Village of Mukwonago

Notice of Meeting and Agenda

PLAN COMMISSION MEETING
Tuesday, October 8, 2024

Time: **6:30 pm**
Place: **Mukwonago Municipal Building, Board Room, 440 River Crest Ct**

1. Call to Order

2. Roll Call

3. Comments from the Public

Please be advised, per Wisconsin Statute Sec. 19.84(2), information and comment will be received from the public by the Plan Commission. The Public Comment Session is granted to the public at the start of each Plan Commission meeting. The Public Comment Session shall last no longer than fifteen (15) minutes and individual presentations are limited to three (3) minutes per speaker. However, these time limits may be extended at the discretion of the Chief Presiding Officer. The Plan Commission may not respond to or have any discussion on information received during the public comment session unless it is placed upon the Agenda for a subsequent meeting. Public comments should be addressed to the Plan Commission as a body. Presentations shall not deal in personalities personal attacks on members of the Plan Commission, the applicant for any project or Village Employees. Comments shall not be used to engage others in a debate in this forum. All comments, questions and concerns should be presented in a respectful professional manner. Any questions to an individual member of the Plan Commission or Staff will be deemed out of order by the Presiding Officer.

4. Approval of Minutes

4.1 Minutes from Planning Commission meeting September 10, 2024
20240910 Minutes Draft.docx

5. Public Hearings

All persons interested in making comments about any of the public hearing items will be heard. Formal petitions and written comments regarding any of the public hearing items may be submitted tonight. During the public hearing(s), if you wish to be heard, the Plan Commission asks that you begin by stating your name and address, speak for no more than three minutes and attempt to avoid duplication. Each person speaking at the public hearing must sign the Public Hearing Appearance sign-in sheet before speaking. The sign-in sheet is available on the table located at the back of the room.

5.1 Public hearing on Conditional Use Permit for a free-standing Car Wash (Tsunami Car Wash) located at the south corner of the intersection of Maple Avenue and W. Wolf Run, Parcel MUKV2013995001, applicant (The Redmond Company).
Public Hearing Notice-Conditional Use-Tsunami Car Wash.docx

6. New Business

Discussion and Possible Action on the Following Items

6.1 Discussion and possible recommendation to approve **Resolution 2024-53** Conditional Use Permit for a free-standing Car Wash (Tsunami Car Wash) located at the south corner of the intersection of Maple Avenue and W. Wolf Run, Parcel MUKV2013995001, applicant (The Redmond Company).

Staff Report-20241002-Tsunami Car Wash-SPAR and CU.pdf
RESOLUTION 2024-53 - Tsunami Car Wash CU.docx
2 Tsunami - SPAR App.pdf
2a Tsunami Conditional Use questions.pdf
3 Tsunami - Plan of Operation.pdf
4 Tsunami - Revised Site Plan 20241002.pdf
5 Tsunami - Civil Plans.pdf
6 Tsunami - Landscape and Building.pdf
7 Tsunami - Lighting cut sheets.pdf
8 Tsunami - SWMP (8-9-24).pdf
9 Mukwonago Tsunami Carwash TIA 090924.pdf

6.2 Discussion and possible action to approve **PC-Resolution 2024-10** for a Site Plan and Architectural Review for Tsunami Car Wash, Parcel MUKV 2013-995-001
Staff Report-20241002-Tsunami Car Wash-SPAR and CU.pdf
PC-RESOLUTION 2024-10 - Tsunami Car Wash SPAR

6.3 Discussion and possible action to approve **PC-Resolution2024-11** for an amended Site Plan and Architectural Review for Dunkin Donuts MUKV2014-987
Staff Report-20241001-Dunkin Donuts-SPAR-Amended.pdf
PC-RESOLUTION 2024-11 - Dunkin Donuts SPAR - Amended.docx

6.4 Discussion and possible action to approve **PC Resolution 2024-09** for a Site Plan Architectural Review for Semper-FI Roofing & Exteriors at 820 Swan Dr, Parcel MUKV 1970-987
Staff Report-20241001-SemperFi-SPAR
PC-RESOLUTION 2024-09 Semper-Fi SPAR

6.5 Discussion and possible action to approve **PC-Resolution 2024-12** for Site Plan and Architectural Review for L'Bri Pure N' Natural Located at 909 Perkins Drive, Parcel MUKV 1969-996-005 and MUKV 1969-996-006
Staff Report-20241003-LBri Expansion-SPAR.pdf
PC RESOLUTION 2024-12 - LBri Expansion SPAR.docx
1 L'Bri - 909 Perkins Ave- Project Summary (2024-09-03).pdf
3 L'Bri Site Plan Application Signed 090324.pdf
4 L'Bri Plan Commission Dwgs Complete 090324.pdf
5 L'Bri SWMP Doc 090324.pdf

6.6 Discussion and possible action to approve **PC-Resolution 2024-13** for Site Plan and Architectural Review for Porch Bar located at 204 S. Rochester Street Parcel MUKV 1976-122
Staff Report-20241003-Porch Bar-SPAR.pdf
PC RESOLUTION 2024-13 - Porch Bar - SPAR.docx

6.7 Status Update regarding Zoning Code

7. Adjournment

Membership:

Eric Brill, John Meiners, Karl Kettner, Mark Penzkover, Tim Rutenbeck, Jason Wamser, Fred Winchowky, and Village Planner (Advisory)

It is possible that a quorum of, members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Please note, upon reasonable notice, efforts will be made to accommodate the needs of individuals with disabilities through appropriate aids and services. For additional information or to request this service, contact the Municipal Clerk's Office, (262) 363-6420.

MINUTES OF THE PLAN COMMISSION MEETING
Tuesday, September 10, 2024

Call to Order
Deputy Clerk-Treasurer Shay Zerfas called the meeting to order at 6:30 p.m. located in the Board Room of the Mukwonago Municipal Building, 440 River Crest Ct.

Roll Call
Commissioners present:

Eric Brill
Tim Rutenbeck
John Meiners
Jason Wamser

Also present: Diana Dykstra, Clerk/ Treasurer/ Administrator
Shay Zerfas, Deputy Clerk/ Treasurer

Excused: Fred Winchowky, Village President
Karl Kettner
Mark Penzkover

Appoint Chair Pro Tem
Deputy Clerk-Treasurer asked for Motion to appoint Chair Pro Tem
Meiners motioned to appoint Eric Brill as Chair Pro Tem, Rutenbeck Second, Unanimously carried.

Comments from the Public
No Comments
Closed 6:32pm

Approval of Minutes
Meiners/Rutenbeck motion to approve minutes from August 12, 2024, regular meeting. Unanimously carried.

New Business
Discussion and possible recommendation to approve RESOLUTION 2024-49 for an Extraterritorial Certified Survey Map review request for the parcels located at 7651, 7724, and 7708 State Road 83 in the Town of Waterford (Parcels 016 0419-0700-8001, 016 0419-0700-8010, and 016 0419-0700-4000) for Sheila Klawitter (owner and applicant).

Meiners/Rutenbeck motioned to recommend to Village Board to approve **Resolution 2024-49** for an Extraterritorial Certified Survey map review request, Unanimously carried.

Adjournment
Meeting adjourned at 6:34pm

Respectfully Submitted,
Shay Zerfas
Deputy Clerk/Treasurer

DRAFT

NOTICE OF PUBLIC HEARING

VILLAGE OF MUKWONAGO PLAN COMMISSION

The Village of Mukwonago Plan Commission will conduct a public hearing on Tuesday, October 8, 2024, for the following:

> Conditional Use Permit for a free-standing Car Wash (Tsunami Car Wash) located at the south corner of the intersection of Maple Avenue and W. Wolf Run, Parcel MUKV2013995001, applicant (The Redmond Company).

The meeting will be held in the Board Room of the Village Hall located at 440 River Crest Court, Mukwonago, Waukesha and Walworth Counties. The meeting starts at 6:30PM and the public hearing will be conducted in the order listed on the meeting agenda.

For information regarding this public hearing, contact the Village Planner at planner@villageofmukwonago.gov or 262-363-6420 during regular office hours. All interested parties will be heard.

Notice was sent to property owners within 250 feet of the property and surrounding municipality Clerks within 1000 feet of the Village of Mukwonago boundary.

Upon reasonable notice, efforts will be made to accommodate the needs of individuals with disabilities through appropriate aids and services. For additional information or to request this service, please contact Diana Dykstra, at 262-363-6420.

> VILLAGE OF MUKWONAGO
> Diana Dykstra, Clerk-Treasurer

Legal notice to be published in the *Waukesha Freeman* on October 1 and September 24, 2024.

PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 2, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: Tsunami Car Wash – Site Plan & Architectural Review and Conditional Use

BASIC INFORMATION	
Project:	Tsunami Car Wash
Applicant:	The Redmond Company
Consulting Engineer:	Nielson, Madson & Barber, SC
Consulting Architect:	The Redmond Company
Request:	Site Plan & Architectural Review & Conditional Use
Staff Recommendation:	Approve with Conditions

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV2013995001
Acreage:	1.80 Acres
Current Use:	Vacant
Proposed Use:	Car Wash, Stand Alone
Reason for Request:	Development of new Car Wash Facility
Land Use Classification:	Business
Zoning Classification:	B-3 – Commercial Business District

Project Summary & Overview

Tsunami Car Wash is looking to construct a standalone car wash facility at the corner of Maple Avenue and E. Wolf Run. The car wash will feature a tunnel wash system with on-site vacuums for customers. This lot was previously zoned B-4 but was non-conforming and rezoned B-3 in March 2024 via Ordinance 1031. The rezoning allows for a car wash to develop on this site via a Conditional Use Permit.

During the review of the submitted documents, a revised site plan was sent to staff to adjust the turn radius from the pay stations into the car wash tunnel. This revision will cause minor modifications to other civil site plan documents and storm water management. The revised site plan is included with this agenda packet, however, the civil and building plans still show the original site plan. Staff does not believe this is a significant change to warrant the delay of the review of this project. Conditions are set forth in the

provided resolutions to ensure staff have the opportunity to review the revised minor details before the issuance of permits.

The site shares an access drive with the neighboring property via existing easements. Staff does not believe that access will be an issue for this property. Staff recommends signage be added on the shared access in case of overflow that cars cannot be stacked blocking a lane of traffic.

Conditional Use Request

Attached to this staff report is the justification questions for a Conditional Use Permit that have been answered by the applicant. The Planning Commission shall take these into consideration when making their decisions.

Conditional Use Process / Findings

The established review procedures are that the Plan Commission shall hold a public hearing and make a recommendation to the Village Board whom makes the final decision.

Following the close of the public hearing, the Plan Commission may recommend (1) approval, (2) approval with conditions, or (3) denial.

If approval is recommended, the Plan Commission can recommend conditions deemed necessary to protect public health, safety, and welfare. The Plan Commission, in passing on the matter, will need to make the following determinations consistent with Section 100-354 of Mukwonago's Zoning Regulations:

1. The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety or welfare of the Village.
2. The uses, values and enjoyment of other property in the surrounding neighborhood that are already permitted shall be, in no foreseeable manner, substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.
3. The establishment, maintenance or operation of the conditional use is compatible with surrounding properties, whether in the same or different zoning districts. In making this determination, the Plan Commission and Village Board must determine whether the petitioner has demonstrated there are no adverse effects on surrounding properties or that potentially adverse effects have been eliminated or reduced to an acceptable level. Approaches that could be employed to mitigate potentially adverse effects will depend on the particular circumstances but may include:
    a. Adjusting the location of the use, or parts thereof, on the subject property;
    b. Limiting hours of operation;
    c. Limiting the size or scope of the use, or parts thereof;
    d. Controlling how the use is managed on an ongoing basis;
    e. Providing additional landscaping;
    f. Providing additional screening; and
    g. Limiting operations conducted out-of-doors, if otherwise allowed
4. The establishment of the conditional use will not impede the normal and ordinary development and improvement of the surrounding property for uses permitted within the district and/or which are consistent with the standards in the Comprehensive Plan.
5. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the use.

6. Adequate measures have been taken or will be taken providing ingress and egress to minimize traffic congestion on public streets so as not to diminish the level of service of any intersection which is impacted by traffic arising from the conditional use.

In addition, the property owner / tenant has shown compliance with the requirements set forth in the Village's zoning regulations for specified use.

The Village Board will carefully review the recommendation of the Plan Commission and concurs with the Plan Commission's findings set forth above, provided the conditional use is operated pursuant to the conditions of approval set forth in this order.

These findings are incorporated into the draft conditional use order which is attached.

The Plan Commission shall approve a conditional use application if the terms and conditions of the zoning regulations are met. However, in the event the terms and conditions of the ordinance are not consented to and complied with by the applicant, the Commission may deny the application. In addition, the Commission may deny the application or place conditions on it if substantial evidence, as defined in §62.23(7) Wis. Stats. is presented. That evidence must demonstrate the inability of the applicant to comply with or meet the conditions of the zoning regulations or that the conditions to be applied by the Plan Commission are necessary to protect the public health, safety or welfare of the community based upon the presentation of substantial evidence. Potential motion for approval to Recommend to the Village Board approval of the project as a conditional use as set forth in the attached conditional use order as drafted, provided the Village Attorney approves the final form of the conditional use order.

Staff Review

Engineering:	Final SWMP and Civil will need to be stamped by PE. Erosion control plan is lacking a tracking pad to prevent tracking onto shared access drive. Revised plans submitted should not be scanned versions as it makes it difficult to read. Additional comments will be made upon resubmittal. Storm water maintenance agreement and letter of credit will be required prior to issuance of permits.
Public Works	Sidewalk will need to be extended along E. Wolf Run to Maple Avenue.
Utilities	Sampling manhole needs to be moved closer to the right-of-way line. All utilities, including the sampling manhole needs to meet the Village Standard Specifications.
Police	No comments at this time.
Fire:	Please provide turning template for WB-50. No other comments at this time.
Building Inspection	Signage must comply to Village's sign code. More comments may be forthcoming with submittal of more detailed site signage. Condition in resolution that signage will be reviewed at the time of sign permit application.

Planning Signage should be added along the shared access with Aldi to prevent vehicle stacking and blocking traffic in the extreme event of high usage that results in stacked vehicles out into the roadway.

Recommended Action

Conditional Use Permit
Staff recommends the Planning Commission recommend to the Village Board approval of a conditional use permit as set forth in the provided resolution.

To – Grant a Conditional Use Permit for a drive-thru facility with the following on-going conditions deemed necessary to protect the health, safety, and welfare:

1. Ongoing conditions of approval. The following conditions shall constitute an ongoing obligation:
    a. Any modifications to the site, buildings, site improvements, shall require the conditional use application being updated.
2. The following conditions are also true and are consistent with Section 100-354 of Mukwonago's zoning regulations:
    a. The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety or welfare of the Village.
    b. The uses, values and enjoyment of other property in the surrounding neighborhood that are already permitted shall be, in no foreseeable manner, substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.
    c. The establishment, maintenance or operation of the conditional use is compatible with surrounding properties, whether in the same or different zoning districts.
    d. The establishment of the conditional use will not impede the normal and ordinary development and improvement of the surrounding property for uses permitted within the district and/or which are consistent with the standards in the Comprehensive Plan.
    e. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the use.
    f. Adequate measures have been taken or will be taken providing ingress and egress to minimize traffic congestion on public streets so as not to diminish the level of service of any intersection which is impacted by traffic arising from the conditional use.

Site Plan and Architectural Review
Staff Recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution with the included conditions.

Attachments

1. Application and Development Information
2. Plans and Site Drawings

RESOLUTION 2024-53

Village of Mukwonago Order Granting a Conditional Use and Prescribing Conditions for a Free-standing Car Wash Facility (Tsunami Car Wash) on Parcel MUKV2013995001, Mukwonago, WI

WHEREAS, TSUNAMI EXPRESS CARWASH (hereinafter "property owner") owns the property identified MUKV2013995001, (hereinafter "subject property") in the Village of Mukwonago, more particularly described as follows:

LOT 1 CERT SURV 9638 VOL 88/311 REC AS DOC# 3073635 PT NE1/4 & NW1/4 & SW1/4 SEC 36 & PT SE1/4 SEC 25 T5N R18E :: INCLUDING RECIPROCAL EASEMENT DESCRIBED AS: PT NE1/4 SW1/4 SEC 36 T5N R18E; COM SW COR LOT 1 CERT SURV 9638; S89°26'38"E 300.08 THE BGN; S89°26'38"E 33.51 FT; S00°33'22"W 23.23 FT; SWLY 21.57 FT ALG ARC OF CURVE RADIUS OF 25.00 FT; CTRPOINT TO NW CENTRAL ANGLE OF 49°26'16" LONG CHORD BEARING S25°16'30"W 20.91 FT; N89°26'38"W 322.55 FT; N02°33'10"W 30.04 FT; S89°26'38"E 277.92 FT; NELY 25.86 FT; ALG ARC OF CURVE RADIUS OF 25.00 FT CTRPOINT TO NW CENTRAL ANGLE OF 59°16'25" LONG CHORD BEARING N60°55'09"E 24.73 FT TO BGN :: INCLUDING RECIPROCAL EASEMENT DESCRIBED AS: PT SE1/4 NW1/4 SEC 36 T5N R18E; COM SW COR LOT 1 CERT SURV 9638; S89°26'38"E 300.08 THE BGN; NELY 13.41 FT ALG ARC OF CURVE RADIUS OF 25.00 FT CTRPOINT TO NW CENTRAL ANGLE OF 30°43'35" LONG CHORD BEARING N15°55'09"E 13.25 FT; N00°33'22"E 12.70 FT; NELY 93.56 FT ALG ARC OF CURVE RADIUS OF 155.00 FT CTRPOINT TO SE CENTRAL ANGLE OF 34°35'04" LONG CHORD BEARING N17°50'54"E 92.15 FT; N35°08'26"E 26.15 FT; S54°51'34"E 30.00 FT; S35°08'26"W 26.15 FT; SWLY 75.45 FT ALG ARC OF CURVE RADIUS OF 125.00 FT CTRPOINT TO SE CENTRAL ANGLE OF 34°35'04" LONG CHORD BEARING S17°50'54"W 74.31 FT; S00°33'22"W 25.47 FT; N89°26'38"W 33.51 FT TO BGN :: DOC# 4130283 & DOC# 4164953

Return to:
Diana Dykstra, Clerk-Treasurer
Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

Parcel Number: MUKV 2013995001

WHEREAS, the property owner has, consistent with the Village of Mukwonago's zoning regulations, submitted a conditional use application for a new free-standing car wash facility (Tsunami Car Wash) per Section 100-251, and

WHEREAS, upon receipt of the petition submitted by the property owner and future purchaser, the Village Clerk properly referred such petition to the Plan Commission; and

WHEREAS, allowing for required public notice, the Plan Commission conducted a public hearing on October 8, 2024, to consider the petitioner's request; and

WHEREAS, members of the public in attendance were given ample opportunity to provide comment regarding the petitioner's request; and

WHEREAS, the Plan Commission passed a motion recommending to the Village Board that the conditional use be approved subject to certain conditions; and

WHEREAS, the Plan Commission, in passing on the matter, has made the following determinations consistent with Section 100-354 of Mukwonago's zoning regulations:

1. The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety or welfare of the Village.

2. The uses, values and enjoyment of other property in the surrounding neighborhood that are already permitted shall be, in no foreseeable manner, substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.

