	10%	$ 1,890,719	$ 210,080
Project Total	**$ 1,815,729**		**$ -**	**$ 285,069**	**$ 2,100,798**	**10%**	**$ 1,890,719**	**$ 210,080**

Contingency	0%
Inflation	15.7%