

PLANNING COMMISSION AGENDA
Monday, September 27, 2021 at 6:00 p.m.
Caledonia Village Hall – 5043 Chester Lane

- 1. Meeting called to order**
- 2. Roll Call/Introductions**
- 3. Approval of Minutes**
- 4. Citizens' Comments**
- 5. Public Hearing Items**
 - A. **CONDITIONAL USE** - Review a request for a conditional use and building, site, and operations plan for the construction and utilization of a ±10,792 square-foot commercial retail building, Dollar General, located at 4949 Erie Street, submitted by Peter Oleszczuk, Applicant, Manveer & Chaman Real Estate Inc., Owner. (Parcel ID No. 104-04-23-28-002-000)
- 6. Non-Public Hearing Items**
 - A. **BUILDING, SITE & OPERATION PLAN REVEIW** – Review a building, site, and operations plan for the construction and utilization of a ±4,052 square-foot training facility located at 3710 7 Mile Road, submitted by Ryan Rudie, Applicant, Wisconsin Electric Power Company, Owner. (Parcel ID No. 104-04-23-06-008-000)
- 7. Adjournment**

Dated September 23, 2021

Joslyn Hoeffert
Village Clerk

Only Commission members are expected to attend. However, attendance by all Board members (including non-members of the Plan Commission) is permitted. If additional (non-commission) Board members attend, three or more Board members may be in attendance. Section 19.82(2), Wisconsin Statutes, states as follows: If one-half or more of the members of a governmental body are present, the meeting is rebuttably presumed to be for the purposes of exercising the responsibilities, authority, power or duties delegated to or vested in the body. To the extent that three or more members of the Caledonia Village Board actually attend, this meeting may be rebuttably presumed to be a "meeting" within the meaning of Wisconsin's open meeting law. Nevertheless, only the commission's agenda will be discussed. Only commission members will vote. Board members who attend the commission meeting do so for the purpose of gathering information and possible discussion regarding the agenda. No votes or other action will be taken by the Village Board at this meeting.

1. Meeting called to order

Trustee Weatherston called the meeting to order at 6:00 pm at the Village Hall, 5043 Chester Lane, Racine, WI.

2. Roll Call/Introductions

Members present: Thomas Knitter, Nancy Pierce, Trustee Weatherston, and Tim Just.

Absent: President Dobbs, Joseph Minorik, and Bill Folk were excused.

Also present: Development Director Peter Wagner.

3. Approval of Minutes

Motion by Pierce to approve the minutes from July 26, 2021. Seconded by Just. Motion carried unanimously.

4. Citizens' Comments

None.

5. Public Hearing Items

5A. CONDITIONAL USE AMENDMENT – Review a conditional use amendment for the property located at 6156 Douglas Avenue allowing the applicant to store vehicles for repair and install storage buildings behind the existing building submitted by Richard Konecko, Applicant and Owner. (Parcel ID No. 104-04-23-18-300-190)

Wagner states that the applicant is looking to amend his conditional use to allow for the operation of automotive sales and storage of vehicles behind the building. The applicant expanded the outdoor parking to behind the building which was not in compliance with their current conditional use. The first step was to discuss on how to be in compliance with the current conditional use and to get a wet-land delineation done on the site. Initially the delineation went behind the building, recently it was delineated and has been verified by the DNR. The applicant is looking to expand the area behind the building by 13850 square feet as well as to add cargo containers behind the building to provide a secure area for vehicles behind the building. To approve this, it must be recommended by Planning Commission and approved by the Village Board.

Robert Konecko, 5538 6 Mile Road, is speaking in favor of this request. His father is the applicant and is attending this meeting to try and get in compliance with the Village. He is seeking approval so they can get everything in order on their end.

Just asked Konecko why they chose storage containers to use on site. Konecko states that cargo containers will be used to store tools and materials for the sales of vehicles. This keeps everything secure and not out in the open. He was then asked why he did not want sheds built on the property instead. Konecko states that he never considered sheds.

Motion to approve by Knitter. Seconded by Pierce. Motion carried unanimously.

Public hearing closed at 6:09PM.

6. Non-Public Hearing Items

6A. BUILDING, SITE & OPERATION PLAN REVEIW – Review a building, site, and operations plan for the construction and utilization of a ±576 square-foot storage shed addition to an existing commercial building located at 11333 CTH G, submitted by Ken Parker, Applicant and Owner. (Parcel ID No. 104-04-22-17-047-000)

The applicant is looking to add a 576 square foot addition to an existing building. The applicant will be using the same materials as the existing building. The entry way to the building will be on the south side and will not be seen from the public right of way. Because this is a storage facility and not a retail facility, no additional parking is required, and no additional lighting is being proposed. One key element that is in the report that is different is that the Water and Utility Department had a concern about storm water management. The Water Utility Director and the applicant sat down and went over the storm water management plan and did remodeling of the storm water and found that there would be no need to revise the plan. With the suggested motion there was a condition that the plan be submitted and approved prior to granting of a building permit. This condition no longer would be required due to the evaluation from the Utility Director. Staff did provide a recommendation to approve.

Motion by Knitter to approve Seconded by Just. Motion carried unanimously.

6B. BUILDING, SITE & OPERATION PLAN REVIEW - Review a building, site, and operations plan for the construction and utilization of a ±10,792 square-foot commercial building located at 4949 Erie Street, submitted by Peter Oleszczuk, Applicant, Manveer & Chaman Real Estate Inc., Owner. (Parcel ID No. 104-04-23-28-002-000)

The applicant went through a quick claim deed to merge parcels into one lot as part of the proposed site plan. This is a proposed retail facility. The primary exterior materials will be a 3” stone veneer, fiber cement board shake siding, as well as horizontal siding. On the east and west elevations, what appears to be windows is a material that mimics glass and looks like real windows. Stone columns will also be placed along the building. The entrance will be on the northeast corner on an angle and will be all glass. The only lighting that is being proposed is the lights on the building. 33 parking stalls and 2 handicap stalls are being proposed. Staff has questions about the number of parking stalls on the site. Per code there is 3.5 stalls per thousand square feet of commercial space which should come out to 37 stalls. Wagner suggests adding additional parking stalls the southeast corner which would be a minor revision to the site plan. When looking at the landscape plan, the applicant is looking to keep the existing vegetation. Staff does suggest including some additional

landscaping along the western part of the building to break up the long expanse of the building along Erie Street. A screened in mechanical area and a dumpster enclosure will have shadow box fencing and both be surrounded by arborvitae.

Before any building permits can be issued, a storm water management plan needs to be submitted and approved by the Utility District as well as an erosion control plan to be approved by the Engineering Department. The Fire Department has reviewed this development and there are no issues with the site plan. The applicant usually stores their merchandise outdoors, typically an ice box like storage container is what is used. Wagner suggests that there be a limit of 2 of these ice box type storage containers outdoors. Per ordinance, all mechanicals must be screened from view. The site plan states that the HVAC is to be placed on the roof.

Just asked the applicant about clearing out some trees and plants and if they will be cutting some down or if they are just going to leave the trees as is for the buffer. The applicant stated that they were going to leave it as is unless the Planning Commission said otherwise. There were concerns about noxious weeds and dead trees in that buffer. The Planning Commission asked the applicant if they can go through that buffer zone and get rid of noxious weeds and dead trees. The applicant is to come back to staff when they have cleared any trees or weeds on the lot.

Motion by Pierce to approve the site plan as presented with one amendment of asking for a landscape review of existing material. Seconded by Just. Motion carried unanimously.

6C. CONCEPT CERTIFIED SURVEY MAP – Review a concept certified survey map creating three lots for the parcel located along 4 Mile Road, between CTH H and Nicholson Road, submitted by Bob Prochaska, Applicant and Owner. (Parcel ID No. 104-04-22-21-036-000)

This is before the Planning Commission because the subdivision does not meet the 2½ to 1 ratio of width to depth. For this certified survey map to go forward, the applicant is looking to see if the Commission will see this as a reasonable request. If the Commission could support this, the applicant would then have a surveyor create a formal certified survey map and come back before the Commission with easements, right of way, setbacks, etc. If the Planning Commission feels comfortable granting the waiver, a recommendation can be made to move forward with this concept plan. When the formal certified survey map is complete, it would then come back before the Planning Commission for consideration as well as the Village Board for final approval.

Motion to approve by Knitter. Seconded by Just. Motion carried unanimously.

6D. ZONING CODE DISCUSSION – Review draft Chapter 13, Floodplain Regulations, and Chapter 18, Zoning Definitions of the Village of Caledonia Zoning Code.

Wagner read from his memo. When the Town of Caledonia became the Village of Caledonia in 2005, the Village adopted Racine County's Zoning Code as their own. Since that time, the Village has amended its code several times and has created zoning code Title 16. As a result, staff has had to reference both Title 16 of the Village Code and Racine County's Zoning Code that was adopted in 2005 when applying the zoning code for development projects and code enforcement. This split

**Plan Commission Meeting
Monday, August 30, 2021**

in regulations is difficult for developers, residents, and businesses to understand what the rules and regulations are for the Village. Staff has been working on merging the two code sections into one unified Village code Title. This process has been more time consuming than originally anticipated.

Staff has prepared draft Chapters 13 & 18 for review and discussion. Chapter topics for discussion will be:

- Chapter 13: Floodplain Regulations
- Chapter 18: Definitions

The purpose of this agenda item to review and discuss the content of the chapters and answer questions or take suggestions as to what should be and not be included in these chapters. These chapters were not revised, but rather reformatted to our current Title/Section/Chapter format. No action is required at this time. Over the next few Plan Commission meetings, staff will be presenting new chapters for your review and input. It is anticipated that the Title 16 will include eighteen chapters. Some of the chapters have few, if any, changes, and others will have significant changes or reorganization than what currently exists. The remaining chapters to review include Signs, and Adult Orientated Businesses. Once all the chapters have been reviewed by the Plan Commission, the next step will be to present it to the Legislation and Licensing Committee for review. Once the Legislation and Licensing Committee is comfortable with the revised zoning code, it will come back before the Plan Commission for a public hearing and recommendation to the Village Board. Staff anticipates final adoption of the revised code will be done in December. At that time, staff will work with our software firm that licenses Zoning Hub and bring the zoning code online.

7. Adjournment

Motion to adjourn by Peirce. Seconded by Knitter. Motion carried unanimously.
Meeting adjourned at 6:58 pm.

Respectfully submitted,
Megan O'Brien
Deputy Village Clerk



PLAN COMMISSION REPORT

Proposal: Building, Site, & Operations (BSO) Plan Review

Description: Review a request for approval of a building, site, and operation plan for the construction and utilization of a ±10,792 square-foot commercial building located at 4949 Erie Street.

Applicant(s): Peter Oleszczuk

Address(es): 4949 Erie Street

Suggested Motion: That the Plan Commission recommends to the Village Board that a building, site, and operations plan for a ±10,972 square-foot commercial building be approved with conditions outlined in Exhibit A for the property located at 4949 Erie Street for the following reason:

1. The proposed use is allowed through the conditional use and building, site, and operation plan review process and is a permitted use in B-1 Zoning District.

Owner(s): Manveer & Chaman Real Estate Inc.

Tax Key(s): 104-04-23-28-002-000

Lot Size(s): ±1.878 acres

Current Zoning District(s): B-1, Neighborhood Business District

Overlay District(s): N/A

Wetlands: Yes No Floodplain: Yes No

Comprehensive Plan: Medium Density Residential

Background: At their September 7th Village Board meeting, the Village Board tabled the proposal asking for clarification regarding the traffic impact analysis (TIA) and requested a representative of Dollar General be present at their next meeting to answer questions directly. Following that meeting, staff and the Village attorney reviewed the project process and found a section of code that requires any development that generates more than 100 daily trips be a conditional use and have a public hearing. At the Board's September 20th meeting, they were informed of this requirement and referred the proposal back to the Plan Commission to conduct a public hearing.

To address the TIA concerns, staff hired a third party to analyze the submitted TIA and provide an additional assessment of the impacts from the proposed development and is included with this report. The applicant also had their consultant reanalyze their report and provide the impacts of the condominium project occurring approximately one mile north of the proposed development. Included in this packet is a TIA memo summarizing the reevaluation of the TIA and a memo from the Village's hired consultant.

The Village consultant's TIA memo suggests that the entrance on 4 Mile should be modified to include a physical barrier to prevent cars turning left onto 4 Mile. Otherwise, the level of service (LOS) as identified in the original report remains the same of a LOS C. This level of service is considered an acceptable level within the Village.

The revised TIA submitted by the applicant takes into consideration new counts with school in session and includes traffic from the Waters Edge Condo project. In short, for traffic generated in 2021, the LOS will be a C with or without the development. In the year 2041, the intersection will have a LOS D for eastbound traffic with or without the proposed development. Overall, the LOS of the intersection will be a C. Currently, the Village is without principle engineer, so a formal analysis by staff was not conducted. A representative from the firm who conducted the TIA will be in attendance to explain the report in more detail.

In response to revisions to the TIA, the applicant has modified the site plan to address the left turn out of the site by installing an island in the middle of the 4 Mile Road entrance to direct traffic out of the site only to the east. This modification removed multiple parking stalls on the northeast end of the parking lot. To maintain the minimum required stalls, the stalls were relocated to the southeast portion of the lot.

Based on the existing zoning and modifications to the site in response to the TIA analysis, staff recommends approval for the proposed development with conditions outlined in Exhibit A.

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August 30, 2021: The applicant is proposing to construct a ±10,972 square-foot commercial building located at 4949 Erie Street. This commercial building is intended to be used as a single tenant retail business which is a permitted use in the B-1 District.

The proposed building will have an exterior consisting primarily of a stone veneer, fiber cement shake siding, and fiber cement horizontal siding. A glass paneled entrance will be located on the northeast corner of the building. The main portion of building will have a gable rooftop and a hip roof design along the northern elevation of the building. On both the east and west elevations, there will be spandrel glass giving the appearance of windows. In addition, the installation of stone columns will help break up the long expanse of the building on these elevations. LED light fixtures will be installed on the stone columns on all four sides of the building as illustrated on the plans. On the north elevation, above the spandrel glass will be dark bronze aluminum canopies providing articulation. The south elevation is clad in similar cement fiber board shake siding and horizontal siding with stone veneer accents. This elevation is where the mechanicals will be located and screened from view. Any roof mechanicals will be required to be screened

from public right-of-way. Roofing materials of the building will asphalt shingles. The varying exterior materials and design of the building meet the design standard of a visually distinct top, middle, and base.

There will be 33 parking stalls with two ADA accessible stalls near the entrance which will require a waiver from the minimum parking standards of 3.5 stalls for every 1,000 square feet of floor area. Curb stops will be utilized on the eastern portion of the parking lot. The parking lot will be paved with either concrete or asphalt.

The site layout places the building at the minimum street yard setback requirement for the zoning district. This will help distance the building from the residential homes located to the east and south of the site. The placement of the building complies with the regulations pertaining to the vision triangle for two arterial streets. Per Engineering, no modifications to the roadway are required because of this development. The entrances to the site meet minimum distance requirements from the intersection. The northern entrance will line west of the residential driveway to the north. The west entrance will line up just north of the residential driveway to the west. When a commercial development abuts a residential district, a recently adopted ordinance requires that a vegetative buffer be between the differing land uses. This site has residential abutting to the south and east lot lines. A 30-foot mature vegetative buffer is proposed along the south lot line and a 45-foot mature vegetative buffer along the east side to mitigate the change in land use. An 18'x18' dumpster will be in the southern portion of the site, away from the entrance of the facility. It will be screened by shadowbox fencing with colors matching the main building.

The lighting of the site will consist of down-cast, cutoff, LED fixtures attached to the building. No parking lot lighting is proposed as part of this development. The submitted photometric plan will need some revisions along the western elevation as some areas exceed the maximum 0.5 foot-candles at the lot line. The applicant will be required to revise the lighting plan to meet this requirement prior to building permits being issued.

The proposed landscape plan meets the minimum requirements of Village Code. Per code trees along a street frontage need to be placed a minimum of 50 feet apart. Along the western lot line, locust, lilac, and amuir maakia trees are proposed every 25-30 feet. One modification to the plan will be required. The proposed tree in the northwest corner of the site is located within the vision triangle and will need to be relocated on the site. Along the northern lot line, four trees are proposed along with shrubs around a monument sign. The eastern and southern areas of the site have a 35' and 40' vegetative buffer that will screen the parking lot. Arborvitae will be used to surround the mechanical screening and dumpster enclosure. Staff suggests additional shrubs and perennials beds abutting the building facing Erie Street be installed to provide a secondary landscape layer located behind the tree line as suggested in Village Code. This would further breakup the long expanse of building.

Three bio-retention areas are proposed as illustrated on the grading plan. Prior to any building permits being issued, the applicant will need to get approvals for stormwater management, erosion control, and grading plans from Water Utility Department and Engineering Department.

The Fire Department indicated no concerns regarding the proposed site plan; however, they have identified various fire protection requirements that will need to be addressed. The Fire Department will work with the applicant to ensure compliance with fire protection and sprinkling requirements for this building type.

Staff recommends approval of the proposed development located at 4949 Erie Street subject to conditions outlined in Exhibit A. If the Plan Commission is comfortable with the proposed development, staff has drafted a suggested motion to approve the proposed development with conditions.

EXHIBIT A: Conditions of Approval for 4949 Erie Street Commercial Building

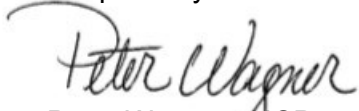
1. **Compliance.** Failure to comply with the terms and conditions stated herein could result in the issuance of citation(s) and/or revocation of this permit.
2. **Binding Effect.** These conditions bind and are applicable to the Property Owner, Agent, and any other users of the Property Owner with respect to the uses on the Property.
3. **Plans.** The proposed operation shall be located, constructed, and utilized in accordance with the revised plans and documents received by the Village Planning Office on August 16, 2021.
4. **Engineering Department.** The property owner or designated agent must contact the Village of Caledonia Engineering Department and must comply with all regulations and requirements of the Village of Caledonia Engineering Department.
5. **Stormwater.** The property owner or designated agent must contact the Village of Caledonia Stormwater Utility District regarding stormwater regulations for this site. Compliance with all regulations and requirements, as determined by the Village of Caledonia Stormwater Utility District is required. Stormwater management plans shall be submitted for approval and be in compliance with all Village requirements, as determined by the Village Engineer before permits are issued.
6. **Fire Department Approval.** Owner shall obtain approval from the Village of Caledonia Fire Department and meet applicable codes.
7. **Parking.** Parking at the site must be in compliance with the submitted plans. All employee and visitor parking must be conducted in the proposed parking lot as outlined on the submitted site plan. Each parking space shall be a minimum of 180 square feet in area exclusive of the space required for ingress and egress. Handicapped spaces shall be provided in accordance with State requirements. The driveway and all parking areas must be maintained in a hard-surfaced, dust-free condition.
8. **Landscaping.** Landscaping at the site must be in compliance with the submitted Landscaping Plan received on August 16, 2021. The Village may require a letter of credit or bond to be posted to ensure implementation and maintenance. Landscaping shall comply with Title 16. The landscaping plan shall follow the Village of Caledonia planting requirements. Landscaping shall be maintained in a living condition and any landscaping that dies or is otherwise removed shall be immediately replaced.
9. **Lighting.** The lighting plan must be in compliance with the submitted lighting plan August 16, 2021. All lighting at the site must be full cut-off lights that may not glare onto abutting properties or onto any public roadway. Following installation, owner shall contact Village for an inspection to ensure that lighting was properly installed.
10. **Signage.** Prior to installation of any signs, a sign permit will be required prior to installation and meet all sign regulations in Title 16. Internally lit cabinet wall signs, banners, balloons, flashing, or animated signs are prohibited.
11. **No Accumulation of Refuse and Debris.** Any fence, wall, hedge, yard, space, or landscaped area must be kept free of any accumulation of refuse or debris. Plant materials must be kept in a healthy growing condition and structures must be maintained in a sound manner.

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12. **Performance Standards.** The applicant must comply with the provisions of Article VII, Division 4, Performance Standards of Chapter 20, Zoning, Racine County Code of Ordinances, as adopted by the Village of Caledonia.
 13. **Property Maintenance Required.** A complete and thorough maintenance program must be established to insure attractiveness. The continued positive appearance of buildings and property is dependent upon proper maintenance attitudes and procedures. Maintenance programs must be established that include watering, maintaining, and pruning all landscape planting areas including removal and replacement of dead or diseased landscaping; cleaning up litter; sweeping, cleaning, and repairing paved surfaces; and cleaning, painting, and repairing windows and building façade.
 14. **Outdoor Display of Merchandise.** Outdoor storage will be limited to one ice chest box. The display of merchandise outdoors is prohibited. Such items shall include but not limited to propane exchange, firewood, general merchandise, redbox, and other retail goods.
 15. **Expiration.** This approval will expire twelve (12) months from the date of the Village's final approval unless substantial work has commenced following such grant. If this office determines that no substantial work has commenced, the development will be required to resubmit their application and go through the conditional use process.
 16. **Access.** The applicant must allow any Village employee full and unlimited access to the project site at a reasonable time to investigate the project's construction, operation, or maintenance.
 17. **Compliance with Law.** The applicant is responsible for obtaining all necessary federal, state, and local permits, approvals, and licenses. The applicant is required to comply with all applicable local, state, and federal regulations, including Titles 14, 16 and 18 of the Village of Caledonia Code of Ordinances.
 18. **Reimburse Village Costs.** Applicant shall reimburse to the Village all costs incurred by the Village for review of this conditional use including but not limited to engineering, legal and planning review that occurred prior to permit issuance and during the implementation of the plans and construction of the improvements.
 19. **Amendments to Building, Site & Operations Plan.** No additions, deletions, or changes may be made to the project, site plan, or these conditions without the Village of Caledonia's prior approval. All addition, deletion, and/or change requests must be submitted to the Village of Caledonia in writing. A minor change to the conditions of this permit, as deemed by the Village Development Director, may be made at a staff level, if authorized by the Village Development Director.
 20. **Caledonia Utility District.** The property owner or designated agent must contact the Caledonia Utility District regarding Utility District regulations for this site. Compliance with all regulations and requirements, as determined by the Caledonia Utility District is required.
 21. **Site Plan and Title 16 Review.** The final site plan and site design and architectural details required under Title 16 of the Village's Code of Ordinances shall be reviewed and approved for compliance by the Village Development Director.
 22. **Agreement.** You are accepting the conditions of approval and the beginning the project means that you have read, understand, and agree to follow all conditions of this approval. Therefore, Peter Oleszczuk, Midwest WI LLC, Manveer & Chaman Real Estate Inc., and their heirs,

successors, and assigns, including tenants, are responsible for full compliance with the above conditions.

23. **Subsequent Owners.** It is the property owner's responsibility to inform any subsequent owner or operator of these conditions.
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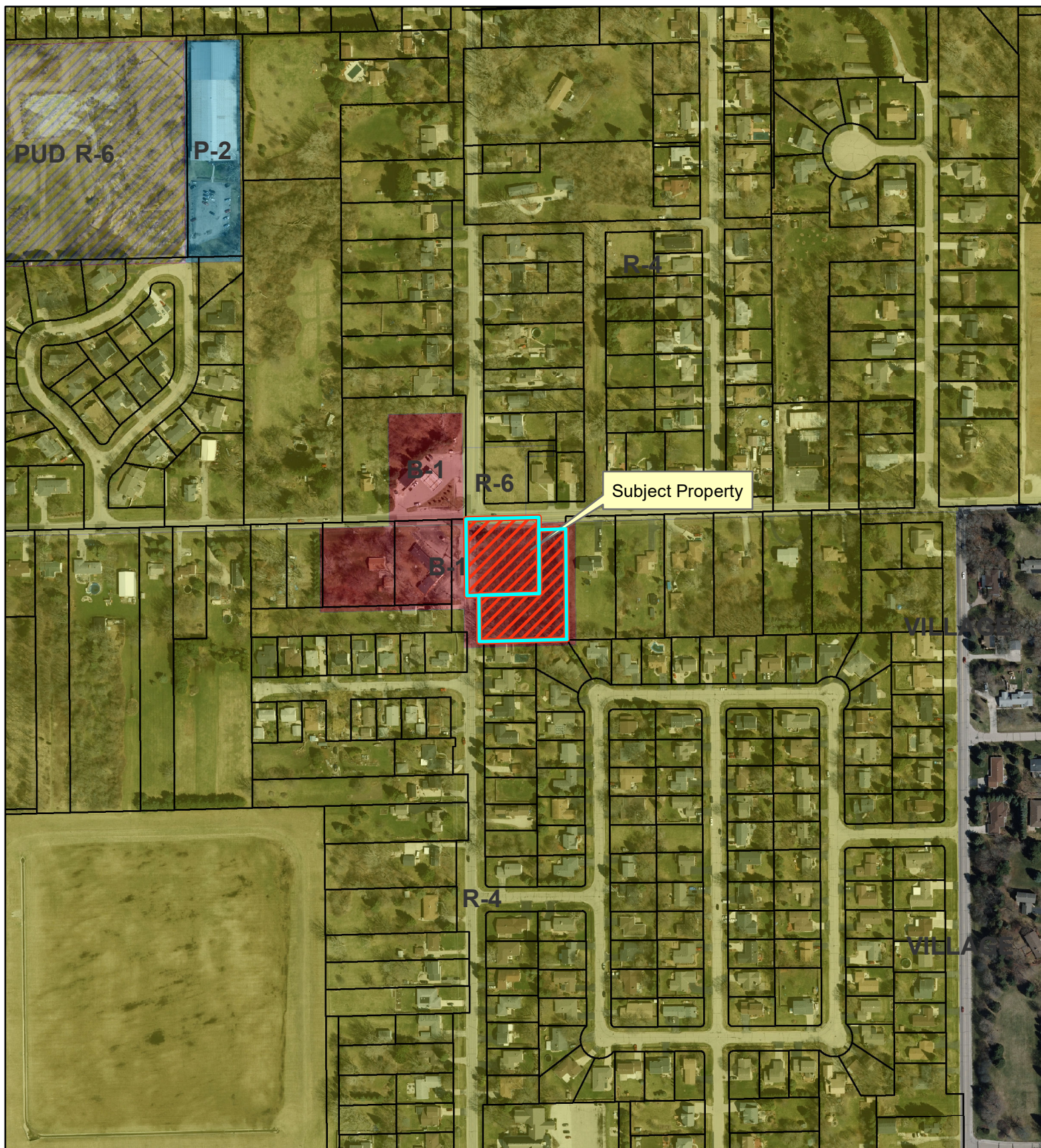
Respectfully submitted:



Peter Wagner, AICP
Development Director

Location Map

4949 Erie Street

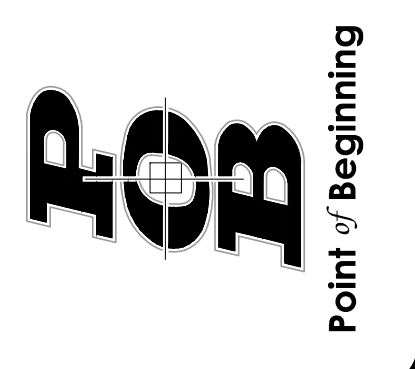


CHECKED:	JUL
DRAWN:	JUL
DATE:	09/23/2021
PROJECT NO.:	21.028

LAYOUT PLAN

MIDWEST WI, LLC
DOLLAR GENERAL
VILLAGE OF CALEDONIA
RACINE CO, WISCONSIN

Civil Engineering
Land Surveying
Landscape Architecture
4941 Kirschling Court
Stevens Point, WI 54481
715.344.9999 (PH) 715.344.9922 (FX)



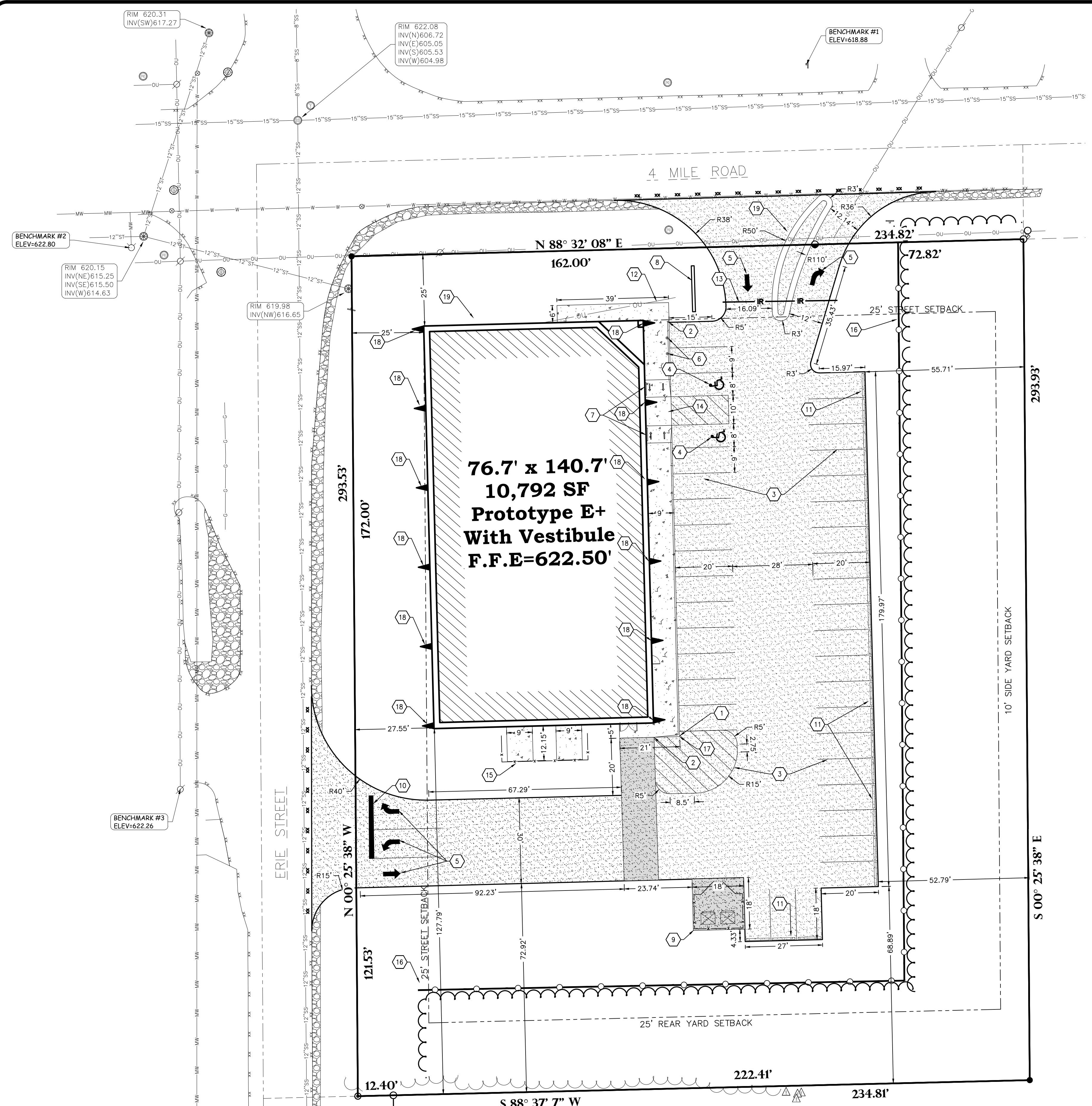
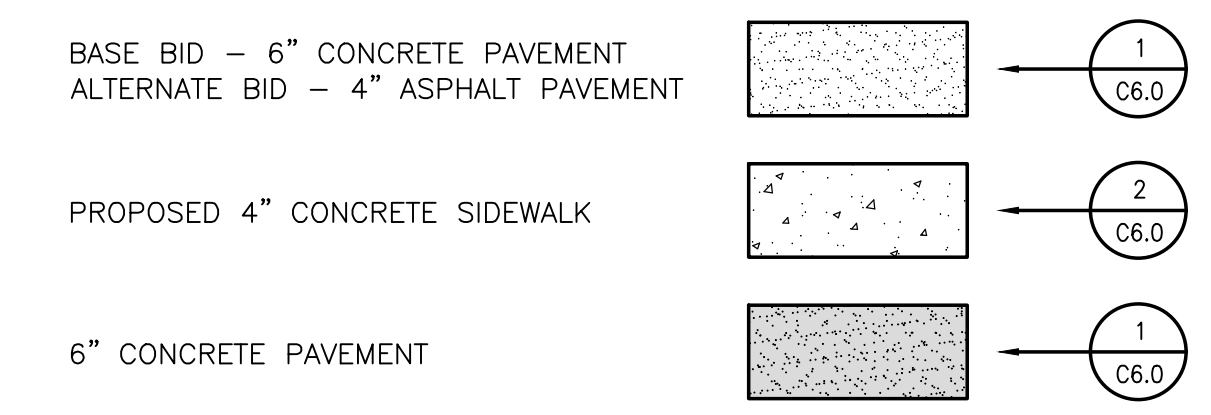
GENERAL NOTES:

- CONTACT DIGGER'S HOTLINE 5 WORKING DAYS PRIOR TO THE START OF DEMOLITION/CONSTRUCTION.
- GRADE, LINE, AND LEVEL TO BE REVIEWED IN THE FIELD BY THE CONSTRUCTION MANAGER.
- ALL REQUIRED EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH LOCAL MUNICIPAL AND DEPARTMENT OF NATURAL RESOURCES REGULATIONS.
- SEE SHEET C4.0 FOR ALL REQUIRED EROSION CONTROL ELEMENTS.
- ANY EXISTING UTILITIES NOT SHOWN ON THIS DOCUMENT WHICH NEED TO BE REMOVED, RELOCATED AND OR ADJUSTED SHALL BE THE RESPONSIBILITY OF THE SITE GRADING CONTRACTOR AND INCLUDED IN THE BASE BID CONTRACT.
- VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION/CONSTRUCTION.
- BIDDERS SHALL VISIT THE SITE AND REVIEW EXISTING CONDITIONS PRIOR TO THE BID DATE.
- PRIOR TO STARTING WORK, VERIFY WITH THE LOCAL AUTHORITIES THAT ALL REQUIRED PERMITS HAVE BEEN ACQUIRED.
- COORDINATE CONSTRUCTION IN THE RIGHT OF WAY WITH THE LOCAL AUTHORITIES.
- PROVIDE PROPER BARRICADES, SIGNS, AND TRAFFIC CONTROL TO MAINTAIN THRU TRAFFIC ALONG ADJACENT STREETS IN ACCORDANCE WITH LOCAL MUNICIPAL REQUIREMENTS.
- SIDEWALK JOINTS SHALL BE INSTALLED AS INDICATED OR AS APPROVED BY THE CONSTRUCTION MANAGER.
- ALL GENERAL LANDSCAPE AREAS SHALL BE SEEDED, FERTILIZED, AND CRIMP HAY MULCHED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

KEYNOTES:

- ① THICKENED EDGE WALK
- ② END OF THICKENED EDGE WALK
- ③ PARKING LOT STRIPING
- ④ ADA PARKING STALL
- ⑤ DIRECTIONAL ARROW
- ⑥ CONCRETE BOLLARD
- ⑦ ADA PARKING SIGN
- ⑧ LIGHTED PYLON SIGN W/ UNDERGROUND ELECTRIC (SEE ELECTRICAL PLANS)
- ⑨ 18"x18" DUMPSTER PAD W/ SHADOW BOX FENCING
- ⑩ 18" STOP BAR
- ⑪ 8' PARKING STOPS
- ⑫ APPROXIMATE LOCATION OF 1" SLEEVE FOR PYLON SIGN POWER CONDUIT (VERIFY FINAL LOCATION WITH BLDG ELECTRICAL DESIGNER/CONTRACTOR)
- ⑬ APPROXIMATE LOCATION OF 2" SLEEVE FOR IRRIGATION LINE, VERIFY FINAL LOCATION WITH IRRIGATION DESIGNER/CONTRACTOR
- ⑭ ADA RAMP
- ⑮ HVAC AREA W/ SHADOW BOX FENCING (SEE MECHANICAL PLANS FOR UNIT INFORMATION AND CONCRETE PAD DESIGN)
- ⑯ 8' HIGH PRIVACY FENCE (STYLE AS APPROVED BY OWNER)
- ⑰ WARP CONCRETE CURBING TO LOADING PAD
- ⑱ 8" ROOF DRAIN (SEE ARCHITECTURAL DRAWING)
- ⑲ CONCRETE ISLAND W/ ROLL CURB

PAVEMENT HATCH PATTERNS:



BENCHMARK:

ELEVATIONS ARE REFERENCED TO NGVD 29 DATUM.