3. The establishment of the conditional use will not impede the normal and ordinary development and improvement of the surrounding property for uses permitted within the district and/or which are consistent with the standards in the Comprehensive Plan.

4. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the use.

5. Adequate measures have been taken or will be taken providing ingress and egress to minimize traffic congestion on public streets so as not to diminish the level of service of any intersection which is impacted by traffic arising from the conditional use.

In addition, the property owner has shown compliance with the requirements set forth in the Village's zoning regulations for the specified use.

WHEREAS, the Village Board has carefully reviewed the recommendation of the Plan Commission and concurs with the Plan Commission's findings set forth above, provided the conditional use is operated pursuant to the conditions of approval set forth in this order.

NOW THEREFORE, IT IS HEREBY DETERMINED AND ORDERED AS FOLLOWS:

1. **Authorized uses**. Subject to the terms and conditions of this approval and the sections of the zoning code that apply, the property owner is authorized to construct a free-standing car wash facility (Tsunami Car Wash).

2. **Issuance of permit required**. The zoning administrator is authorized to issue the property owner a conditional use permit when all conditions enumerated in section 3 have been satisfied to his or her satisfaction. Such permit is the last approval before the property owner/tenant can begin to establish the use as authorized herein.

3. **Initial conditions of approval.** The following conditions shall be satisfied prior to the issuance of the conditional use permit:

a. The property owner must submit site/architectural plans to the Village for review and obtain approval of the same within 9 months of the date of this decision.

b. The property owner must accept the terms and conditions of this conditional use order in its entirety in writing within 6 months of the date of this decision. Prior to such expiration, the property owner may request an extension to this time period and the Village Clerk may approve an extension with good cause.

c. This order must be recorded against the subject property in the Waukesha County register of deeds office (only if subsections 3(a) through 3(b) have been satisfied).

In the event the requirements enumerated in subsections 3(a) and 3(b) above are not satisfied, this order shall automatically be null and void without any further action by the Village of Mukwonago on the aforementioned date.

4. **Ongoing conditions of approval**. The following conditions shall constitute an ongoing obligation:

a. Any modifications to the site, buildings, site improvements shall require the conditional use application being updated.

5. **Expansion or changes.** The conditional use hereby authorized shall be confined to the subject property without extension or expansion. Any expansion or change in use shall require issuance of a new conditional use approval pursuant to the requirements in effect at the time of application.

6. **Modification of property boundary lines**. The property owner shall not change the size and/or shape of the subject property by any means without the approval of the Village Board. If the Village Board determines that a proposed change is substantial with regard to the overall size of the parcel and/or configuration, such change shall require issuance of a new conditional use approval pursuant to the requirements in effect at the time of application.

7. **Plans and related matters**. Unless otherwise expressly stated herein, plans that are specifically required by this conditional use order may be amended upon the prior approval of the Plan Commission if the Plan Commission finds the amendment to be minor and consistent with the conditional use order and permit. Any change in any plan that the Plan Commission feels, in its sole discretion to be substantial, shall require a new conditional use approval and all procedures in place at the time must be followed.

8. **Inspection**. The property owner shall allow Village of Mukwonago staff, officials, and other authorized agents to inspect the subject property, at any reasonable time and for any proper purpose related to compliance with this conditional use order.

9. **Discontinuance**. Should the conditional use be discontinued in use for 365 consecutive days the use shall be terminated as set forth in the Village of Mukwonago's zoning regulations.

10. **Private rights**. This approval is given under the Village of Mukwonago's zoning regulations and is not to be interpreted to abrogate any private rights other property owners may have pursuant to deed restrictions or restrictive covenants.

11. **Interpretation**. If any aspect of this conditional use order is in conflict with any other aspect of the conditional use order, the more restrictive provisions shall be controlling, as determined by the Plan Commission.

12. **Other permits**. This order shall not be deemed to constitute a building permit, or constitute any other license or permit required by Village ordinance, or other local, state, or federal law.

13. **Severability**. In the event a court of competent jurisdiction determines that a paragraph or phrase of this conditional use order is unlawful, illegal, or unconstitutional, said determination as to the particular phrase or paragraph shall not void the rest of the conditional use order and the remainder shall continue in full force and effect.

14. **Heirs, successors, and assigns**. This conditional use order shall be binding upon the property owner and their heirs, successors, and assigns. Upon a change in ownership, the property owner shall notify the Village Clerk.

15. **Ongoing review**. This conditional use may be reviewed by the Plan Commission with notice to the property owner at any time upon complaint or upon Plan Commission initiative. If it is determined that the authorized use is no longer compatible, or that the provisions of this approval have not been complied with, the Village Board may revoke or amend this order after recommendation by the Plan Commission and holding of a public hearing.

16. **Amendment**. The property owner may propose an amendment to this conditional use order at anytime by submitting a written petition to the Village Clerk, which shall be reviewed pursuant to the requirements in effect at the time of application.

17. **Violation**. Any violation of this order may be treated as a violation of Mukwonago's zoning regulations and each day of each violation of each condition herein shall be treated as a separate violation.

18. **Acceptance.** GRANTEES hereby accept the said Conditional Use Grant and covenant strictly to comply

with all the terms and conditions thereof. GRANTEES acknowledge that, in accordance with the provisions of the Zoning Code, failure to comply with any conditions of the Conditional Use Grant is cause for the termination of said Grant by the Village. GRANTEES also acknowledge that approval of the Conditional Use Grant allows the appropriate Village officials to conduct reasonable and routine inspections of the property. This Covenant shall run with the land and shall be binding on the GRANTEES and all persons claiming any estate or interest in the Premises by, through or under the GRANTEES, as long as the said Premises are used as described in the Conditional Use Grant

Approved this 16th day of October, 2024.

BY THE VILLAGE BOARD OF THE VILLAGE OF MUKWONAGO

_____
Fred Winchowky, Village President

Attest:

_____
Diana Dykstra, Village Clerk-Treasurer

STATE OF WISCONSIN, WAUKESHA COUNTY

Personally came before me this ____ day of _____ 2024, the persons described above, Fred Winchowky, Village President, and Diana Dykstra, Village Clerk, to me known to be the persons who executed the foregoing instrument and to me known to be such Village President and Village Clerk of the Village of Mukwonago and acknowledged that they executed the foregoing instrument as such officers of said municipal corporation by its authority and pursuant to the authorization by the Village Board from their meeting on the ____ day of _____, 2024.

_____
NOTARY PUBLIC

_____
My Commission Expires:

The remainder of this page left intentionally blank.

Acceptance by Property Owner

I, _____ verify that I am an authorized agent for TSUNAMI EXPRESS CARWASH accepts the terms stated herein.

Dated this _____ day of _____, 2024

_____
_____, agent

STATE OF WISCONSIN, WAUKESHA

Personally, came before me this ____ day of _____, 2024, the above-named person, _____ to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____
NOTARY PUBLIC

_____
My Commission Expires:

Drafted by Peter Gesch, Contracted Village Planner at the direction of the Mukwonago Village Board.

Process Details: PZ24-0025

Property Address: | Parcel: MUKV2013995001

Property Owner: DC PROPERTIES LLP

Summary Information

> 18 Process Step(s) Found > 0 Inspection(s) Found

This Site Plan was created from an application. Click here to view the application.

Amount Due

Process - Site Plan	**$0.00**
Total	

Process Information

Filed As	Site Plan	**Application Date**	08/23/2024
Process Name	Site Plan	**Date Process Started**	*No Data to Display*
Process Number	PZ24-0025	**Date Completed**	*No Data to Display*
Status	Preprocess - Ready	**Last Status Change**	08/23/2024
Scope Of Work	New construction of express car wash and accessory buildings		
Conditions	*No Data to Display*		

Process Step Information

Step Number	Step Display Name	Status	Date Step Started	Date Step Completed	Date Step Due	
1	Review Application for Completeness	Not Started				View
2	Staff Review	Not Started				View
3	CIVIL DRAWINGS	Not Started				View
4	STORMWATER MGT PLAN	Not Started				View
5	LIGHTING PLAN	Not Started				View
6	LANDSCAPE PLAN	Not Started				View
7	EROSION CONTROL PLAN	Not Started				View
8	PRE CON ESCROW TO DEPUTY CLERK $5K	Not Started				View
9	Post PC Agenda	Not Started				View
10	PC Review and Decision	Not Started				View
11	VILLAGE BOARD NOTIFICATION ONLY	Not Started				View
12	Owner and Applicant Notified	Not Started				View
13	LETTER OF CREDIT - IF INFRASTRUCTURE VILLAGE RESPONSIBILITY	Not Started				View
14	STORM WATER MAINT AGMT	Not Started				View
15	DEVELOPER AGMT	Not Started				View
16	PRE CON MTG	Not Started				View
17	POST APPROVAL CONSTR ESCROW $10K	Not Started				View
		Not Started				View

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Document Summary

Document Title

CIVIL DRAWINGS

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	CIVIL DRAWINGS	Not Started			No Attachment

Complete Village Submittal

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	Complete Village Submittal	Not Started	8/16/2024		View Document
1	Complete Village Submittal	Not Started	8/16/2024		View Document

EROSION CONTROL PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	EROSION CONTROL PLAN	Not Started			No Attachment

LANDSCAPE PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	LANDSCAPE PLAN	Not Started			No Attachment

Lighting Cut Sheets

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	Lighting Cut Sheets	Not Started	8/16/2024		View Document
1	Lighting Cut Sheets	Not Started	8/16/2024		View Document

LIGHTING PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	LIGHTING PLAN	Not Started			No Attachment

Project Narrative

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	Project Narrative	Not Started	8/16/2024		View Document

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Document Title

Version	Document Title	Review Status	Received	Completed	
1	Project Narrative	Not Started	8/16/2024		View Document

SITE PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	SITE PLAN	Not Started			No Attachment

STORMWATER MGT PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	STORMWATER MGT PLAN	Not Started			No Attachment

SUBMITTAL ESCROW $5K

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	SUBMITTAL ESCROW $5K	Not Started			No Attachment

Review Comments/Concerns

Show All

[Collapse All]

Title	Type	Comment Type	Corrected	Date Found	Date Corrected	Process Step	Review
No records to display.							

Inspection Information

Inspection Type	Inspector	Status	Scheduled Date	Completed Date	Result
No records to display.					

Fees & Payments

Date	Action	Qty	Description	Billed	Paid
8/23/2024	Invoice Item	5,330.00	PZE Fees: Site Plan - Major (Invoice Number: 00005652)	$581.60	
8/23/2024	Transaction		Transaction Number: 00006447		$581.60

Parcel/Land Details

Notes *No Data to Display*

Zoning/Rezoning and Usage

Dimensional Information

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Utility Details

Setback Details

Miscellaneous Fields

Parking Details

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THE REDMOND COMPANY

YOUR PREMIER DESIGN/BUILD PARTNER

9 September 2024

Planning & Zoning Department – Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

RE: Tsunami Express Carwash – 115 East Wolf Run
Conditional Use Questions

To Whom It May Concern,

Below is a response to the Six Questions regarding the Justification of the Proposed Use.

A. *How is the proposed conditional use (the use in general, independent of its location) in harmony with the purposes, goals, objectives, policies and standards of the Village of Mukwonago Comprehensive Plan, the Zoning Ordinance, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the Village?*

a Tsunami Car Wash is a community oriented business that will be providing a new start of the art facility using materials, architectural aesthetic, and landscaping in compliance with the Comprehensive Plan.

B. *How is the proposed conditional use, in its specific location, in harmony with the purposed, goals, objectives, policies and standards of the Village of Mukwonago Comprehensive Plan, the Zoning Ordinance, and any other plan, program, or ordinance adopted, or under consideration pursuant to official notice by the Village?*

a The building materials selected for this area are intended to complement the surrounding area and neighboring commercial developments. The Landscaping that is being proposed exceeds that of nearby developments and that of the comprehensive plan.

C. *Does the proposed conditional use, in its proposed location and as depicted on the required site plan (see Section 100-354 (a), (b), and (c), result in any substantial or undue adverse impact on nearby property, the character of the neighborhood, environmental factors, traffic factors, parking, public improvements, public property or rights-of-way, or other matters affecting the public health, safety, or general welfare, either as they now exist or as they may in the future be developed as a result of the implementation of the provisions of the Zoning Ordinance, the Comprehensive Plan, or any other plan, program, map ordinance adopted or under consideration pursuant to official notice by the Village or other governmental agency having jurisdiction to guide development?*

a No, none.

PLAN | DESIGN | BUILD

D. *How does the proposed conditional use maintain the desired consistency of land uses, land use intensities, and land use impacts as related to the environs of the subject property?*

a The site was rezone by the city specifically for this development. The use is auto orientated located in a non-residential area. It is a relatively low volume use for the area and during peak periods, the flow is consistent with customers evenly spaced entering and leaving the facility.

b With the added impervious area, the site is being engineered to accommodate that additional storm water runoff so as to not impact neighboring areas.

E. *Is the proposed conditional use located in an area that will be adequately served by and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public agencies serving the subject property?*

a A car wash is a relatively low burden on public provided services. The largest burden is water, but a water reclamation system is being invested into this location to dramatically lessen this burden.

F. *Do the potential public benefits of the proposed conditional use outweigh all potential adverse impacts of the proposed conditional use (as identified in Sections 100-354 (e)(l) and (2)), after taking into consideration the Applicant's proposal and any requirements recommended by the Applicant to ameliorate such impacts?*

a The benefits of having a utilized lot, with relatively low service impact is a greater benefit than any potential negatives of the development. The Use is in accordance with the zoning, as the site was rezoned in order to allow for this development.

Thank you for taking the time to read through the responses to the questions. Please do not hesitate to contact us with any additional questions.

Sincerely,

Jerry Mortier
Project Architect
The Redmond Company

THE REDMOND COMPANY

YOUR PREMIER DESIGN/BUILD PARTNER

16 August 2024

Planning & Zoning Department – Village of Mukwonago
440 River Crest Court
Mukwonago, WI 53149

RE: Tsunami Express Carwash – 115 East Wolf Run

To Whom It May Concern,

Tsunami Express Carwash ("Tsunami") is proudly presenting the proposed development plans for a state-of-the-art facility that will serve Mukwonago (the "Village") and the surrounding communities.

Introduction

The proposed development is located at the south corner of East Wolf Run and Maple Ave, and the parcel number is 2013-995-001. The property is a 1.7957 acre vacant lot currently zoned as B-3 "Community Business District." The B-3 zoning district allows a car wash as a conditional use. The proposed facility is a single-story 5,200 SF building including the car wash bay, mechanical room, storage, office, and restroom. Accessory buildings include a 100 SF employee sales booth, 100 SF vacuum pump house, and dumpster enclosure.

Business Operations

Tsunami Express Carwash ("Tsunami") is a high-quality express car wash that uses state-of-the-art equipment and provides customers with a wide variety of services. For washes, Tsunami offers several levels of memberships, or customers can pay for a single wash at every visit. The wash cycles are offered at varying price points to suit the needs of each customer.

The site will house 10 vacuums to serve 20 parking stalls. These stalls will be 13'-0" wide and 18'-6" deep. This is wider than the average parking stall to allow for more maneuverability around the vehicle. The vacuums will be available to customers for free regardless of whether they go through the wash. The free vacuums will only be available for use during regular business hours.

In addition to regular business operations, Tsunami also fosters community connections and is an advocate for supporting local organizations. They offer an opportunity to host fundraisers, giving a modern spin on the famous "community car wash" that was once a popular method of raising funds for various community organizations. Supporters of the organizations will receive a high-quality car wash, and the organization receives 50% of the proceeds from every wash donated back to them.

Regular business hours extend from 7:00 am to 8:00 pm daily. There will be attendants on duty for the full duration of the operating hours to assist customers and maintain the cleanliness of the site. Each shift will employ 2-3 employees with a total staff of approximately 8-10 employees. During these hours, Tsunami expects to service 200-400 customers per day.

Tsunami currently has five (5) facilities in the Milwaukee area including: Oak Creek, Greenfield, Waukesha, and on Fond du Lac Avenue in Milwaukee. They are excited to expand into the Mukwonago community and continue to serve the Southeast Wisconsin area.

Entitlement Strategy & Timeline

Tsunami will comply with the local approval process by submitting applications for a Conditional Use Permit consideration. They anticipate receiving municipal approvals in Fall of 2024 with single-phase construction beginning shortly thereafter. The facility is anticipated to be open and operational in 2025.

Site Plan

The site is arranged such that the main car wash building is located on the west side of the site and is oriented to be parallel to East Wolf Run and perpendicular to Maple Ave. Tsunami strives to place themselves in areas that make access to their services convenient, allowing their customers to easily incorporate a car wash into their weekly errands.

- Layout: The plan shows (22) parking stalls with (1) being a dedicated ADA space. The entrance to the wash includes (3) pay stations that allow space for the stacking of up to (12) vehicles. The site has been designed to minimally impact the wetlands that were discovered on site. The design team has worked in tandem with the Wisconsin DNR and the Army Corps of Engineers to come to an agreement on an acceptable site plan.
- Vacuum Design & Placement: The vacuums are aligned along both sides of the parking lot with one vacuum post serving two parking stalls. Each vacuum has (2) hoses that are attached to a central vacuum system that routes to either the main building or the detached pump house at the southeast corner of the site. Each vacuum station is also equipped with a trash bin, a mat clip for easy vacuuming, and a central blower system to help clean those hard-to-reach places.
- Landscaping/Screening: There is ample landscaping throughout the site that has been designed by a professional landscape architect. The dumpster is screened by an enclosure constructed of materials that match the main building, and the pump house is a fully-enclosed secondary building also constructed of similar materials.
- Access: The main entrance to the site is located off of the shared access road with the property to the south that connects East Wolf Run and Maple Avenue. There are two entrances to the site: one that is West and one that is East. The east drive entrance is a one-way that leads to the three lanes of pay stations and allows vehicles to access the wash tunnel. The west drive entrance allows customers to access the free vacuums without going through the wash. After exiting the wash tunnel, customers can turn left to exit the site, or they can turn right to access the free vacuums.
- Signage: A full signage package complying with all code standards will be submitted for approval. There will be signage on the building as well as one monument sign located in-between the West and East entrances.
- Lighting: The proposed lighting plan includes general pole lighting, wall packs, and canopy lighting that provide an average illumination of 2.0 footcandles. Additional information on each proposed lighting fixture has also been provided.