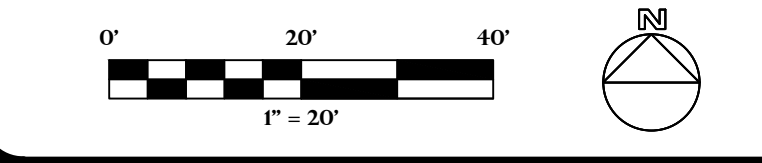
BENCHMARK #1
60# NAIL ON SOUTH SIDE OF SIGN
LOCATED ON THE NORTH SIDE OF 4 MILE ROAD NORTH OF
THE SUBJECT PROPERTY.
ELEVATION = 618.88

BENCHMARK #2
ARROW BOLT ON HYDRANT
LOCATED AT THE SOUTHWEST QUADRANT OF THE
INTERSECTION OF 4 MILE ROAD AND ERIE STREET.
ELEVATION = 622.80

BENCHMARK #3
60# NAIL ON NORTHEAST SIDE OF POWER POLE
LOCATED ON THE WEST SIDE OF ERIE STREET WEST OF THE
SUBJECT PROPERTY.
ELEVATION = 622.26

UTILITY DISCLAIMER:

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September 14, 2021

Anthony A. Bunkelman, PE
Village of Caledonia
5043 Chester Lane
Racine, WI 53402

RE: TIA Review
Proposed Dollar General
4 Mile Road & Erie Street
Caledonia, WI

Dear Mr. Bunkelman,

The following is the results of our review of the traffic impact analysis completed by TADI and submitted to the Village of Caledonia on August 9, 2021.

The TIA from TADI has one major issue and several minor ones.

1. Traffic exiting to 4 Mile Road is only to turn right. There are no signs shown to require this exit movement to be right turn only. It also is very difficult to control traffic to be right turn only without a median directing them right. I attached a sketch for how this should be built. Two parking stalls are used to do this.
2. The pavement marking for the left turn eastbound on 4 Mile Road needs to be extended to provide left turns to the Dollar Store in a turn bay. This is also shown in the attached sketch.
3. The proportional traffic distribution in AM peak is 40% from the west, 20% from the north, 30% from the east and 10% from the south.
4. The proportional traffic distribution in PM peak is 40% from the west, 15% from the north, 25% from the east and 10% from the south.
5. The TIA report has traffic distributed 35% from the west, 15% from the north, 25% from the east and 25% from the south. The small amount of traffic is not impacted by this change.

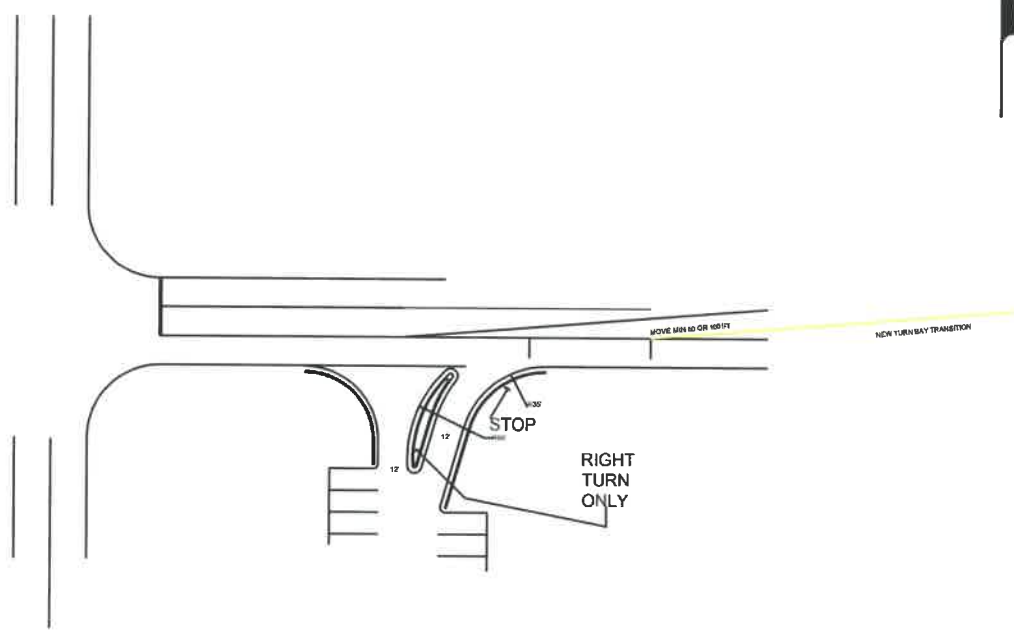
The trip generation Table in the report has relatively small values so it will not change the LOS results for the correction of distribution.

What is significant is the prohibition of the left out movement to 4 Mile Road and proper left turn storage inbound from 4 Mile Road.

Sincerely,

Wayne R. Higgins

Wayne R. Higgins, PE, PTOE
President



	ENGINEERING ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE SURVEYING
	1000 1000 1000 1000 1000 1000
DATE: 9-15-2021	SHEET NO. 1



1435 Fulton, 2nd Floor / Grand Haven, Michigan 49414

November 23, 2021

Peter Wagner
Village of Caledonia
5043 Chester Lane
Racine, WI 53402

RE: Dollar General - 4949 Erie Street Location Rationale

Mr. Wagner,

I am writing this letter to address the concerns of the public regarding the need for a mid-sized general retailer at the above-referenced location. Per the most recent census data, there is a population of 6,882 within approximately 3 square miles of the proposed development. Besides the Casey's gas station, Rice's 4 Mile Liquor and MJ Petroleum, there are currently no general retailers or grocers available to consumers within this area. Due to the success of the existing surrounding stores, Dollar General has identified a clear demand for a new store at this location. The nearest Dollar General is located 2.5 miles southwest at 3440 Douglas Avenue in Racine, Wisconsin, and currently provides customers with non-perishable foodstuffs, frozen and refrigerated grocery items, household products, beauty/personal care items, apparel and over-the-counter medications. The proposed Dollar General will provide all those items plus expanded refrigerated and frozen groceries and additional square footage to accommodate fresh produce items and prescription medications in the future. The store will provide for the local public's daily needs at an affordable price. As the preferred developer, we are planning on investing \$1,760,000 to develop a new Dollar General on this vacant land that will provide jobs for 6-8 people. Along with this letter, I have included some photos of a similar wood prototype store as reference for future discussion.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Scott Knowlton', with a long, sweeping horizontal line extending to the right.

Scott Knowlton
Midwest WI, LLC
VP – General Counsel



Date: September 21, 2021

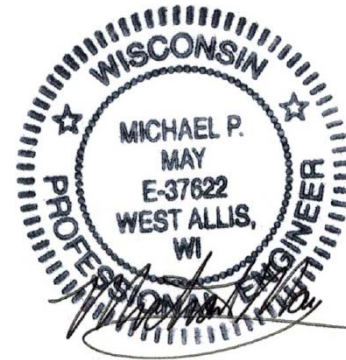
Traffic Impact Analysis Memorandum

To: Anthony Bunkelman, P.E.
Village of Caledonia Public Works

From: Michael May, P.E. PTOE

cc List: Jim Lundberg, P.E.
Point of Beginning, Inc.

Subject: Proposed Dollar General
Caledonia, Wisconsin



PART A – INTRODUCTION

Dollar General is proposed to be located in the southeast corner of 4 Mile Road & Erie Street on the east side of the Village of Caledonia, Racine County. A site location map is shown in [Exhibit A](#). The Dollar General conceptual site plan is shown in [Exhibit B](#). A traffic impact analysis (TIA) is required for the development in accordance with Village Resolution No. 2011-06.

TADI performed this TIA to determine and document the expected weekday morning and weekday evening peak hour operating conditions and recommendations at identified study area intersections. This report documents the procedures, findings, and conclusions of the analysis. The analysis identifies recommended modifications based on existing roadway conditions and additional traffic expected to be generated by Dollar General. Note that this TIA replaces a TIA submitted on August 9, 2021, is based on new counts performed with school in session, and includes traffic to/from the Waters Edge Place off-site development.

PART B – STUDY AREA & PROJECT DESCRIPTION

The study area includes the following intersections.

- 4 Mile Road & Erie Street (existing intersection, all-way stop control)
- 4 Mile Road & East Driveway (proposed intersection, one-way stop control)
- Erie Street & South Driveway (proposed intersection, one-way stop control)

A transportation detail illustrating existing intersection lane configurations and speed limits is shown in [Exhibit C](#).

4 Mile Road is a two-lane east/west highway with a posted speed limit of 35 mph. According to WisDOT, the Year 2017 annual average daily traffic (AADT) volume on 4 Mile Road was approximately 6,600 vehicles per day (vpd) east of Erie Street. Exclusive left-turn lanes exist on

4 Mile Road at its intersection with Erie Street. No pedestrian, bicycle, or transit accommodations exist along 4 Mile Road within the study area.

Erie Street is a two-lane undivided north/south road with a posted speed limit of 30 mph. The WisDOT Year 2011 AADT volume was approximately 2,900 vpd north of 4 Mile Road. No dedicated turn lanes exist on Erie Street at 4 Mile Road. No pedestrian, bicycle, or transit accommodations exist along Erie Street within the study area. A Class B weight restriction is posted on Erie Street.

The study area is primarily built-out with residential development. A liquor store is located in the southwest corner of the intersection and a gas station with C-store is located in the northwest corner. The site of the proposed 10,640 square foot (sf) Dollar General is undeveloped and zoned B-1 Neighborhood Business District. As shown in [Exhibit B](#), the development plan includes one left-in/right-in/right-out driveway along 4 Mile Road (“East Driveway”) approximately 170-feet east of Erie Street (center-to-center) and one full-movement driveway along Erie Street (“South Driveway”) approximately 235-feet south of 4 Mile Road (center-to-center).

PART C – TRAFFIC VOLUMES

C1. Year 2021 Background Traffic Volumes

An intersection turning movement traffic count was performed at 4 Mile Road & Erie Street from 6:00am to 9:00am and from 3:00pm to 6:00pm in mid-September 2021 while school was in session. Based on the counts, the weekday morning evening peak hours were identified as being 7:45 to 8:45am and 3:00 to 4:00pm under favorable weather conditions. The Year 2021 unadjusted existing traffic volumes are shown in [Exhibit D1](#).

TADI compared the peak hour counts against WisDOT mainline hourly traffic volumes to determine if adjustments should be made.

- The peak hour turning movement volumes along Erie Street were higher than the hourly mainline volumes and, therefore, no adjustment was needed to volumes along and to/from Erie Street.
- Along 4 Mile Road, the weekday morning peak hour volumes were less than the hourly mainline volumes but the weekday evening peak hour volumes were more than the hourly mainline volumes. To bring the weekday morning turning movement volumes on 4 Mile Road at Erie Street up to the hourly mainline volumes, the weekday morning through volumes on 4 Mile Road were increased by 8.7% (a factor of 1.087).

The Year 2021 adjusted existing traffic volumes are shown in [Exhibit D2](#).

The Waters Edge Place off-site development is planned north of 4 Mile Road with access to Erie Street. A TIA for Waters Edge Place was completed in January of 2021. The Waters Edge Place TIA contemplated a future 5 Mile Road extension. The Waters Edge Place new trips without 5 Mile Road extension are shown in [Exhibit D3](#) while the Waters Edge Place new trips with a 5 Mile Road extension are shown in [Exhibit D4](#). These trip assignments came from the Waters Edge Place TIA.

The Year 2021 background traffic were determined by summing the Year 2021 adjusted existing traffic volumes ([Exhibit D2](#)) and the Waters Edge Place new trips without 5 Mile Road extension ([Exhibit D3](#)). The resulting Year 2021 background traffic volumes used in the traffic analysis are shown in [Exhibit D5](#).

C2. Year 2041 Background Traffic Volumes

Historical traffic counts from Year 1987 through Year 2017 were plotted to estimate the annual linear growth rate within the study area. The results, included in the appendices, show that traffic along Erie Street have been in steady decline since 1993 (i.e., a negative annual growth) while traffic along 4 Mile Road has been increasing at an annual growth rate of approximately 0.10% per year.

Though Erie Street has a negative annual growth and 4 Mile Road has a low 0.10% annual growth, a 0.50% annual growth rate was applied to the Year 2021 adjusted existing traffic volumes ([Exhibit D2](#)) to estimate the Year 2041 forecast traffic volumes shown in [Exhibit E1](#).

As previously mentioned, the Waters Edge Place TIA contemplated a future 5 Mile Road extension. The TIA estimated that approximately 45% of traffic turning to/from the west from/to Erie at 4 Mile Road would divert and instead use the new 5 Mile Road extension. The Year 2041 5 Mile Road diverted trips are shown in [Exhibit E2](#).

The Year 2041 background traffic were determined by summing the Year 2041 forecast traffic volumes ([Exhibit E1](#)), and the Waters Edge Place new trips with 5 Mile Road extension ([Exhibit D4](#)), and the Year 2041 5 Mile Road diverted trips. The resulting Year 2041 background traffic volumes used in the traffic analysis are shown in [Exhibit E3](#).

C3. Development Traffic

To address potential future traffic impacts at the study area intersection, it is necessary to identify the hourly volume of traffic generated by Dollar General. The traffic volumes expected to be generated by Dollar General are based on the size and type of the proposed use and on trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition, 2017*. The Dollar General trip generation is shown below in [Table 1](#).

Table 1
Dollar General Trip Generation Table

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Dollar General	814	10.64 x 1,000 SF	680 (63.47)	20 (57%)	15 (43%)	35 (3.18)	40 (52%)	35 (48%)	75 (6.84)
Total New Trips			680	20	15	35	40	35	75

The trip generation was assigned to the study area network with the estimate that 35% of development traffic will travel to/from the west on 4 Mile Road, 25% will travel to/from the east on 4 Mile Road, 15% will travel to/from the north on Erie Street, and 25% will travel to/from the south on Erie Street. The Dollar General new trips are shown in [Exhibit F](#).

C4. Year 2021 Build & Year 2041 Build Traffic Volumes

The Year 2021 build traffic volumes, shown in [Exhibit G](#), were determined by adding the Year 2021 background traffic volumes ([Exhibit D5](#)) to the Dollar General new trips ([Exhibit F](#)).

The Year 2041 build traffic volumes, shown in [Exhibit H](#), were determined by adding the Year 2041 background traffic volumes ([Exhibit E3](#)) to the Dollar General new trips ([Exhibit F](#)).

PART D – INTERSECTION CAPACITY ANALYSIS

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition*. Intersection operation is defined by “Level of Service”. Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. As is required for use in Village of Caledonia, LOS C (25-seconds or less of average vehicle delay) or better was used to define desirable peak hour operating conditions. Note that nearly all other communities in southeast Wisconsin require a LOS D (35-seconds or less of average vehicle delay) or better when defining desirable peak hour operating conditions. The analysis was performed using the existing transportation detail shown in [Exhibit C](#). The driveways were analyzed using the layouts represented in the Dollar General site plan ([Exhibit B](#)).

As shown in the [Tables 2 through 5](#), all movements are expected to operate at LOS C or better conditions through the Year 2021 both without and with the proposed Dollar General. By Year 2041, the intersection is expected to operate at LOS D or better conditions without and with the proposed Dollar General.

**Table 2
Year 2021 Background Traffic Peak Hour Operating Conditions**

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
4 Mile Road & Erie Street <i>All-Way Stop Control</i>	Lanes →		1	1	1	1	1	1	1	1	1	1	1		
	AM	LOS	B	C	A	C	B	B	C					C	
		Delay	10	21	9	15	12	14						16	
		Queue	20'	135'	20'	70'	20'	60'							
	PM	LOS	B	C	A	C	B	B	C					C	
		Delay	11	20	9	18	12	13						16	
Queue		20'	125'	20'	100'	30'	40'								

Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

Year 2041 Background Traffic Peak Hour Operating Conditions

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
4 Mile Road & Erie Street <i>All-Way Stop Control</i>	Lanes →		1	1	1	1	1	1	1	1	1	1	1		
	AM	LOS	B	D	A	C	B	B	C					C	
		Delay	10	25	9	16	12	14						19	
		Queue	20'	170'	20'	85'	25'	50'							
	PM	LOS	B	C	A	C	B	B	C					C	
		Delay	10	24	9	20	13	13						19	
Queue		20'	160'	20'	120'	35'	35'								

Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

Table 4
Year 2021 Build Traffic Peak Hour Operating Conditions

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
4 Mile Road & Erie Street <i>All-Way Stop Control</i>	AM	Lanes →	1	1	1	1	1	1	1	1	1	1	1		
		LOS	B	C	A	B	B	B	B	B	B	B	B	B	
		Delay	10	18	9	13	11	11	11	11	11	11	11	14	
	Queue	20'	120'	20'	60'	20'	35'	20'	35'	20'	35'	20'	35'		
	PM	LOS	B	C	A	C	B	B	B	B	B	B	B	C	
		Delay	10	18	9	15	12	11	12	11	11	11	11	15	
Queue		20'	120'	20'	75'	30'	25'	30'	25'	30'	25'	25'			
4 Mile Road & East Driveway <i>Stop Sign Control (NB)</i>	AM	Lanes →	-	1	1	-	-	-	1	-	-	-	-		
		LOS	-	*	A	-	-	-	B	-	-	-	-	A	
		Delay	-	*	8	-	-	-	10	-	-	-	-	0	
	Queue	-	*	20'	-	-	-	20'	-	-	-	-	-		
	PM	LOS	-	*	A	-	-	-	B	-	-	-	-	A	
		Delay	-	*	7	-	-	-	10	-	-	-	-	0	
Queue		-	*	20'	-	-	-	20'	-	-	-	-	-		
Erie Street & South Driveway <i>Stop Sign Control</i>	AM	Lanes →	-	-	-	1	-	1	-	1	-	1	-		
		LOS	-	-	-	A	-	A	-	*	A	-	-	A	
		Delay	-	-	-	9	-	8	-	*	7	-	-	0	
	Queue	-	-	-	20'	-	20'	-	*	20'	-	-	-		
	PM	LOS	-	-	-	B	-	A	-	*	A	-	-	A	
		Delay	-	-	-	10	-	9	-	*	7	-	-	0	
Queue		-	-	-	20'	-	20'	-	*	20'	-	-	-		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

Table 5
Year 2041 Build Traffic Peak Hour Operating Conditions

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach												I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙	
4 Mile Road & Erie Street <i>All-Way Stop Control</i>	AM	Lanes →	1	1	1	1	1	1	1	1	1	1	1		
		LOS	B	D	B	C	B	B	B	B	B	B	B	C	
		Delay	10	27	10	17	12	14	12	14	12	14	14	19	
	Queue	20'	180'	20'	85'	25'	55'	25'	55'	25'	55'	25'	55'		
	PM	LOS	B	D	B	C	B	B	B	B	B	B	B	C	
		Delay	10	28	10	21	14	13	14	13	14	13	13	21	
Queue		20'	180'	20'	125'	45'	40'	45'	40'	45'	40'	40'			
4 Mile Road & East Driveway <i>Stop Sign Control (NB)</i>	AM	Lanes →	-	1	1	-	-	-	1	-	-	-	-		
		LOS	-	*	A	-	-	-	B	-	-	-	-	A	
		Delay	-	*	8	-	-	-	11	-	-	-	-	0	
	Queue	-	*	20'	-	-	-	20'	-	-	-	-	-		
	PM	LOS	-	*	A	-	-	-	B	-	-	-	-	A	
		Delay	-	*	8	-	-	-	10	-	-	-	-	0	
Queue		-	*	20'	-	-	-	20'	-	-	-	-	-		
Erie Street & South Driveway <i>Stop Sign Control</i>	AM	Lanes →	-	-	-	1	-	1	-	1	-	1	-		
		LOS	-	-	-	B	-	A	-	*	A	-	-	A	
		Delay	-	-	-	10	-	8	-	*	7	-	-	0	
	Queue	-	-	-	20'	-	20'	-	*	20'	-	-	-		
	PM	LOS	-	-	-	B	-	A	-	*	A	-	-	A	
		Delay	-	-	-	11	-	9	-	*	7	-	-	0	
Queue		-	-	-	20'	-	20'	-	*	20'	-	-	-		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

PART E – RECOMMENDATION & CONCLUSION

Modifications to accommodate the Dollar General are outlined below. *Recommended modifications are for jurisdictional consideration and are not legally binding. The Village of Caledonia reserves the right to determine alternative solutions.*

4 Mile Road & East Driveway

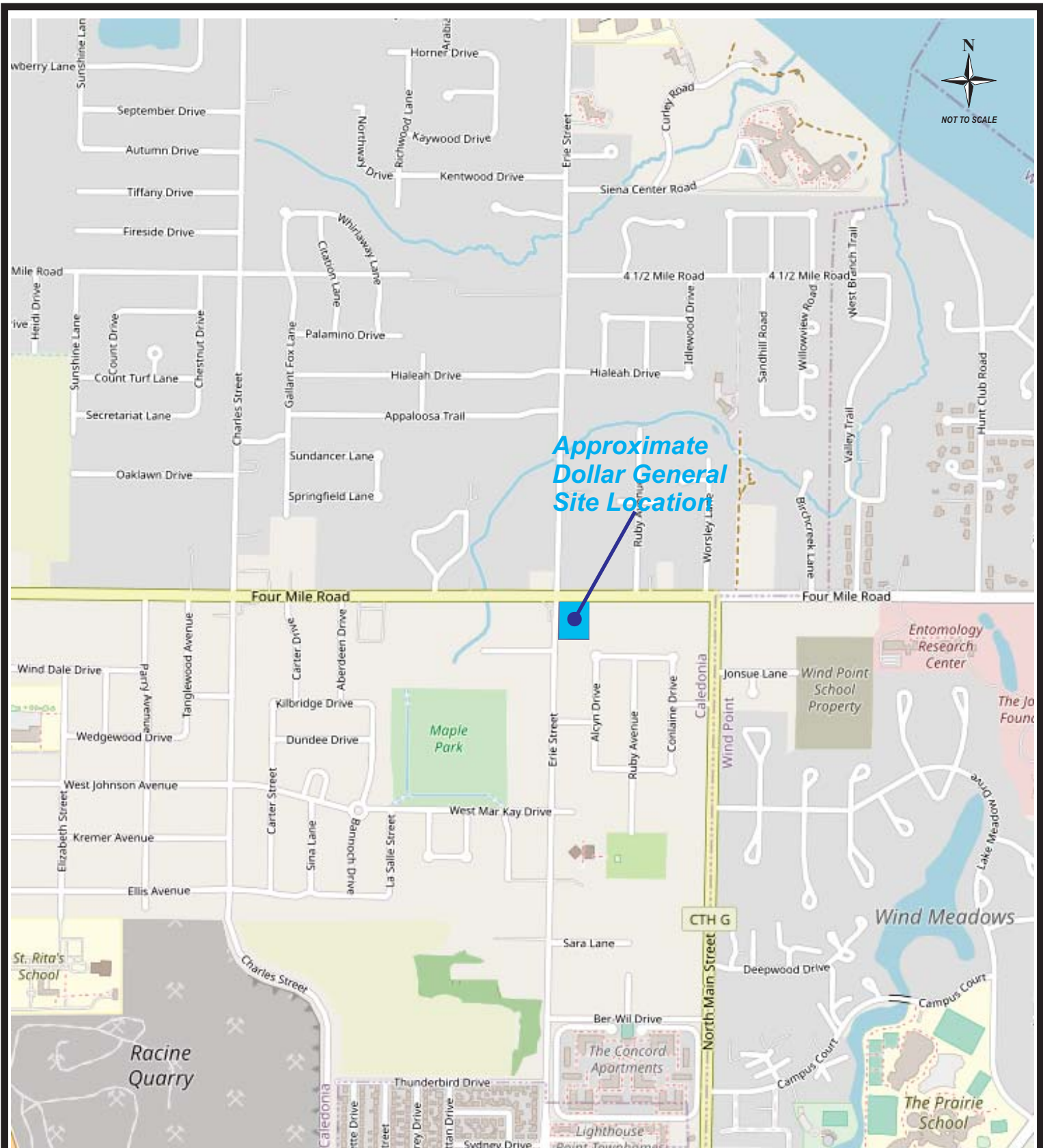
- Construct the East Driveway to allow for left-in/right-in/right-out operations (no left-out). No dedicated turn lanes are necessary along 4 Mile Road.
- Install a stop sign on the driveway approach to 4 Mile Road.

Erie Street & South Driveway

- Construct the South Driveway to allow for all movements. No dedicated turn lanes are necessary along Erie Street. Construct separate left-turn and right-turn lanes on the driveway approach to Erie Street.
- Install a stop sign on the driveway approach to Erie Street.

As previously outlined, all movements are expected to operate at LOS C or better conditions through the Year 2021 both without and with the proposed Dollar General (Tables 2 & 4) – the Village’s preferred operation. The movements may be expected to deteriorate to LOS D or better by Year 2041 both without and with the proposed Dollar General (Tables 3 & 5) – beyond the Village’s preferred operation but well within the operations typically expected for other communities in southeast Wisconsin. Because this operation is not expected for another 20 years, because it occurs without Dollar General, and because the operation is 3-seconds of average vehicle delay beyond the LOS C/D threshold, TADI has no additional recommendations for construction at this time. If the Village wishes to obtain LOS C or better operations, 100-foot eastbound and westbound right-turn lanes may be constructed along 4 Mile Road regardless of whether Dollar General is constructed. Outputs with the optional right-turn lanes are included in the report appendix.

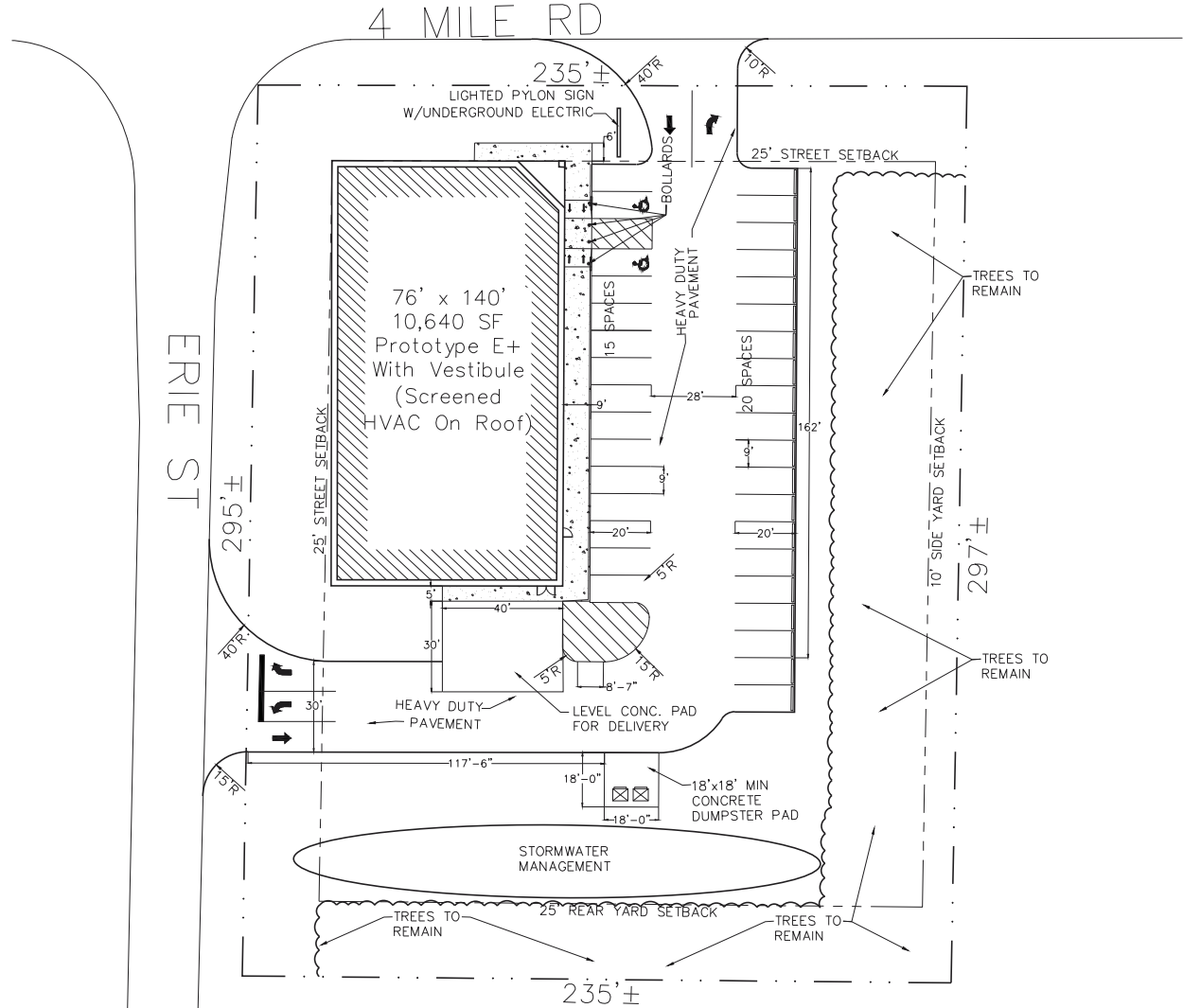
Should any questions or comments arise, please feel free to contact Michael May, P.E. PTOE of TADI at 414-807-1912 or mmay@tadi-us.com.



PRELIMINARY SITE PLAN		CITY, STATE - STREET: Racine, WI 53402 - 4 Mile Rd & Erie St	
PROTOTYPE:	E+	DEVELOPER	DESIGNER
BLDG/SALES SF:	10,640/8,496	COMPANY: MIDWEST W, LLC	COMPANY: POINT OF BEGINNING
ACREAGE:	1.59±	NAME: PETER OLESZCZUK	NAME: JAMES LUNDBERG, P.E.
PARKING SPACES:	35	PHONE #: 616-842-2030	PHONE #: 715-344-9999

DISTANCE FROM BLDG TO ROAD: 4 MILE RD : 40'

EXHIBIT B-1



SITE SUMMARY

SITE AREA: 69,435 SF ± (1.59± AC)	PARKING: REQUIRED: < 37 SPACES PROVIDED: 35 SPACES
SITE DIMENSIONS: 235' x 296'	IMPERVIOUS COVERAGE: REQUIRED: N/A
ZONING: B-1 NEIGHBORHOOD BUSINESS DISTRICT	LANDSCAPING: PROVIDE LANDSCAPE PER SECTION 16-3-3 OF VILLAGE CODE
BUILDING SETBACKS: FRONT: 25' SIDE: 10' REAR: 25'	STORMWATER DETENTION REQUIRED: COMPLY WITH WI CHAPTER NR161 REQUIREMENTS & SECTION 9-2-10 OF VILLAGE CODE
BUILDING AREA: 10,640 SF	ARCHITECTURE: PER 16-3-2 OF VILLAGE ZONING CODE
BLDG HEIGHT (MAX.): 35'	
BUILDING COVERAGE: N/A	

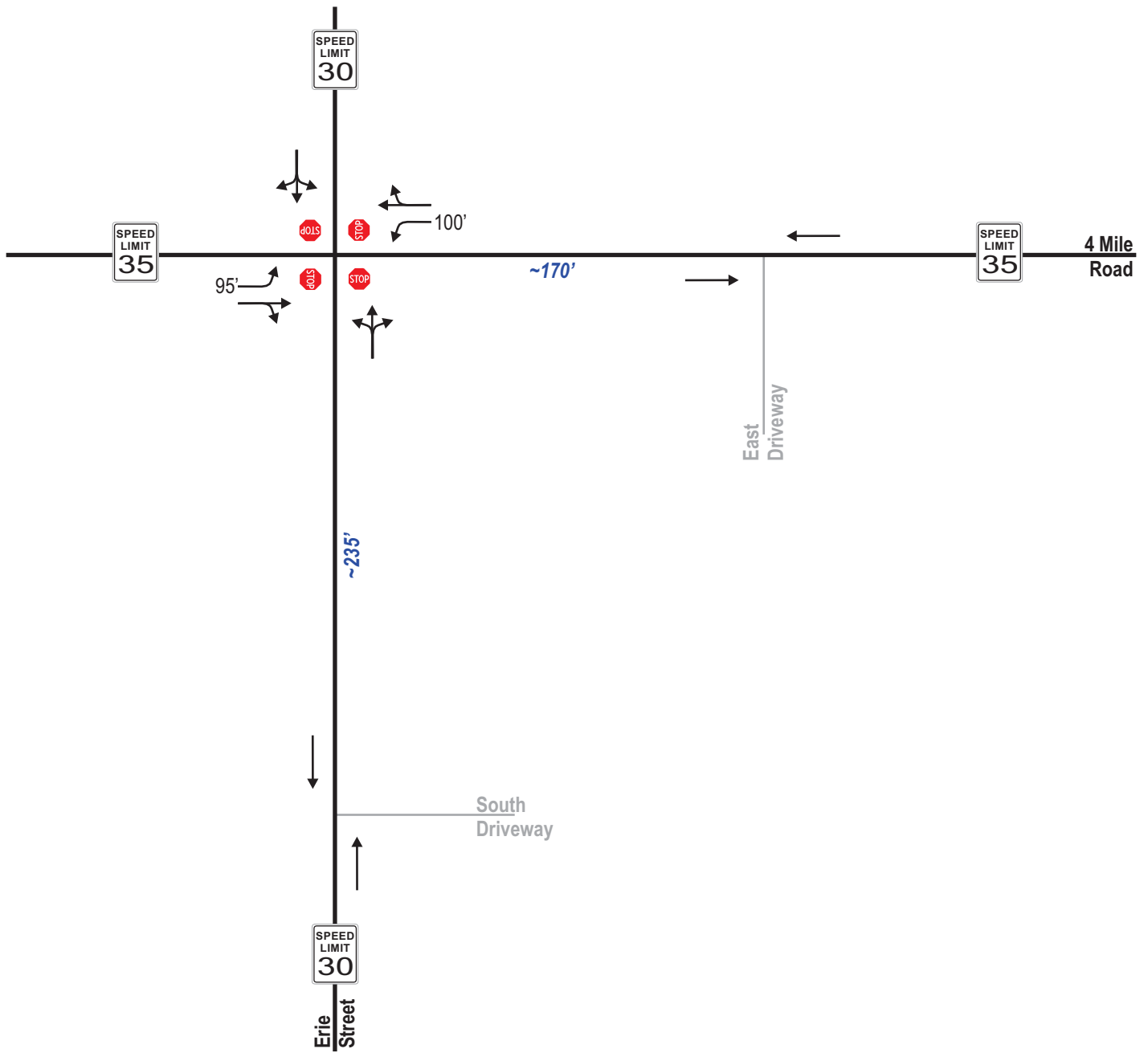


SCALE = 1" = 50'



LEGEND

- Stop Sign
- Existing Lane Configuration
- XX' Existing Turn Bay Length (In Feet)
- XX' Distance Between Intersections (C-C, in Feet)

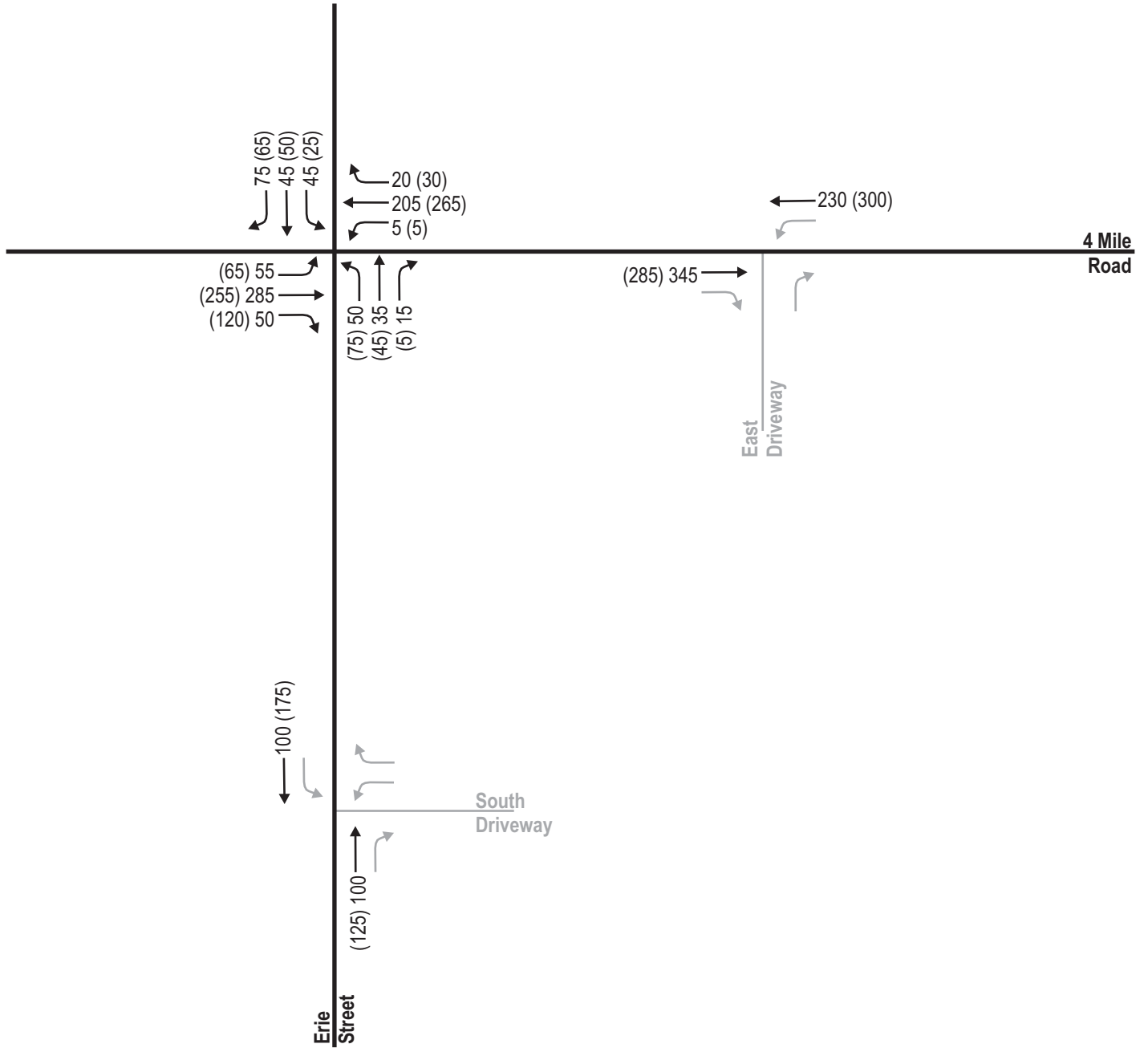


**EXHIBIT C
EXISTING TRANSPORTATION DETAIL**



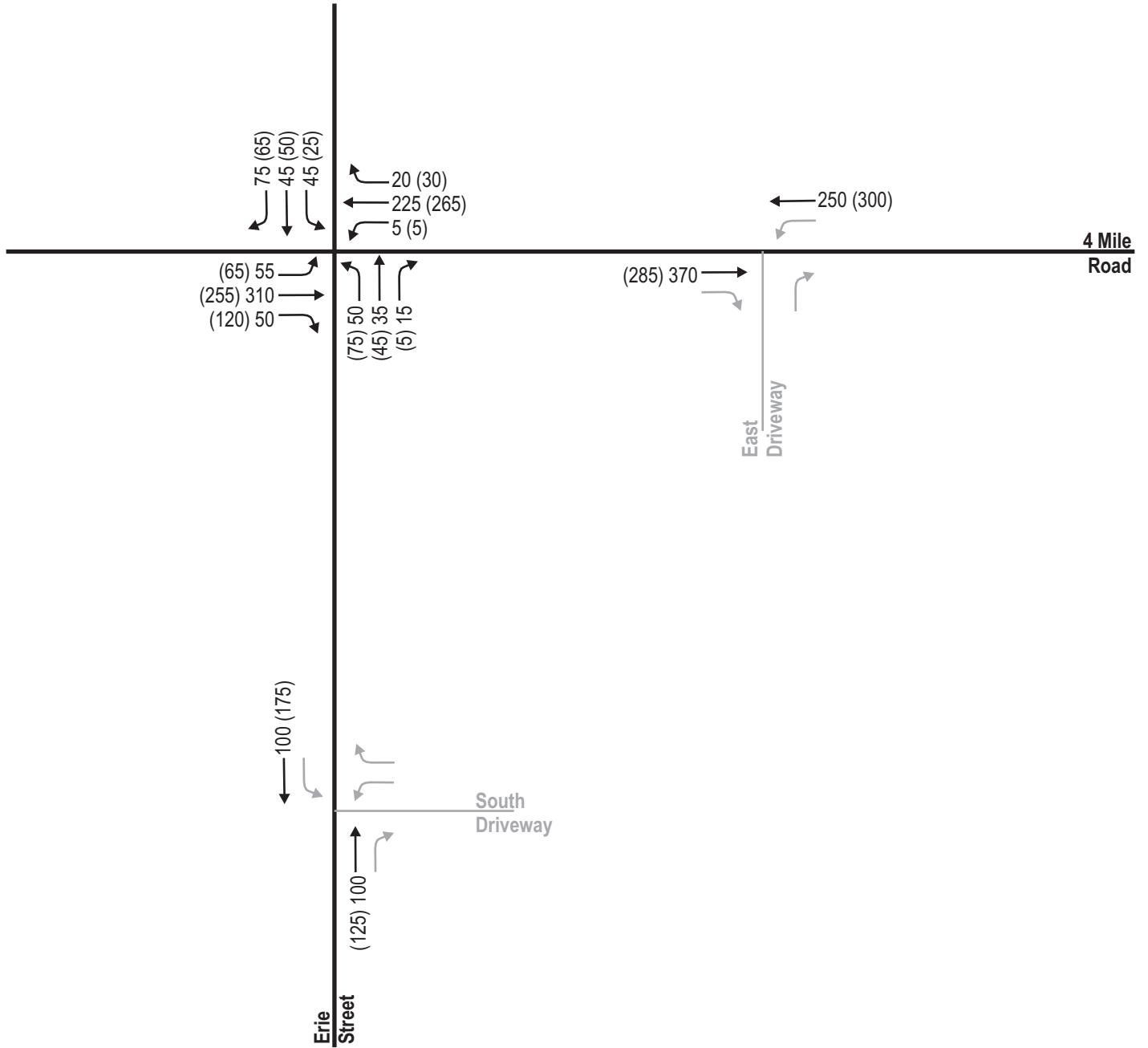
LEGEND

- XX Weekday Morning Peak Hour (7:45-8:45AM)
- (XX) Weekday Evening Peak Hour (3:00-4:00PM)
- Fewer than 2 vehicles per hour



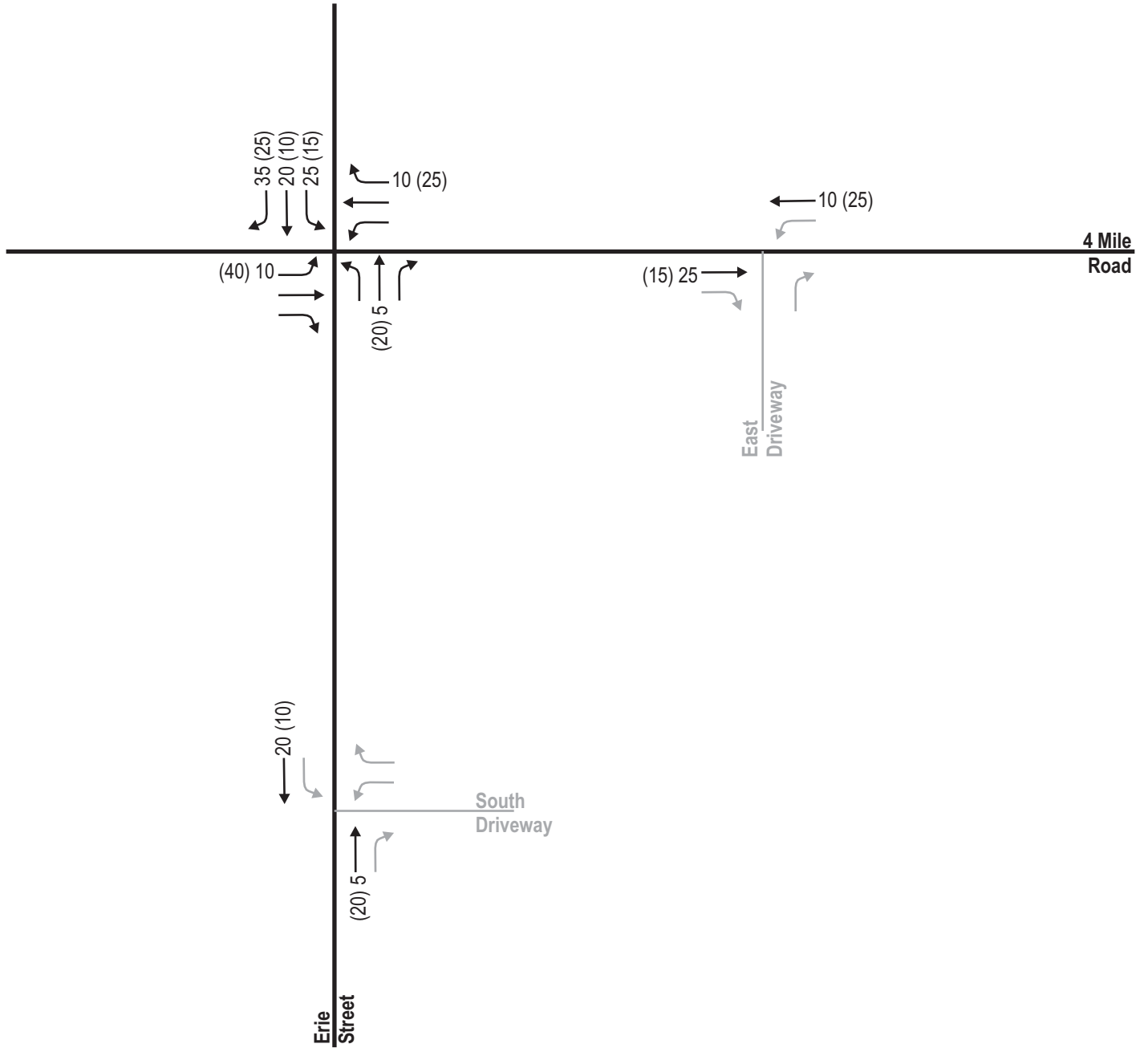


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



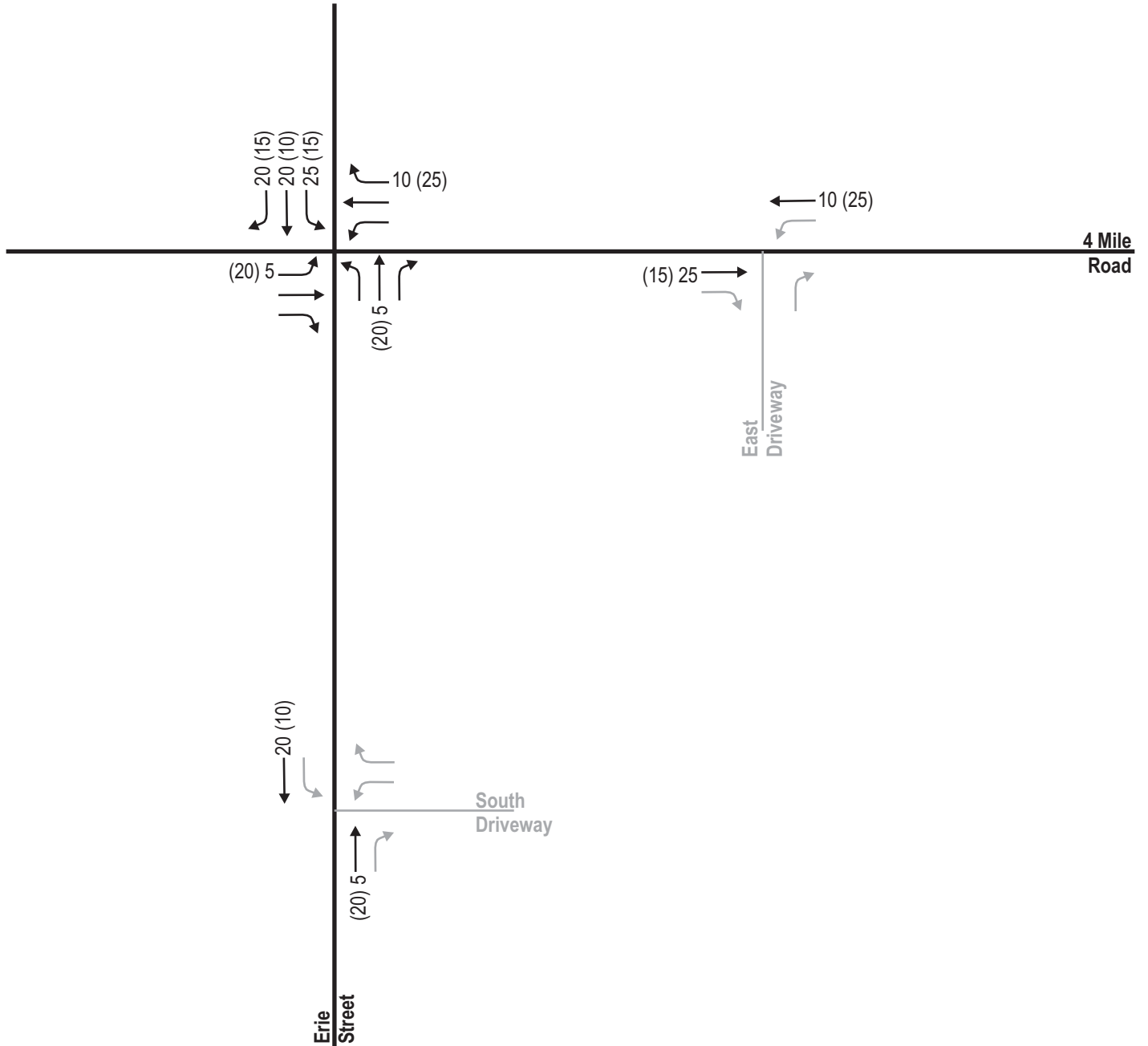


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



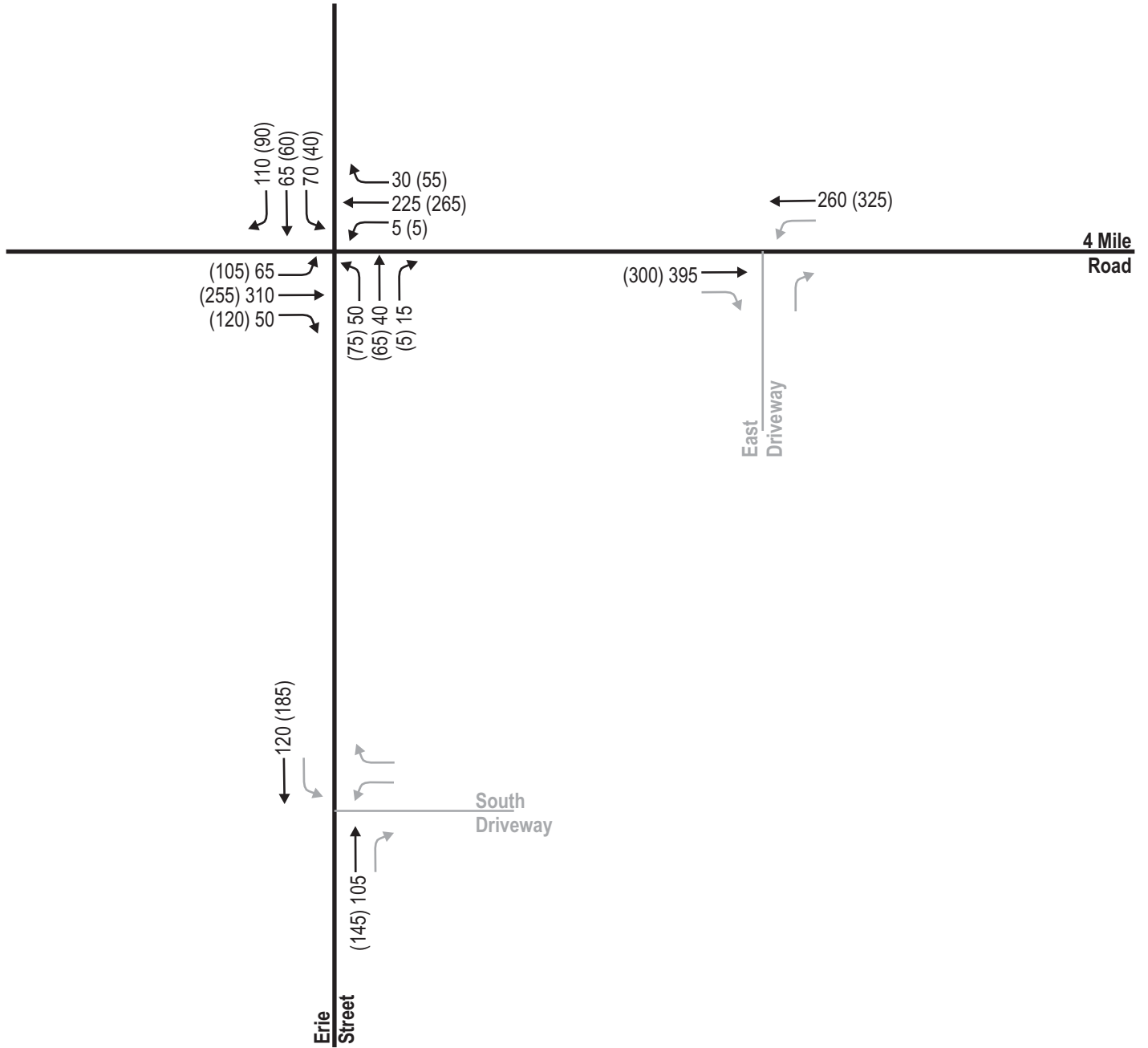


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour





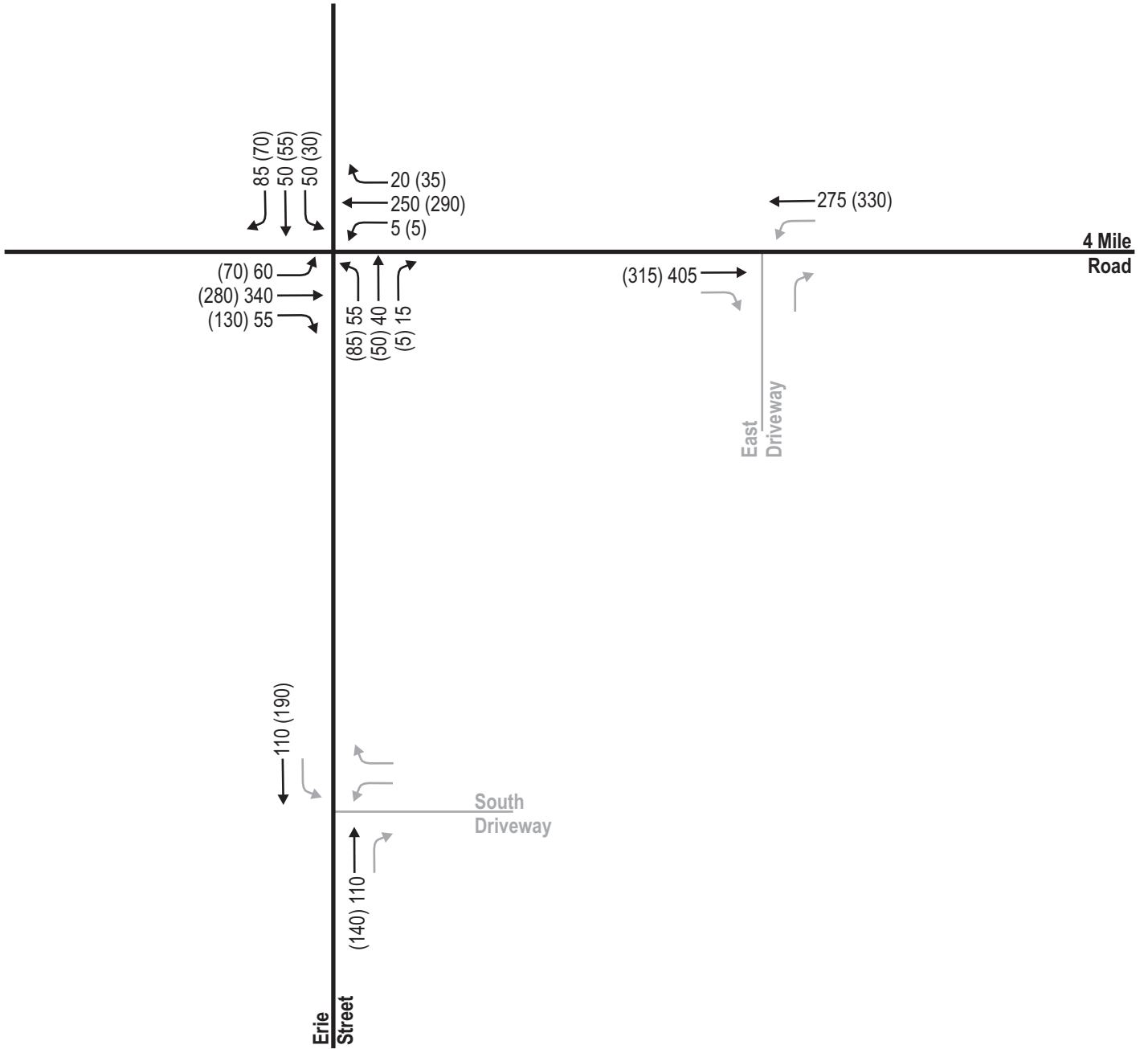
LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour





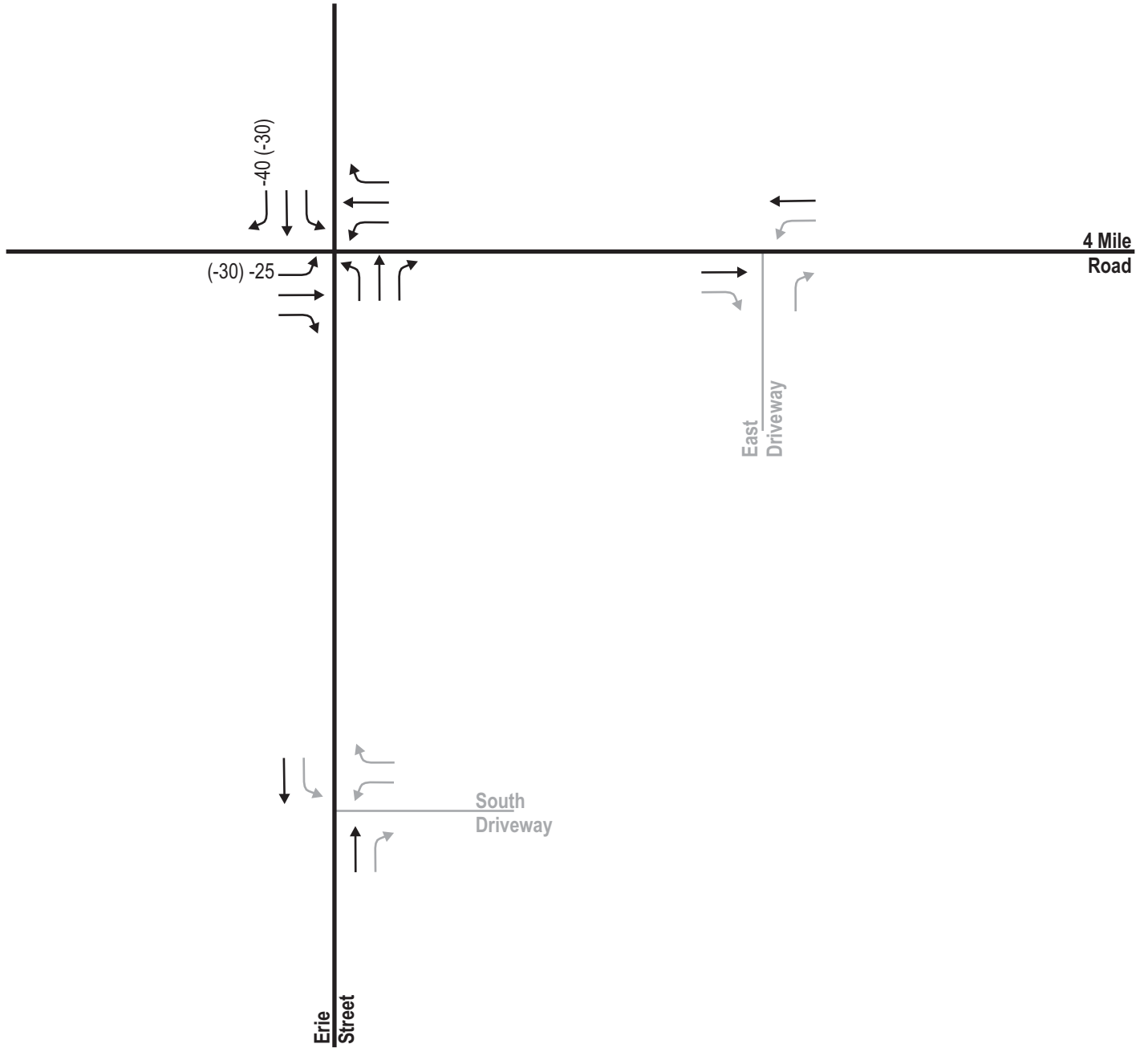
LEGEND

- XX Weekday Morning Peak Hour (7:45-8:45AM)
- (XX) Weekday Evening Peak Hour (3:00-4:00PM)
- Fewer than 2 vehicles per hour