Architecture

The design of the building consists of gray split-faced concrete block, gray masonry, clear anodized aluminum storefront windows, and a blue standing seam metal roof. The long façade is broken up with brick accent piers. The windows located in the mechanical room will be spandrel glazing.

The main structure of the building consists of structural CMU walls, precast hollow core planks for the roof of the wash tunnel, steel joists and metal deck for the roof of the mechanical/support rooms and poured-in-place concrete foundation walls.

The tunnel contains dual overhead doors at both the entrance and the exit. The interior door will be insulated metal with vision lites to provide thermal protection and security during non-operational hours; the exterior overhead door will be vinyl roll-up doors that will correspond with Tsunami's blue and yellow branding. These vinyl doors are intended to provide protection from the elements in the winter months when the metal doors are open.

Conclusion

Tsunami Express Carwash is excited for the opportunity to submit their state-of-the-art facility to the Plan Commission to be considered for this site. They will prove to be a valuable addition to the Mukwonago community.

Documents

Accompanying this narrative are all the documents required for the City to review and consider the project for approval. Also included are supplemental documents that provide additional information that may be of use to the Plan Commission while reviewing our submittal. These supplemental documents include:

- **Exhibit 1:** Lighting Cut Sheets Specific information on all proposed lighting fixtures to supplement the site photometric plan. *(Included in digital submittal only to conserve paper.)*
- **Exhibit 2:** Reclaim System & Equipment Information regarding the reclaim system and equipment.

Other documents are available upon request. These documents include a geotechnical survey and safety data sheets for all chemicals used for operations.

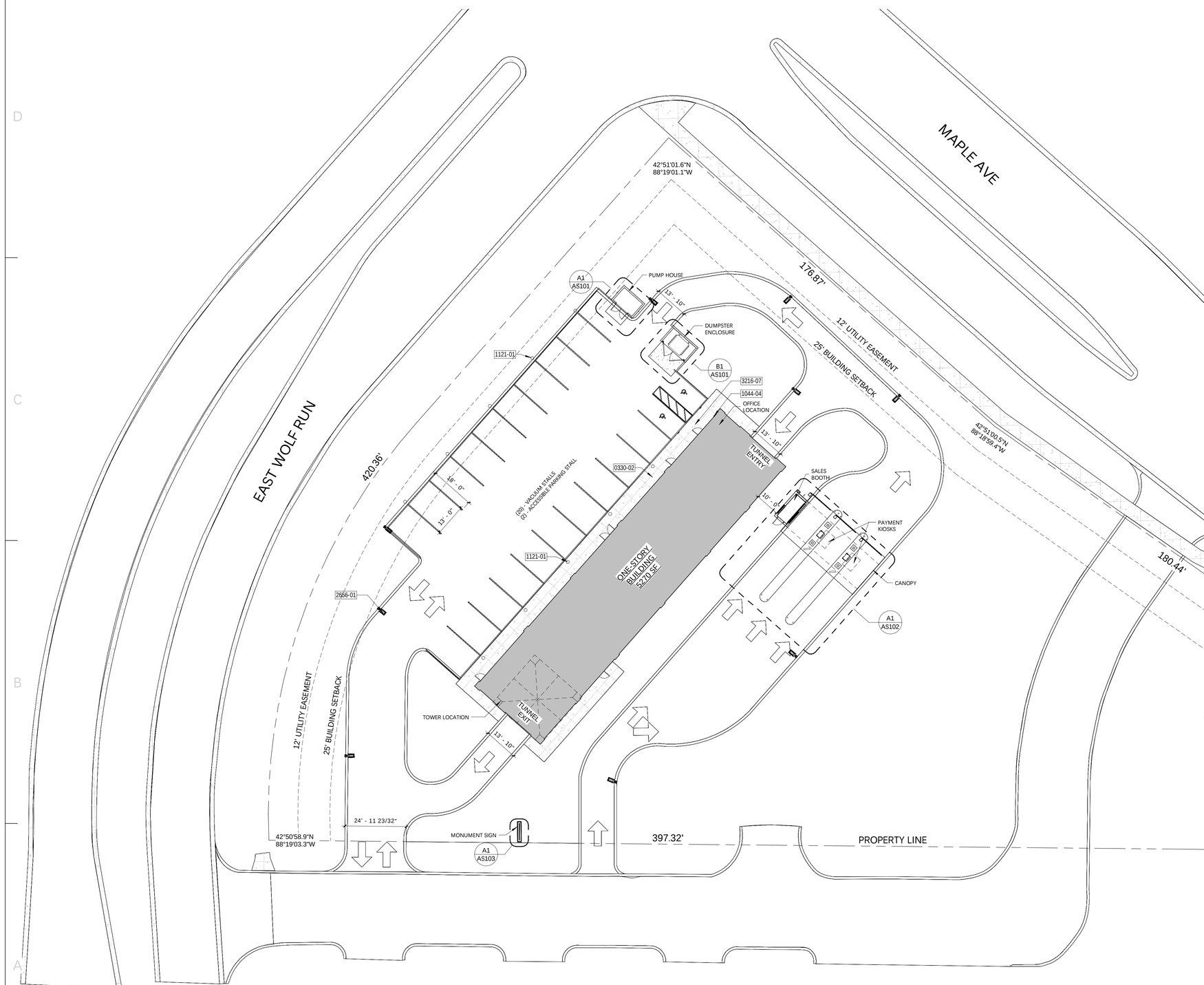
A sound study is planned be conducted for this site specifically to show the car wash's noise impact on the adjacent properties. The final report will be available and shared with the city as soon as it is received.

Please do not hesitate to contact us with any additional questions.

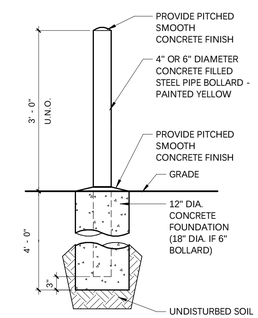
Sincerely,

Jerry Mortier
Director of Design
The Redmond Company

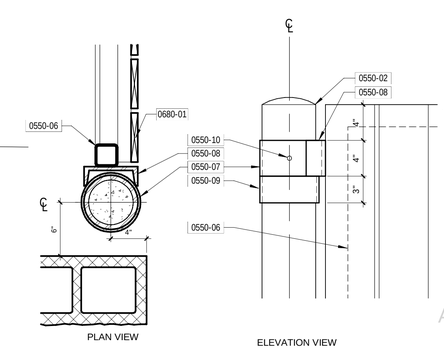
KEYNOTES PER SHEET	
0330-02	POURED CONCRETE SIDEWALK / CURB / SLAB (SEE CIVIL DRAWINGS)
0550-02	6" DIAMETER CONCRETE BOLLARD FILLED GALVANIZED STEEL PIPE BOLLARD - FIELD PAINT YELLOW.
0550-06	2 1/2" X 2 1/2" X 3/16" TUBE STEEL WELDED TO FORM GATE FRAME. PROVIDE DIAGONAL TUBE BRACE. GRIND ALL WELDS SMOOTH (SHOP PRIME AND FIELD PAINT). PROVIDE TREATED 2X4 HORIZONTAL AT TOP, MIDDLE AND BOTTOM.
0550-07	4" HIGH STEEL PIPE HINGE (PRIMED AND FIELD PAINTED)
0550-08	4" HIGH C6X13 WELDED TO STEEL PIPE HINGE (PRIMED AND FIELD PAINTED)
0550-09	3" HIGH STEEL PIPE WELDED TO 6" PIPE BOLLARD (SHOP PRIMED AND FIELD PAINTED)
0550-10	ZERC FITTING
0680-01	1X6 COMPOSITE BOARD (COLOR TO BE SELECTED BY ARCHITECT)
1044-04	KNOX BOX. VERIFY LOCATION WITH AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO INSTALLATION.
1121-01	VACUUM HOSE BOOM. TYP.
2656-01	POLE MOUNTED LIGHT FIXTURE (SEE ELECTRICAL DRAWINGS).
3216-07	HANDICAP RAMP. SEE CIVIL DRAWINGS.



A1 ARCHITECTURAL SITE PLAN
1" = 20'-0"



B5 BOLLARD DETAIL
3/4" = 1'-0"



A5 REFUSE/RECYCLING ENCLOSURE DOOR HINGE Copy 1
1 1/2" = 1'-0"

THE REDMOND COMPANY
W228 N745 WESTMOUND DRIVE | WAUKESHA, WISCONSIN 53186 | P: 262.549.9600

Tsunami Express Car Wash

115 East Wolf Run | Mukwonago, WI 53149

PROGRESS SET

Project Number	24040
Date	08.28.2024

Revisions

#	Description	Date

Architectural Site Plan

AS100

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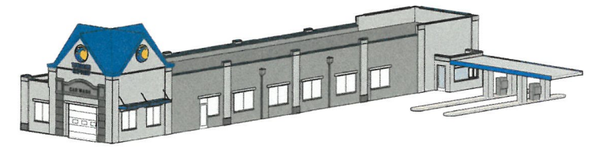
THE REDMOND COMPANY

Tsunami Express Car Wash

115 East Wolf Run | Mukwonago, WI 53149



PROJECT TEAM

OWNER
Tsunami Express Carwash
4800 Meadows Rd. Suite 300
Oswego, OR 97035

DESIGN / BUILDER
The Redmond Company
W228 N745 Westmound Drive
Waukesha, WI 53186
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1458 HORIZON BLVD. SUITE 200
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P: 262.634.5588

LANDSCAPE ARCHITECT
HELLER & ASSOCIATES
RACINE, WI 53406
PROJECT CONTACT: DAVID HELLER
EMAIL: DAVID@WDAVIDHELLER.COM
P: 414.614.9733

SHEET INDEX

SHEET INDEX - VILLAGE SUBMITTAL

Sheet Number	Sheet Name
GENERAL	
G100	TITLESHEET - VILLAGE SUBMITTAL
CIVIL	
1	ALTA / NSPS LAND TITLE SURVEY
C 1	CONSTRUCTION PLANS
C 2	EXISTING CONDITIONS
C 3	DIMENSIONED SITE PLAN
C 4	SITE DEMOLITION PLAN
C 5	SITE GRADING PLAN
C 6	EROSION CONTROL PLAN
C 7	PAVEMENT GRADING PLAN
C 8	SITE UTILITY PLAN
C 9	STORM SEWER PLAN
C 10	TYPICAL SECTIONS & CONSTRUCTION DETAILS
C 11	TYPICAL SECTIONS & CONSTRUCTION DETAILS
C 12	TYPICAL SECTIONS & CONSTRUCTION DETAILS
C 13	TYPICAL SECTIONS & CONSTRUCTION DETAILS
LANDSCAPE	
L 1.0	OVERALL LANDSCAPE PLAN
L 1.1	ENLARGED LANDSCAPE PLAN
L 1.2	ENLARGED LANDSCAPE PLAN
L 1.3	LANDSCAPE DETAILS, NOTES & SCHEDULES
ELECTRICAL	
E5100	SITE PHOTOMETRIC DRAWING
ARCHITECTURAL	
A 1	ARCHITECTURAL SITE PLAN
A 2	FLOOR PLAN & ROOF PLAN
A 3	EXTERIOR ELEVATIONS
A 4	3D ORTHOGRAPHIC
A 5	SALES BOOTH
A 6	PUMP HOUSE
A 7	TRASH ENCLOSURE
SIGNAGE	
	TYPOGRAPHY, ARROWS, FINSISHES & VINYLS
MN 2	SECONDARY MONUMENT SIGN
IDX 1	BUILDING ID - CAR WASH ENTRANCE
IDX 2	BUILDING ID - TOWER SIDES
CL 1	CHANNEL LETTERS
CL 2	CHANNEL LETTERS
LB 1	LIGHT BANDS
LB 1	LIGHT BANDS
DIR 1	DIRECTIONAL SIGN
BOL 1	CONCRETE SPHERE BOLLARDS

VICINITY MAP

GENERAL NOTES

GENERAL NOTES

1. SUB-CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
2. FINISH FLOOR ELEVATION IS 100'-0". REFER TO CIVIL PLAN FOR ACTUAL DATUM ELEVATIONS.
3. ALL WORK OF THE SUB-CONTRACTOR SHALL BE IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND COMPLY WITH ALL GOVERNING LAWS, CODES, ORDINANCES, RULES AND REGULATIONS OF THE CITY, COUNTY, STATE AND FEDERAL JURISDICTION INCLUDING REQUIREMENTS OF THE STATE DEPARTMENT OF NATURAL RESOURCES.
4. PRIOR TO COMMENCMENT OF WORK, THE SUB-CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE OF THE WORK AND VERIFY GRADE ELEVATIONS, UTILITIES, AND OTHER EXISTING CONDITIONS WHETHER OR NOT SHOWN ON THE DRAWINGS. LOCATE ALL GENERAL SITE REFERENCE DATA FOR PROPERTY LINES AND GRADE ELEVATIONS AND DO THAT WORK WHICH IS NECESSARY TO PREVENT THEIR DISLOCATION OR DESTRUCTION.
5. THE CLEARING/ FILLING/ EXCAVATING OF THE CONTRACT WORK AREA SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO MINIMIZE THE RUNOFF OF SILT AND SEDIMENT INTO THE STORM DRAINAGE SYSTEM AND ONTO ADJACENT OR DOWNSTREAM PROPERTIES. EROSION CONTROL MEASURES SHALL BE INSTITUTED AS NECESSARY BY THE SUB-CONTRACTOR. ANY AND ALL EROSION CONTROL PLANS REQUIRED FOR THIS WORK SHALL BE THE RESPONSIBILITY OF THE SUB-CONTRACTOR.
6. SUB-CONTRACTOR SHALL CLEAR THE CONTRACT WORK AREA ONLY. PROTECT EXISTING UTILITIES, TREES AND/OR NATURAL VEGETATION WHICH IS REQUIRED TO REMAIN.
7. NO DEBRIS, EARTH MATERIAL, CLEARED VEGETATION OR WASTE MATERIALS SHALL BE DEPOSITED ON ANY OTHER PROPERTY WITHOUT FIRST OBTAINING THE REQUIRED PERMITS AND/ OR APPROVALS. THIS INCLUDES THE INTRUSION OF SUCH MATERIAL INTO THE CITY STREET AND DRAINAGE SYSTEMS. CLEAN ANY DEBRIS LEFT IN THE STREET AS A RESULT OF OPERATIONS IMMEDIATELY.
8. BARRICADE AND POST WARNING SIGNS AND LIGHTS ADJACENT TO OPEN DEPRESSIONS AND HOLES OCCURING AS PART OF THE WORK.
9. MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES.
10. USE MEANS NECESSARY TO PREVENT DUST FROM BECOMING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND OTHER WORK BEING PERFORMED ON OR NEAR THE SITE.
11. GRADE AREAS ADJACENT TO BUILDINGS TO ACHEIVE DRAINAGE AWAY FROM BUILDINGS. SLOPE 5% OR GREATER, AS MAY BE SHOWN, FOR THE FIRST 10'-0" TOWARDS APPROVED DRAINAGE FACILITIES.
12. FINISH FLOOR SHALL BE A MINIMUM 4" ABOVE ADJACENT FINISH GRADE.
13. DO NOT SCALE DRAWINGS.
14. VERIFY ALL ROUGH IN DIMENSIONS FOR ALL BUILT IN EQUIPMENT PRIOR TO PERFORMING WORK. NO CHANGE ORDERS WILL BE APPROVED FOR SUB-CONTRACTOR FAILURE TO DO SO.
15. THE SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, FITTING, OR PATCHING THAT MAY BE REQUIRED TO COMPLETE THE WORK.
16. REPETITIVE FEATURES IN THE CONSTRUCTION DOCUMENTS ARE OFTEN DRAWN ONLY ONCE AND SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
17. THE SUB-CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPENCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON THE CONSTRUCTION DOCUMENTS TO THE ARCHITECT.
18. ALL 3D IMAGES / DRAWINGS ARE INTENDED FOR GRAPHIC REPRESENTATION ONLY AND ARE PROVIDED FOR REFERNCE ONLY.

THE REDMOND COMPANY
W228 N745 WESTMOUND DRIVE | WAUKESHA, WISCONSIN 53186 | P: 262.549.9600

Tsunami Express Car Wash
115 East Wolf Run | Mukwonago, WI 53149

STATE SUBMITTAL

Project Number	24052
Date	05.30.2024

Revisions

#	Description	Date
A	ADDENDUM A	06.14.2024
2	CONSTRUCTION BULLETIN 01	07.24.2024

TITLESHEET - VILLAGE SUBMITTAL

G100

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LOCATION MAP

N

60' 30' 0' 30' 60'

SCALE 1" = 30'

BEARINGS BASE: GRID NORTH, WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE NAD 1927 AS PER CERTIFIED SURVEY MAP NO. 9638

ALL ELEVATIONS REFER TO NAVD 1988 (12)

FIELD WORK	3-29-2024	ETM / WJB
	4-1-2024	ETM / KRF
	4-5-2024	ETM / KRF
	4-11-2024	ETM

LEGAL DESCRIPTION

LOT ONE (1) OF CERTIFIED SURVEY MAP NO. 9638 RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR WAUKESHA COUNTY, WISCONSIN ON SEPTEMBER 25, 2003, IN VOLUME 88 OF CERTIFIED SURVEY MAPS, PAGES 311-315 AS DOCUMENT NO. 3073635, SAID CERTIFIED SURVEY MAP BEING A PART OF THE SOUTHEAST ONE-QUARTER (1/4) OF THE SOUTHEAST ONE-QUARTER (1/4) OF SECTION TWENTY-FIVE (25), AND PART OF THE SOUTHEAST ONE-QUARTER (1/4) OF THE NORTHWEST ONE-QUARTER (1/4) AND PART OF THE NORTHWEST ONE-QUARTER (1/4), NORTHEAST ONE-QUARTER (1/4), SOUTHEAST ONE-QUARTER (1/4) AND SOUTHWEST ONE-QUARTER (1/4) OF THE NORTHEAST ONE QUARTER (1/4) OF SECTION THIRTY-SIX (36), IN TOWNSHIP FIVE (5) NORTH, RANGE EIGHTEEN (18) EAST, IN THE VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN.