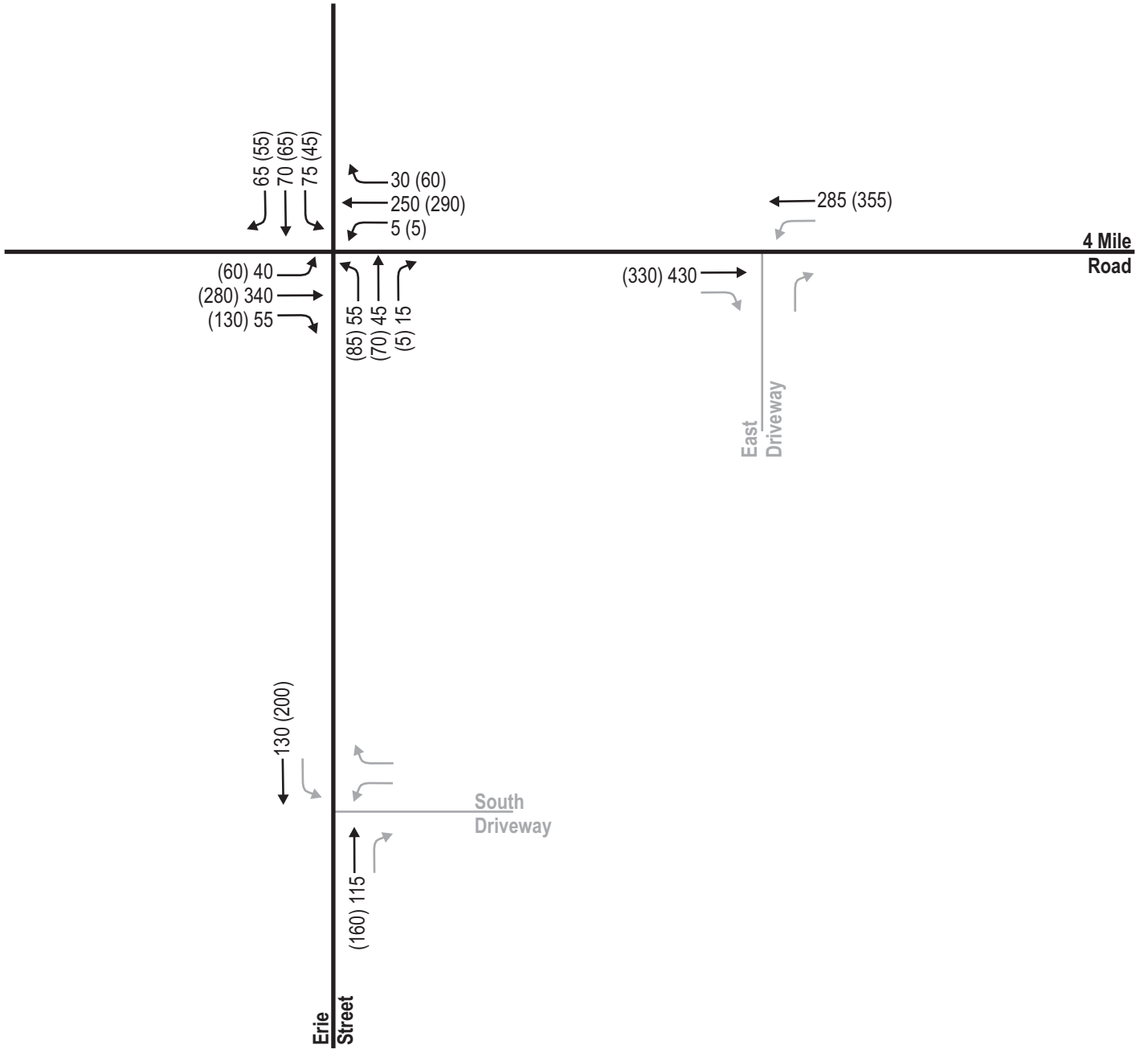


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



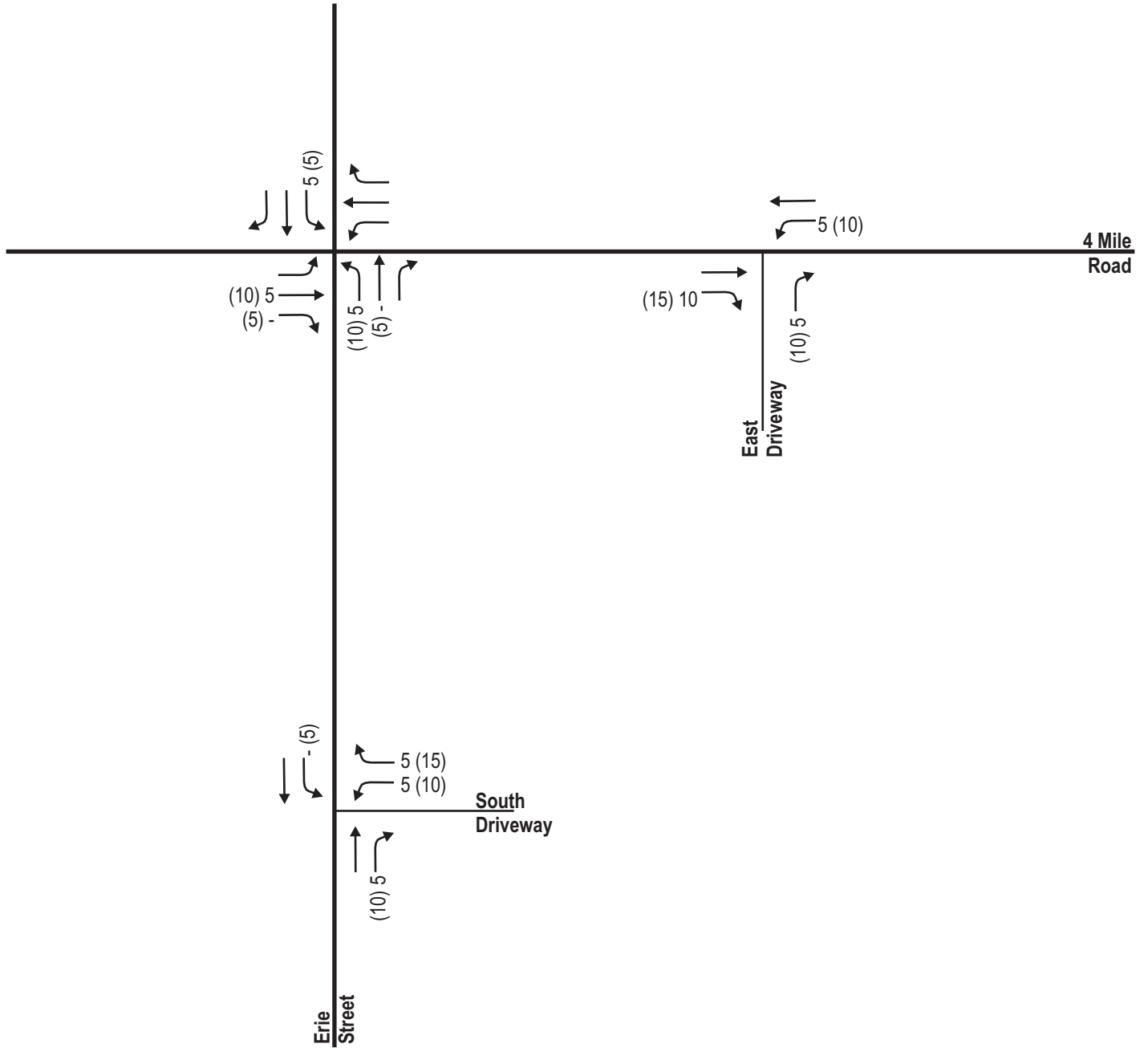


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



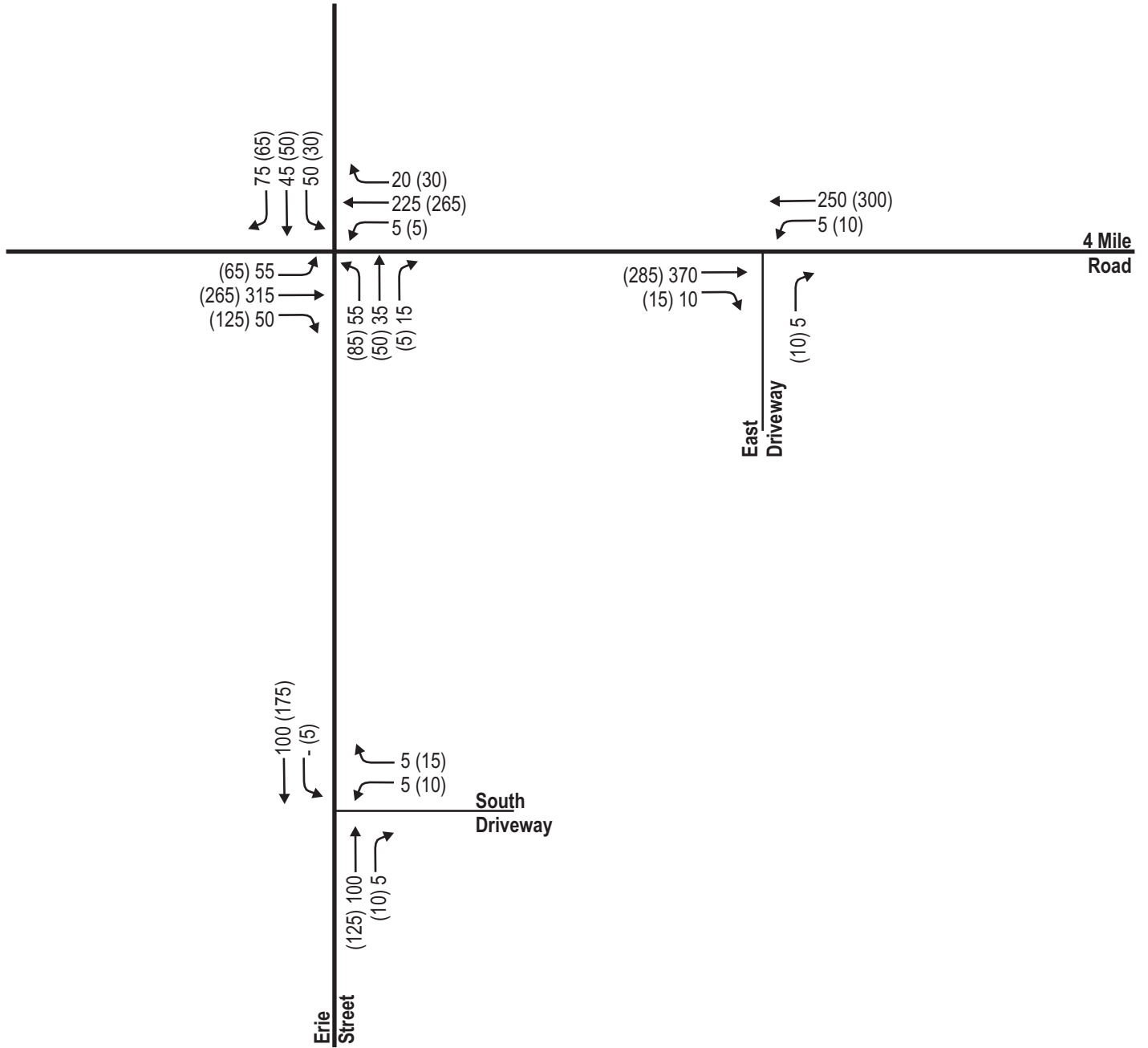


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



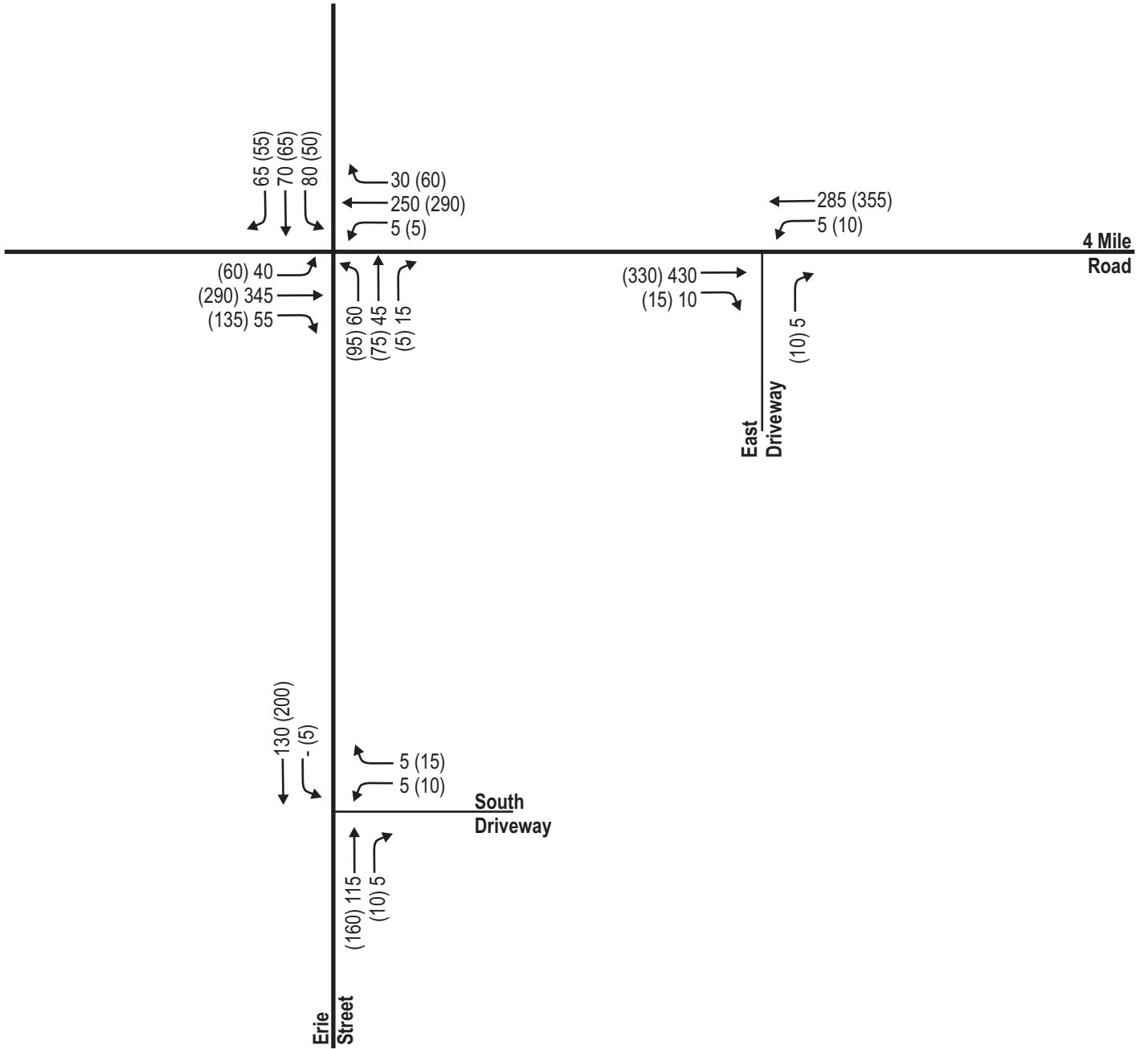


LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour





LEGEND	
XX	Weekday Morning Peak Hour (7:45-8:45AM)
(XX)	Weekday Evening Peak Hour (3:00-4:00PM)
-	Fewer than 2 vehicles per hour



APPENDIX

Traffic Counts

Intersection Traffic Volume Report

Count Basics		Version 2013.J4.1		Page 1 of 13
Start Date:	Monday, September 13, 2021	Weekday	Schools in Session	
Total Number of Hours Counted:	6	Non-Holiday	No Special Events	

Base Information, Observed (6) Hour and Estimated (24) Hour Volume Summaries

Intersection of: **Erie Street and 4 Mile Road**

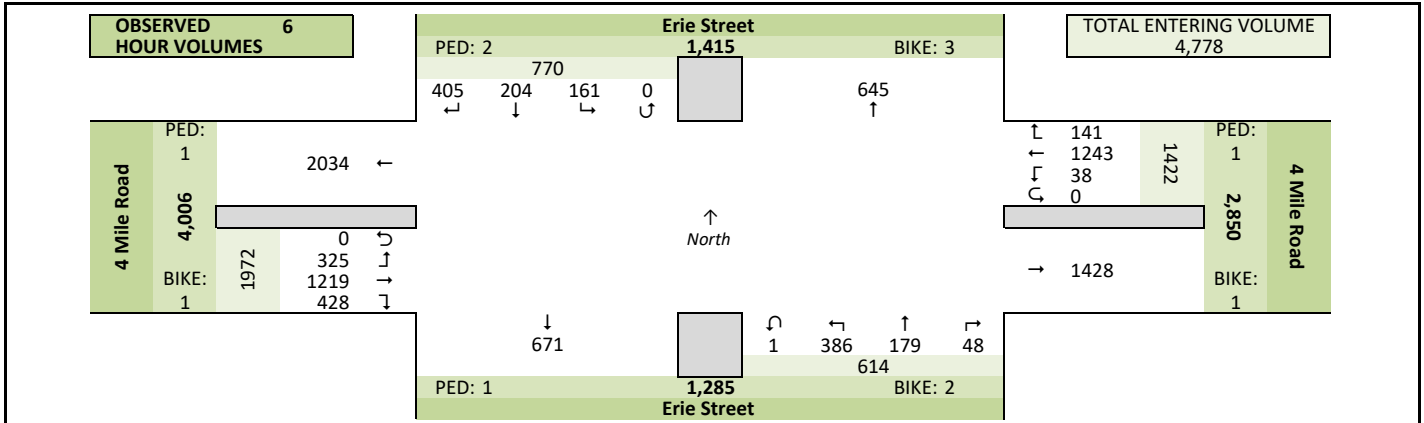
Site Information

Municipality	Village of Caledonia		
County	Racine	WisDOT Region	SE
Traffic Control	All-Way Stop		
Roadway Names	North Direction ↑		
North Leg	Erie Street		
East Leg	4 Mile Road		
South Leg	Erie Street		
West Leg	4 Mile Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
	Pre-school children	None	
	Elementary school age children	None	
	Visually impaired (white cane/helper dog)	None	
	Elderly/disabled (except wheelchairs)	None	
	Wheelchairs/electric scooters	None	
Other (describe)		None	None

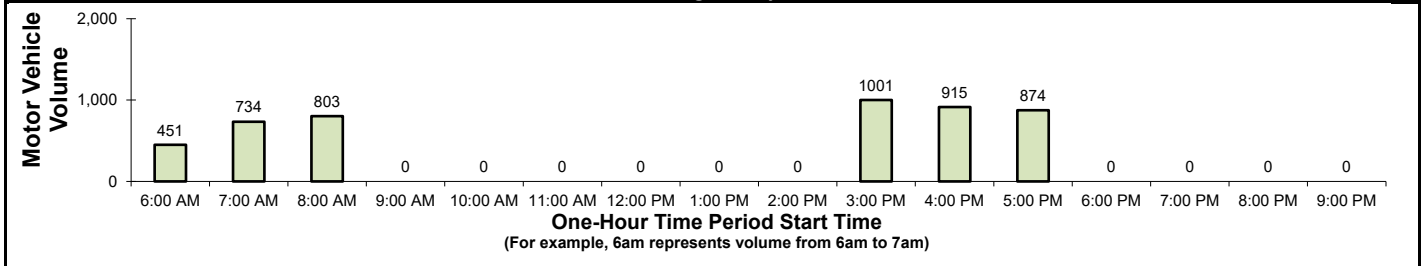
Count Information

Hrs Counted:	6:00 AM-9:00 AM and 3:00 PM-6:00 PM		
1st Day of Count	Monday, September 13, 2021	Weather	
AM Peak Period	Tuesday, September 14, 2021	Clear & Dry	
Midday Peak Period	Tuesday, September 14, 2021	Clear & Dry	
PM Peak Period	Monday, September 13, 2021	Clear & Dry	
Calculated Peak Hours			
	AM 7:45-8:45am	MD	PM 3:00-4:00pm
Peak Hours Selected for Analysis			
	AM 7:45-8:45am	MD	PM 3:00-4:00pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors		
Count Expansion Group	(2) Urban Arterials & Collectors		
Daily/Seasonal Adjustment Factor	0.919	Count Expansion Factor	2.520
Company Name	TADI, Inc.	Manual Adj.	1.000
Observers	AM Peak Period	Wendy Picard	
	Midday Peak Period	None	
	PM Peak Period	Wendy Picard	
Comments	2019 DOT Seasonal Factors		

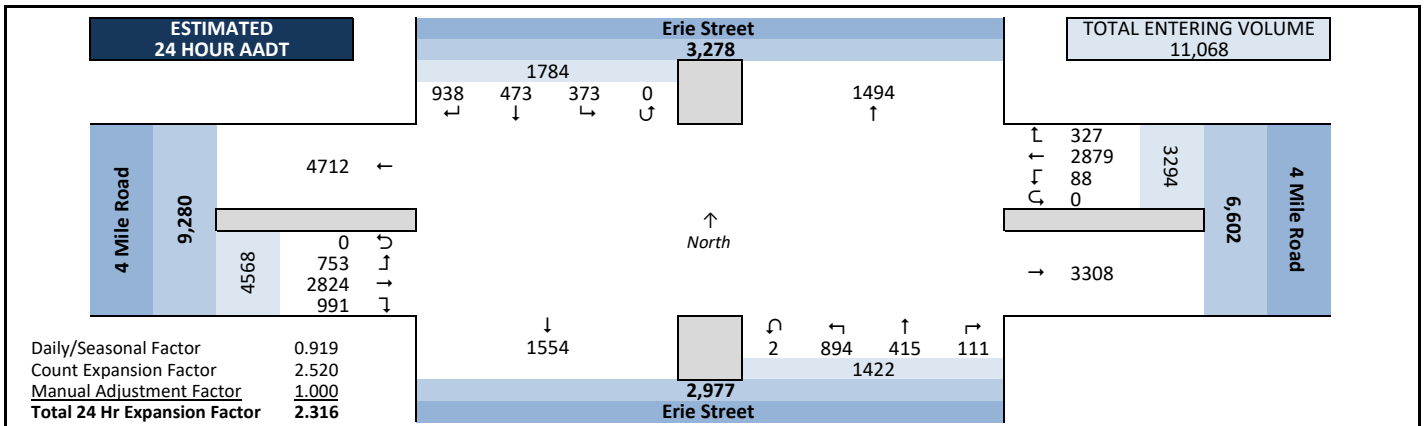
Observed 6 Hour Volume Summary



Total Entering Hourly Volume



Estimated 24 Hour AADT



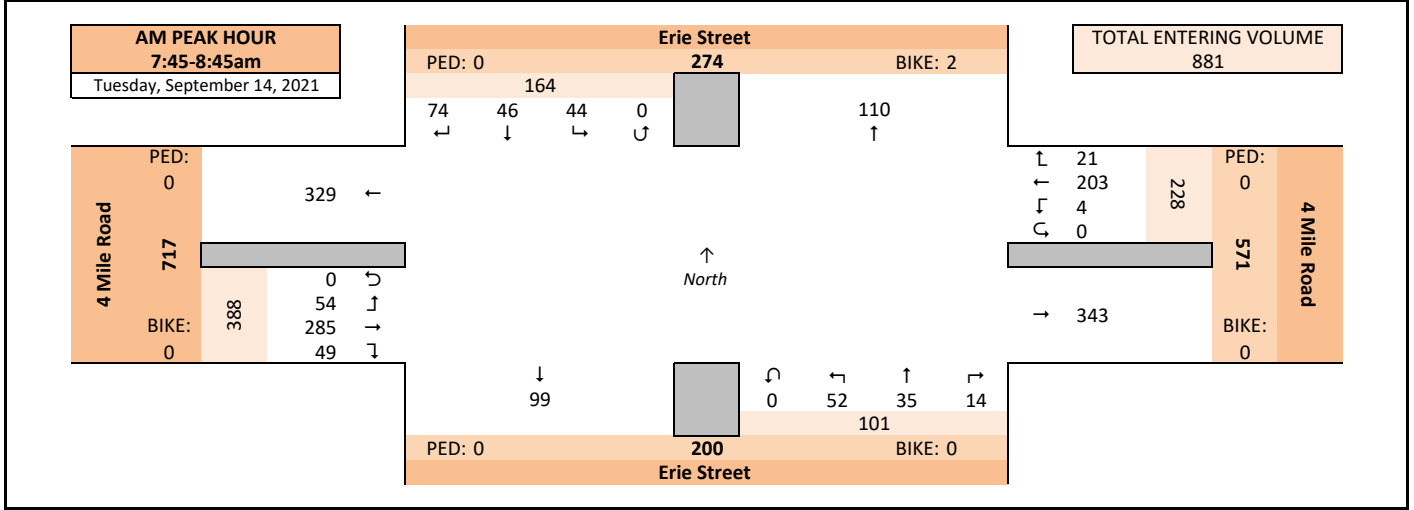
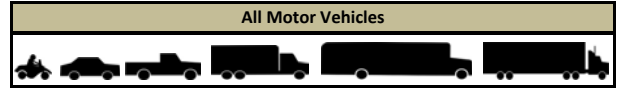
Intersection Traffic Volume Report

<i>Count Basics</i>		Page 2 of 13	
Start Date:	Monday, September 13, 2021	Weekday	Schools in Session
Total Number of Hours Counted: 6		Non-Holiday	No Special Events

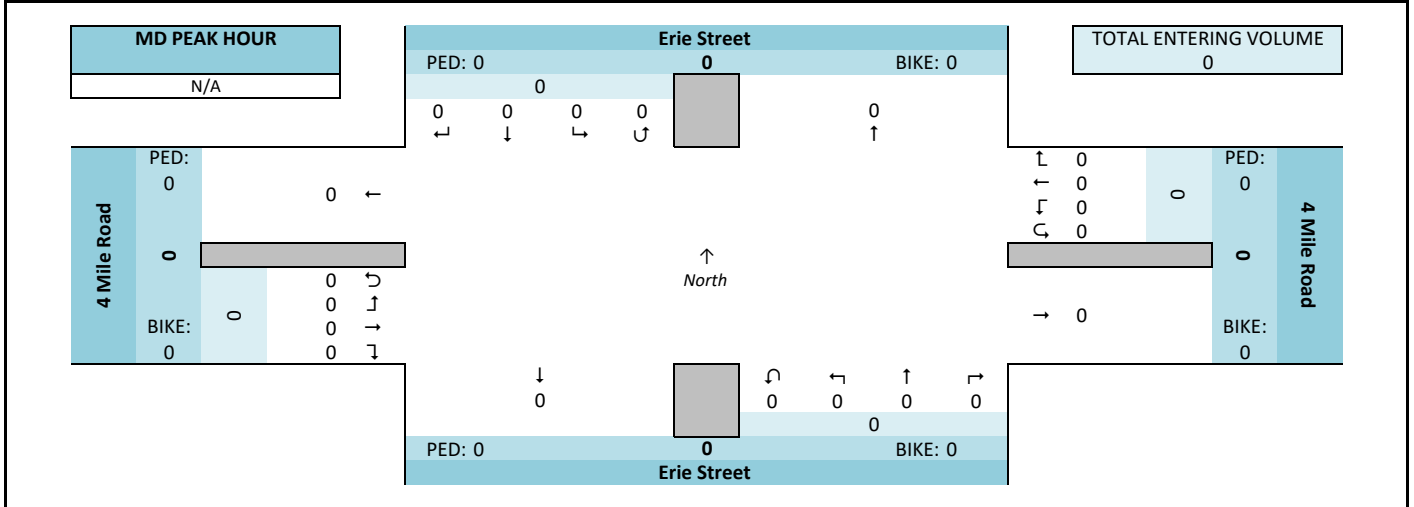
Peak Hour Volume Graphical Summary

Erie Street and 4 Mile Road

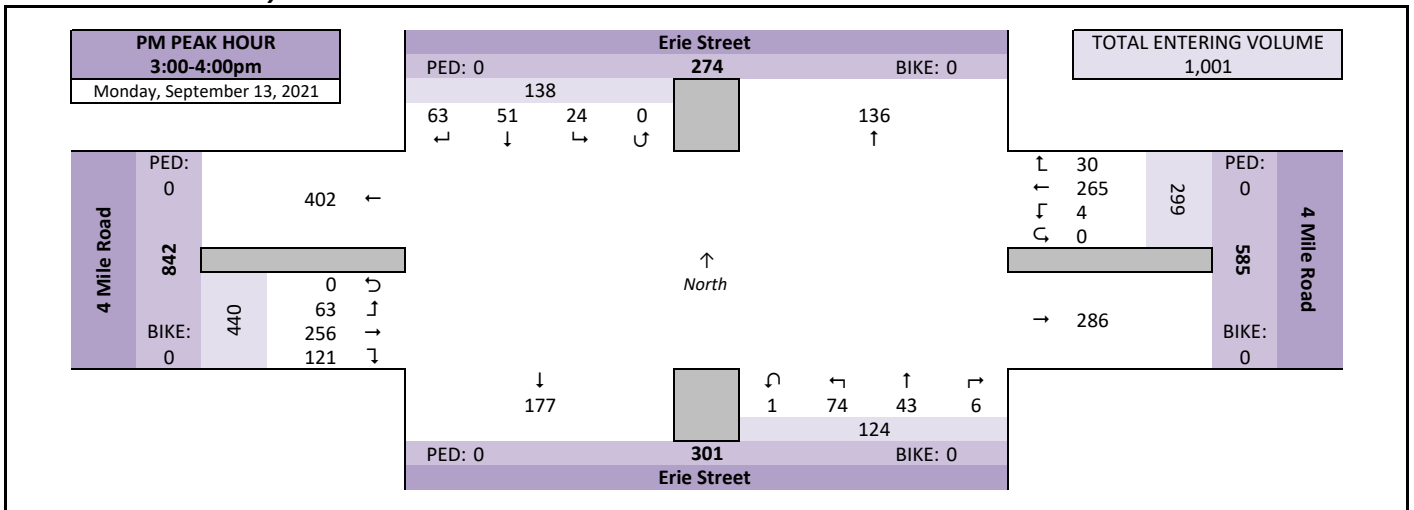
AM Peak Hour Summary



MIDDAY (MD) Peak Hour Summary



PM Peak Hour Summary

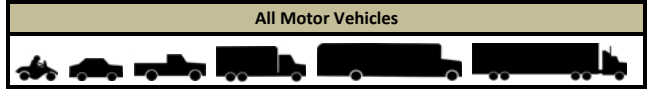


Intersection Traffic Volume Report

Count Basics		Page 4 of 13	
Start Date:	Monday, September 13, 2021	Weekday	Schools in Session
Total Number of Hours Counted:	6	Non-Holiday	No Special Events

Hourly Volume Summary - Motor Vehicle Data

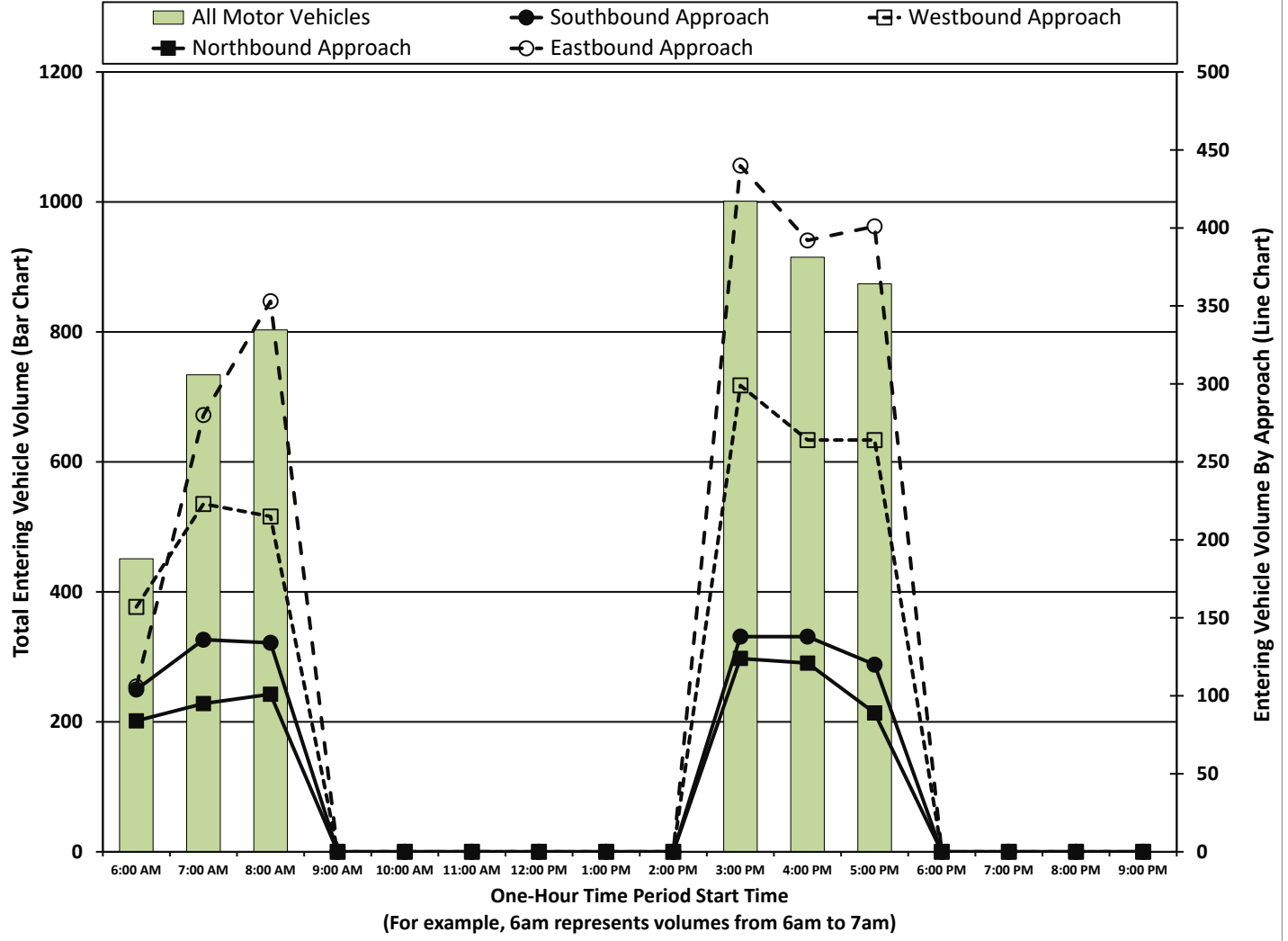
Erie Street and 4 Mile Road



One-Hour Motor Vehicle Data

One-Hour Time Period	From North					From East					From South					From West					Total Vehicle Volume	Directional Volume Totals	
	Erie Street					4 Mile Road					Erie Street					4 Mile Road						E/W	N/S
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
6:00 AM	63	18	23	0	104	12	141	4	0	157	5	15	64	0	84	23	59	24	0	106	451	263	188
7:00 AM	71	30	35	0	136	24	194	5	0	223	4	22	69	0	95	42	196	42	0	280	734	503	231
8:00 AM	68	34	32	0	134	19	192	4	0	215	12	30	59	0	101	55	249	49	0	353	803	568	235
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	63	51	24	0	138	30	265	4	0	299	6	43	74	1	124	121	256	63	0	440	1001	739	262
4:00 PM	72	36	30	0	138	26	226	12	0	264	13	34	74	0	121	88	228	76	0	392	915	656	259
5:00 PM	68	35	17	0	120	30	225	9	0	264	8	35	46	0	89	99	231	71	0	401	874	665	209
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	405	204	161	0	770	141	1243	38	0	1422	48	179	386	1	614	428	1219	325	0	1972	4778	3394	1384

Graphical Summary of Hourly Volumes



Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Erie Street and 4 Mile Road



15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
	Erie Street			4 Mile Road			Erie Street			4 Mile Road				
	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
6:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	4
6:15 AM	0	0	0	0	0	0	0	1	1	0	0	0	1	3
6:30 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	4
6:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	1	3
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	1	0	1	0	0	0	0	0	0	1	0	1	2	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	1	0	0	0	0	0	0	0	0	0	1	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	1	0	1	1	0	1	0	0	0	0	0	0	2	3
5:15 PM	0	0	0	0	0	0	0	1	1	0	0	0	1	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Totals	2	3	5	1	1	2	1	2	3	1	1	2	12	

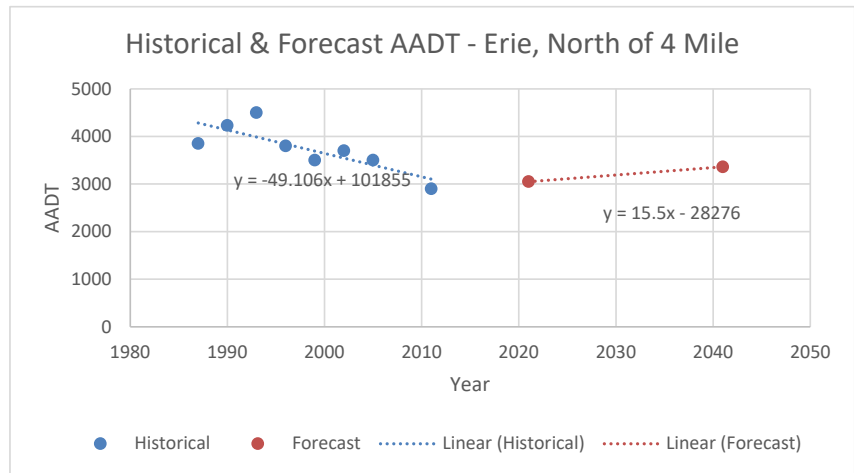
Special Pedestrians

Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementary School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Historical Traffic Trends & Forecast

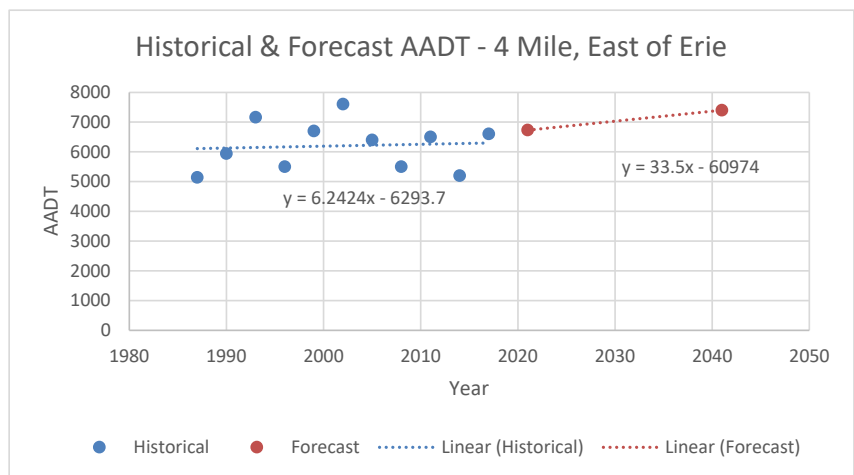
511003 - Erie, North of 4 Mile

1987	3850	
1990	4230	
1993	4500	
1996	3800	
1999	3500	
2002	3700	
2005	3500	
2011	2900	
2021	3050	0.52%
2041	3360	0.51%



511002 - 4 Mile, East of Erie

1987	5140	
1990	5940	
1993	7160	
1996	5500	
1999	6700	
2002	7600	
2005	6400	
2008	5500	
2011	6500	
2014	5200	
2017	6600	
2021	6730	0.49%
2041	7400	0.50%



Year 2021 Background Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	65	310	50	5	225	30	50	40	15	70	65	110
Future Volume (vph)	65	310	50	5	225	30	50	40	15	70	65	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.979			0.982			0.981			0.939		
Flt Protected	0.950			0.950			0.977			0.986		
Satd. Flow (prot)	1703	1755	0	1770	1829	0	0	1671	0	0	1691	0
Flt Permitted	0.950			0.950			0.977			0.986		
Satd. Flow (perm)	1703	1755	0	1770	1829	0	0	1671	0	0	1691	0
Link Speed (mph)	35			35			30			30		
Link Distance (ft)	726			167			241			618		
Travel Time (s)	14.1			3.3			5.5			14.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		
Adj. Flow (vph)	71	337	54	5	245	33	54	43	16	76	71	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	391	0	5	278	0	0	113	0	0	267	0
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	16.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	65	310	50	5	225	30	50	40	15	70	65	110
Future Vol, veh/h	65	310	50	5	225	30	50	40	15	70	65	110
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	71	337	54	5	245	33	54	43	16	76	71	120
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	20.1	15.6	12	14.5
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	48%	100%	0%	100%	0%	29%
Vol Thru, %	38%	0%	86%	0%	88%	27%
Vol Right, %	14%	0%	14%	0%	12%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	65	360	5	255	245
LT Vol	50	65	0	5	0	70
Through Vol	40	0	310	0	225	65
RT Vol	15	0	50	0	30	110
Lane Flow Rate	114	71	391	5	277	266
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.221	0.136	0.687	0.011	0.504	0.461
Departure Headway (Hd)	6.963	6.927	6.318	7.142	6.546	6.238
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	515	520	575	503	552	578
Service Time	5.018	4.638	4.029	4.855	4.26	4.282
HCM Lane V/C Ratio	0.221	0.137	0.68	0.01	0.502	0.46
HCM Control Delay	12	10.7	21.8	9.9	15.7	14.5
HCM Lane LOS	B	B	C	A	C	B
HCM 95th-tile Q	0.8	0.5	5.3	0	2.8	2.4

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	105	255	120	5	265	55	75	65	5	40	60	90
Future Volume (vph)	105	255	120	5	265	55	75	65	5	40	60	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.952		0.974		0.996		0.936					
Flt Protected	0.950		0.950		0.975		0.990		0.990			
Satd. Flow (prot)	1752	1756	0	1752	1797	0	0	1757	0	0	1661	0
Flt Permitted	0.950		0.950		0.975		0.990		0.990			
Satd. Flow (perm)	1752	1756	0	1752	1797	0	0	1757	0	0	1661	0
Link Speed (mph)	35		35		30		30					
Link Distance (ft)	726		167		241		618					
Travel Time (s)	14.1		3.3		5.5		14.0					
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%					
Adj. Flow (vph)	109	266	125	5	276	57	78	68	5	42	63	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	109	391	0	5	333	0	0	151	0	0	199	0
Sign Control	Stop		Stop		Stop		Stop					

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	16.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	105	255	120	5	265	55	75	65	5	40	60	90
Future Vol, veh/h	105	255	120	5	265	55	75	65	5	40	60	90
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	109	266	125	5	276	57	78	68	5	42	63	94
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	18.5	18.3	12.9	13.3
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	52%	100%	0%	100%	0%	21%
Vol Thru, %	45%	0%	68%	0%	83%	32%
Vol Right, %	3%	0%	32%	0%	17%	47%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	145	105	375	5	320	190
LT Vol	75	105	0	5	0	40
Through Vol	65	0	255	0	265	60
RT Vol	5	0	120	0	55	90
Lane Flow Rate	151	109	391	5	333	198
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.293	0.21	0.67	0.01	0.599	0.36
Departure Headway (Hd)	6.986	6.912	6.174	7.098	6.464	6.549
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	514	523	590	504	560	548
Service Time	5.04	4.612	3.874	4.839	4.205	4.599
HCM Lane V/C Ratio	0.294	0.208	0.663	0.01	0.595	0.361
HCM Control Delay	12.9	11.4	20.5	9.9	18.4	13.3
HCM Lane LOS	B	B	C	A	C	B
HCM 95th-tile Q	1.2	0.8	5	0	3.9	1.6

Year 2041 Background Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	40	340	55	5	250	30	55	45	15	75	70	65
Future Volume (vph)	40	340	55	5	250	30	55	45	15	75	70	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.979		0.984		0.983		0.958					
Frt Protected	0.950			0.950			0.977			0.982		
Satd. Flow (prot)	1703	1755	0	1770	1833	0	0	1674	0	0	1719	0
Frt Permitted	0.950			0.950			0.977			0.982		
Satd. Flow (perm)	1703	1755	0	1770	1833	0	0	1674	0	0	1719	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		726			167			241			618	
Travel Time (s)		14.1			3.3			5.5			14.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	43	370	60	5	272	33	60	49	16	82	76	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	430	0	5	305	0	0	125	0	0	229	0
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	19
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	40	340	55	5	250	30	55	45	15	75	70	65
Future Vol, veh/h	40	340	55	5	250	30	55	45	15	75	70	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	43	370	60	5	272	33	60	49	16	82	76	71
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	24.4	16.8	12.4	14.2
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	48%	100%	0%	100%	0%	36%
Vol Thru, %	39%	0%	86%	0%	89%	33%
Vol Right, %	13%	0%	14%	0%	11%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	40	395	5	280	210
LT Vol	55	40	0	5	0	75
Through Vol	45	0	340	0	250	70
RT Vol	15	0	55	0	30	65
Lane Flow Rate	125	43	429	5	304	228
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.245	0.084	0.754	0.011	0.549	0.414
Departure Headway (Hd)	7.061	6.93	6.321	7.082	6.495	6.533
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	520	575	505	554	550
Service Time	5.119	4.63	4.021	4.827	4.239	4.584
HCM Lane V/C Ratio	0.247	0.083	0.746	0.01	0.549	0.415
HCM Control Delay	12.4	10.3	25.8	9.9	16.9	14.2
HCM Lane LOS	B	B	D	A	C	B
HCM 95th-tile Q	1	0.3	6.7	0	3.3	2

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	60	280	130	5	290	60	85	70	5	45	65	55
Future Volume (vph)	60	280	130	5	290	60	85	70	5	45	65	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.953		0.974		0.996		0.955					
Frt Protected	0.950			0.950			0.974			0.987		
Satd. Flow (prot)	1752	1758	0	1752	1797	0	0	1755	0	0	1690	0
Frt Permitted	0.950			0.950			0.974			0.987		
Satd. Flow (perm)	1752	1758	0	1752	1797	0	0	1755	0	0	1690	0
Link Speed (mph)	35		35		30		30					
Link Distance (ft)	726		167		241		618					
Travel Time (s)	14.1		3.3		5.5		14.0					
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%					
Adj. Flow (vph)	63	292	135	5	302	63	89	73	5	47	68	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	427	0	5	365	0	0	167	0	0	172	0
Sign Control	Stop		Stop		Stop		Stop					

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	60	280	130	5	290	60	85	70	5	45	65	55
Future Vol, veh/h	60	280	130	5	290	60	85	70	5	45	65	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	63	292	135	5	302	63	89	73	5	47	68	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	22.6	20.5	13.6	13.3
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	53%	100%	0%	100%	0%	27%
Vol Thru, %	44%	0%	68%	0%	83%	39%
Vol Right, %	3%	0%	32%	0%	17%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	60	410	5	350	165
LT Vol	85	60	0	5	0	45
Through Vol	70	0	280	0	290	65
RT Vol	5	0	130	0	60	55
Lane Flow Rate	167	62	427	5	365	172
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.328	0.12	0.735	0.01	0.655	0.328
Departure Headway (Hd)	7.082	6.932	6.195	7.096	6.463	6.861
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	517	585	504	558	523
Service Time	5.138	4.677	3.94	4.841	4.207	4.917
HCM Lane V/C Ratio	0.329	0.12	0.73	0.01	0.654	0.329
HCM Control Delay	13.6	10.6	24.3	9.9	20.7	13.3
HCM Lane LOS	B	B	C	A	C	B
HCM 95th-tile Q	1.4	0.4	6.3	0	4.7	1.4

Year 2021 Build Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	55	315	50	5	225	20	55	35	15	50	45	75
Future Volume (vph)	55	315	50	5	225	20	55	35	15	50	45	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%			0%			0%			0%		
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.980			0.988			0.981			0.940		
Flt Protected	0.950			0.950			0.974			0.986		
Satd. Flow (prot)	1703	1757	0	1770	1840	0	0	1666	0	0	1693	0
Flt Permitted	0.950			0.950			0.974			0.986		
Satd. Flow (perm)	1703	1757	0	1770	1840	0	0	1666	0	0	1693	0
Link Speed (mph)	35			35			30			30		
Link Distance (ft)	726			167			241			618		
Travel Time (s)	14.1			3.3			5.5			14.0		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		
Adj. Flow (vph)	60	342	54	5	245	22	60	38	16	54	49	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	396	0	5	267	0	0	114	0	0	185	0
Sign Control	Stop			Stop			Stop			Stop		

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	55	315	50	5	225	20	55	35	15	50	45	75
Future Vol, veh/h	55	315	50	5	225	20	55	35	15	50	45	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	60	342	54	5	245	22	60	38	16	54	49	82
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	17.6	13.6	11.3	11.8
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	52%	100%	0%	100%	0%	29%
Vol Thru, %	33%	0%	86%	0%	92%	26%
Vol Right, %	14%	0%	14%	0%	8%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	55	365	5	245	170
LT Vol	55	55	0	5	0	50
Through Vol	35	0	315	0	225	45
RT Vol	15	0	50	0	20	75
Lane Flow Rate	114	60	397	5	266	185
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.206	0.107	0.645	0.01	0.449	0.309
Departure Headway (Hd)	6.489	6.457	5.852	6.638	6.072	6.011
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	550	554	615	537	591	595
Service Time	4.57	4.212	3.607	4.403	3.836	4.084
HCM Lane V/C Ratio	0.207	0.108	0.646	0.009	0.45	0.311
HCM Control Delay	11.3	10	18.7	9.5	13.7	11.8
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.4	4.7	0	2.3	1.3

Lanes, Volumes, Timings
110: East Drwy & 4 Mile Road

09/16/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	370	10	5	250	0	5
Future Volume (vph)	370	10	5	250	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996					0.865
Flt Protected				0.999		
Satd. Flow (prot)	1785	0	0	1861	0	1611
Flt Permitted				0.999		
Satd. Flow (perm)	1785	0	0	1861	0	1611
Link Speed (mph)	35			35	25	
Link Distance (ft)	167			699	91	
Travel Time (s)	3.3			13.6	2.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	402	11	5	272	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	413	0	0	277	0	5
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
110: East Drwy & 4 Mile Road

09/16/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	370	10	5	250	0	5
Future Vol, veh/h	370	10	5	250	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	402	11	5	272	0	5

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	413
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1146
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1146
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	643	-	-	1146	-
HCM Lane V/C Ratio	0.008	-	-	0.005	-
HCM Control Delay (s)	10.6	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
120: Erie Street & South Drwy

09/16/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Volume (vph)	5	5	100	5	1	100
Future Volume (vph)	5	5	100	5	1	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.994			
Frt Protected	0.950					
Satd. Flow (prot)	1770	1583	1733	0	0	1827
Frt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1733	0	0	1827
Link Speed (mph)	25		30			30
Link Distance (ft)	116		460			241
Travel Time (s)	3.2		10.5			5.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	9%	9%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	5	5	109	5	1	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	5	114	0	0	110
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
120: Erie Street & South Drwy

09/16/2021

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Vol, veh/h	5	5	100	5	1	100
Future Vol, veh/h	5	5	100	5	1	100
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	9	9	4	4
Mvmt Flow	5	5	109	5	1	109

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	223	112	0	0	114
Stage 1	112	-	-	-	-
Stage 2	111	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236
Pot Cap-1 Maneuver	765	941	-	-	1463
Stage 1	913	-	-	-	-
Stage 2	914	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	764	941	-	-	1463
Mov Cap-2 Maneuver	764	-	-	-	-
Stage 1	913	-	-	-	-
Stage 2	913	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	764	941	1463	-
HCM Lane V/C Ratio	-	-	0.007	0.006	0.001	-
HCM Control Delay (s)	-	-	9.7	8.8	7.5	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	65	265	125	5	265	30	85	50	5	30	50	65
Future Volume (vph)	65	265	125	5	265	30	85	50	5	30	50	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.952		0.985		0.995		0.939					
Flt Protected	0.950		0.950		0.970		0.990		0.990			
Satd. Flow (prot)	1752	1756	0	1752	1817	0	0	1746	0	0	1666	0
Flt Permitted	0.950		0.950		0.970		0.990		0.990			
Satd. Flow (perm)	1752	1756	0	1752	1817	0	0	1746	0	0	1666	0
Link Speed (mph)	35		35		30		30					
Link Distance (ft)	726		167		241		618					
Travel Time (s)	14.1		3.3		5.5		14.0					
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%					
Adj. Flow (vph)	68	276	130	5	276	31	89	52	5	31	52	68
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	406	0	5	307	0	0	146	0	0	151	0
Sign Control	Stop		Stop		Stop		Stop					

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	15.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	65	265	125	5	265	30	85	50	5	30	50	65
Future Vol, veh/h	65	265	125	5	265	30	85	50	5	30	50	65
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	68	276	130	5	276	31	89	52	5	31	52	68
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	17.5	15.3	12	11.6
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	61%	100%	0%	100%	0%	21%
Vol Thru, %	36%	0%	68%	0%	90%	34%
Vol Right, %	4%	0%	32%	0%	10%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	65	390	5	295	145
LT Vol	85	65	0	5	0	30
Through Vol	50	0	265	0	265	50
RT Vol	5	0	125	0	30	65
Lane Flow Rate	146	68	406	5	307	151
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.266	0.122	0.65	0.01	0.522	0.262
Departure Headway (Hd)	6.561	6.492	5.757	6.695	6.114	6.251
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	544	550	626	532	587	569
Service Time	4.653	4.255	3.519	4.465	3.884	4.343
HCM Lane V/C Ratio	0.268	0.124	0.649	0.009	0.523	0.265
HCM Control Delay	12	10.2	18.7	9.5	15.4	11.6
HCM Lane LOS	B	B	C	A	C	B
HCM 95th-tile Q	1.1	0.4	4.7	0	3	1

Lanes, Volumes, Timings
110: East Drwy & 4 Mile Road

09/16/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Volume (vph)	285	15	10	300	0	10
Future Volume (vph)	285	15	10	300	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993					0.865
Flt Protected				0.998		
Satd. Flow (prot)	1832	0	0	1841	0	1611
Flt Permitted				0.998		
Satd. Flow (perm)	1832	0	0	1841	0	1611
Link Speed (mph)	35			35	25	
Link Distance (ft)	167			699	91	
Travel Time (s)	3.3			13.6	2.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	297	16	10	313	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	313	0	0	323	0	10
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
110: East Drwy & 4 Mile Road

09/16/2021

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	285	15	10	300	0	10
Future Vol, veh/h	285	15	10	300	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	297	16	10	313	0	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	313
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.13	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.227	-
Pot Cap-1 Maneuver	-	1242	-
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1242	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	735	-	-	1242	-
HCM Lane V/C Ratio	0.014	-	-	0.008	-
HCM Control Delay (s)	10	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
120: Erie Street & South Drwy

09/16/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↷		↶	↶
Traffic Volume (vph)	10	15	125	10	5	175
Future Volume (vph)	10	15	125	10	5	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.990			
Frt Protected	0.950					0.999
Satd. Flow (prot)	1770	1583	1791	0	0	1791
Frt Permitted	0.950					0.999
Satd. Flow (perm)	1770	1583	1791	0	0	1791
Link Speed (mph)	25		30			30
Link Distance (ft)	116		460			241
Travel Time (s)	3.2		10.5			5.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	5%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	10	16	130	10	5	182
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	16	140	0	0	187
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
120: Erie Street & South Drwy

09/16/2021

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↷		↶	↶
Traffic Vol, veh/h	10	15	125	10	5	175
Future Vol, veh/h	10	15	125	10	5	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	5	5	6	6
Mvmt Flow	10	16	130	10	5	182

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	327	135	0	0	140
Stage 1	135	-	-	-	-
Stage 2	192	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.16
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.254
Pot Cap-1 Maneuver	667	914	-	-	1419
Stage 1	891	-	-	-	-
Stage 2	841	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	664	914	-	-	1419
Mov Cap-2 Maneuver	664	-	-	-	-
Stage 1	891	-	-	-	-
Stage 2	838	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	664	914	1419	-
HCM Lane V/C Ratio	-	-	0.016	0.017	0.004	-
HCM Control Delay (s)	-	-	10.5	9	7.5	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	0	-

Year 2041 Build Traffic Analysis Outputs

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	40	345	55	5	250	30	60	45	15	80	70	65
Future Volume (vph)	40	345	55	5	250	30	60	45	15	80	70	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.979		0.984		0.983		0.959					
Frt Protected	0.950			0.950			0.976			0.982		
Satd. Flow (prot)	1703	1755	0	1770	1833	0	0	1672	0	0	1720	0
Frt Permitted	0.950			0.950			0.976			0.982		
Satd. Flow (perm)	1703	1755	0	1770	1833	0	0	1672	0	0	1720	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		726			167			241			618	
Travel Time (s)		14.1			3.3			5.5			14.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	43	375	60	5	272	33	65	49	16	87	76	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	435	0	5	305	0	0	130	0	0	234	0
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	40	345	55	5	250	30	60	45	15	80	70	65
Future Vol, veh/h	40	345	55	5	250	30	60	45	15	80	70	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	43	375	60	5	272	33	65	49	16	87	76	71
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	25.8	17.2	12.7	14.6
HCM LOS	D	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	50%	100%	0%	100%	0%	37%
Vol Thru, %	38%	0%	86%	0%	89%	33%
Vol Right, %	12%	0%	14%	0%	11%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	40	400	5	280	215
LT Vol	60	40	0	5	0	80
Through Vol	45	0	345	0	250	70
RT Vol	15	0	55	0	30	65
Lane Flow Rate	130	43	435	5	304	234
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.258	0.085	0.772	0.011	0.556	0.429
Departure Headway (Hd)	7.133	7	6.391	7.16	6.572	6.602
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	502	515	570	499	548	545
Service Time	5.201	4.7	4.091	4.912	4.324	4.658
HCM Lane V/C Ratio	0.259	0.083	0.763	0.01	0.555	0.429
HCM Control Delay	12.7	10.3	27.4	10	17.3	14.6
HCM Lane LOS	B	B	D	A	C	B
HCM 95th-tile Q	1	0.3	7.1	0	3.4	2.1

Lanes, Volumes, Timings
110: East Drwy & 4 Mile Road

09/16/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Volume (vph)	430	10	5	285	0	5
Future Volume (vph)	430	10	5	285	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.997					0.865
Frt Protected				0.999		
Satd. Flow (prot)	1787	0	0	1861	0	1611
Frt Permitted				0.999		
Satd. Flow (perm)	1787	0	0	1861	0	1611
Link Speed (mph)	35			35	25	
Link Distance (ft)	167			699	91	
Travel Time (s)	3.3			13.6	2.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	467	11	5	310	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	478	0	0	315	0	5
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
110: East Drwy & 4 Mile Road

09/16/2021

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	430	10	5	285	0	5
Future Vol, veh/h	430	10	5	285	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	2	2	2	2
Mvmt Flow	467	11	5	310	0	5

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	478
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1084
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1084
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	591	-	-	1084	-
HCM Lane V/C Ratio	0.009	-	-	0.005	-
HCM Control Delay (s)	11.1	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
120: Erie Street & South Drwy

09/16/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Volume (vph)	5	5	115	5	1	130
Future Volume (vph)	5	5	115	5	1	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.995			
Frt Protected	0.950					
Satd. Flow (prot)	1770	1583	1734	0	0	1827
Frt Permitted	0.950					
Satd. Flow (perm)	1770	1583	1734	0	0	1827
Link Speed (mph)	25		30			30
Link Distance (ft)	116		460			241
Travel Time (s)	3.2		10.5			5.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	9%	9%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	5	5	125	5	1	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	5	130	0	0	142
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
120: Erie Street & South Drwy

09/16/2021

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Vol, veh/h	5	5	115	5	1	130
Future Vol, veh/h	5	5	115	5	1	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	9	9	4	4
Mvmt Flow	5	5	125	5	1	141

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	271	128	0	0	130
Stage 1	128	-	-	-	-
Stage 2	143	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236
Pot Cap-1 Maneuver	718	922	-	-	1443
Stage 1	898	-	-	-	-
Stage 2	884	-	-	-	-
Platoon blocked, %					
Mov Cap-1 Maneuver	717	922	-	-	1443
Mov Cap-2 Maneuver	717	-	-	-	-
Stage 1	898	-	-	-	-
Stage 2	883	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	717	922	1443	-
HCM Lane V/C Ratio	-	-	0.008	0.006	0.001	-
HCM Control Delay (s)	-	-	10.1	8.9	7.5	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	0	-

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/16/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Volume (vph)	60	290	135	5	290	60	95	75	5	50	65	55
Future Volume (vph)	60	290	135	5	290	60	95	75	5	50	65	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt	0.952		0.974		0.996		0.957					
Flt Protected	0.950			0.950			0.974				0.986	
Satd. Flow (prot)	1752	1756	0	1752	1797	0	0	1755	0	0	1691	0
Flt Permitted	0.950			0.950			0.974				0.986	
Satd. Flow (perm)	1752	1756	0	1752	1797	0	0	1755	0	0	1691	0
Link Speed (mph)	35		35		30		30					
Link Distance (ft)	726		167		241		618					
Travel Time (s)	14.1		3.3		5.5		14.0					
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%					
Adj. Flow (vph)	63	302	141	5	302	63	99	78	5	52	68	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	443	0	5	365	0	0	182	0	0	177	0
Sign Control	Stop		Stop		Stop		Stop					

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/16/2021

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	60	290	135	5	290	60	95	75	5	50	65	55
Future Vol, veh/h	60	290	135	5	290	60	95	75	5	50	65	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	63	302	141	5	302	63	99	78	5	52	68	57
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	25.9	21.7	14.4	13.8
HCM LOS	D	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	54%	100%	0%	100%	0%	29%
Vol Thru, %	43%	0%	68%	0%	83%	38%
Vol Right, %	3%	0%	32%	0%	17%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	60	425	5	350	170
LT Vol	95	60	0	5	0	50
Through Vol	75	0	290	0	290	65
RT Vol	5	0	135	0	60	55
Lane Flow Rate	182	62	443	5	365	177
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.365	0.123	0.779	0.011	0.671	0.346
Departure Headway (Hd)	7.214	7.069	6.331	7.261	6.626	7.037
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	498	506	571	492	543	510
Service Time	5.282	4.821	4.082	5.016	4.381	5.105
HCM Lane V/C Ratio	0.365	0.123	0.776	0.01	0.672	0.347
HCM Control Delay	14.4	10.8	28	10.1	21.9	13.8
HCM Lane LOS	B	B	D	B	C	B
HCM 95th-tile Q	1.7	0.4	7.2	0	5	1.5

Lanes, Volumes, Timings
110: East Drwy & 4 Mile Road

09/16/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Volume (vph)	330	15	10	355	0	10
Future Volume (vph)	330	15	10	355	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		0	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.994					0.865
Flt Protected				0.999		
Satd. Flow (prot)	1834	0	0	1843	0	1611
Flt Permitted				0.999		
Satd. Flow (perm)	1834	0	0	1843	0	1611
Link Speed (mph)	35			35	25	
Link Distance (ft)	167			699	91	
Travel Time (s)	3.3			13.6	2.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	344	16	10	370	0	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	0	0	380	0	10
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
110: East Drwy & 4 Mile Road

09/16/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔		↔
Traffic Vol, veh/h	330	15	10	355	0	10
Future Vol, veh/h	330	15	10	355	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	344	16	10	370	0	10

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	360
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	4.13	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	2.227	-
Pot Cap-1 Maneuver	-	1193	-
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1193	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	692	-	-	1193	-
HCM Lane V/C Ratio	0.015	-	-	0.009	-
HCM Control Delay (s)	10.3	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Lanes, Volumes, Timings
120: Erie Street & South Drwy

09/16/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Volume (vph)	10	15	160	10	5	200
Future Volume (vph)	10	15	160	10	5	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.992			
Frt Protected	0.950					0.999
Satd. Flow (prot)	1770	1583	1795	0	0	1791
Frt Permitted	0.950					0.999
Satd. Flow (perm)	1770	1583	1795	0	0	1791
Link Speed (mph)	25		30			30
Link Distance (ft)	116		460			241
Travel Time (s)	3.2		10.5			5.5
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	5%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Adj. Flow (vph)	10	16	167	10	5	208
Shared Lane Traffic (%)						
Lane Group Flow (vph)	10	16	177	0	0	213
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th TWSC
120: Erie Street & South Drwy

09/16/2021

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔			↔
Traffic Vol, veh/h	10	15	160	10	5	200
Future Vol, veh/h	10	15	160	10	5	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	5	5	6	6
Mvmt Flow	10	16	167	10	5	208

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	390	172	0
Stage 1	172	-	-
Stage 2	218	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	614	872	-
Stage 1	858	-	-
Stage 2	818	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	612	872	-
Mov Cap-2 Maneuver	612	-	-
Stage 1	858	-	-
Stage 2	815	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	612	872	1375	-
HCM Lane V/C Ratio	-	-	0.017	0.018	0.004	-
HCM Control Delay (s)	-	-	11	9.2	7.6	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	0	-

**Year 2041 Background Traffic
Analysis Outputs**
*(With 4 Mile Road & Erie Street
Optional EB/WB Right-Turn Lanes)*

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔	↔		↔	↔
Traffic Volume (vph)	40	340	55	5	250	30	55	45	15	75	70	65
Future Volume (vph)	40	340	55	5	250	30	55	45	15	75	70	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				0.850			0.850			0.958		
Flt Protected	0.950			0.950			0.977				0.982	
Satd. Flow (prot)	1703	1792	1524	1770	1863	1583	0	1674	0	0	1719	0
Flt Permitted	0.950			0.950			0.977				0.982	
Satd. Flow (perm)	1703	1792	1524	1770	1863	1583	0	1674	0	0	1719	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		726			167			241			618	
Travel Time (s)		14.1			3.3			5.5			14.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	43	370	60	5	272	33	60	49	16	82	76	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	370	60	5	272	33	0	125	0	0	229	0
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/17/2021

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔	↔		↔	↔
Traffic Vol, veh/h	40	340	55	5	250	30	55	45	15	75	70	65
Future Vol, veh/h	40	340	55	5	250	30	55	45	15	75	70	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	43	370	60	5	272	33	60	49	16	82	76	71
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	19.1	15.3	13.1	15.4
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	48%	100%	0%	0%	100%	0%	0%	36%
Vol Thru, %	39%	0%	100%	0%	0%	100%	0%	33%
Vol Right, %	13%	0%	0%	100%	0%	0%	100%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	40	340	55	5	250	30	210
LT Vol	55	40	0	0	5	0	0	75
Through Vol	45	0	340	0	0	250	0	70
RT Vol	15	0	0	55	0	0	30	65
Lane Flow Rate	125	43	370	60	5	272	33	228
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.264	0.085	0.673	0.097	0.011	0.506	0.054	0.448
Departure Headway (Hd)	7.613	7.067	6.555	5.838	7.219	6.705	5.987	7.059
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	471	510	554	618	496	538	598	511
Service Time	5.363	4.767	4.255	3.538	4.959	4.446	3.727	4.801
HCM Lane V/C Ratio	0.265	0.084	0.668	0.097	0.01	0.506	0.055	0.446
HCM Control Delay	13.1	10.4	21.7	9.2	10	16.2	9.1	15.4
HCM Lane LOS	B	B	C	A	A	C	A	C
HCM 95th-tile Q	1.1	0.3	5	0.3	0	2.8	0.2	2.3

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↘	↔	↑	↘		↕	↔		↕	
Traffic Volume (vph)	60	280	130	5	290	60	85	70	5	45	65	55
Future Volume (vph)	60	280	130	5	290	60	85	70	5	45	65	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		0	100		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				0.850			0.850			0.955		
Flt Protected	0.950			0.950			0.974			0.987		
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	0	1755	0	0	1690	0
Flt Permitted	0.950			0.950			0.974			0.987		
Satd. Flow (perm)	1752	1845	1568	1752	1845	1568	0	1755	0	0	1690	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		726			167			241			618	
Travel Time (s)		14.1			3.3			5.5			14.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	63	292	135	5	302	63	89	73	5	47	68	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	292	135	5	302	63	0	167	0	0	172	0
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/17/2021

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↘	↔	↑	↘		↕	↔		↕	
Traffic Vol, veh/h	60	280	130	5	290	60	85	70	5	45	65	55
Future Vol, veh/h	60	280	130	5	290	60	85	70	5	45	65	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	63	292	135	5	302	63	89	73	5	47	68	57
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	14	16.2	14.3	13.8
HCM LOS	B	C	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	53%	100%	0%	0%	100%	0%	0%	27%
Vol Thru, %	44%	0%	100%	0%	0%	100%	0%	39%
Vol Right, %	3%	0%	0%	100%	0%	0%	100%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	60	280	130	5	290	60	165
LT Vol	85	60	0	0	5	0	0	45
Through Vol	70	0	280	0	0	290	0	65
RT Vol	5	0	0	130	0	0	60	55
Lane Flow Rate	167	62	292	135	5	302	62	172
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.35	0.123	0.53	0.219	0.01	0.562	0.104	0.346
Departure Headway (Hd)	7.557	7.059	6.547	5.83	7.207	6.694	5.977	7.237
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	477	510	554	619	499	541	602	497
Service Time	5.304	4.772	4.26	3.542	4.921	4.408	3.69	4.982
HCM Lane V/C Ratio	0.35	0.122	0.527	0.218	0.01	0.558	0.103	0.346
HCM Control Delay	14.3	10.8	16.4	10.2	10	17.7	9.4	13.8
HCM Lane LOS	B	B	C	B	A	C	A	B
HCM 95th-tile Q	1.6	0.4	3.1	0.8	0	3.4	0.3	1.5