Tax Parcel ID: MUKV 2013 995 001
Vacant Land - East Wolf Run, Mukwonago, WI 53149

SURVEYOR'S CERTIFICATION

To: First American Title Insurance Company, a Nebraska Corporation
First American Title Insurance Company National Commercial Services - Milwaukee, WI
Tsunami Car Wash Intermediate Holdco, LLC, a Delaware limited liability company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6(b), 8, 9, 11(b), 11(c) & 13 of Table A thereof.

The field work was completed on April 11, 2024.

April 15, 2024
Rev. April 25, 2024

Mark R. Madsen
Professional Land Surveyor
State of Wisconsin
Registration No. 2271

WISCONSIN MARK R. MADSEN S-2271 RACINE WI LAND SURVEYOR

ORIGINAL SURVEY IS IN COLOR

TITLE COMMITMENT

Issued By: First American Title Insurance Company
Issuing Agent: First American Title Insurance Company National Commercial Services
833 East Michigan Street, Suite 550, Milwaukee, WI 53202
Commitment Number: NCS-1192951-MKE
Commitment Date: September 18, 2023 at 7:30 AM

SCHEDULE B, PART II - EXCEPTIONS

4, 5, 6, 7, 8, 9, 11, 16, 18 & 19 are not survey related.

1, 2, 3, 10 & 17 visible evidence is shown, if any.

11 Easements, dedications, reservations, provisions, relinquishments, recitals, certificates, and any other matters as provided for or delineated on Certified Survey Map No. 9638 recorded September 25, 2003 in Volume 88, Pages 311-315 as Document No. 3073635 referenced in the legal description contained herein. Reference is hereby made to said plat for particulars. THE LOCATIONS ARE SHOWN FOR A 12-FOOT WIDE UTILITY EASEMENT AND A DRAINAGE EASEMENT AREA.

12 Utility Easement to The Milwaukee Electric Railway and Light Company, dated August 04, 1922, recorded/filed January 13, 1923 as Document No. 125784.
ITS EXACT LOCATION CANNOT BE DETERMINED FROM THE RECORDED DOCUMENT. THE DESCRIBED LANDS HAVE SINCE BEEN SUBDIVIDED AND THE SURVEYED PARCEL DOES NOT ABUT THE TWO ROADS REFERENCED WITHIN THE DESCRIPTION WHERE THE UTILITY POLES AND LINES WERE TO BE ERECTED.

13 Terms, conditions, restrictions and provisions relating to the use and maintenance of the Driveway Easement Agreement recorded on February 20, 2004, as Document No. 3130571. IT HAS BEEN ASSUMED THAT THIS EASEMENT WAS TERMINATED FOLLOWING THE REDEVELOPMENT AND CHANGE OF LAND USE OF THE DOMINATE ESTATE AS LAID FORTH IN THE RECORDED DOCUMENT. THIS EASEMENT LIES CENTERED WITHIN THE EASEMENT RECORDED IN DOCUMENT NO. 4151380 (EXCEPTION 15), BUT IS ONLY 20 FEET WIDE AS OPPOSED TO 30 FEET WIDE.

14 Terms, conditions, restrictions and provisions as set forth in Restriction Agreement and Grant of Easements dated April 20, 2004 by and between Greenwald Family Limited Partnership, a Wisconsin limited partnership and Home Depot U.S.A. Inc., a Delaware corporation, recorded April 20, 2004 as Document No. 3151406.
AFFECTS THE SURVEYED PARCEL BY LOCATION - NO PLOTTABLE ITEMS.

15 Terms, conditions, restrictions and provisions relating to the use and maintenance of the Access Easement Agreement recorded on July 01, 2015, as Document No. 4151380. Correction Instrument, recorded September 09, 2015 as Document No. 4164953.
ITS LOCATION IS SHOWN.

LEGEND

- STORM MANHOLE
- CATCH BASIN
- STORM SEWER
- SANITARY MANHOLE
- SANITARY SEWER
- HYDRANT
- WATER VALVE
- WATER MAIN
- COMMUNICATION BOX
- LIGHT POLE
- ELECTRIC LINE
- GAS MAIN
- SIGN
- DECIDUOUS TREE
- FENCE
- 1" IRON PIPE FOUND
- 3/4" REBAR SET
- RIPRAP
- CONCRETE

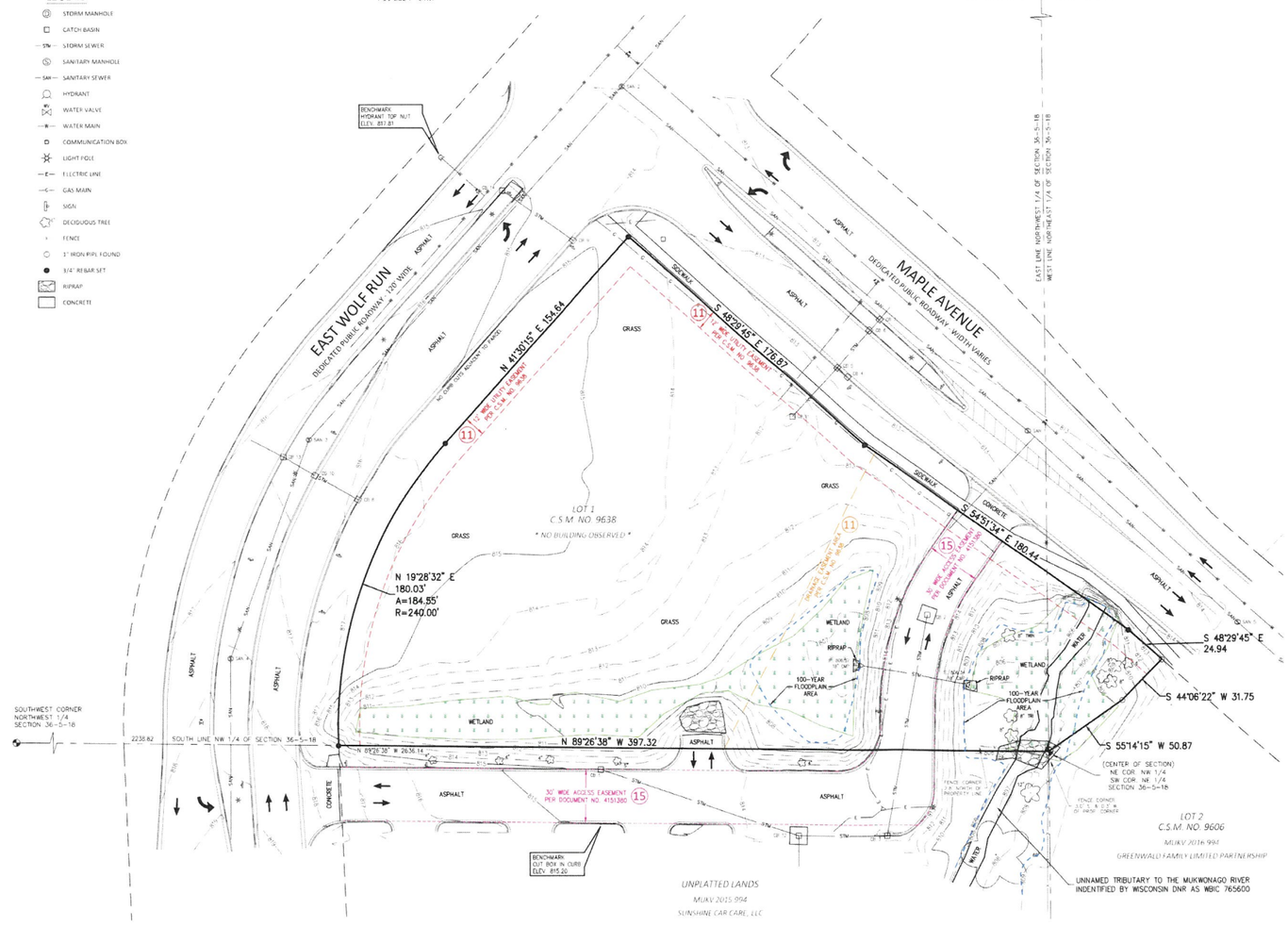

TABLE A NOTES

2 Address of the surveyed property: Vacant Land - East Wolf Run, Mukwonago, WI 53149

3 Flood zone classification: This parcel is located within an area having Zone designations of "X" and "AE" by the Federal Emergency Management Agency (FEMA) on Flood Insurance Rate Map, Community Panel No. 55133C0427H, which bears an effective date of October 19, 2023. The field survey was used by this office to delineate the floodplain as shown on the map. The area has a variable base elevation within the surveyed parcel that ranges from 807.1 feet to 808.3 feet.

4 Gross land area: 78,340 square feet or 1.798 acres.

5 Vertical relief is plotted based on ground survey with a contour interval of 1 foot. The datum is North American Vertical Datum of 1988 (NAVD88), with the originating elevation established on the surveyed parcel with GNSS. The site benchmark is the top nut of the fire hydrant located on the North side of the surveyed parcel.

6(b) No zoning report or letter was provided to this office by the client.

9 Site is a vacant lot - no clearly identifiable parking spaces were observed in the process of conducting the fieldwork.

11(b) Private utilities affecting the surveyed parcel were located by All Lines Utility Services, LLC on March 27, 2024.

11(c) Provide invert elevations of all underground structures and laterals within and serving the site. Refer to survey map and utility structure list for invert elevations.

SURVEYOR'S NOTES

Diggers Hotline was contacted for utility locates. Planning Locates Ticket No. 20241303677 and Planning Prints Ticket No. 20241303680 cleared April 5, 2024 at 9:00AM.

Paint markings found on the ground and shown hereon as evidence of possible (or probable) underground utility locations are consistent with typical utility markings. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary.

Wetlands delineated by Kristi Sherfinski of Wetland & Waterway Consulting, LLC on April 6, 2024.

UTILITY STRUCTURE INVERTS

SAN 1
RIM 813.25
IE. 12" NW 795.35
IE. 12" SE 795.35

SAN 2
RIM 814.31
IE. 36" NE 792.86
IE. 36" SW 792.86
IE. 12" SE 794.66

SAN 3
RIM 816.97
IE. 36" NW 793.47
IE. 36" SE 793.47

SAN 4
RIM 818.12
IE. 36" NE 793.97
IE. 36" S 793.97

SAN 5
RIM 814.11
IE. 12" NW 796.01
IE. 12" SE 796.01

CB 1
RIM 814.00
IE. 12" SE 810.75

CB 2
RIM 813.21
IE. 8" S 810.81

CB 3
RIM 812.84
IE. 12" W 809.44
IE. 8" NE 810.44

CB 4
RIM 812.02
IE. 15" W 808.97

CB 5
RIM 811.97
IE. 24" S 808.17
IE. 24" N 808.07
IE. 15" E 808.82

CB 6
RIM 812.52
IE. 24" S 807.97
IE. 24" N 807.87

CB 7
RIM 812.71
IE. 24" S 807.96
IE. 24" N 807.86

CB 8
RIM 815.71
IE. 15" W 811.86

CB 9
RIM 814.20
IE. 15" W 810.70

CB 10
RIM 816.31
IE. 15" W 811.51
IE. 15" E 811.61

CB 11
RIM 810.83
IE. 24" W 808.48

CB 12
RIM 813.46
IE. 12" W 810.41
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IE. 15" S 810.36

CB 13
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IE. 24" N 807.86

CB 14
RIM 814.84
IE. 15" SE 810.24
IE. 15" NW 810.14

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Tele: (262)634-5588 Website: www.nmbsc.net

CERTIFIED SURVEY MAP NO. 9638

LOT 1
ALTA / NSPS LAND TITLE SURVEY
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO	REVISION	BY	DATE
1	CORRECTED LOT NUMBER ON MAP	CRL	4-25-24

PROJ. MGR:	MRM
DRAFTED:	CRL / SCB
DATE:	4-15-2024
CHECKED:	MRM
DATE:	4-15-2024

2024.0060.01

SHEET 1 OF 1

CONSTRUCTION PLANS
for
TSUNAMI EXPRESS CAR WASH
for
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
115 East Wolf Run, Mukwonago, Wisconsin

LEGEND

Description	Existing	Description	Existing	Proposed
EDGE OF WOODS		WATER SHUT OFF		
DECIDUOUS TREE		WATER MAIN VALVE		
DECIDUOUS TREE REMOVAL		HYDRANT		
CONIFEROUS TREE		WATER MAIN REDUCER		
CONIFEROUS TREE REMOVAL		SANITARY MANHOLE		
BUSH		SANITARY CLEAN OUT		
SOIL BORING		STORM MANHOLE		
TELEPHONE BOX		CATCH BASIN		
GUY WIRE		LIGHT POLE		
UTILITY POLE		ENDWALL		
GAS VALVE		STORM SEWER	STM	
GAS METER		SANITARY SEWER	SAN	
SEPTIC VENT		WATERMAIN	W	W
ELECTRIC MANHOLE		CONTOURS	650	650
COMMUNICATION MANHOLE		FIRE PROTECTION		FP
WATER MANHOLE		UTILITY CROSSING		
HVAC UNIT		DITCH OR SWALE		
UNDERGROUND VAULT		CULVERT	15" CMP	15" CMP
SECTION CORNER		RAILROAD TRACKS		
MAIL BOX		FENCE	X	X
GUARD POST		NO VEHICULAR ACCESS		
STREET SIGN		UNDERGROUND ELECTRIC	E	
ELECTRIC PEDESTAL		UNDERGROUND GAS MAIN	G	
ELECTRIC METER		UNDERGROUND COMMUNICATIONS	CM	
PAD MOUNT TRANSFORMER		SILT FENCE	//	
FOUND IRON PIPE		OVERHEAD ELECTRIC	OHE	
SET IRON PIPE		FORCE MAIN	\	

ABBREVIATIONS

BASE LINE	BL	INVERT ELEVATION	IE
LONG CORD OF CURVE	CHD	LENGTH OF CURVE	ARC
CURB AND GUTTER	C&G	MANHOLE	MH
CATCH BASIN	CB	NORMAL WATER LEVEL	NWL
CENTERLINE	CL	POINT OF CURVATURE	PC
EDGE OF PAVEMENT	EOP	POINT OF TANGENCY	PT
FINISHED FIRST FLOOR	FFF	TANGENCY OF CURVE	TAN
FINISHED GRADE	FG	POINT OF VERTICAL INTERSECTION	PVI
FLOW LINE	FL	RADIUS	R
FLOODPLAIN	FP	RIGHT OF WAY	ROW
ORDINARY HIGH WATER MARK	OHWM	SANITARY SEWER	SAN
TOP OF BANK	TOB	STORM SEWER	STM
TOP OF CURB	TOC	TOP OF FOUNDATION	TOF
TOP OF WALK	TOW	WATER MAIN	WM

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

UTILITY NOTE

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SHEET INDEX

PLAN SHEET	SHEET NO.
TITLE SHEET	C-1
EXISTING CONDITIONS	C-2
DIMENSIONED SITE PLAN	C-3
DEMOLITION PLAN	C-4
GRADING PLAN	C-5
EROSION CONTROL PLAN	C-6
PAVEMENT GRADING PLAN	C-7
SITE UTILITY PLAN	C-8
STORM SEWER PLAN	C-9
TYPICAL SECTIONS & CONSTRUCTION DETAILS	C-10 TO C-13

OWNER

TSUNAMI EXPRESS CAR WASH, LLC.
CHRIS SCHULDT, CEO
4800 MEADOWS ROAD, SUITE 300
LAKE OSWEGO, OR 97035
OFFICE: 920-744-9882
EMAIL: chris@tsunamiexpress.com

GENERAL CONTRACTOR

THE REDMOND COMPANY
MIRANDA SEALS
W228 N745 WESTMOUND DR
WAUKESHA, WI 53186
OFFICE: 262-896-8727
EMAIL: mseals@theredmondco.com

GOVERNING AGENCY CONTACTS

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VILLAGE CLERK/TREASURER
DIANA DYKSTRA
OFFICE: 262-363-6420 EXT. 2103
EMAIL: ddykstra@villageofmukwonago.gov

COMMUNITY AND ECONOMIC DEVELOPMENT ADMINISTRATIVE CLERK
ROBIN GALLO
OFFICE: 262-363-6420 EXT. 2102
EMAIL: rgallo@villageofmukwonago.gov

PUBLIC WORKS DIRECTOR
RON BITTNER
OFFICE: 262-363-6447
EMAIL: rbittner@villageofmukwonago.gov

VILLAGE OF MUKWONAGO
BUILDING INSPECTOR
TIM RUTTENBECK
OFFICE: 262-363-6420 EXT. 2109
EMAIL: truttenbeck@villageofmukwonago.gov

POLICE CHIEF
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OFFICE: 262-363-6435
EMAIL: dstreit@villageofmukwonago.gov

FIRE CHIEF
JEFFREY R. STEIN
OFFICE: 262-363-6426
EMAIL: jstein@villageofmukwonago.gov

PUBLIC UTILITY CONTACTS

SPECTRUM
ROBERT TUNUTA
UTILITY COORDINATOR
OFFICE: 414-277-4205
CELL: 414-758-5688
EMAIL: tunuta@charter.net

WE-ENERGIES
TOM SCHULTZ
OFFICE: 262-552-3229
EMAIL: tom.schultz@we-energies.com

NATURAL GAS EMERGENCY:
(800) 261-5325
ELECTRICAL EMERGENCY:
(800) 662-4797

AT&T
MIKE TOYEK
OFFICE: 262-636-0549
EMAIL: mt1734@att.com

TDS TELECOM
SOUTHEAST WISCONSIN
OFFICE: 877-483-7142

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TSUNAMI EXPRESS CAR WASH
CONSTRUCTION PLANS
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

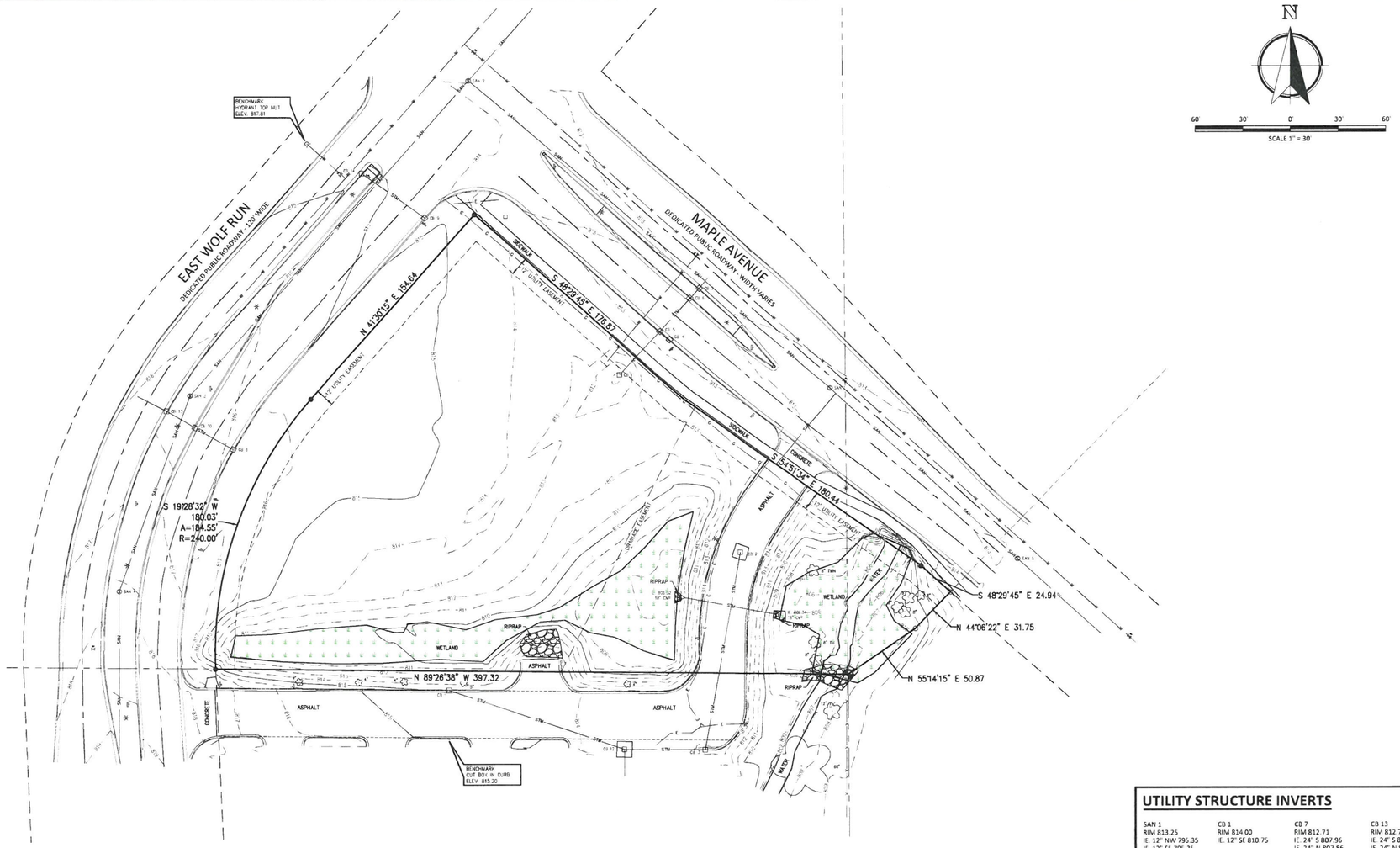
PROJ. MGR: MRM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: AJJ
DATE: 6-3-2024

2024.0060.01

SHEET
C-1

ISSUE FOR REVIEW: 6-5-2024

Friday, June 07, 2024 6:13:42 AM



NOTES

BEARINGS BASE: GRID NORTH, WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE NAD 1983/2011.

ALL ELEVATIONS REFER TO NAVD 1988 (12)

FIELD WORK: 3-29-2024 ETM / KRF
4-01-2024 ETM / KRF

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www.DiggersHotline.com

LEGEND

- STORM MANHOLE
- CATCH BASIN
- STORM SEWER
- SANITARY MANHOLE
- SANITARY SEWER
- HYDRANT
- WATER VALVE
- WATER MAIN
- COMMUNICATION BOX
- COMMUNICATION LINE
- LIGHT POLE
- ELECTRIC LINE
- SIGN
- DECIDUOUS TREE
- 1-1/4" REBAR FOUND

UTILITY NOTE

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UTILITY STRUCTURE INVERTS

SAN 1
RIM 813.25
IE. 12" NW 795.35
IE. 12" SE 795.35

SAN 2
RIM 814.31
IE. 36" NE 792.86
IE. 36" SW 792.86
IE. 12" SE 794.66

SAN 3
RIM 816.97
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SAN 5
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TSUNAMI EXPRESS CAR WASH
EXISTING CONDITIONS
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR: MRM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: ALJ
DATE: 6-3-2024

2024.0060.01

SHEET
C-2

ISSUE FOR REVIEW: 6-5-2024

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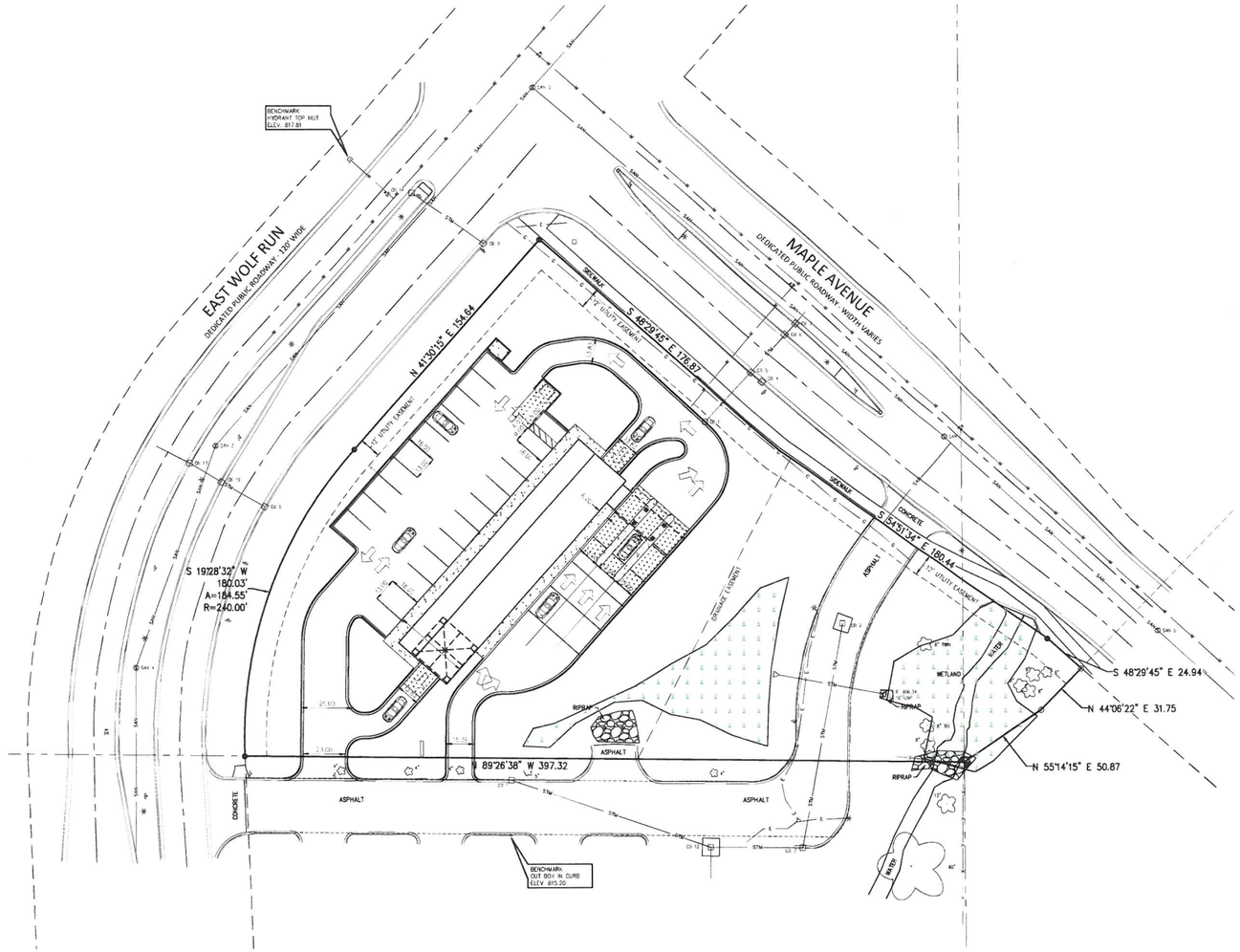
Friday, June 07, 2024



N

60' 30' 0' 30' 60'

SCALE 1" = 30'

EXISTING SITE INFORMATION

78,340 s.f.	TOTAL LOT AREA
0 s.f.	BUILDING AREAS
5,056 s.f.	PAVEMENT AREAS
73,284 s.f.	GREEN SPACE AREA
6.45%	IMPERVIOUS SURFACE RATIO

PROPOSED SITE INFORMATION

78,340 s.f.	TOTAL LOT AREA
5,330 s.f.	BUILDING AREAS
30,051 s.f.	PAVEMENT AREAS
48,288 s.f.	GREEN SPACE AREA
45.16%	IMPERVIOUS SURFACE RATIO

(*38.71% INCREASE IN IMPERVIOUS SURFACE RATIO)

ZONING INFORMATION

ZONING DISTRICT : ?C-4 CENTRAL BUSINESS DISTRICT
?C-4 REGIONAL BUSINESS DISTRICT

PARKING INFORMATION

PROPOSED

HC STALLS	2
STANDARD STALLS	20
TOTAL STALLS	22
STACKING BAYS	3
STALLS PER BAY	5
TOTAL SPACES	15

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

UTILITY NOTE

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Tele: (262)634-5588 Website: www.nmbsc.net

TSUNAMI EXPRESS CAR WASH
DIMENSIONED SITE PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

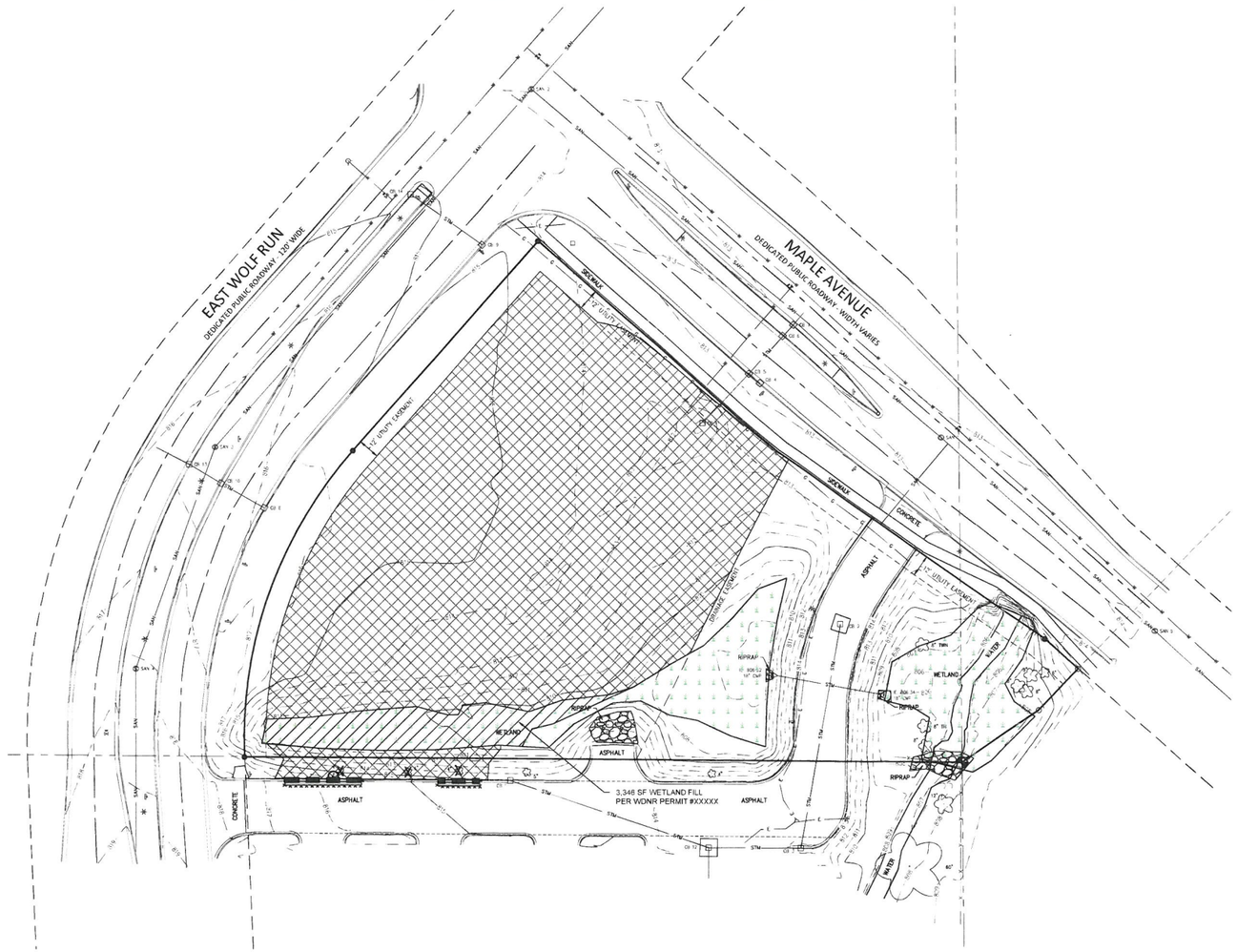
PROJ. MGR: MRM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: AJ
DATE: 6-3-2024

2024.0060.01

SHEET
C-3

ISSUE FOR REVIEW: 6-5-2024

Friday, June 07, 2024 6:13:54 AM



N

60' 30' 0' 30' 60'

SCALE 1" = 30'

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 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 IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION, SITE CLEARING, AND DISPOSAL.

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.

ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION OR AS THE ONLY OBSTACLES 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.

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, THE VILLAGE OF MUKWONAGO EROSION CONTROL PERMIT AND WDNR WRAPP PERMIT SHALL BE OBTAINED. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE DEMOLITION CAN OCCUR. ORANGE CONSTRUCTION FENCE TO BE INSTALLED ALONG ALL WETLAND AREAS AS SHOWN ON THE SITE GRADING PLAN.

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.

CONTRACTOR TO REMOVE ALL EXISTING SIGNS WITHIN PROPERTY LIMITS EXCEPT FOR THOSE CALLED TO BE SALVAGED TO THE OWNER OR SALVAGED AND RELOCATED.

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.

DEMOLITION LEGEND

- SAW CUT PAVEMENT (FULL DEPTH)
- STRIP & SALVAGE TOPSOIL
- REMOVE ASPHALT PAVEMENT
- REMOVE CONCRETE CURB AND GUTTER
- WETLAND FILL AREA
- REMOVE TREES
- REMOVE SIGN

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Friday, June 07, 2024 6:13:59 AM

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TSUNAMI EXPRESS CAR WASH
DEMOLITION PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

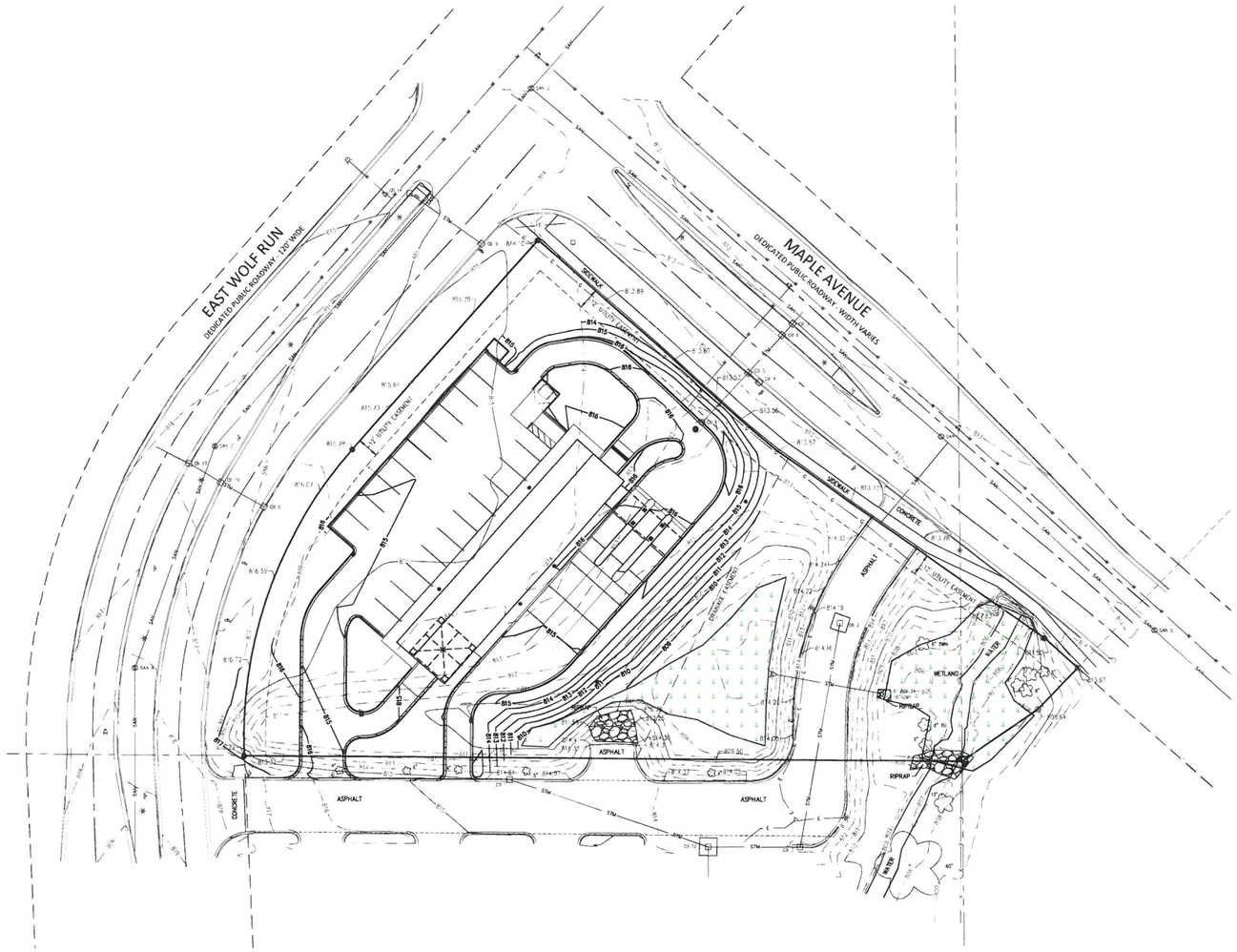
NO.	REVISION	BY	DATE

PROJ. MGR: MRM
DRAFTED: JWR
DATE: 5-28-2024
CHECKED: ALJ
DATE: 6-3-2024

2024.0060.01

SHEET
C-4

ISSUE FOR REVIEW: 6-5-2024



N

60' 30' 0' 30' 60'

SCALE 1" = 30'

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 COMPACTION. COHESIVE SOILS WITH MODERATE TO HIGH EXPANSIVE POTENTIALS (PI>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 COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTION.