**Year 2041 Build Traffic
Analysis Outputs**
*(With 4 Mile Road & Erie Street
Optional EB/WB Right-Turn Lanes)*

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔			↔	
Traffic Volume (vph)	40	345	55	5	250	30	60	45	15	80	70	65
Future Volume (vph)	40	345	55	5	250	30	60	45	15	80	70	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%				0%						0%	
Storage Length (ft)	95		100	100		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				0.850			0.850			0.959		
Flt Protected	0.950			0.950			0.976				0.982	
Satd. Flow (prot)	1703	1792	1524	1770	1863	1583	0	1672	0	0	1720	0
Flt Permitted	0.950			0.950			0.976				0.982	
Satd. Flow (perm)	1703	1792	1524	1770	1863	1583	0	1672	0	0	1720	0
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		726			167			241			618	
Travel Time (s)		14.1			3.3			5.5			14.0	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	9%	9%	9%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%				0%						0%	
Adj. Flow (vph)	43	375	60	5	272	33	65	49	16	87	76	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	375	60	5	272	33	0	130	0	0	234	0
Sign Control	Stop				Stop						Stop	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/17/2021

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔			↔	
Traffic Vol, veh/h	40	345	55	5	250	30	60	45	15	80	70	65
Future Vol, veh/h	40	345	55	5	250	30	60	45	15	80	70	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	6	6	6	2	2	2	9	9	9	4	4	4
Mvmt Flow	43	375	60	5	272	33	65	49	16	87	76	71
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	19.8	15.6	13.4	15.9
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	50%	100%	0%	0%	100%	0%	0%	37%
Vol Thru, %	38%	0%	100%	0%	0%	100%	0%	33%
Vol Right, %	12%	0%	0%	100%	0%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	40	345	55	5	250	30	215
LT Vol	60	40	0	0	5	0	0	80
Through Vol	45	0	345	0	0	250	0	70
RT Vol	15	0	0	55	0	0	30	65
Lane Flow Rate	130	43	375	60	5	272	33	234
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.279	0.086	0.687	0.098	0.011	0.513	0.055	0.463
Departure Headway (Hd)	7.691	7.105	6.592	5.875	7.303	6.79	6.07	7.13
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	505	548	610	490	530	590	505
Service Time	5.439	4.842	4.329	3.611	5.044	4.531	3.811	4.872
HCM Lane V/C Ratio	0.278	0.085	0.684	0.098	0.01	0.513	0.056	0.463
HCM Control Delay	13.4	10.5	22.6	9.3	10.1	16.5	9.2	15.9
HCM Lane LOS	B	B	C	A	B	C	A	C
HCM 95th-tile Q	1.1	0.3	5.3	0.3	0	2.9	0.2	2.4

Lanes, Volumes, Timings
100: Erie Street & 4 Mile Road

09/17/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔			↔	
Traffic Volume (vph)	60	290	135	5	290	60	95	75	5	50	65	55
Future Volume (vph)	60	290	135	5	290	60	95	75	5	50	65	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)	0%		0%		0%		0%		0%		0%	
Storage Length (ft)	95		100	100		0	0		0	0		0
Storage Lanes	1		1	1		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor				0.850			0.850			0.957		
Flt Protected	0.950		0.950		0.950		0.974		0.974		0.986	
Satd. Flow (prot)	1752	1845	1568	1752	1845	1568	0	1755	0	0	1691	0
Flt Permitted	0.950		0.950		0.950		0.974		0.974		0.986	
Satd. Flow (perm)	1752	1845	1568	1752	1845	1568	0	1755	0	0	1691	0
Link Speed (mph)	35		35		35		30		30		30	
Link Distance (ft)	726		167		241		618		14.0			
Travel Time (s)	14.1		3.3		5.5							
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%		0%		0%		0%		0%		0%	
Adj. Flow (vph)	63	302	141	5	302	63	99	78	5	52	68	57
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	302	141	5	302	63	0	182	0	0	177	0
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

HCM 6th AWSC
100: Erie Street & 4 Mile Road

09/17/2021

Intersection	
Intersection Delay, s/veh	15.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↑	↔	↔	↑	↔		↔			↔	
Traffic Vol, veh/h	60	290	135	5	290	60	95	75	5	50	65	55
Future Vol, veh/h	60	290	135	5	290	60	95	75	5	50	65	55
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	3	3	3	3	3	3	5	5	5	6	6	6
Mvmt Flow	63	302	141	5	302	63	99	78	5	52	68	57
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	14.8	16.8	15.2	14.3
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	54%	100%	0%	0%	100%	0%	0%	29%
Vol Thru, %	43%	0%	100%	0%	0%	100%	0%	38%
Vol Right, %	3%	0%	0%	100%	0%	0%	100%	32%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	60	290	135	5	290	60	170
LT Vol	95	60	0	0	5	0	0	50
Through Vol	75	0	290	0	0	290	0	65
RT Vol	5	0	0	135	0	0	60	55
Lane Flow Rate	182	62	302	141	5	302	62	177
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.388	0.124	0.559	0.232	0.011	0.573	0.106	0.363
Departure Headway (Hd)	7.665	7.17	6.657	5.939	7.342	6.828	6.109	7.386
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	500	541	605	488	529	586	487
Service Time	5.411	4.91	4.397	3.678	5.082	4.568	3.849	5.132
HCM Lane V/C Ratio	0.387	0.124	0.558	0.233	0.01	0.571	0.106	0.363
HCM Control Delay	15.2	10.9	17.6	10.5	10.2	18.4	9.6	14.3
HCM Lane LOS	C	B	C	B	B	C	A	B
HCM 95th-tile Q	1.8	0.4	3.4	0.9	0	3.6	0.4	1.6



PLAN COMMISSION REPORT

Proposal: Building, Site, & Operations (BSO) Plan Review

Description: Review a request for approval of a building, site, and operation plan for a ±4,052 square-foot training facility for the property located at 3710 7 Mile Road.

Applicant(s): Ryan Rudie

Address(es): 3710 7 Mile Road

Suggested Motion: That the Plan Commission recommends to the Village Board that a building, site, and operations plan for a ±4,052 square-foot training facility be approved for the property located at 3710 7 Mile Road with conditions outlined in Exhibit A for the following reasons:

1. The proposed use is allowed through the building, site, and operation plan review process.
2. This use will not adversely affect the surrounding property values.

Owner(s): Wisconsin Electric Power Company

Tax Key(s): 104-04-23-06-008-000

Lot Size(s): ±29.09 acres

Current Zoning District(s): P-2, Recreational Park District, A-2, General Farming and Residential District

Overlay District(s): Shoreland Overlay District

Wetlands: Yes No Floodplain: Yes No

Comprehensive Plan: Commercial

Background: The applicant is proposing to construct a ±4,052 square-foot training facility located at 3710 7 Mile Road. This will be in addition to existing training facilities on the site. Representatives of the project will provide answers to time of operations and what kind of training uses are expected to be conducted with this facility.

The proposed building will be located approximately 630 feet from Lake Michigan within the P-2 Zoning District. Per code, any building located within the shoreland district must be a minimum of 100 feet from the top of the stable bluff. The located of the building exceeds the 100-foot setback requirement. Since the development is located within the shoreland district, a shoreland conditional use permit will be required. As this is a training facility with no daily operations on site, no dumpster is required.

The applicant will be removing approximately 5,390 square feet of concrete on the northern portion of the site to negate the 4,856 square feet of impervious surface that will be added as part of this development. By doing this, the applicant will not need to submit a stormwater management plan to accommodate the additional impervious surface to the site.

The proposed building will have a primary exterior of split-face CMU block on all four sides of the building. The brick will be painted to differentiate a bottom and middle. The gable portion of the building will be clad in fiber cement siding, providing a “top” as outlined in our design guidelines. The roof will be asphalt shingles. Due to the type of facility, no windows are being proposed.

No additional parking is being proposed with this development. Parking is located to the west of the proposed building as illustrated on the site plan. This facility will not have any staff or customers, nor any specific hours of operation. The site will be operated to accommodate parking needs if more than one training facility is being used at the same time.

This proposed development is part of the training facility that is located down a bluff and cannot be seen from the road. Staff is not requiring any type of landscaping as part of this project which is consistent with the requirements for the previous training facility located on the site. The only exterior lighting being proposed is located on the south and west side of the building. They are cutoff fixtures as required by code. The submitted photometric plan is in compliance with the lighting code.

The proposed building complies with Village zoning code and the proposed use is in accordance with previous approved training facilities on the site. Staff recommends approval of the proposed development located at 3710 7 Mile Road with conditions outlined in Exhibit A. If the Plan Commission is comfortable with the proposed development, staff has drafted a suggested motion to approve the proposed development.

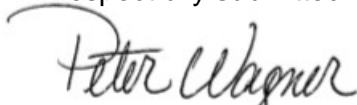
EXHIBIT A: 3710 7 Mile Road Conditions of Approval

1. **Occupancy Permit.** The applicant must obtain an occupancy permit card from the Village Building Inspection Department. The occupancy permit must be displayed in a prominent location at the project site, and a copy of these conditions must be kept at the project site at all times until the project has been completed.
2. **Compliance.** Failure to comply with the terms and conditions stated herein could result in the issuance of citation(s) and/or revocation of this permit.
3. **Binding Effect.** These conditions bind and are applicable to the Property Owner, Applicant, and any other users of the Property Owner with respect to the uses on the Property.
4. **Plans.** The proposed use (training facility) must be located on the parcel as shown on the plan received by the Village Planning & Zoning Department dated June 7, 2021.
5. **Engineering Department.** The property owner or designated agent must contact the Village of Caledonia Engineering Department and must comply with all regulations and requirements of the Village of Caledonia Engineering Department.
6. **Stormwater.** The property owner or designated agent must contact the Village of Caledonia Stormwater Utility District regarding stormwater regulations for this site. Compliance with all regulations and requirements, as determined by the Village of Caledonia Stormwater Utility District is required. Stormwater management plans shall be submitted for approval and be in compliance with all Village requirements, as determined by the Village Engineer before permits are issued.
7. **Fire Department Approval.** Owner shall obtain approval from the Village of Caledonia Fire Department and meet applicable codes.
8. **No Accumulation of Refuse and Debris.** Any fence, wall, hedge, yard, space or landscaped area must be kept free of any accumulation of refuse or debris. Plant materials must be kept in a healthy growing condition and structures must be maintained in a sound manner.
9. **Performance Standards.** The applicant must comply with the provisions of Article VII, Division 4, Performance Standards of Chapter 20, Zoning, Racine County Code of Ordinances (a copy is attached), as adopted by the Village of Caledonia.
10. **Property Maintenance Required.** A complete and thorough maintenance program must be established to insure attractiveness. The continued positive appearance of buildings and property is dependent upon proper maintenance attitudes and procedures. Maintenance programs must be established that include watering, maintaining and pruning all landscape planting areas including removal and replacement of dead or

diseased landscaping; cleaning up litter; sweeping, cleaning and repairing paved surfaces; and cleaning, painting, and repairing windows and building façade.

11. **Expiration.** This approval will expire twelve (12) months from the date of the Village’s final approval unless substantial work has commenced following such grant. If this office determines that no substantial work has commenced, the project may not occur unless the Village of Caledonia Plan Commission and the Village Board grants a written extension. Written extension requests must be submitted to the Village Planning & Zoning Department thirty (30) days before permit/approval expiration.
12. **Compliance with Law.** The applicant is responsible for obtaining all necessary federal, state, and local permits, approvals, and licenses. The applicant is required to comply with all applicable local, state, and federal regulations, including Titles 14, 16 and 18 of the Village of Caledonia Code of Ordinances.
13. **Amendments to Use Approval.** No additions, deletions, or changes may be made to the project, site plan, or these conditions without the Village of Caledonia’s prior approval. All addition, deletion, and/or change requests must be submitted to the Village of Caledonia in writing. A minor change to the conditions of this permit, as deemed by the Zoning Administrator, may be made at a staff level, if authorized by the Zoning Administrator.
14. **Agreement.** Your accepting the conditional use approval/zoning permit and beginning the project means that you have read, understand, and agree to follow all conditions of this approval. Therefore, Ryan Rudie, Racine County Sheriff’s Office, WE Energies and their heirs, successors, and assigns, including tenants, are responsible for full compliance with the above conditions.
15. **Subsequent Owners.** It is the property owner’s responsibility to inform any subsequent owner or operator of these conditions.

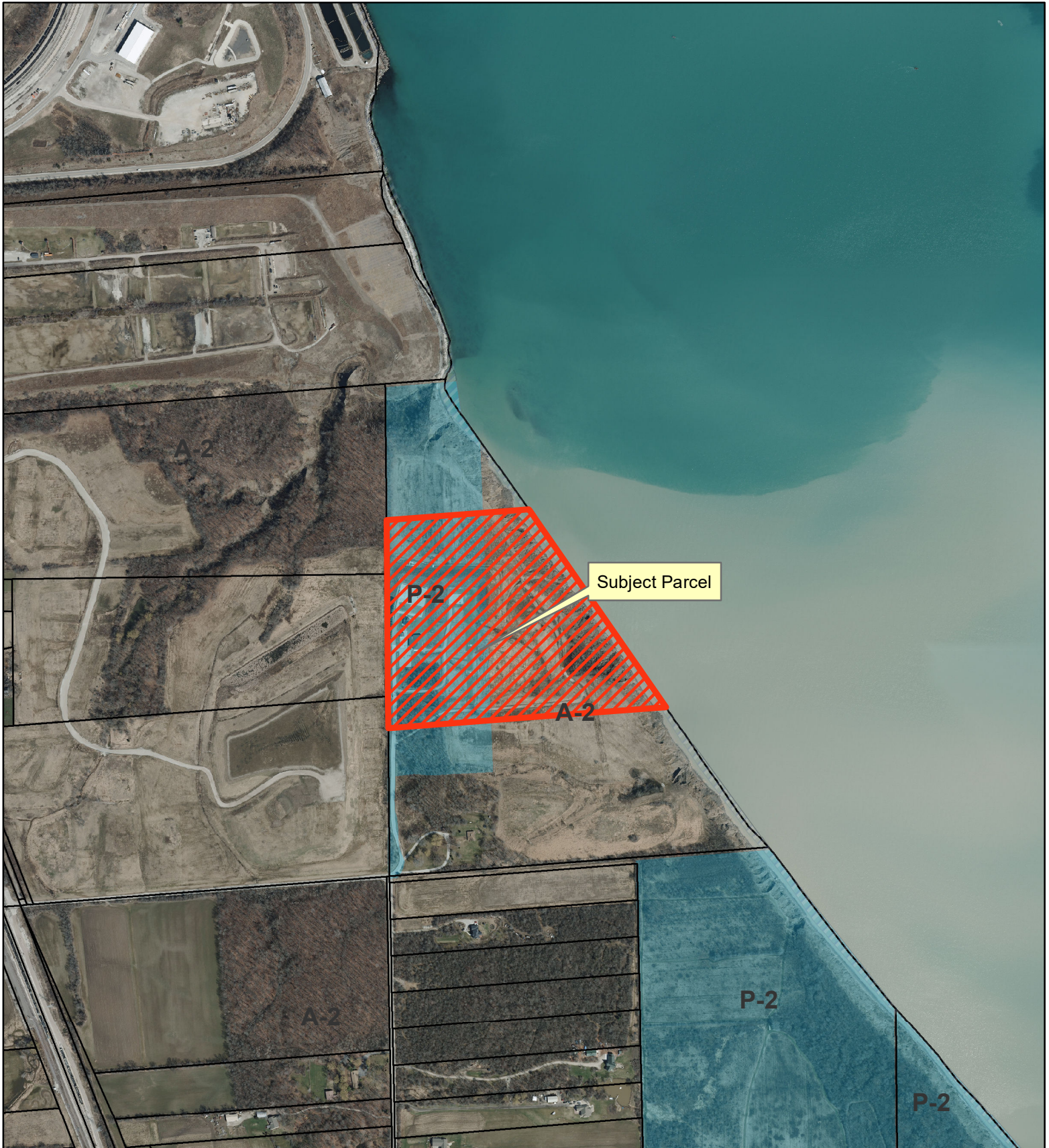
Respectfully submitted:



Peter Wagner, AICP
Development Director

Location Map

3710 7 Mile Road





CALEDONIA FIRE DEPARTMENT

6900 Nicholson Road
Caledonia, Wisconsin 53108
262-835-2050
FAX 262-835-4192

September 22, 2021

Ryan M. Rudie
Architect / President
Rudie / Frank Architecture, Inc.
920 Goold Street
Racine, WI 53402

Mr. Rudie,

The Caledonia Fire Department has reviewed the proposed plans for a training building for the Racine County Sheriff Office located at 3900 7 Mile Road in the Village of Caledonia. We conditionally approve your building permits with the following stipulations:

1. A fire alarm system is installed in compliance to NFPA 72.
2. The fire alarm system will be monitored 24 hours by a third party.
3. Fire extinguishers shall be installed in compliance to NFPA 10.
4. Emergency exit and egress lighting in compliance with NFPA 1, Chapter 14.
5. Fire department access to the building will be maintained in accordance with NFPA 1, Chapter 18.

If you have questions feel free to contact me.

Sincerely,

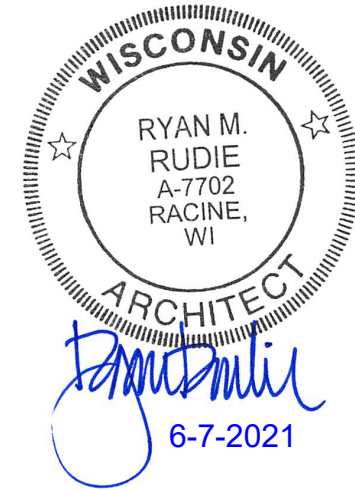
A handwritten signature in black ink, appearing to read 'Jeffrey Henningfeld', is written over the typed name and title.

Jeffrey Henningfeld, Fire Chief
Caledonia Fire Department

cc: Scott Seymour – Building Inspector
Peter Wagner – Development Director

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
C1	EXISTING SITE PLAN
C2	PROPOSED SITE PLAN
C3	SITE DEMOLITION PLAN
C4	GRADING AND EROSION CONTROL PLAN
C5	DETAILS
A2	GENERAL NOTES
A3	FLOOR PLAN
A4	EXTERIOR ELEVATIONS
A5	EXTERIOR ELEVATIONS
A6	CROSS SECTION 1
A7	CROSS SECTION 2
A8	WALL SECTIONS
A9	WALL SECTIONS
A10	WALL SECTIONS
A11	DOOR DETAILS
A12	SCHEDULES
S1	FOUNDATION PLAN
S2	ROOF FRAMING PLAN
M1	HVAC PLAN
E1	ELECTRICAL SITE PLAN
E2	ELECTRICAL PLAN - MAIN FLOOR
E3	ELECTRICAL PLAN - CATWALK
E4	ELECTRICAL SCHEDULES



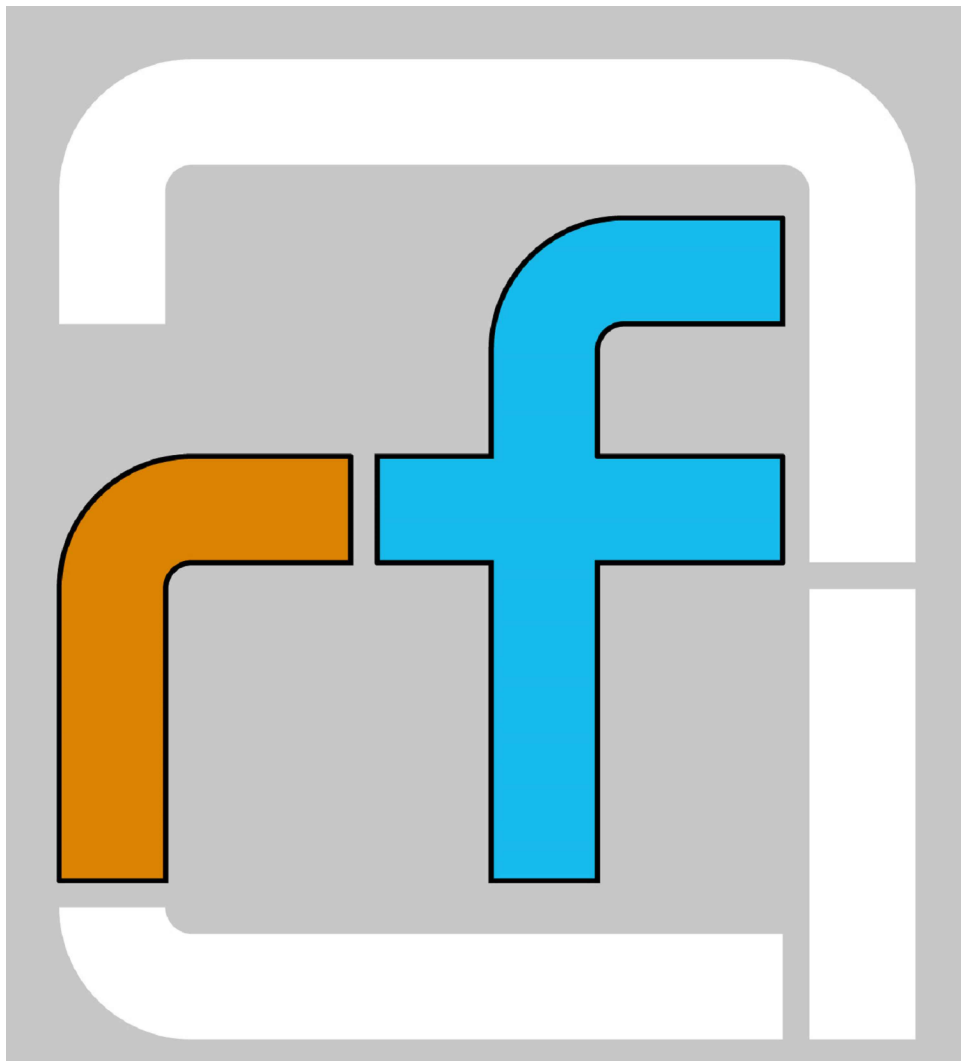
A NEW TRAINING CENTER FOR THE RACINE COUNTY SHERIFF'S OFFICE

3900 7 MILE ROAD

RACINE, WI 53402

RUDIE | FRANK ARCHITECTURE

920 GOOLD STREET
RACINE, WISCONSIN 53402
262-634-5565



RACINE COUNTY SHERIFF'S TRAINING CENTER

PROJECT INFO

BUILDING AREA

4,052 SF

MAJOR OCCUPANCY GROUP:

BUSINESS (B) - TRAINING CENTER

FIRE PROTECTION:

NONE

CONSTRUCTION CLASS:

TYPE IIIB

OCCUPANT LOAD: (PER IBC TABLE 1004.1.2 - BUSINESS AREA)

4,052 SF / 100 SF PER OCCUPANT = 40.5

TOILET FACILITIES:

ACCESSIBLE TOILETS ARE PROVIDED IN ADJACENT OFFICE BUILDING IN ACCORDANCE WITH IBC 2902.3.2



PROJECT LOCATION

PROJECT LOCATION MAP

NO SCALE

REVISIONS

DATE

JUNE 7, 2021

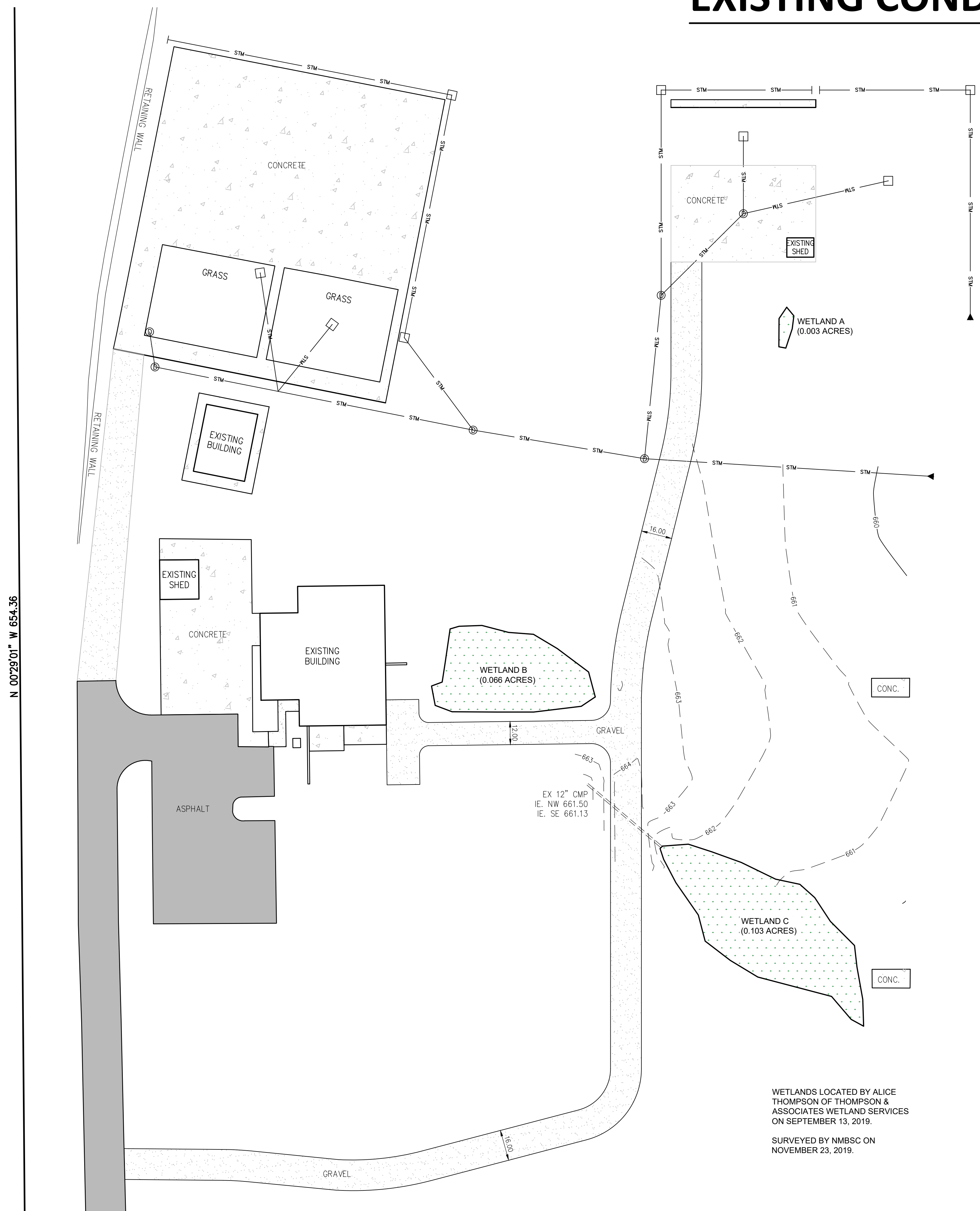
PROJECT NO.

40-20

SHEET NO.

1

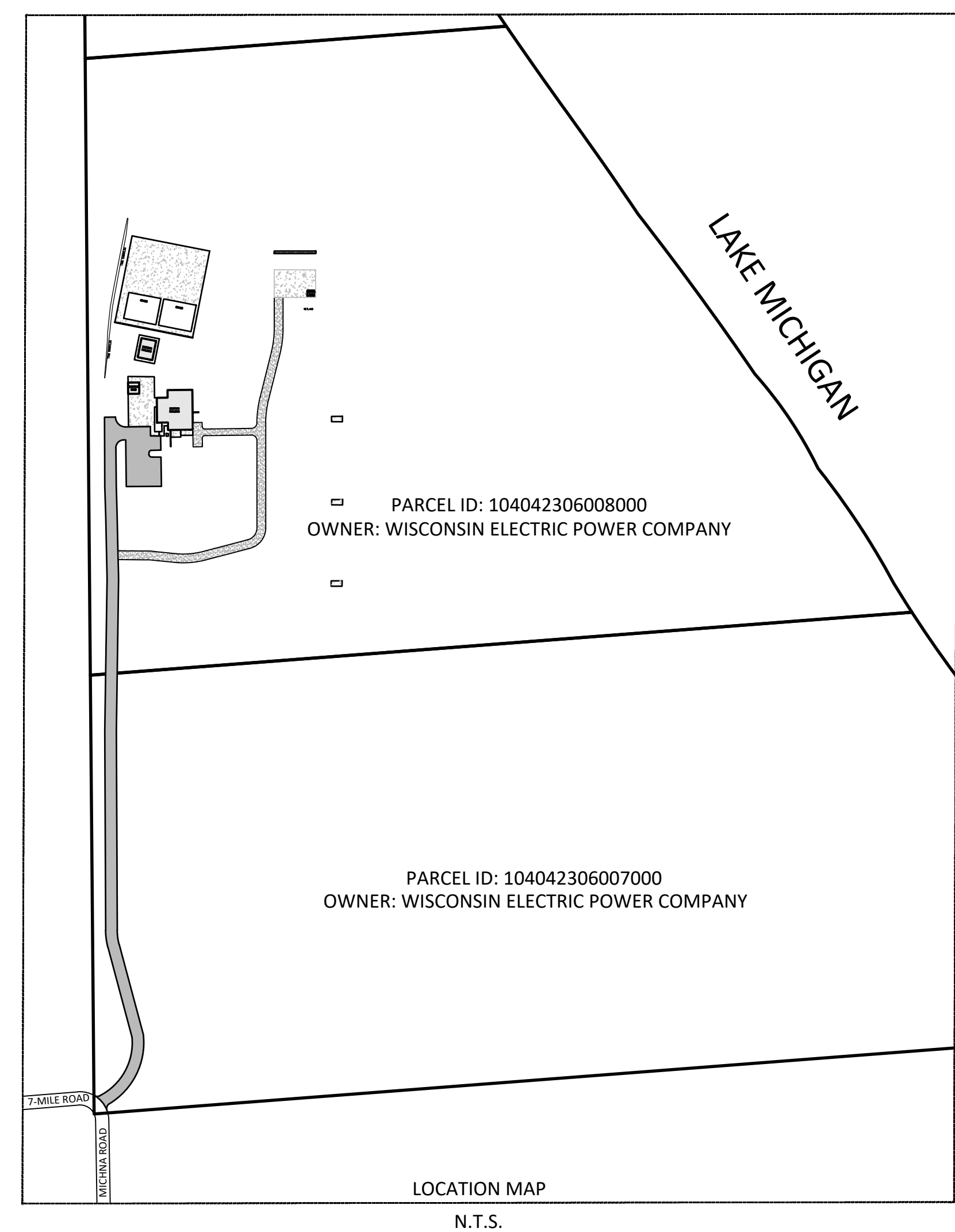
EXISTING CONDITIONS



40' 30' 0' 30' 60'
SCALE 1"=30'



Nielsen Madsen + Barber
CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbasc.net



BENCH MARKS

- TOP RR SPIKE 0.3' IN PP NORTH END OF EXISTING PARKING
ELEVATION: 674.14

LEGEND

- EXISTING CONCRETE
- EXISTING GRAVEL
- EXISTING ASPHALT
- EXISTING WETLANDS

FIELD WORK 11-23-20 BY WJB
BEARING BASE: GRID NORTH, WISCONSIN
COORDINATE SYSTEM, SOUTH ZONE.
BASED UPON NAD 1927.

ALL ELEVATIONS REFER TO NATIONAL
GEODETIC DATUM OF 1929.

- LEGEND:**
- LIGHT POLE
 - CATCH BASIN
 - STM — STORM SEWER
 - DOWNSPOUT
 - GUARD POST
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - FENCE
 - MISC. MANHOLE
 - ELECTRIC PEDESTAL
 - ELECTRIC METER
 - ELECTRIC LINE
 - HYDRANT
 - WATER VALVE
 - WATER MAIN
 - PAD MOUNT TRANSFORMER



UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO. CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

N 00°29'01" W 654.36

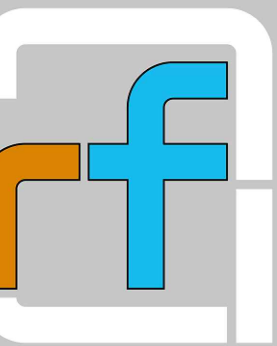
WETLANDS LOCATED BY ALICE THOMPSON OF THOMPSON & ASSOCIATES WETLAND SERVICES ON SEPTEMBER 13, 2019.

SURVEYED BY NMBSC ON NOVEMBER 23, 2019.

920 GOULD STREET
RACINE, WI 53402
262.634.5565

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ARCHITECTURE

A NEW TRAINING CENTER FOR:
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39007 MILE ROAD - RACINE, WI 53402



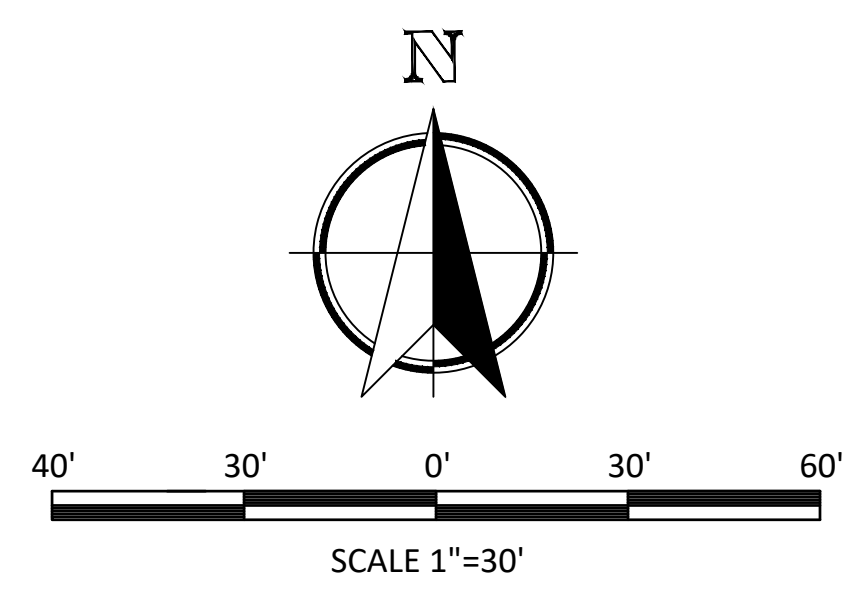
PROJECT NO.
40-20
JUN. 7, 2021

REVISIONS

SHEET NO.
C-1

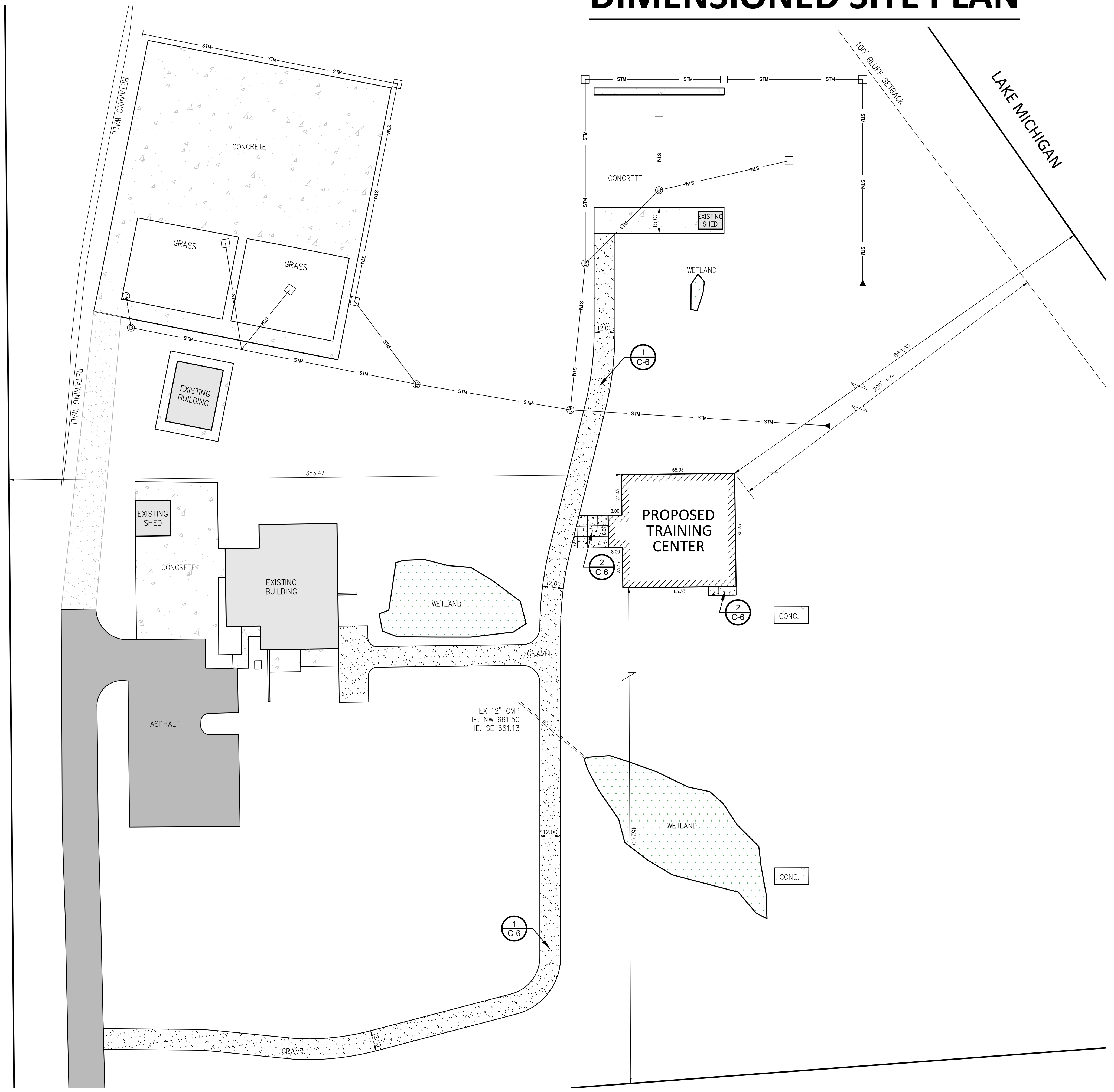
BID PLANS: JUNE 7, 2021

DIMENSIONED SITE PLAN



mb
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 1458 Horizon Blvd, Suite 200, Racine, WI. 53406
 Tele: (262)634-5588 Website: www.nmbssc.net

920 GOULD STREET
 RACINE, WI 53402
 262.634.5565
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LEGEND

PROPOSED CONCRETE PAVEMENT

UTILITY NOTE

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A NEW TRAINING CENTER FOR:
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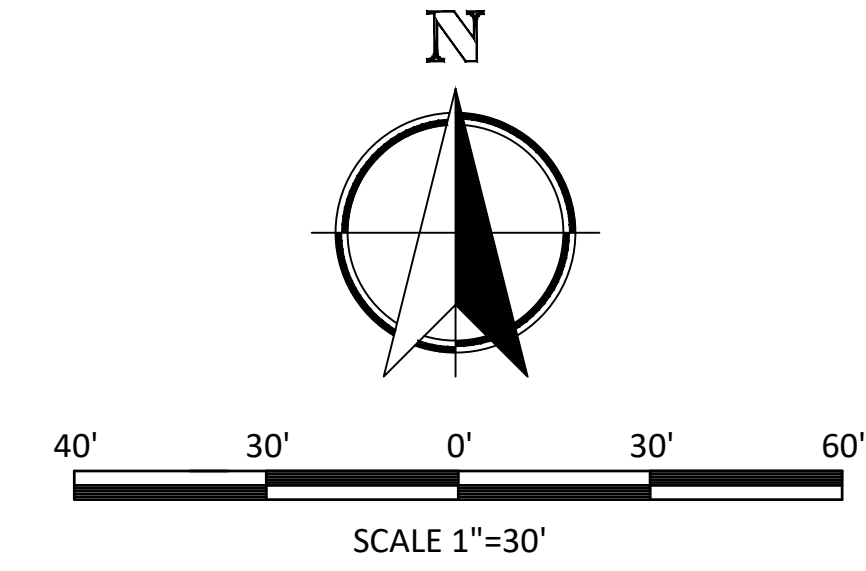
PROJECT NO.
40-20
 JUN. 7, 2021

REVISIONS
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SHEET NO.
C-2

BID PLANS: JUNE 7, 2021

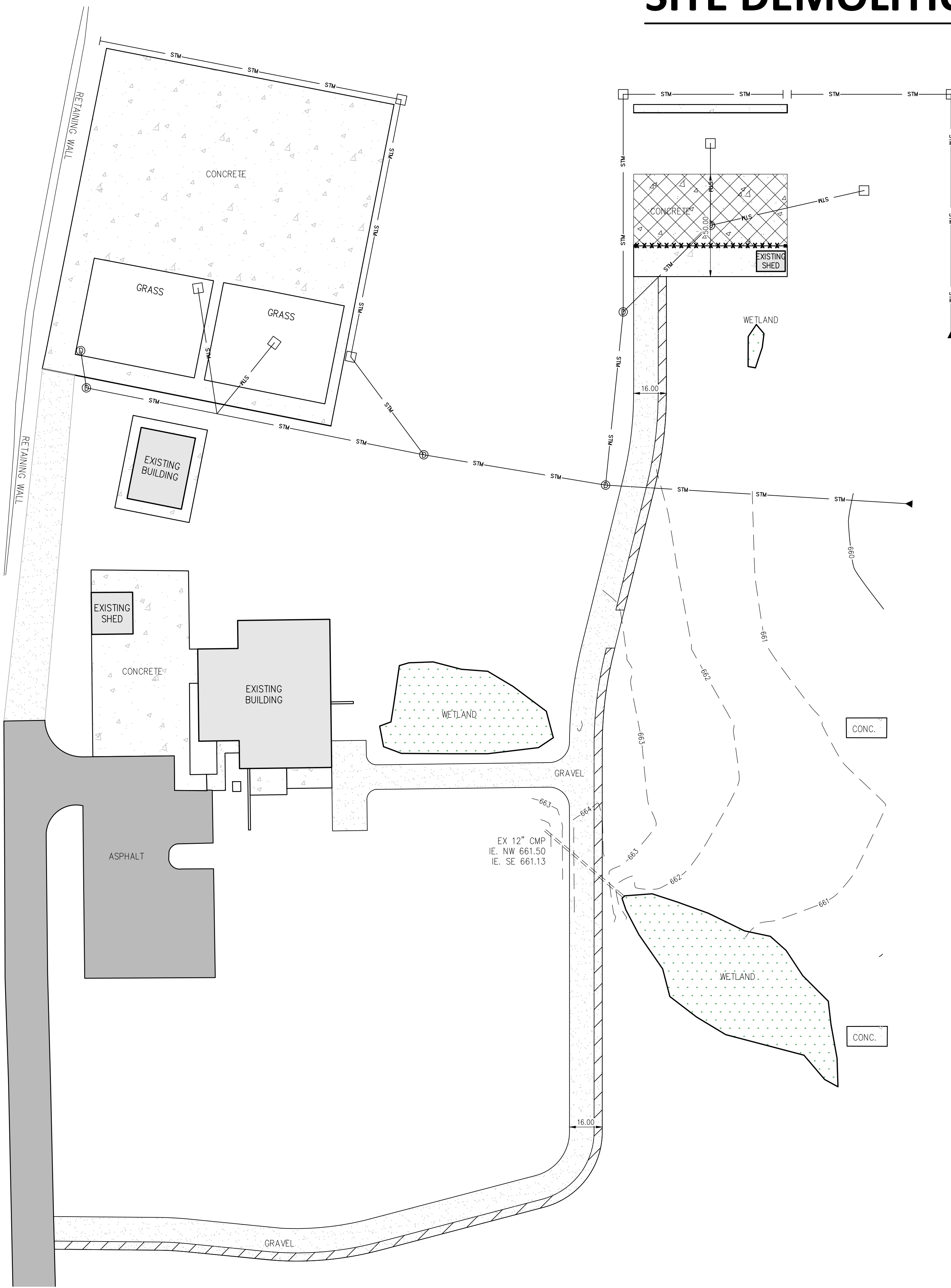
SITE DEMOLITION PLAN



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 RACINE, WI 53402
 262.634.5565

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DEMOLITION NOTES

THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (AT A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PAVEMENTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLY COMPACTED STRUCTURAL FILL MATERIAL PER THE SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR DEMOLITION, SITE CLEARING, AND DISPOSAL.

THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.

THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE LAND SURVEYOR AND ENGINEER OF RECORD ASSUME NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR ON-SITE LOCATIONS OF EXISTING UTILITIES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND DISCONNECTION OF UTILITY SERVICES TO THE EXISTING BUILDINGS PRIOR TO DEMOLITION (OR MODIFICATION) OF THE BUILDINGS.

ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION OR AS THE ONLY CONFLICTS THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH THE WORK.

ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CALL DIGGERS HOTLINE AT 1-800-242-8511 A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATION ACTIVITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HIRE A PRIVATE UTILITY LOCATING SERVICE TO LOCATE AND MARK ALL UNDERGROUND PRIVATE UTILITIES.

CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH SIGNS, FENCING, BARRICADES, ENCLOSURES, ETC., (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. TEMPORARY CLOSURE OF ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE APPROVED BY THE AUTHORITY HAVING JURISDICTION.

CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING THE COURSE OF WORK.

PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.

EXISTING ITEMS TO REMAIN INCLUDING, BUT NOT LIMITED TO, FENCES, SIGNS, UTILITIES, BUILDINGS, TREES, PAVEMENTS, AND LIGHT POLES SHALL BE CAREFULLY PROTECTED DURING THE DEMOLITION PROCESS. ANY DAMAGE SUSTAINED TO ITEMS TO REMAIN IN PLACE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.

PROPERTY CORNERS AND BENCHMARKS SHALL BE CAREFULLY PROTECTED UNTIL THEY HAVE BEEN REFERENCED BY A PROFESSIONAL LAND SURVEYOR. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AT NO ADDITIONAL COST TO THE OWNER.






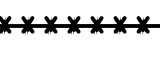
CONTRACTOR SHALL LIMIT PAVEMENT REMOVALS TO ONLY THOSE AREAS WHERE IT IS NECESSARY AS SHOWN ON THESE CONSTRUCTION PLANS. CONCRETE SIDEWALK AND CURB & GUTTER IS TO BE REMOVED TO NEAREST JOINT IN ORDER TO ACCOMMODATE PROPOSED IMPROVEMENTS. IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENTS AND OR OTHER IMPROVEMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND REPAIR OF DAMAGED PAVEMENT AND OTHER ITEMS AT NO ADDITIONAL COST TO THE OWNER.

ABANDONMENT SHALL BE IN ACCORDANCE WITH SECTION 3.2.24 OF THE "STANDARD SPECIFICATIONS".

IF PREVIOUSLY UNIDENTIFIED HAZARDOUS, CONTAMINATED MATERIALS, OR OTHER ENVIRONMENTAL RELATED CONDITIONS ARE DISCOVERED, STOP WORK IMMEDIATELY AND NOTIFY THE PROJECT CONSTRUCTION MANAGER FOR ACTION TO BE TAKEN. DO NOT RESUME WORK UNTIL SPECIFICALLY AUTHORIZED BY THE CONSTRUCTION MANAGER.

AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL ABANDONED, EXCESS, WASTE, STOCKPILED AND SPOIL MATERIAL IN ACCORDANCE WITH SECTION 205.3.12 OF THE "STATE SPECIFICATIONS". THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

LEGEND

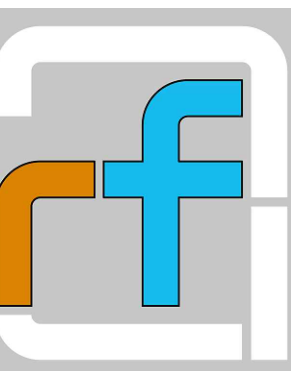
-  REMOVE CONCRETE PAVEMENT
-  REMOVE GRAVEL DRIVEWAY
-  EXISTING CONCRETE
-  EXISTING GRAVEL
-  EXISTING ASPHALT
-  SAW CUT PAVEMENT (FULL DEPTH)



UTILITY NOTE

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A NEW TRAINING CENTER FOR:
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 3900 7 MILE ROAD - RACINE, WI 53402



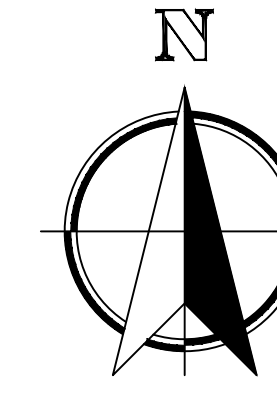
PROJECT NO.
40-20
 JUN. 7, 2021

REVISIONS

SHEET NO.
C-3

BID PLANS: JUNE 7, 2021

GRADING & EROSION CONTROL PLAN



SCALE 1"=30'

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1458 Horizon Blvd, Suite 200, Racine, WI. 53406
Tel: (262)634-5588 Website: www.nmbc.net

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A NEW TRAINING CENTER FOR:
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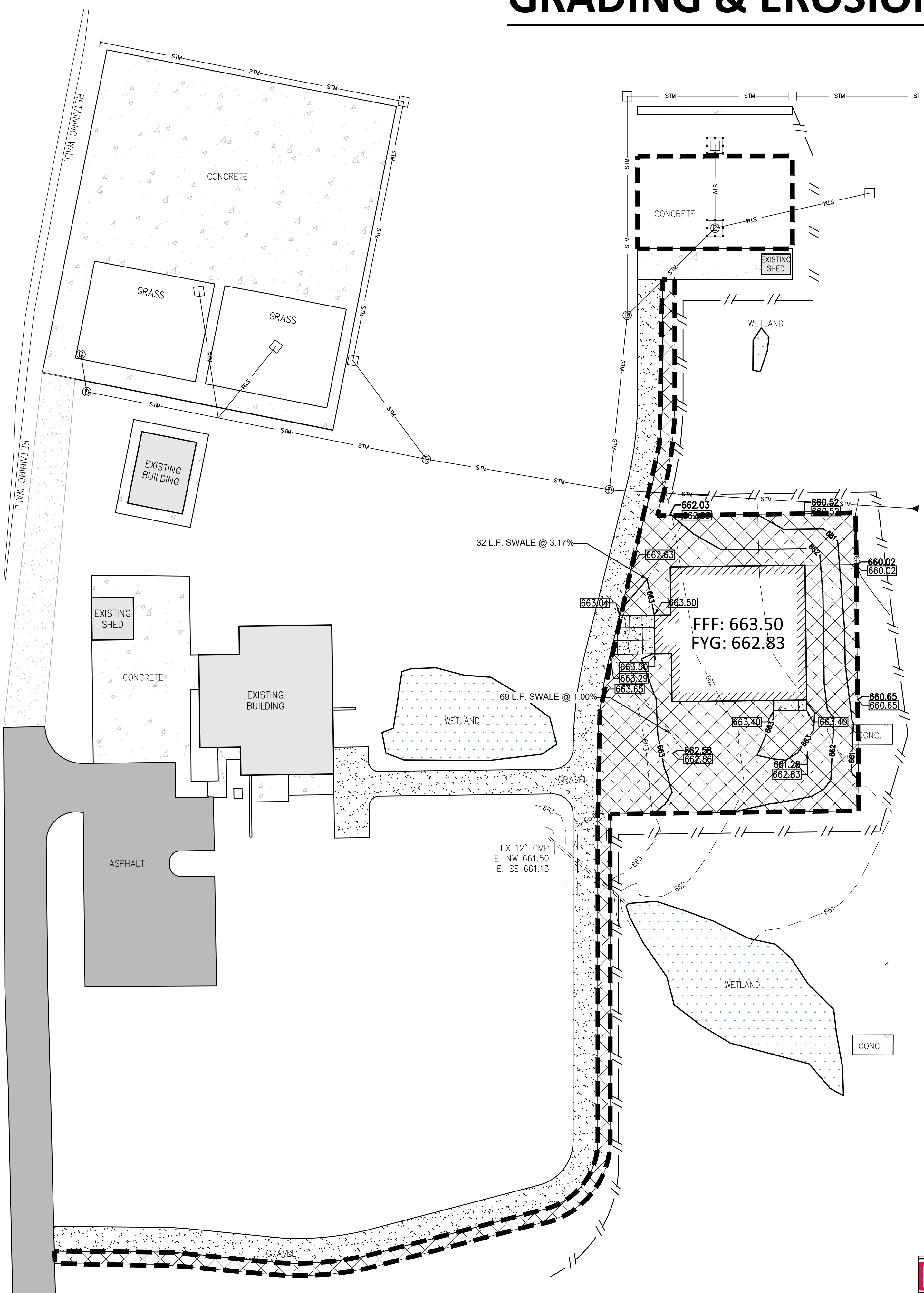


PROJECT NO.
40-20
JUN. 7. 2021

REVISIONS

SHEET NO.
C-4

BID PLANS: JUNE 7, 2021



SITE GRADING & SUB-GRADE PREPARATION

ALL EXISTING TOPSOIL AND OTHER NON-STRUCTURAL MATERIAL WITHIN THE PROPOSED BUILDING PADS, PAVEMENT SECTIONS AND STRUCTURAL FILL AREAS SHALL BE STRIPPED AND STOCKPILED AT THE LOCATION SHOWN OR AS DIRECTED BY THE GENERAL CONTRACTOR.

EXCAVATE, GRADE AND SHAPE SUBGRADE TO THE LINES AND GRADES SHOWN ON THE PLANS. SEE TYPICAL SECTIONS FOR PAVEMENT THICKNESS AND MATERIALS.

FOR STRUCTURAL FILL DEPTHS LESS THAN 20 FEET, THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR (ASTM D-698) WITH THE EXCEPTION OF THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL HAVE A MINIMUM IN-SITU DENSITY OF 100 PERCENT OF MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS.

THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN -1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF THE OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY RECOMMENDED / APPROVED BY THE SOILS ENGINEER MONITORING THE PLACEMENT AND COMPACTATION. COHESIVE SOILS WITH MODERATE TO HIGH EXPANSIVE POTENTIALS (PP-15) SHOULD, HOWEVER, BE PLACED, COMPACTED AND MAINTAINED PRIOR TO CONSTRUCTION AT A MOISTURE CONTENT OF 3±1 PERCENT ABOVE OPTIMUM MOISTURE CONTENT TO LIMIT FUTURE HEAVE.

THE FILL SHALL BE PLACED IN LAYERS WITH A MAXIMUM LOOSE THICKNESS OF 9 INCHES. THE COMPACTATION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTATION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTATION.

UPON COMPLETION OF THE GRADING AND COMPACTATION OF THE SUBGRADE, A PROOF ROLL SHALL BE CONDUCTED BY THE CONTRACTOR ON ALL SUBGRADES THAT RECEIVE DENSE AGGREGATE BASE COURSE. THE CONTRACTOR SHALL PROVIDE A FULLY LOADED QUAD-AXLE TRUCK (18 TON MINIMUM LOAD) TO PERFORM THE PROOF ROLL. CONTRACTOR SHALL COORDINATE THE PROOF ROLL WITH THE OWNER AND THE GENERAL CONTRACTOR'S GEOTECHNICAL ENGINEER.

SOIL COMPACTATION IN ALL FILL AND EMBANKMENT AREAS SHALL BE APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER.

TEMPORARY SEEDING IS REQUIRED FOR ALL STOCKPILES AND OTHER EXPOSED LAND AREAS IF NOT ACTIVELY WORKED WITHIN 30 DAYS. AT THE COMPLETION OF THE PAVEMENT WORK, RE-SPREAD SALVAGED TOPSOIL OR IMPORT TOPSOIL AS NECESSARY TO PROVIDE A MINIMUM SIX-INCH (6") LAYER IN ALL LANDSCAPE AND LAWN AREAS. ALL DISTURBED AREAS SHALL BE RESTORED PER THE LANDSCAPE PLAN.

EXCESS TOPSOIL NOT BEING USED FOR THE PROJECT SHALL BE HAULED OFF-SITE.

LEGEND

- 692 — EXISTING CONTOURS
- 702— PROPOSED CONTOURS
- [Hatched Box] SLOPE EROSION MAT (CLASS I, URBAN, TYPE A)
- [Double Line] SILT FENCE
- [Circle with X] STORM INLET PROTECTION
- [Dashed Line] DISTURBANCE LIMIT (0.55 ACRES)

CONSTRUCTION SEQUENCING

1. OBTAIN PLAN APPROVAL AND ALL APPLICABLE PERMITS.
2. HOLD A PRE-CONSTRUCTION CONFERENCE AT LEAST ONE (1) WEEK PRIOR TO STARTING CONSTRUCTION.
3. NOTIFY THE VILLAGE ENGINEERING DEPARTMENT OF THE PROJECT START DATE.
4. INSTALL SILT FENCE BARRIER.
5. BEGIN DEMOLITION OF EXISTING CONCRETE.
6. BEGIN BUILDING CONSTRUCTION.
7. DEMO DRIVEWAY.
8. FINAL GRADE STONE IN DRIVEWAY AND PAVEMENT AREA.
9. RESTORE AND INSTALL EROSION MAT.

IMPERVIOUS AREA CALCULATIONS:

PROPOSED AREA TO BE ADDED:

- 4,417 S.F. BUILDING ADDITION
- 439 S.F. CONCRETE PAVEMENT
- 4,856 S.F. TOTAL

EXISTING PAVEMENT AREA TO BE REMOVED:

- 2,625 S.F. CONCRETE PAVEMENT
- 2,765 S.F. GRAVEL DRIVEWAY
- 5390 S.F. TOTAL

NET BALANCE:

- 534 S.F.

UTILITY NOTE

EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND / OR TO AVOID DAMAGE THERETO, CONTRACTOR SHALL CALL "DIGGER'S HOTLINE" PRIOR TO ANY CONSTRUCTION.

DIGGERS HOTLINE
Call 811 or (800) 242-8511
www.DiggersHotline.com

EROSION & SEDIMENT CONTROL NOTES

THE EROSION AND SEDIMENT CONTROL PROVISIONS DETAILED ON THE DRAWINGS AND SPECIFIED HEREIN ARE THE MINIMUM REQUIREMENTS FOR EROSION CONTROL.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE ANY REVISIONS, ADJUSTMENTS OR PROPOSED ALTERATIONS TO THE CONSTRUCTION SEQUENCING AND/OR EROSION CONTROL PLANS. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ENGINEER OF RECORD AND REGULATORY OFFICIALS OF ANY CHANGES TO THE EROSION CONTROL AND STORMWATER MANAGEMENT PLANS. MODIFICATIONS TO THE APPROVED EROSION CONTROL DESIGN IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS IS ALLOWED IF MODIFICATIONS CONFORM TO BEST MANAGEMENT PRACTICES (BMP'S). ALL SIGNIFICANT DEVIATIONS FROM THE PLANS MUST BE SUBMITTED AND APPROVED BY THE VILLAGE OF CALEDONIA.

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION, MAINTENANCE, REPAIR AND REMOVAL OF ALL EROSION CONTROL DEVICES REQUIRED FOR THE PROJECT WHICH SHALL BE DONE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (DNR) TECHNICAL STANDARDS (REFERRED TO AS BMP'S) AND THE VILLAGE OF CALEDONIA ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS. SEE THE VILLAGE OF CALEDONIA EROSION CONTROL PERMITS FOR ADDITIONAL DETAILS OR REQUIREMENTS.

ALL EROSION AND SEDIMENT CONTROL MEASURES AND DEVICES SHALL BE INSPECTED BY THE CONTRACTOR AS REQUIRED IN THE WISCONSIN ADMINISTRATIVE CODE (SPS 360.21) AND MAINTAINED PER SPS 360.22.

INSPECTIONS AND MAINTENANCE OF ALL EROSION CONTROL MEASURES SHALL BE ROUTINE (ONCE PER WEEK MINIMUM) TO ENSURE PROPER FUNCTION OF EROSION CONTROLS AT ALL TIMES. SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE IN WORKING ORDER AT THE END OF EACH WORK DAY. THE CONTRACTOR SHALL CHECK THE EROSION AND SEDIMENT CONTROL PRACTICES FOR MAINTENANCE NEEDS AT ALL THE FOLLOWING INTERVALS UNTIL THE SITE IS STABILIZED:

- A. AT LEAST WEEKLY.
- B. WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. A RAINFALL EVENT SHALL BE CONSIDERED TO BE THE TOTAL AMOUNT OF RAINFALL RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE INSPECTED WITHIN 24 HOURS OF ALL RAIN EVENTS EXCEEDING 0.5 INCHES IMMEDIATELY REPAIR ANY DAMAGE OBSERVED DURING THE INSPECTION.

THE CONTRACTOR SHALL MAINTAIN A MONITORING RECORD WHEN THE LAND DISTURBING CONSTRUCTION ACTIVITY INVOLVES ONE OR MORE ACRES. THE MONITORING RECORD SHALL CONTAIN AT LEAST THE FOLLOWING INFORMATION:

- A. THE CONDITION OF THE EROSION AND SEDIMENT CONTROL PRACTICES AT THE INTERVALS SPECIFIED ABOVE.
- B. A DESCRIPTION OF THE MAINTENANCE CONDUCTED TO REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL PRACTICES. EROSION AND SEDIMENT CONTROL INSPECTIONS AND ENFORCEMENT ACTIONS MAY BE CONDUCTED BY WDNR, THE VILLAGE OF CALEDONIA OR THEIR AUTHORIZED AGENTS DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL INSPECTIONS AND ENFORCEMENT ACTIONS MAY BE CONDUCTED BY THE VILLAGE OF CALEDONIA OR THEIR AUTHORIZED AGENTS DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED BY STATE OR LOCAL INSPECTORS AND/OR THE ENGINEER OF RECORD, SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.

ALL SEDIMENT AND EROSION CONTROL DEVICES, INCLUDING PERIMETER EROSION CONTROL MEASURES SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION SHALL BE INSTALLED PRIOR TO COMMENCING EARTH DISTURBING ACTIVITIES. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE SITE HAS ESTABLISHED A VEGETATIVE COVER AND IS STABILIZED.

INSTALL SILT FENCE PER SECTION 628 OF THE "STATE SPECIFICATIONS" AND WDNR TECHNICAL STANDARD 1056 AT THE LOCATIONS SHOWN ON THE PLAN. ERECT SILT FENCE PRIOR TO STARTING A CONSTRUCTION OPERATION THAT MIGHT CAUSE SEDIMENTATION OR SILTATION AT THE SITE OF THE PROPOSED SILT FENCE. CONTRACTOR SHALL INSTALL SILT FENCING AT DOWNSLOPE SIDE OF STOCKPILES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION, MAINTENANCE AND REMOVAL OF ALL REQUIRED SILT FENCE MATERIAL.

CONSTRUCTION FENCE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. CONSTRUCTION FENCING SHALL BE INSTALLED 3 TO 5 FEET DOWNSTREAM OF ANY SILT FENCE TO ALLOW FOR SEDIMENT REMOVAL, GENERAL MAINTENANCE AND REPLACEMENT OF THE EROSION CONTROL DEVICE. MATERIAL FOR CONSTRUCTION FENCE SHALL BE HIGH DENSITY POLYETHYLENE MESH SUPPLIED IN EITHER 50-FOOT OR 100-FOOT ROLLS. THE FENCING SHALL BE A MINIMUM OF 4 FEET HIGH AND SHALL BE WEATHER-, CHEMICAL- AND ULTRAVIOLET-RESISTANT TO INCREASE THE PRODUCT LIFE. FENCING SHALL BE SUPPORTED AT MAXIMUM EIGHT-FOOT (8') INTERVALS BY METAL T-POSTS OR OTHER APPROVED METHODS SUFFICIENT TO KEEP THE FENCE UPRIGHT AND IN PLACE. WOODEN STAKES AND REBAR POSTS ARE NOT CONSIDERED AN APPROVED METHOD OF SUPPORT. DEFAULT COLOR OF FENCING SHALL BE ORANGE UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. CONSTRUCTION FENCE MATERIAL SHALL BE SECURED TO THE METAL T-POSTS BY PLASTIC ZIP OR WIRE TIES. FENCING AND POSTS SHALL BECOME PROPERTY OF THE CONTRACTOR AT PROJECT COMPLETION AND SHALL BE REMOVED FROM THE SITE.

ALL PROPOSED STORM SEWER STRUCTURES AND ADJACENT EXISTING STORM INLETS SHALL HAVE A LAYER OF GEOTEXTILE FABRIC (TYPE "FF") INSTALLED BETWEEN THE FRAME & GRATE TO PREVENT SEDIMENT OR SILT FROM ENTERING THE SYSTEM. THE INLET PROTECTION SHALL BE INSPECTED BY THE CONTRACTOR AND REPLACED EVERY 14 DAYS AND AFTER EACH RAINFALL EVENT. FABRIC TO BE REPLACED AS NEEDED TO MEET FIELD CONDITIONS.

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION (DUST) DURING CONSTRUCTION AT HIS/HER EXPENSE (WHEN NECESSARY OR AS REQUIRED BY LOCAL INSPECTORS AND/OR ENGINEER OF RECORD).

EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.):

- A. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
- B. BACKFILL, COMPACT AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
- C. ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE DISCHARGED INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061 AND BMP'S PRIOR TO RELEASE INTO THE STORM SEWER, RECEIVING STREAM OR DRAINAGE DITCH. PUMPED WATER CAN BE TREATED IN FILTER BAGS, STONE FILTERS OR SIMILAR DEVICES. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. CONTRACTOR IS RESPONSIBLE TO COORDINATE LOCATION(S) WITH THE PROPER AUTHORITIES, PROVIDE NECESSARY FEES AND OBTAIN ALL REQUIRED APPROVALS OR PERMITS. ADDITIONAL CONSTRUCTION ENTRANCES, OTHER THAN SHOWN ON THE PLANS, MUST HAVE PRIOR APPROVAL BY THE VILLAGE OF CALEDONIA.

DITCH CHECKS AND APPLICABLE EROSION NETTING/MATTING SHALL BE INSTALLED IMMEDIATELY AFTER COMPLETION OF GRADING EFFORTS WITHIN DITCHES/SWALES TO PREVENT SOIL TRANSPORTATION.