UPON COMPLETION OF THE GRADING AND COMPACTION 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 COMPACTION 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.

SEEDING SHALL BE IN ACCORDANCE WITH STATE SPECIFICATION 630, EXCEPT AS MODIFIED HEREIN.

a. AREAS DESIGNATED ON THE PLANS TO BE SEEDED OR AREAS WHERE GRASS IS TO BE REPLACED SHALL BE SEEDED AT A RATE OF FOUR POUNDS PER 1,000 SQUARE FEET WITH GRASS SEED MEETING THE REQUIREMENTS OF SUBSECTION 630.2.1.5.1.1.1 (TABLE OF HIGHWAY SEED MIXTURES - NO. 40) AS FOLLOWS:

35% KENTUCKY BLUEGRASS
20% RED FESCUE
20% HARD FESCUE
25% IMPROVED FINE PERENNIAL RYEGRASS

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

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 CITY OF THE PROJECT START DATE.
4. INSTALL CONSTRUCTION ENTRANCE.
5. INSTALL SILT FENCE BARRIER.
6. INSTALL INLET PROTECTION.
7. BEGIN DEMOLITION WORK.
8. BEGIN BUILDING STRUCTURE.
9. INSTALL ALL UTILITIES.
10. GRADE PAVEMENT AREAS.
13. FINAL GRADE STONE IN PAVEMENT AREAS.
14. INSTALL CURB & GUTTER AND SIDEWALKS.
15. RE-GRADE STONE & INSTALL PAVEMENTS.
16. RESTORE AND INSTALL EROSION MAT WHERE NOTED ON PLANS.
17. AT CONCLUSION OF GRADING ACTIVITIES ALL NON-EROSION CONTROL MAT AREAS SHALL BE SEEDED AND MULCHED.

GRADING LEGEND

— 697 —	EXISTING CONTOURS
—702—	PROPOSED CONTOURS
604.88	EXISTING SPOT GRADES
604.88	PROPOSED SPOT GRADES
	VERTICAL FACE, CURB & GUTTER
	REVERSE PAN, CURB & GUTTER

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www.DiggersHotline.com

UTILITY NOTE

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Friday, June 07, 2024 6:14:04 AM

Nielsen Madsen + Barber
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TSUNAMI EXPRESS CAR WASH
GRADING PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

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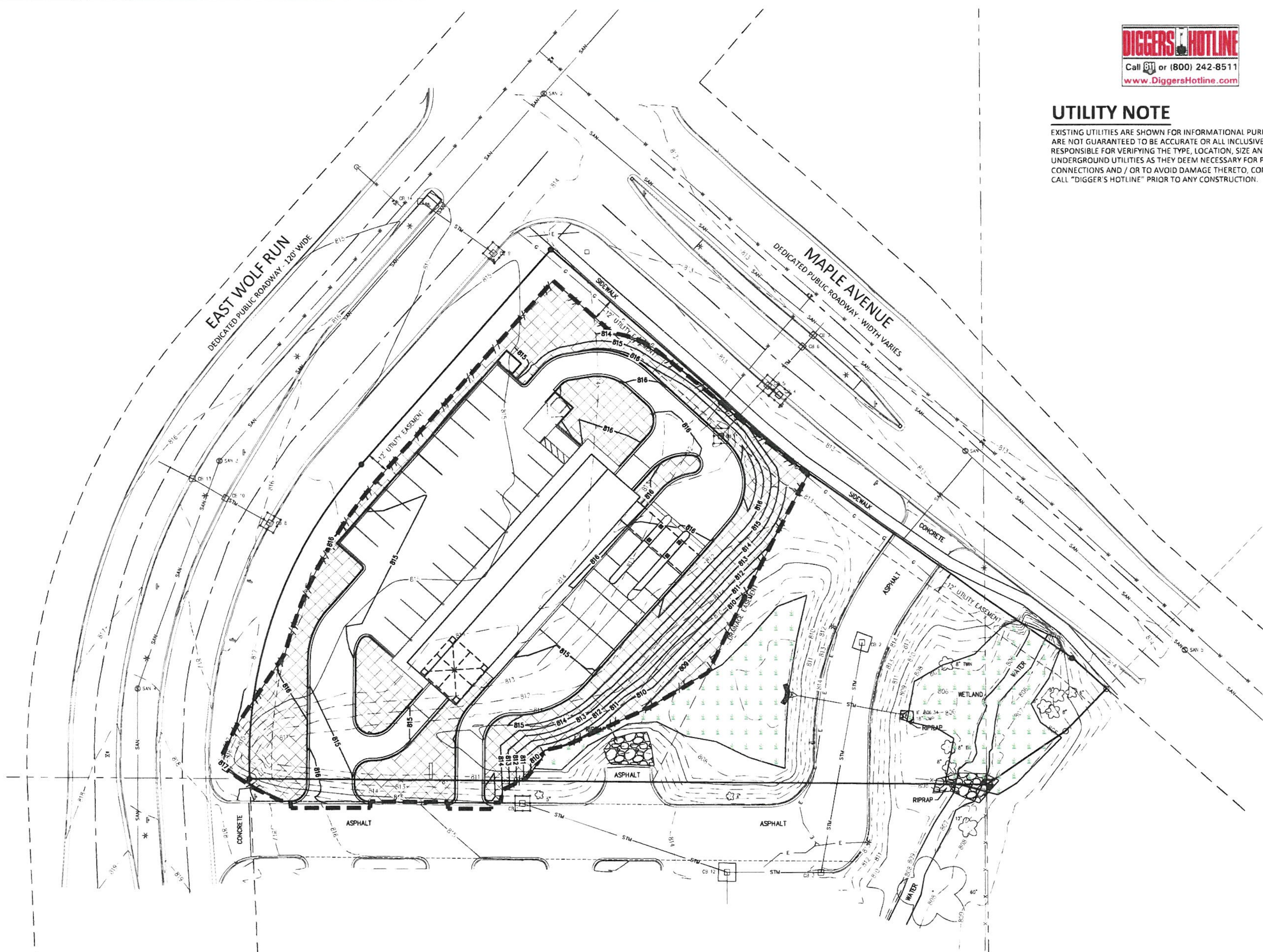

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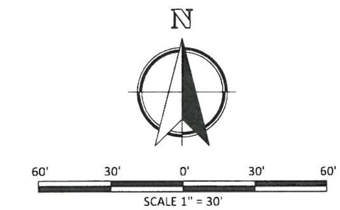

EROSION CONTROL LEGEND

- STORM SEWER INLET PROTECTION (TYPE "C" UNLESS SPECIFIED DIFFERENTLY)
- SILT FENCE
- SLOPE EROSION MAT (CLASS 1, TYPE A, URBAN)
- CHANNEL EROSION MAT (CLASS 1, TYPE B)
- STONE TRACKING PAD
- DITCH CHECK
- LIMITS OF DISTURBANCE (TOTAL 50,654 S.F. = 1.163 AC)

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 MUKWONAGO.

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 MUKWONAGO ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL CONTROL MEASURES WHICH MAY BE NECESSARY TO MEET UNFORESEEN FIELD CONDITIONS. SEE VILLAGE OF MUKWONAGO AND WDNR 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 MUKWONAGO OR THEIR AUTHORIZED AGENTS DURING AND AFTER THE CONSTRUCTION OF THIS PROJECT.

EROSION AND SEDIMENT CONTROL INSPECTIONS AND ENFORCEMENT ACTIONS MAY BE CONDUCTED BY WDNR, THE VILLAGE OF MUKWONAGO 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 MUKWONAGO.

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 INTO 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 MUKWONAGO ORDINANCE.

ALL DISTURBED SLOPES EXCEEDING 5:1, SHALL BE STABILIZED WITH CLASS I, 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 SWEPT AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST AT THE END OF EACH WORK DAY AND AS REQUESTED BY THE VILLAGE OF MUKWONAGO.

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

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.

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TSUNAMI EXPRESS CAR WASH

EROSION CONTROL PLAN

FOR

TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC

VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR: MRM
DRAFTED: JWR
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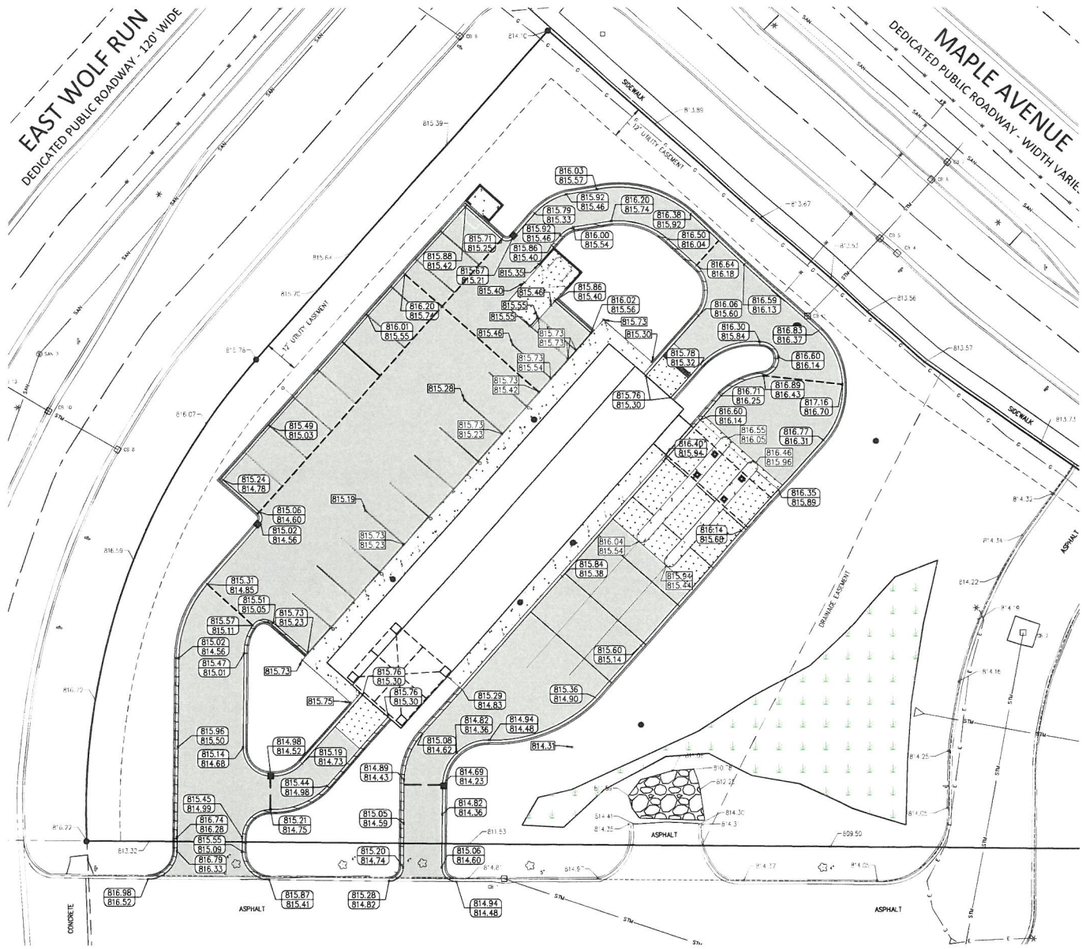

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40' 20' 0' 20' 40'

SCALE 1" = 20'

REFERENCES

STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2020 EDITION, HEREIN REFERRED TO AS "STATE SPECIFICATIONS." THE CURRENT VERSION OF THE "STATE SPECIFICATIONS" IS AVAILABLE ON THE WisDOT WEBSITE AT http://roadwaystandards.dot.wi.gov/standards/stndspec/index.htm

"MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), 2009 EDITION WITH REVISIONS 1 AND 2 INCORPORATED.

PAVEMENT SPECIFICATIONS

DENSE AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 305 OF THE "STATE SPECIFICATIONS". THE COMPLETED BASE SHALL BE IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET AND SHALL BE CONSTRUCTED IN FOUR-INCH (4") LIFTS AND COMPACTED ACCORDING TO SUBSECTION 305.3.2.2 OF THE "STATE SPECIFICATIONS".

ASPHALTIC CONCRETE PAVEMENT SHALL BE WISDOT LT SB-28 S MEETING THE REQUIREMENTS OF SECTION 460 OF THE "STATE SPECIFICATIONS". PAVEMENT SHALL BE INSTALLED IN TWO (2) LIFTS IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET. A TACK COAT SHALL BE INSTALLED BETWEEN THE LOWER AND UPPER COURSES IN ACCORDANCE WITH SECTION 455.3.2 OF THE "STATE SPECIFICATIONS".

CONCRETE FOR PAVEMENT(S), SIDEWALKS, CURB & GUTTER AND DRIVEWAY APRONS SHALL BE GRADE A-FA, AIR-ENTRAINED, AS SPECIFIED IN SUBSECTION 501.3.1 OF THE "STATE SPECIFICATIONS". ALL EXTERIOR CONCRETE SHALL BE "READY-MIXED" AND RECEIVE A BROOM FINISH. ALL CONCRETE WORK SHALL BE CURED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBSECTION 415.2.4 OF THE "STATE SPECIFICATIONS".

LIGHT-DUTY CONCRETE SHALL BE FOUR INCHES (4") IN THICKNESS ON FOUR INCHES (4") OF DENSE AGGREGATE BASE COURSE AND BE CONSTRUCTED IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET.

MEDIUM-DUTY CONCRETE SHALL BE SIX INCHES (6") IN THICKNESS ON EIGHT INCHES (8") OF DENSE AGGREGATE BASE COURSE AND BE CONSTRUCTED IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET.

HEAVY-DUTY CONCRETE SHALL BE EIGHT INCHES (8") IN THICKNESS ON SIX INCHES (6") OF DENSE AGGREGATE BASE COURSE AND BE CONSTRUCTED IN ACCORDANCE WITH THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET.

ALL CONCRETE CURB AND GUTTER SHALL BE 18" VERTICAL FACE CONFORMING TO THE "TYPICAL SECTIONS & CONSTRUCTION DETAILS" SHEET(S) OF THE PLAN SET AND SECTION 601 OF THE "STATE SPECIFICATIONS". CURB & GUTTER SHALL BE "REVERSE PAN CURB" OR "STANDARD CURB" AS INDICATED BY THE LEGEND BELOW AND INSTALLED IN A MANNER TO SHED ALL STORM WATER RUNOFF TOWARDS THE DRAINAGE STRUCTURES.

CONTRACTION JOINTS SHALL BE AT TEN-FOOT (10') INTERVALS FOR CURB AND GUTTER AND FIVE-FOOT (5') INTERVALS FOR FIVE-FOOT (5') WIDE SIDEWALK. FINAL JOINTING PLAN FOR CONCRETE PAVEMENT TO BE PREPARED BY THE CONTRACTOR.

EXPANSION JOINTS SHALL BE PLACED AS OUTLINED IN SUBSECTION 601.3.6 OF THE "STATE SPECIFICATIONS". FILLER MATERIAL FOR EXPANSION JOINTS SHALL BE 1/2" FIBER MATERIAL.

CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT ALL UTILITY COVERS (SUCH AS MANHOLES, VALVE BOXES, ETC.) TO MATCH THE FINISHED GRADES OF THE AREA AFFECTED BY THE CONSTRUCTION.

PARKING LOT STRIPING, STOP BARS AND HANDICAPPED ACCESSIBLE SYMBOLS SHALL BE INSTALLED WITH WISCONSIN DOT APPROVED TRAFFIC PAINT IN ACCORDANCE WITH SECTION 646 OF THE "STATE SPECIFICATIONS". ALL PARKING STALL STRIPING SHALL BE FOUR INCHES (4") IN WIDTH AND SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER. SEE THE TYPICAL SECTIONS AND CONSTRUCTION DETAILS SHEET(S) OF THE PLAN SET FOR ADDITIONAL INFORMATION REGARDING PAVEMENT MARKINGS.

PAVEMENT GRADING LEGEND

- 804.85 EXISTING SPOT GRADES
- 804.85 FINISHED PAVEMENT GRADES
- 804.85 / 804.35 FINISHED TOP OF CURB GRADES / FINISHED CURB FLANGE GRADES
- C1-1.3 CURB TAPER
- PAVEMENT GRADING RIDGE LINE
- MEDIUM-DUTY ASPHALT PAVEMENT
- LIGHT-DUTY CONCRETE PAVEMENT
- MEDIUM-DUTY CONCRETE PAVEMENT
- VERTICAL FACE, CURB & GUTTER
- REVERSE PAN, CURB & GUTTER

PAVEMENT MARKING LEGEND

ISA-W/B - INTERNATIONAL SYMBOL FOR ACCESSIBILITY - WHITE ON BLUE BACKGROUND

SWSL/4"/45°/4' - SINGLE WHITE SOLID LINE / 4" WIDE EACH, 45°, 4' O.C.

SWSL/4" - SINGLE WHITE SOLID LINE / 4" WIDE EACH

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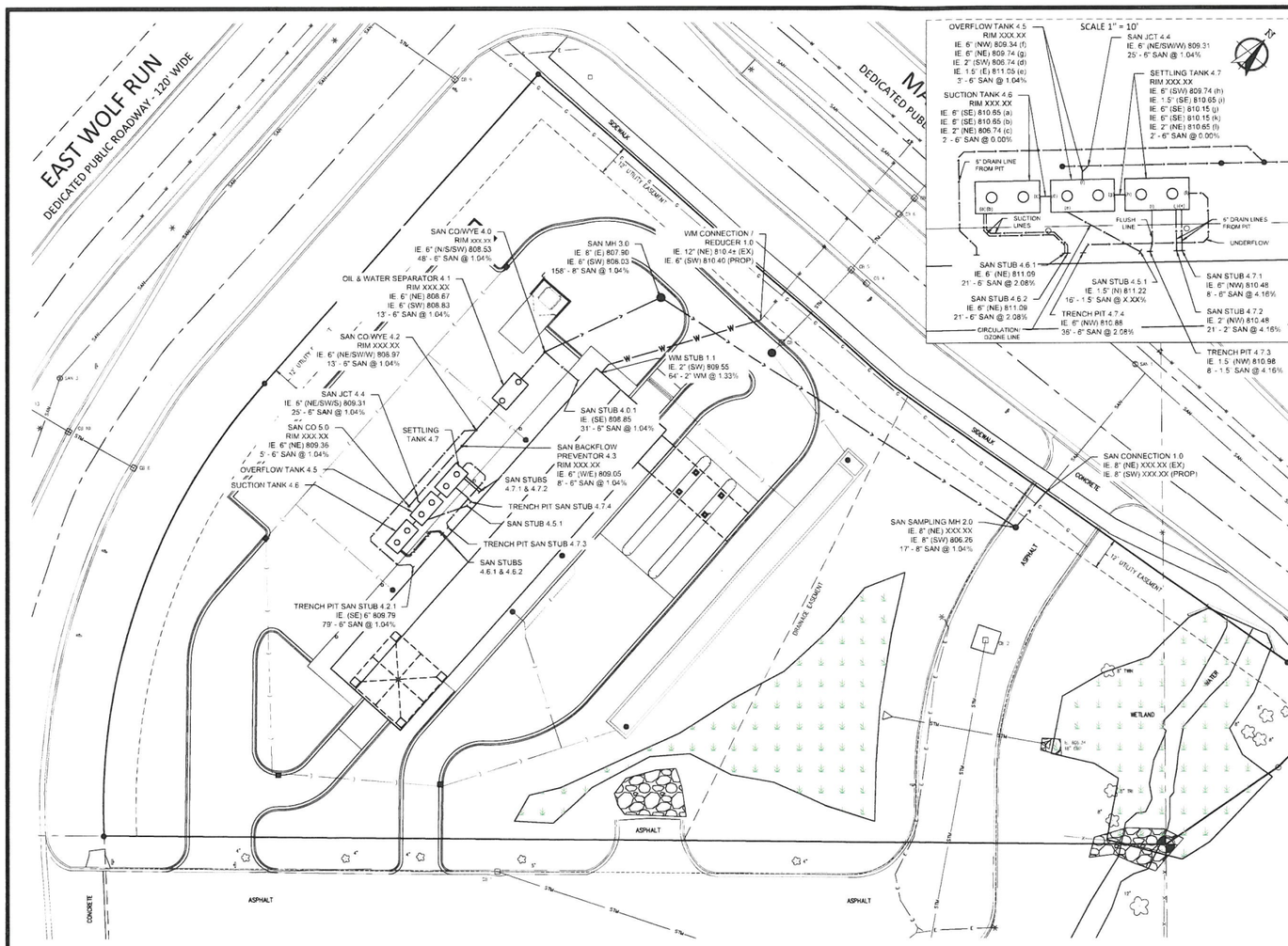

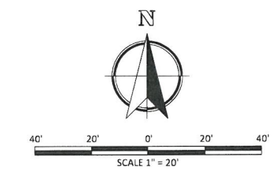

SITE UTILITY LEGEND

- —<— PROPOSED 6" SANITARY SEWER
- —W— PROPOSED 2" WATER SERVICE
- PROPOSED STORM SEWER (VARIOUS SIZES)

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UTILITY CONSTRUCTION GENERAL NOTES

ALL APPLICATIONS AND CONNECTION FEES FOR WATER SERVICES MUST BE SUBMITTED AND PAID PRIOR TO CONNECTION TO THE PUBLIC SYSTEMS.

THE CONTRACTOR SHALL PROVIDE 7 DAYS NOTICE TO THE VILLAGE OF MUKWONAGO WATER UTILITY BEFORE COMMENCING CONSTRUCTION ON ANY WATERMAIN IMPROVEMENTS.

THE CONTRACTOR SHALL CONTACT VILLAGE OF MUKWONAGO WATER UTILITY 72 HOURS PRIOR TO PROPOSED WATERMAIN SHUTDOWNS OR ANY WORK THAT MAY INTERFERE WITH EXISTING WATER SERVICE. ALL EXISTING VALVES, HYDRANTS, AND OTHER WATERMAIN INFRASTRUCTURE SHALL ONLY BE OPERATED BY VILLAGE OF MUKWONAGO WATER UTILITY.

CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS AND SIZES OF EXISTING SANITARY AND STORM SEWERS, WATER MAINS, GAS & ELECTRIC LINES AND OTHER ADJACENT UTILITIES PRIOR TO COMMENCING CONSTRUCTION. AS-BUILT (FIELD) DATA SHALL BE USED TO CHECK ALL PROPOSED UTILITY CROSSINGS FOR CONFLICTS.

CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE A MINIMUM OF 72 HOURS BEFORE THE START OF CONSTRUCTION TO HAVE THE ADJACENT UNDERGROUND PUBLIC UTILITIES LOCATED. THE LOCATION OF EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLANS AND SHOULD BE LOCATED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGE OFF-SITE. PUMPING OPERATIONS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061. PUMPED WATER CAN BE TREATED IN RETENTION BASINS, FILTER BAGS, STONE FILTERS OR BY OTHER WDNR APPROVED METHODS. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

THE EXACT LOCATION OF THE SANITARY SEWER LATERAL, DOMESTIC WATER LINE, FIRE PROTECTION LEAD, NATURAL GAS SERVICE, ELECTRIC, PHONE AND CABLE LINES (AS THEY ENTER THE BUILDING) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

EXISTING SEWERS LATERALS MAY BE USED WITH NEW STRUCTURES OR PLUMBING SYSTEMS ONLY WHEN SUCH SEWER LATERALS ARE FOUND ON EXAMINATION AND TESTS TO CONFORM IN ALL RESPECTS TO THE REGULATIONS RELATING TO SEWER LATERALS. IF THE EXISTING SEWER LATERALS ARE FOUND TO BE DEFECTIVE, THE DEPARTMENT SHALL NOTIFY THE OWNER OF THE PREMISES IN WRITING OF THE NECESSARY CHANGES TO MAKE THE SEWER LATERALS CONFORM WITH REGULATIONS.

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.

SANITARY SEWER & WATERMAIN SPECIFICATIONS

MATERIALS FOR WATERMAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND VILLAGE OF MUKWONAGO SPECIFICATIONS.

SANITARY SEWER AND WATER MAIN CONSTRUCTION SHALL BE CONSTRUCTED PER THE VILLAGE OF MUKWANAGO'S DEVELOPMENT HANDBOOK AND STANDARD CONSTRUCTION SPECIFICATIONS.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL PRIVATE SANITARY SEWERS AND LATERALS PER SPS 382.30(11)(h). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE WITHIN THE PROPOSED STRUCTURES. FOR THE SANITARY SEWER LATERALS, THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A RISER BOX WITH "SEWER" ON THE COVER.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL PRIVATE WATER MAINS, HYDRANT LEADS, FIRE DEPARTMENT CONNECTION LEADS AND LATERALS PER SPS 382.40(8)(k). THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A RISER BOX WITH "WATER" OR "FDC" ON THE COVER. THE TRACER WIRE SHALL BE CONNECTED TO THE TRACER WIRE ON THE WATER MAIN.

1. WIRE SPLICES SHALL BE IN ACCORDANCE WITH STANDARD ELECTRICAL PRACTICES. ACCEPTABLE WIRE SPLICES ARE BRASS SPLIT BOLTS, DRYCONN WATERPROOF CONNECTORS, SNAP-LOC MODEL LV 9500, OR APPROVED EQUAL. WIRE NUTS ARE NOT ACCEPTABLE
2. BRANCH CONNECTIONS UTILIZING SPLIT BOLTS - SPLICE BRANCH TRACER WIRE TO MAIN TRACER WIRE USING THE FOLLOWING PROCEDURE: BARE TRACER WIRE ON MAIN LINE (DO NOT CUT); CONNECT BRANCH WIRE TO MAIN LINE WITH BRASS SPLIT BOLT; AND SEAL CONNECTION WITH RUBBER ELECTRICAL TAPE AND OVER WRAP WITH TWO LAYER OF POLYETHYLENE ADHESIVE TAPE 1-1/2" WIDE AND 8MM THICK.
3. BRANCH CONNECTIONS UTILIZING OTHER APPROVED CONNECTORS - FOLLOW MANUFACTURER'S RECOMMENDATIONS.

SANITARY SEWER LATERAL PIPE MATERIAL SHALL BE FOUR-INCH (4") PVC CLASS SDR-35 WITH INTEGRAL BELL TYPE ELASTOMERIC JOINTS CONFORMING TO THE REQUIREMENTS OF ASTM D3034, ASTM D3212 AND F-789/P546 WITH RUBBER GASKETS. SANITARY LATERALS SHALL BE PROVIDED WITH A CLEANOUT AT THE BUILDING PER SPS 382.35. LATERAL CLEAN-OUT RISERS SHALL BE SIX-INCH (6") DIAMETER WITH EIGHT-INCH (8") DIAMETER FROST SLEEVE CONSTRUCTED OF THE SAME MATERIAL. THE CLEANOUT RISERS SHALL TERMINATE FOUR INCHES (4") BELOW FINISHED GRADE WITH A SCREW ON CAP. THE FROST SLEEVE SHALL BE BROUGHT UP TO JUST BELOW FINISHED GRADE AND COVERED WITH A NEENAH R-3487 FRAME WITH A SOLID LID.

SANITARY SEWER BACKFLOW PREVENTOR SHALL BE CONSTRUCTED WITH A CLEAN CHECK EXTENDABLE BACKWATER VALVE MODEL MADE BY RECTORSEAL OR AN APPROVED EQUAL.

WATER SERVICE SHALL BE SIX INCH (6") MINIMUM COPPER TYPE "K". WATER SERVICE CONNECTION SHALL BE CONSTRUCTED WITH MUELLER MODEL NUMBER H-15000 CORPORATIONS, MUELLER "ORI SEAL" MODEL NUMBER H-15201 CURB VALVES, AND MUELLER 1-1/4" ARCH PATTERN CURB BOX (MODEL NUMBER H-10385).

SANITARY SEWER LATERAL PIPE MATERIAL SHALL BE 6" PVC CLASS SDR 26, CONFORMING TO THE REQUIREMENTS OF ASTM D3034 AND F-789/P546 WITH RUBBER GASKETS. CLEAN-OUT RISERS SHALL BE 6" DIAMETER WITH 8" DIAMETER FROST SLEEVE CONSTRUCTED OF THE SAME MATERIAL.

ALL SEWER AND WATER LINES INSTALLED IN PROPOSED PRIVATE PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

SLURRY BACKFILL SHALL BE USED WHERE INDICATED ON THE PLANS. MATERIALS SHALL BE PLACED IN A CLEAN CEMENT MIXER TRUCK AND THOROUGHLY MIXED, IN THE FOLLOWING QUANTITIES:

1,350 LBS	SAND
775 LBS	#1 STONE
1,150 LBS	#2 STONE
25 GAL	(+0 TO 0.5 GALS) WATER/CU. YD.

THE SLURRY BACKFILL MATERIAL SHALL BE PLACED AND MECHANICALLY COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN DEPTH. NO ADDITIONAL WATER SHALL BE ALLOWED. THE ABOVE WEIGHTS ARE DAMP WEIGHTS. JUST PRIOR TO PLACING THE SLURRY, THE MIXER SHALL BE RUN AT MIXING SPEED FOR ONE FULL MINUTE TO ENSURE AN EVEN MIXTURE.

ALL SEWER AND WATER LINES INSTALLED IN THE PUBLIC RIGHT-OF-WAY SHALL BE BACKFILLED WITH SLURRY MATERIAL IN ACCORDANCE WITH CHAPTER 8.43.8 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT/SIDEWALK LIMITS.

PROVIDE FIVE FEET (5') OF COVER OVER ALL SANITARY SEWERS AND FIVE AND ONE HALF FEET (5-1/2') OF COVER OVER ALL WATER MAINS. MINIMUM HORIZONTAL SEPARATION OF UTILITY MAINS IS EIGHT FEET (8'). PROVIDE VERTICAL SEPARATION OF UTILITIES PER CODE.

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

TSUNAMI EXPRESS CAR WASH
UTILITY PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR: MBM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: ALJ
DATE: 6-3-2024

2024.0060.01

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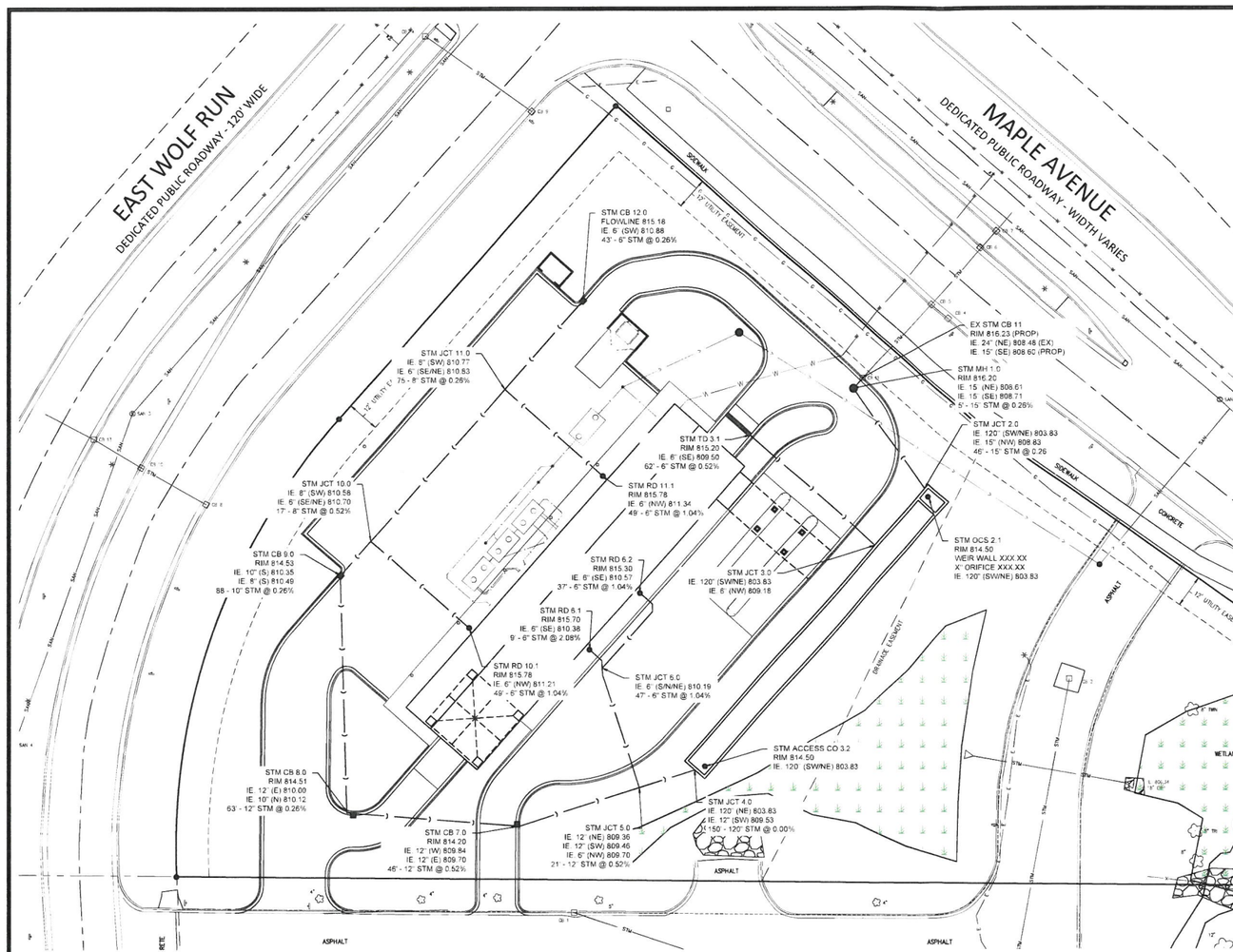
Friday, June 07, 2024 6:14:29 AM



N

40' 30' 0' 20' 40'

SCALE 1" = 20'

REFERENCES

EROSION CONTROL, EARTHWORK, SITE GRADING AND PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STATE OF WISCONSIN; STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION", CURRENT EDITION, HEREIN REFERRED TO AS THE "STATE SPECIFICATIONS"

MATERIALS FOR STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS.

STORM SEWER CONSTRUCTION SHALL BE CONSTRUCTED PER THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS.

PUBLIC UTILITY NOTES

CABLE TV AND TELEPHONE SERVICE INSTALLATION TO BE COORDINATED WITH THE ELECTRICAL SERVICE.

ELECTRICAL SERVICE TO BE COORDINATED WITH WE ENERGIES. EXACT LOCATION OF THE SERVICE ENTRANCE / METER TO BE COORDINATED WITH WE ENERGIES, THE MECHANICAL DESIGNER AND THE ARCHITECT.

IF ANY VILLAGE OF MUKWONAGO OWNED UNDERGROUND ELECTRIC MAY NEED TO BE RELOCATED, THE OWNER/DEVELOPER TO PAY ALL COSTS FOR RELOCATION. CONSTRUCTION TO BE PERFORMED TO MEET THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS. CONTACT THE VILLAGE OF MUKWONAGO ENGINEERING DIVISION TO SCHEDULE INSPECTION.

THE EXACT LOCATION OF THE SANITARY SEWER LATERAL, DOMESTIC WATER LINE, FIRE PROTECTION LEAD, NATURAL GAS SERVICE, ELECTRIC, AND PHONE LINES (AS THEY ENTER THE BUILDING) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

UTILITY CONSTRUCTION GENERAL NOTES

CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS AND SIZES OF EXISTING SANITARY AND STORM SEWERS, WATER MAINS, GAS & ELECTRIC LINES OR OTHER UTILITIES PRIOR TO STARTING CONSTRUCTION. AS-BUILT (FIELD) DATA SHALL BE USED TO CHECK ALL PROPOSED UTILITY CROSSINGS FOR CONFLICTS.

CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE A MINIMUM OF 72 HOURS BEFORE THE START OF CONSTRUCTION TO IDENTIFY ADJACENT UNDERGROUND UTILITIES. THE LOCATION OF EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLANS AND SHOULD BE LOCATED BY THE OWNER PRIOR TO CONSTRUCTION.

ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGE OFF-SITE. PUMPING OPERATIONS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061. PUMPED WATER CAN BE TREATED IN RETENTION BASINS, FILTER BAGS, STONE FILTERS OR BY OTHER WDNR APPROVED METHODS. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

THE EXACT LOCATION OF ALL BUILDING LATERALS, ROOF DRAIN RISERS AND DOWNSPOUTS (IF APPLICABLE) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

STORM SEWER SPECIFICATIONS

STORM SEWERS WERE SIZED IN ACCORDANCE WITH SPS TABLE 382.36-4 "MAXIMUM CAPACITY OF STORM WATER HORIZONTAL CONVEYANCE PIPING FOR CONCRETE, ASTM C76 AND ASTM C14". ANY MATERIAL APPROVED BY THE CITY OF WAUKESHA AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES MAY BE USED AT THE SLOPES AND SIZES DESIGNED.