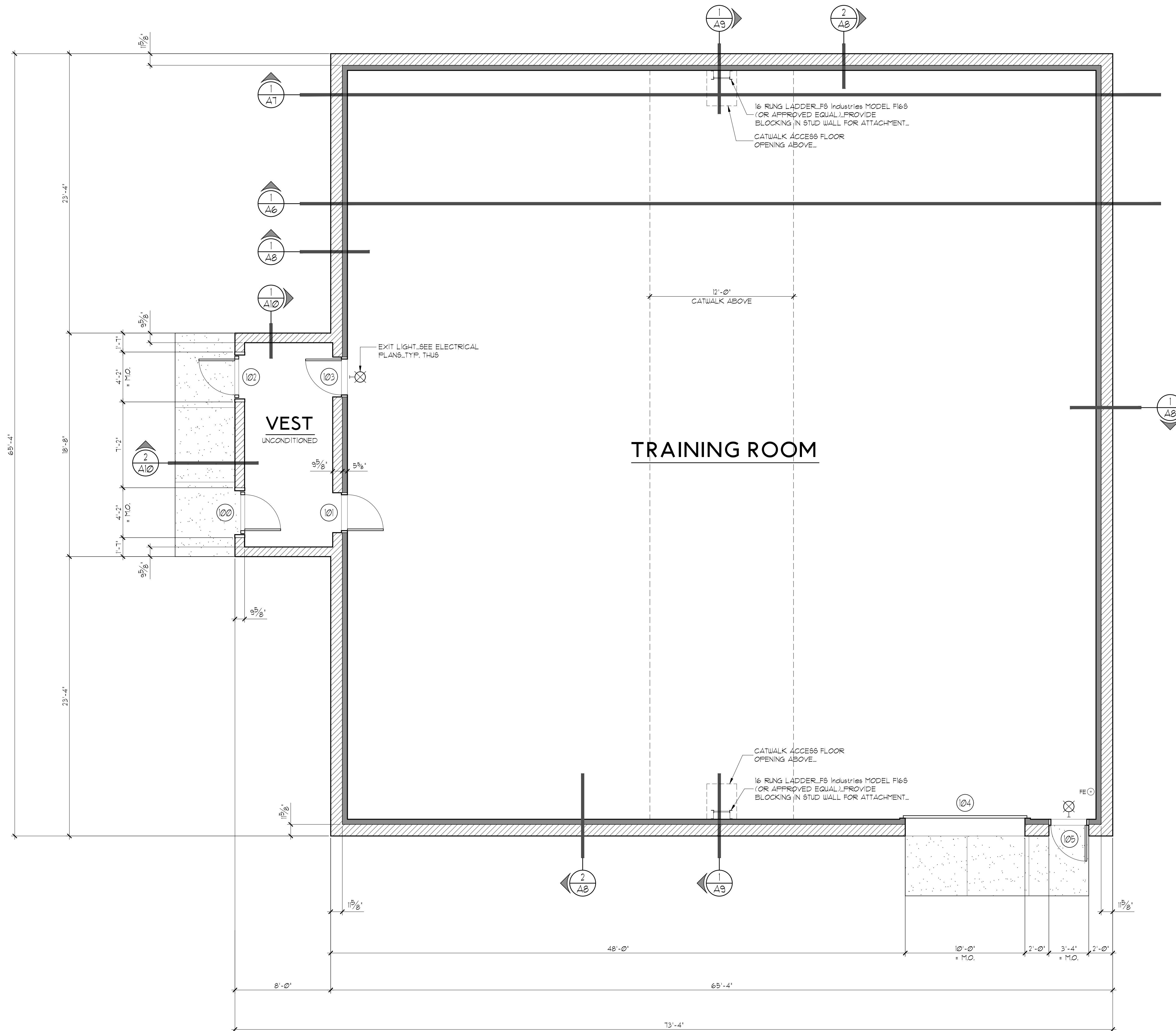
CONCRETE WASHOUT BASIN SHALL BE LOCATED ON SITE IN AN AREA THAT IS STABILIZED AND DRAINS IN TO SUITABLE SEDIMENT TRAPPING OR SETTLING DEVICE. MONITOR THE WASHOUT BASIN FOR SEDIMENT ACCUMULATION, CLOGGED HOSES, APPROPRIATE WATER LEVELS, AND EFFECTIVENESS.

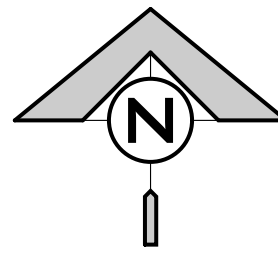
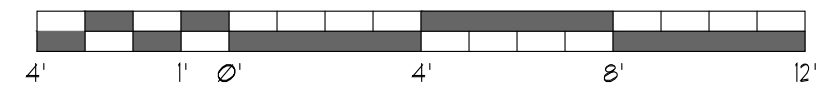
ALL EXPOSED SOIL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 DAYS AND REQUIRE VEGETATIVE COVER FOR LESS THAN 1 YEAR, REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1059 AND THE VILLAGE OF CALEDONIA ORDINANCE.

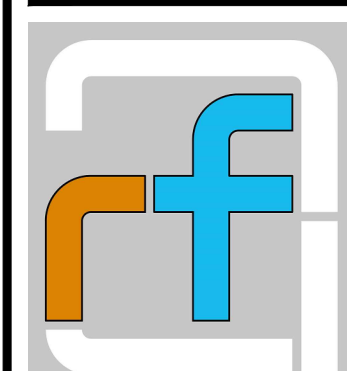
ALL DISTURBED SLOPES EXCEEDING 5:1, SHALL BE STABILIZED WITH CLASS I, URBAN, TYPE A EROSION MATTING OR APPLICATION OF A WISCONSIN DEPARTMENT OF TRANSPORTATION (WisDOT) APPROVED (POLYMER) SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED. EROSION MATTING AND/OR NETTING USED ONSITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND WDNR TECHNICAL STANDARDS 1052.

PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEEPED AND/OR SCRAPPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST AT THE END OF EACH WORK DAY AND AS REQUESTED BY THE VILLAGE OF CALEDONIA.

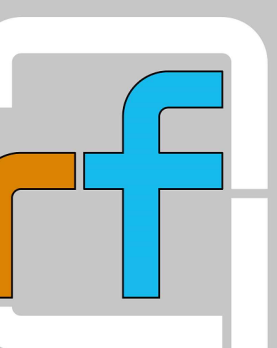
EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.



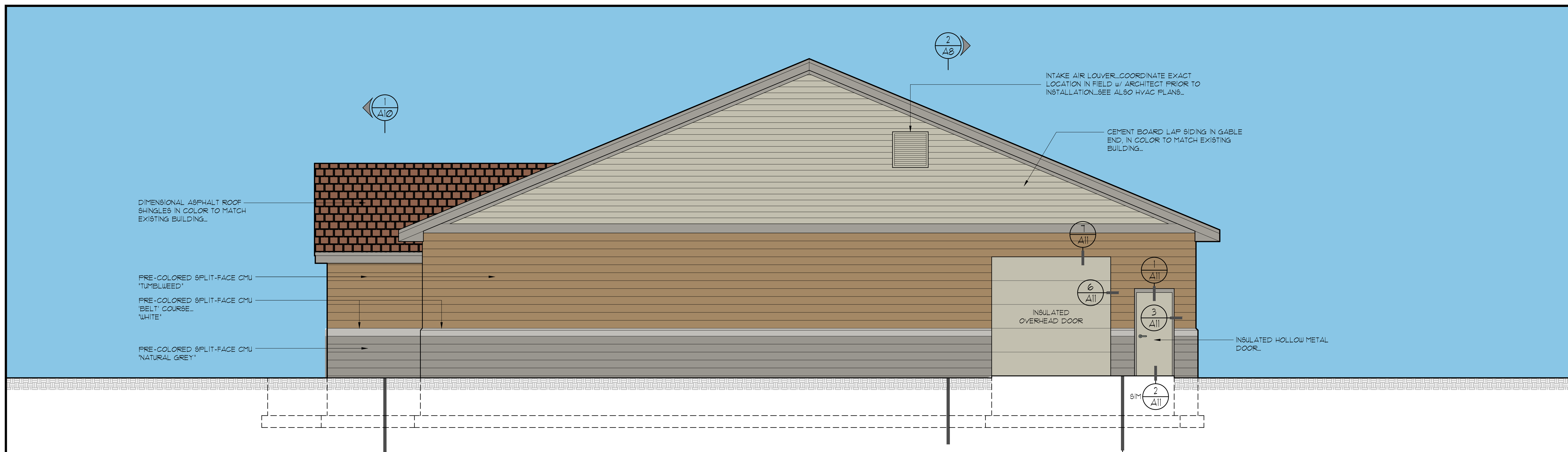

FLOOR PLAN
 SCALE: 1/4" = 1'-0"




REVISIONS

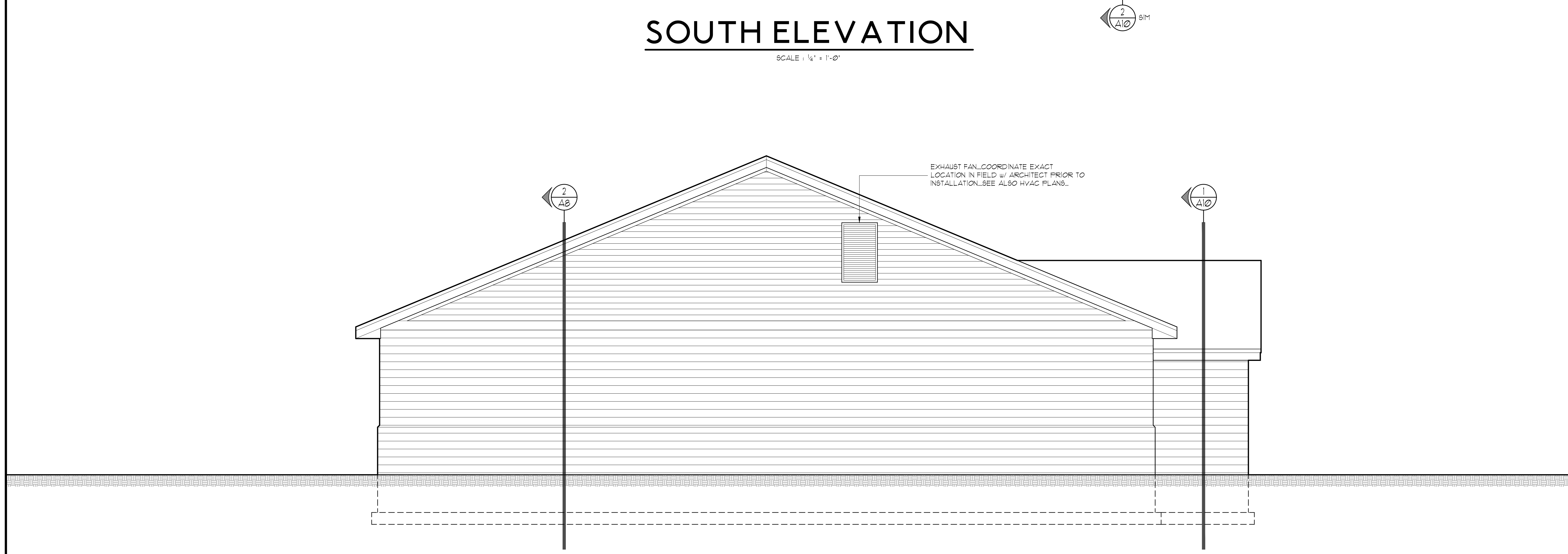


REVISIONS



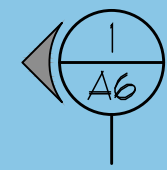
SOUTH ELEVATION

SCALE : 1/4" = 1'-0"



NORTH ELEVATION

SCALE : 1/4" = 1'-0"



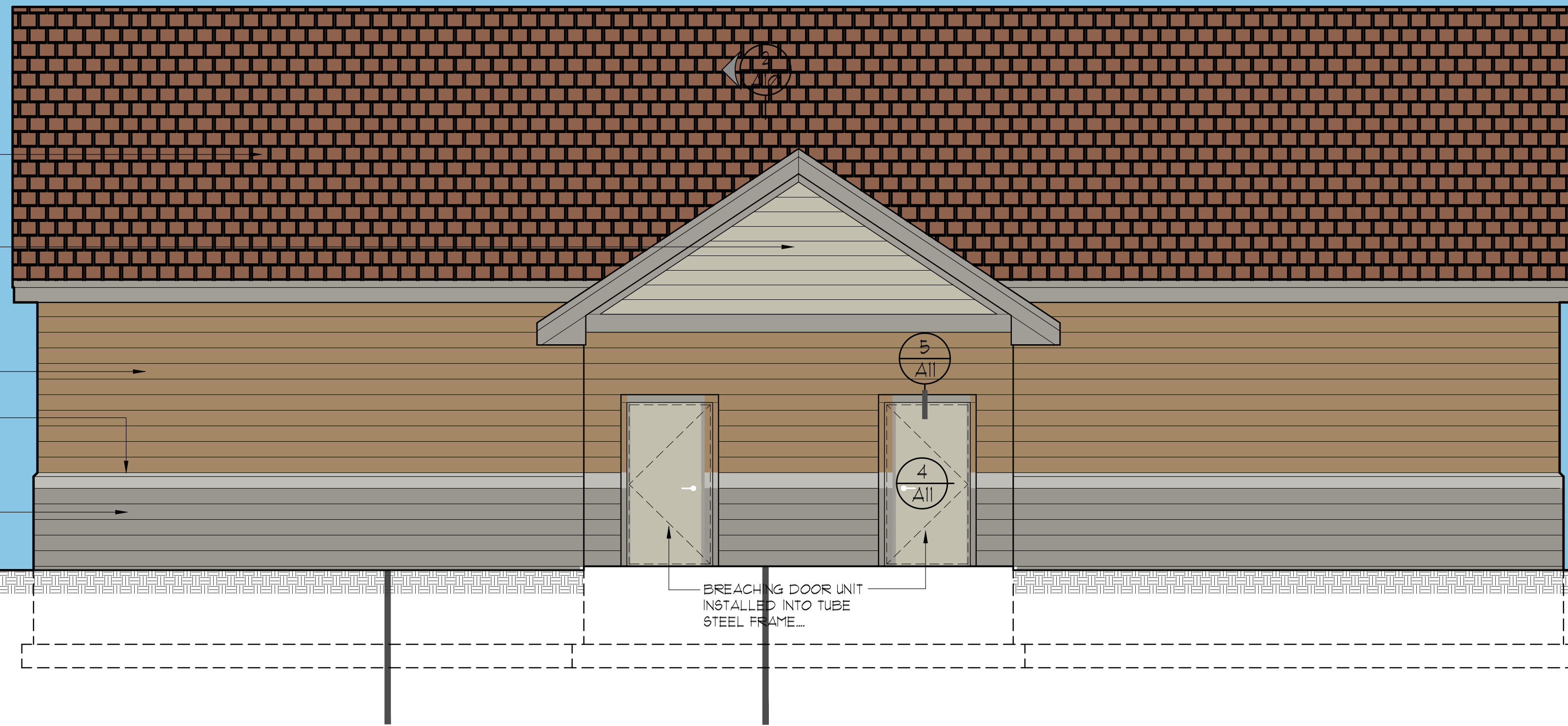
DIMENSIONAL ASPHALT ROOF SHINGLES IN COLOR TO MATCH EXISTING BUILDING.

CEMENT BOARD LAP SIDING IN COLOR TO MATCH EXISTING BUILDING.

PRE-COLORED SPLIT-FACE CMU 'TUMBLEWEED'

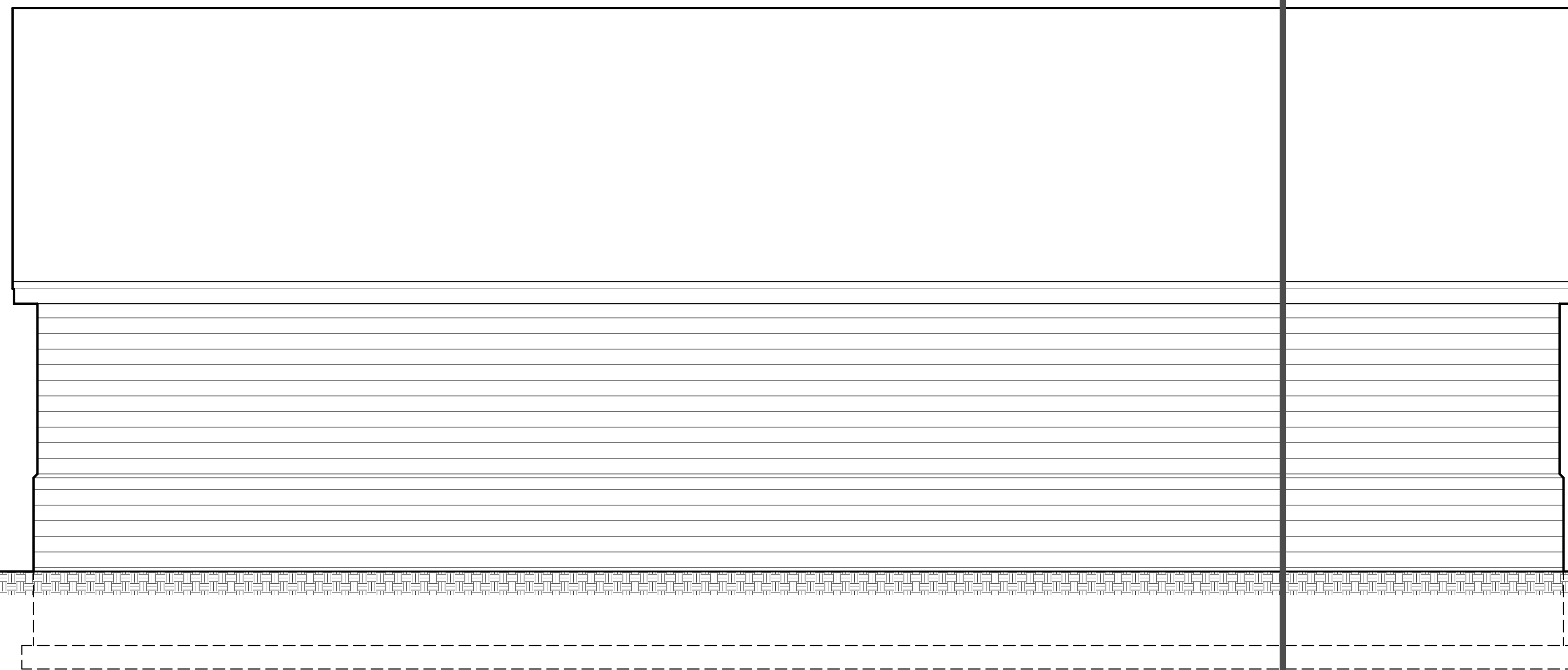
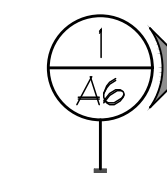
PRE-COLORED SPLIT-FACE CMU 'BELT' COURSE... 'WHITE'

PRE-COLORED SPLIT-FACE CMU 'NATURAL GREY'



WEST ELEVATION

SCALE : 1/4" = 1'-0"



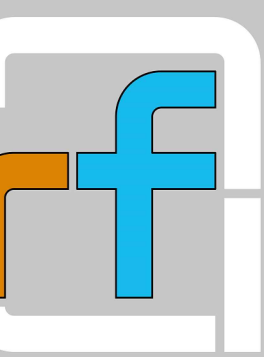
EAST ELEVATION

SCALE : 1/4" = 1'-0"

920 GOULD STREET
RACINE, WI 53402
262.634.5565

RUDIE | FRANK
ARCHITECTURE

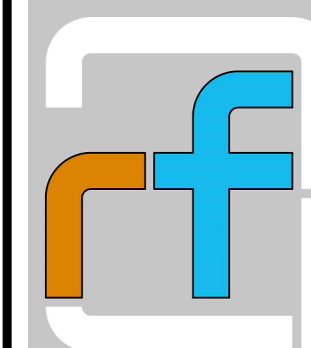
A NEW TRAINING CENTER FOR:
RACINE COUNTY SHERIFF'S OFFICE
3900 7 MILE ROAD - RACINE, WI 53402



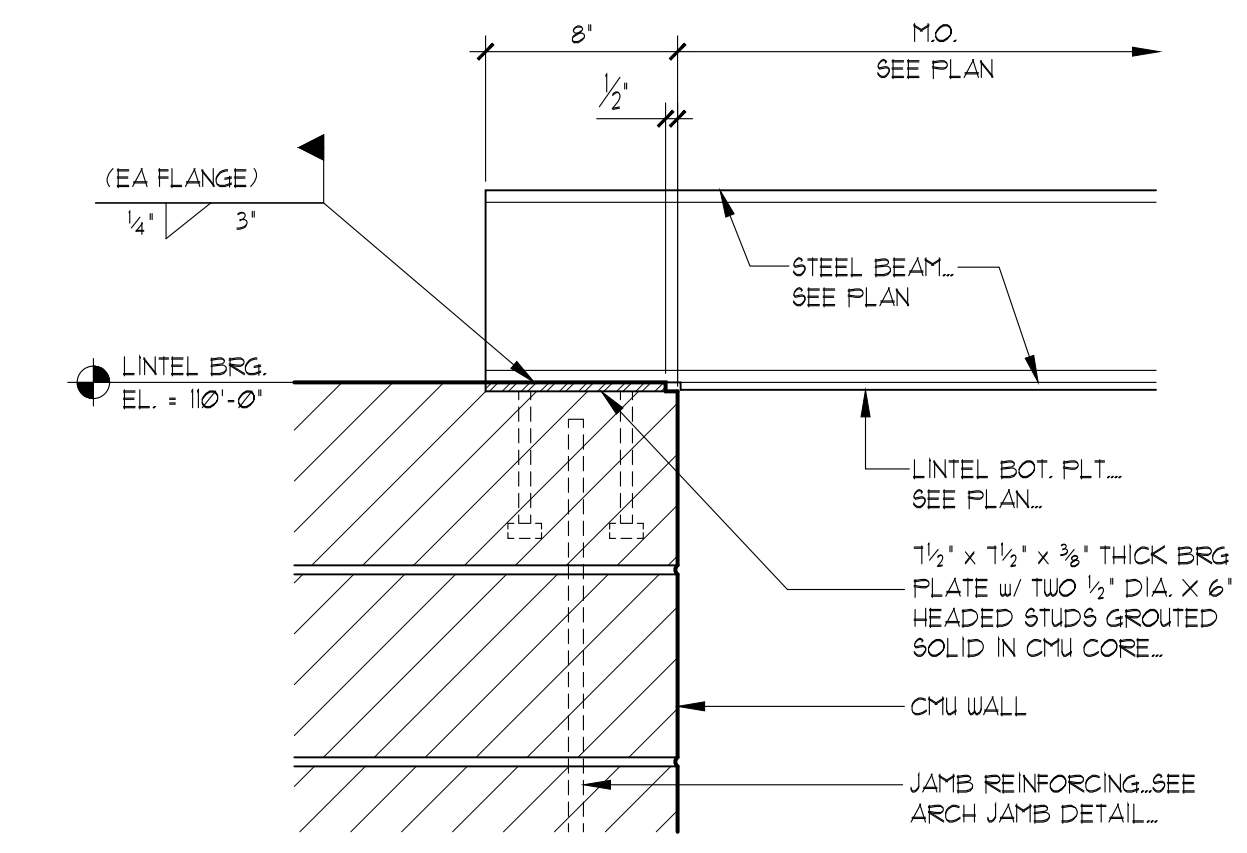
PROJECT NO.
40-20
JUNE 7, 2021

REVISIONS

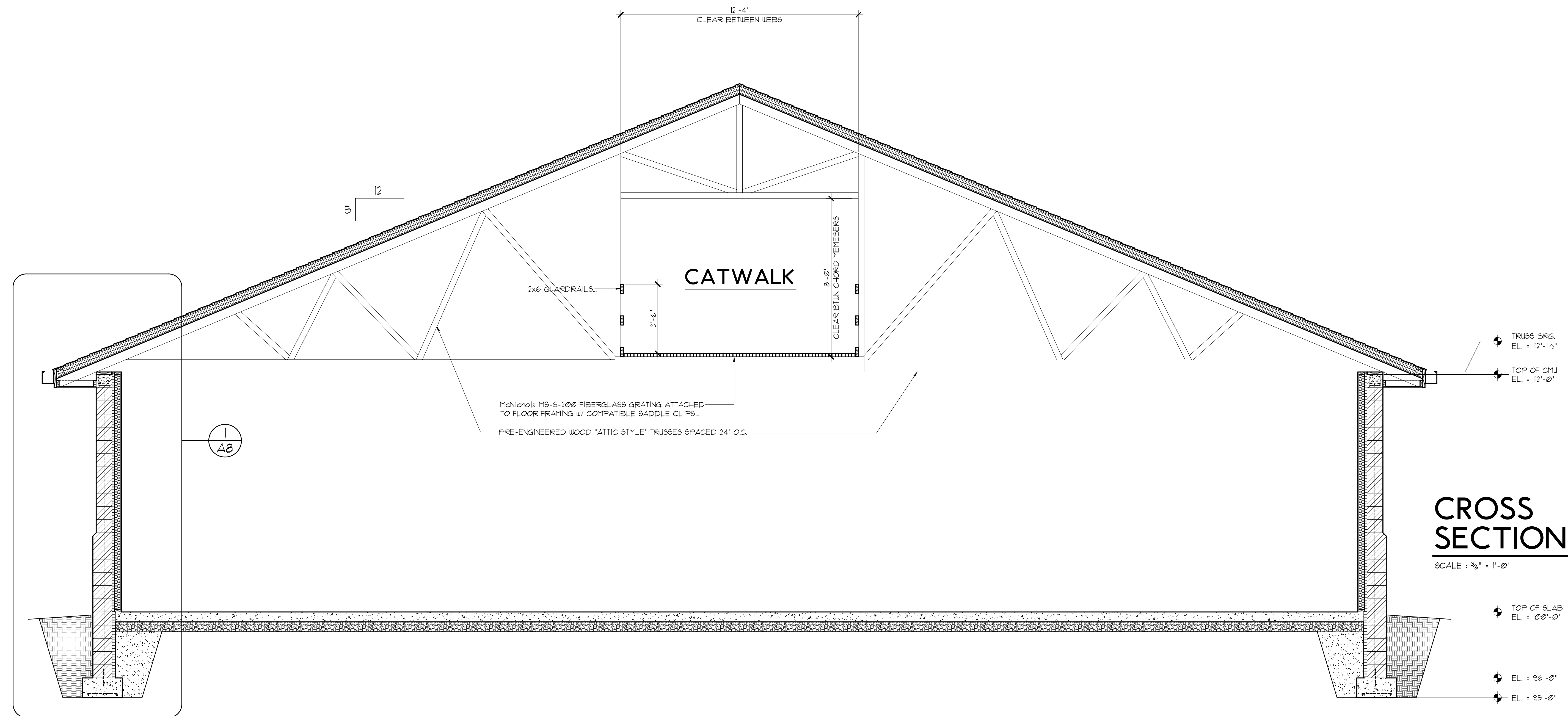
SHEET NO.
A5



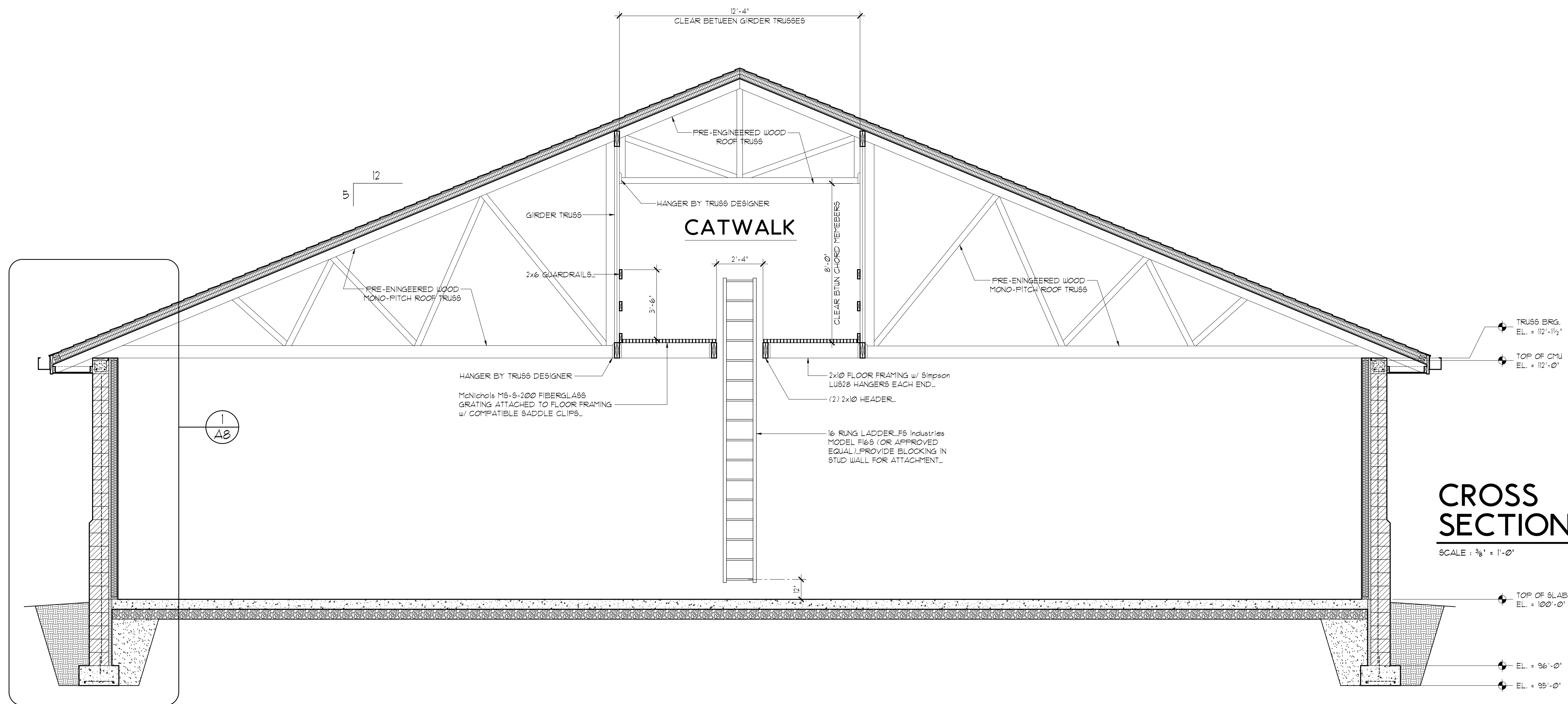
REVISIONS



BEAM BRG DTL ②
 SCALE: 1/2" = 1'-0"



CROSS SECTION ①
 SCALE: 3/8" = 1'-0"



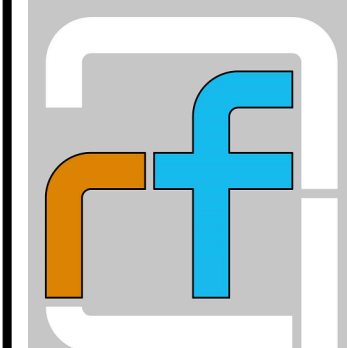
CATWALK

CROSS SECTION

SCALE : 3/8" = 1'-0"

2

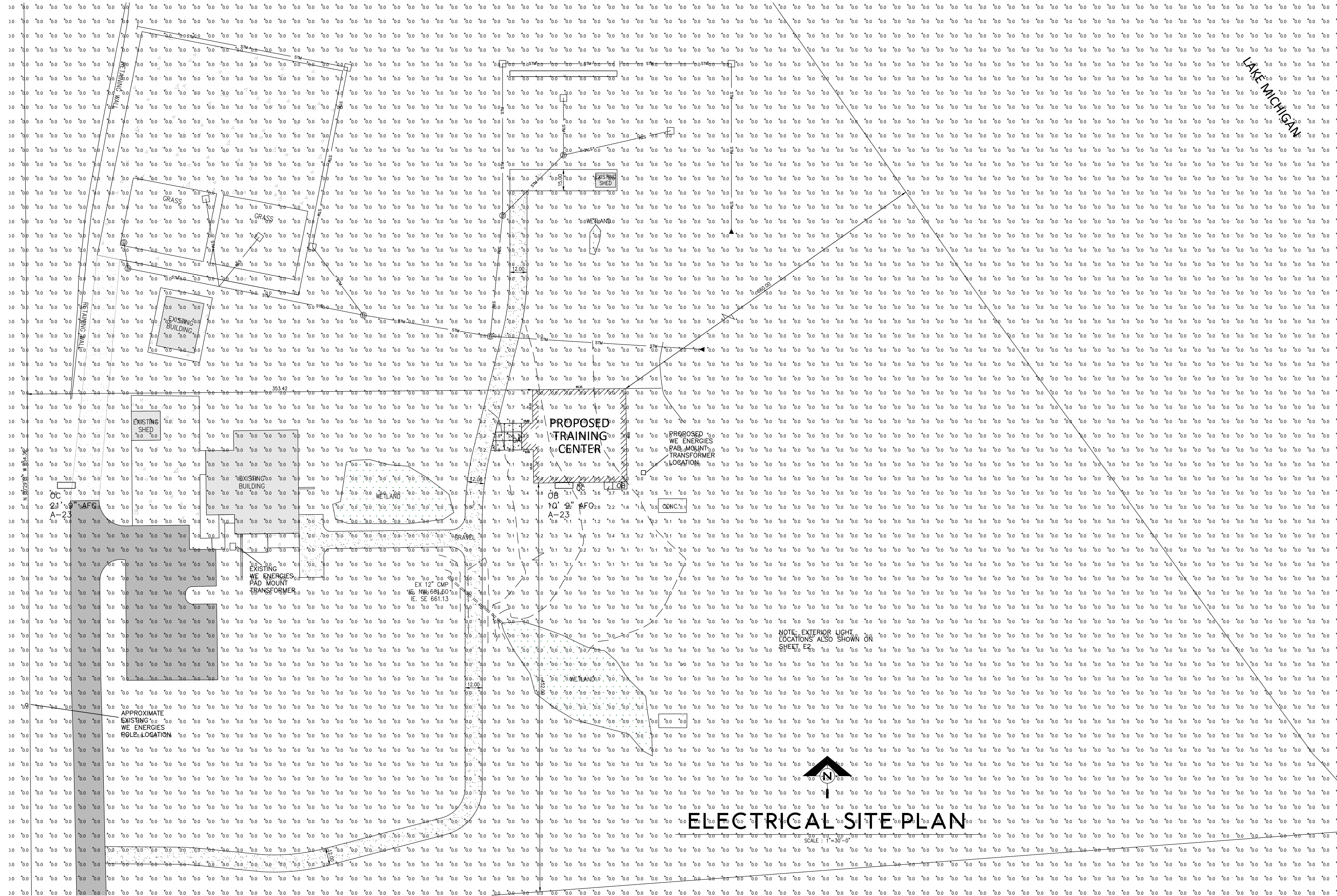
1
A8



REVISIONS

TOP OF SLAB
EL. = 100'-0"
EL. = 96'-0"
EL. = 95'-0"

TRUSS BRG.
EL. = 112'-1 1/2"
TOP OF CMU
EL. = 112'-0"



ELECTRICAL SITE PLAN

SCALE: 1"=30'-0"

NOTE: EXTERIOR LIGHT LOCATIONS ALSO SHOWN ON SHEET E2.