STORM SEWER, ROOF DRAIN AND STORM BUILDING SEWER PIPE AND TUBING MATERIALS SHALL CONFORM TO SPS 384.30 OF THE WISCONSIN ADMINISTRATIVE CODE. REINFORCED CONCRETE PIPE (RCP) AND POLYVINYL CHLORIDE (PVC) MATERIALS SHALL BE SELECTED FROM TABLE 384.30-6. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE MATERIAL (IF SELECTED) SHALL MEET THE REQUIREMENTS OF AASHTO M 252 FOR 4"-10" DIAMETER SIZES AND AASHTO M294 FOR 12"-48" DIAMETER SIZES.

BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

ALL STORM SEWERS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL PRIVATE STORM SEWERS, ROOF DRAINS AND STORM BUILDING SEWER LATERALS PER SPS 382.36(7)(d)10. THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A RISER BOX WITH "STORM" ON THE COVER.

ALL MANHOLES, CATCH BASINS AND/OR DRAIN BASINS INSTALLED IN PAVED SURFACES AND ACCEPTING RUNOFF SHALL BE FURNISHED WITH THE NEENAH FOUNDRY R-2080-D FRAME AND GRATE.

ALL MANHOLES, CATCH BASINS AND/OR DRAIN BASINS INSTALLED IN LAWN AREAS AND ACCEPTING RUNOFF SHALL BE FURNISHED WITH THE NEENAH FOUNDRY R-2560-EA BEEHIVE FRAME AND GRATE.

ALL MANHOLES, CATCH BASINS AND DRAIN BASINS SHALL BE FURNISHED WITH A MINIMUM 12" SUMP.

ALL STORM SEWERS, MANHOLES, CATCH BASINS AND/OR DRAIN BASINS SHALL BE CONSTRUCTED WITH WATER AND GAS TIGHT JOINTS IN CONFORMANCE WITH SPS 384.40.

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

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.

SITE UTILITY LEGEND

- PROPOSED 6" SANITARY SEWER
- W — PROPOSED 2" WATER SERVICE
- PROPOSED STORM SEWER (VARIOUS SIZES)

Nielsen Madsen + Barber
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TSUNAMI EXPRESS CAR WASH
STORM SEWER PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

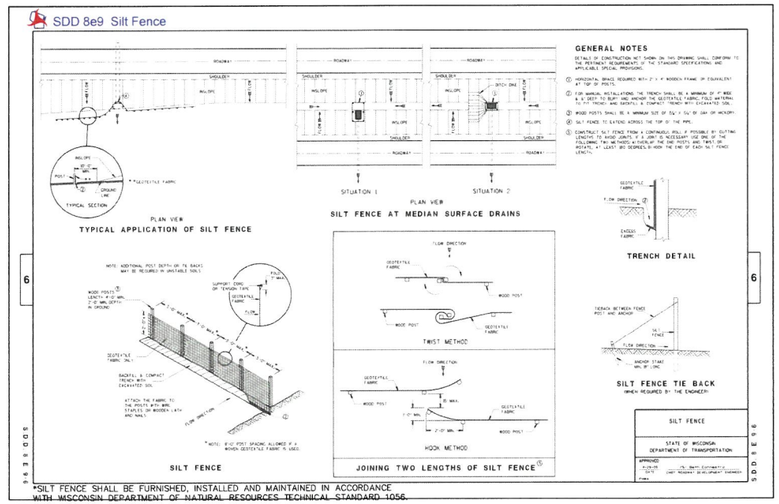
PROJ. MGR: MRM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: AJ
DATE: 6-3-2024

2024.0060.01

SHEET
C-9

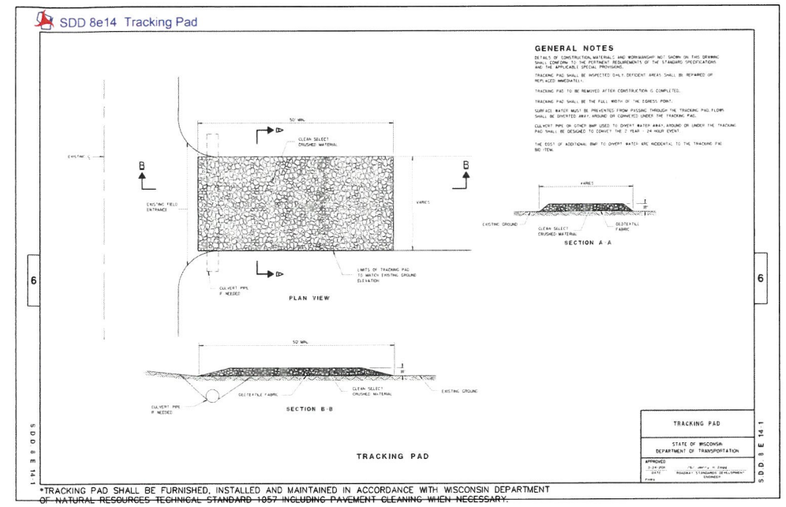
ISSUE FOR REVIEW: 6-5-2024

Friday, June 07, 2024 6:14:24 AM



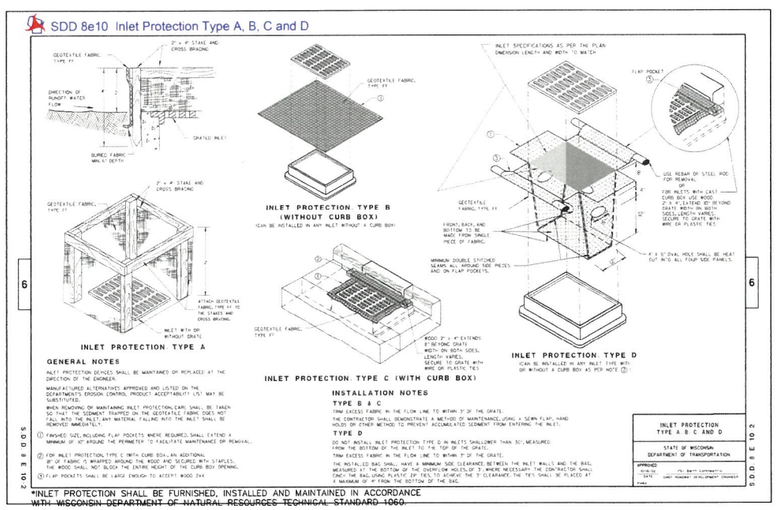
*SILT FENCE SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1056.

1 SILT FENCE DETAIL — N.T.S.



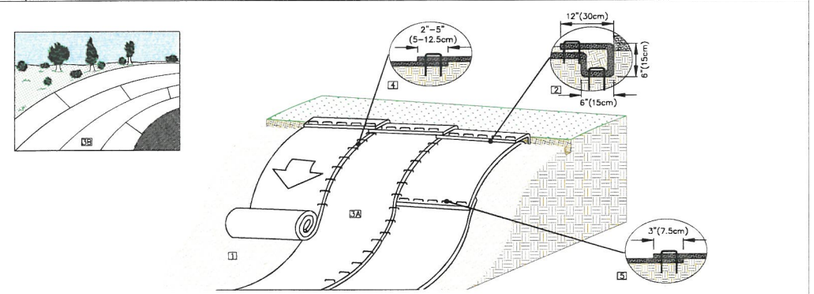
*TRACKING PAD SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1057 INCLUDING PAVEMENT CLEANING WHEN NECESSARY.

2 TRACKING PAD DETAIL — N.T.S.

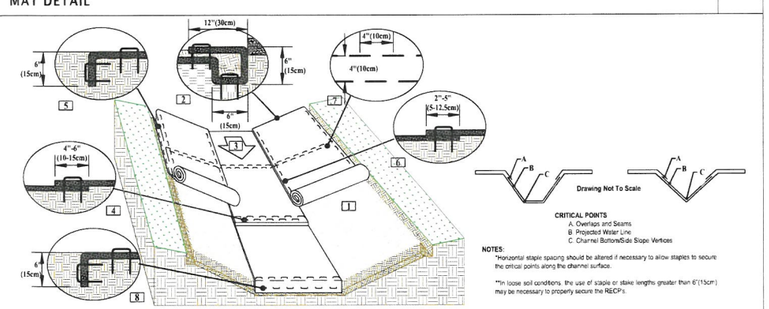


*INLET PROTECTION SHALL BE FURNISHED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD 1060.

3 INLET PROTECTION DETAIL — N.T.S.



4 SLOPE INSTALLATION OF EROSION MAT DETAIL — N.T.S.



5 CHANNEL INSTALLATION OF EROSION MAT DETAIL — N.T.S.

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Tele: (262)634 5588 Website: www.nmbsc.net

TSUNAMI EXPRESS CAR WASH
TYPICAL SECTIONS & CONSTRUCTION DETAILS
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR:	MBM
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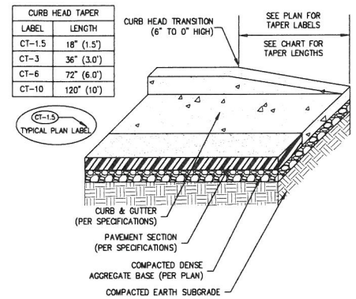
INSTALLATION NOTES FOR CURB AND GUTTER DETAILS

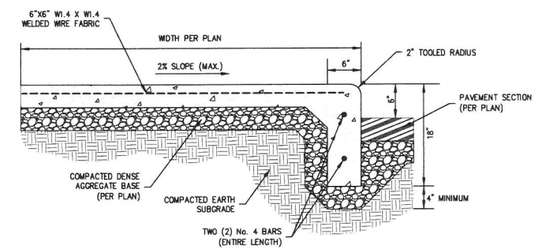
1. CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED DENSE AGGREGATE BASE COURSE EXTENDING A MINIMUM OF 12 INCHES BEHIND THE BACK OF CURB.
2. CURB PAN SHALL BE A MINIMUM OF SIX INCHES (6") THICK, EXPECT AT DRIVEWAY LOCATIONS WHERE IT SHALL BE A MINIMUM OF EIGHT INCHES (8") THICK.
3. INSTALL TWO (2) NO. 4, 18-INCH LONG EPOXY COATED TIE BARS ANCHORED WITH AN EPOXY, EVENLY SPACED, DRIVEN NINE INCHES (9") INTO TO EXISTING OR PREVIOUSLY INSTALLED CURB AND GUTTER.
4. WHEN PLACED ADJACENT TO NEW CONCRETE, INSTALL NO. 4 18-INCH LONG EPOXY COATED TIE BARS, 36" ON CENTER PLACED A MINIMUM OF THREE AND ONE HALF INCHES (3½") BELOW THE TOP OF THE CURB PAN.
5. LATERAL CONTRACTION JOINTS TO BE PLACED AT AN INTERVAL OF 10 FEET TO A MINIMUM DEPTH OF TWO INCHES (2").
6. EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT POINTS OF CURVATURE, ANGLE POINTS, THREE FEET (3') FROM EACH SIDE OF EVERY INLET AND EVERY 300 FEET ALONG TANGENT SECTIONS OR AS DIRECTED BY THE ENGINEER. EXPANSION JOINT FILLER MATERIAL SHALL MEET WSDOT SPECIFICATIONS HAVING THE SAME DIMENSIONS AS THE CURB & GUTTER WITH A 3/4" THICKNESS.
7. APPLY CONCRETE CURING COMPOUND PER WSDOT SPECIFICATIONS.

1 CONCRETE CURB AND GUTTER DETAIL NOTES — N.T.S.

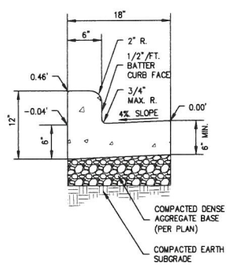
CURB HEAD TAPER	
LABEL	LENGTH
CT-1.5	18" (1.5')
CT-3	36" (3.0')
CT-6	72" (6.0')
CT-10	120" (10')



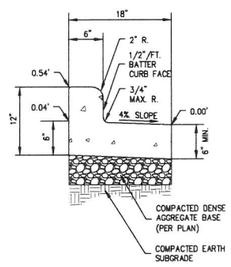
2 CURB HEAD TAPER DETAIL — N.T.S.



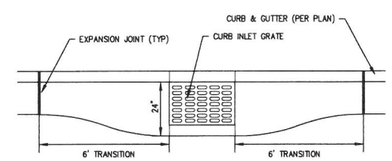
3 INTEGRAL CONCRETE SIDEWALK / BARRIER CURB DETAIL — N.T.S.



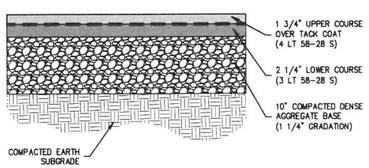
4 18" VERTICAL FACE CONCRETE CURB AND GUTTER DETAIL — N.T.S.



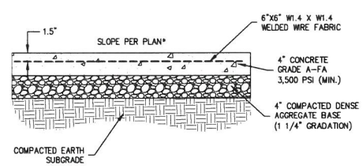
5 18" VERTICAL FACE REVERSE PAN CONCRETE CURB AND GUTTER DETAIL — N.T.S.



6 CONCRETE CURB AND GUTTER / STORM SEWER INLET TRANSITION DETAIL — N.T.S.

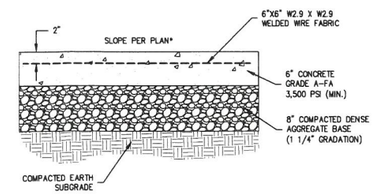


7 MEDIUM-DUTY ASPHALT PAVEMENT (4") (TYPICAL SECTION) — N.T.S.



* SIDEWALKS: 1.5% CROSS-SLOPE (TYP.) 2.08% CROSS-SLOPE (MAX.)
PATIOS, PLAZAS, AND LANDINGS: 2.08% SLOPE IN ANY DIRECTION (MAX.)
ALL OTHER PAVEMENTS: SLOPE PER PLAN

8 LIGHT-DUTY CONCRETE PAVEMENT (4") (TYPICAL SECTION) — N.T.S.



* SIDEWALKS: 1.5% CROSS-SLOPE (TYP.) 2.08% CROSS-SLOPE (MAX.)
PATIOS, PLAZAS, AND LANDINGS: 2.08% SLOPE IN ANY DIRECTION (MAX.)
ALL OTHER PAVEMENTS: SLOPE PER PLAN

9 MEDIUM-DUTY CONCRETE PAVEMENT (6") (TYPICAL SECTION) — N.T.S.

Nielsen Madsen + Barber
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1458 Horizon Blvd Suite 200, Racine, WI 53406
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TSUNAMI EXPRESS CAR WASH
TYPICAL SECTIONS & CONSTRUCTION DETAILS
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO	REVISION	BY	DATE

PROJ. MGR: MRM
DRAFTED: JWB
DATE: 5-28-2024
CHECKED: AJ
DATE: 6-3-2024

2024.0060.01

SHEET C-11

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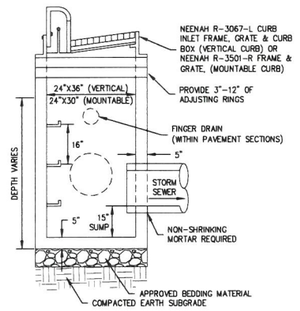
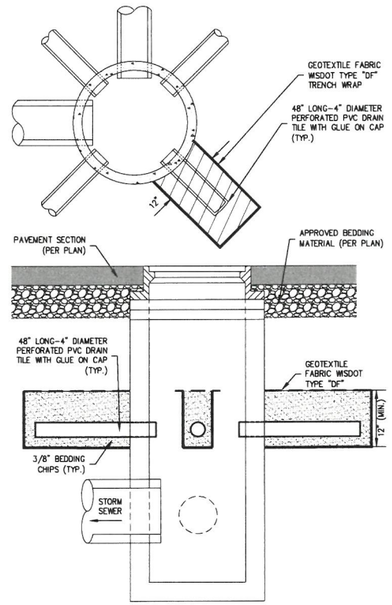
Friday, June 07, 2024 6:14:32 AM

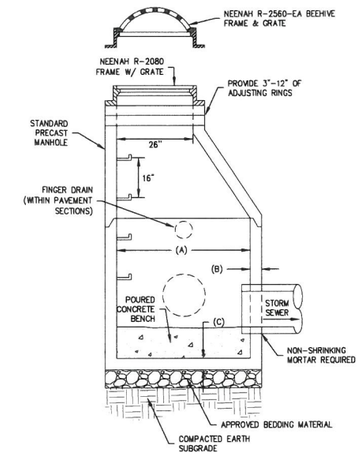


1 STANDARD STORM SEWER INLET/CATCH BASIN DETAIL N.T.S.



NOTE:
1. FINGER DRAINS SHALL BE INSTALLED IN ALL DRAINAGE STRUCTURES (WITHIN OR ADJACENT TO) PAVED SURFACES.
2. FINGER DRAIN OPENINGS IN STRUCTURE SHALL BE PRECAST.
3. VERTICAL LOCATION OF FINGER DRAIN MAY VARY DEPENDING ON PIPE CONFIGURATION.
4. FINGER DRAIN MUST BE ABOVE THE TOP OF ALL STORM SEWER INVERTS.
5. FINGER DRAINS SHALL HAVE ??? PERFORATIONS.

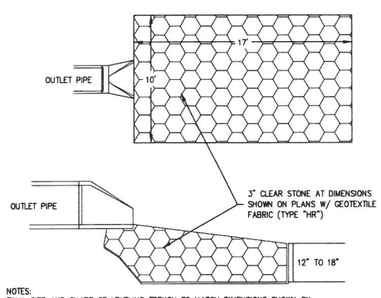
3 STORM SEWER STRUCTURE FINGER DRAIN DETAIL N.T.S.



STRUCTURE DIAMETER (A)*	MINIMUM WALL THICKNESS (B)**	MINIMUM BASE AND TOP THICKNESS (C)**
4'	5"	6"
5'	6"	8"
6'	7"	8"
7'	8"	8"
8'±	9"	8"

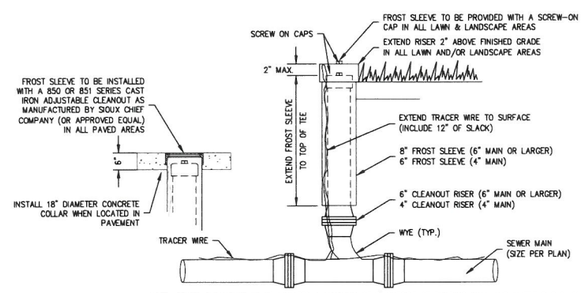
*STRUCTURE DIAMETER SHALL BE STANDARD 48" UNLESS OTHERWISE NOTED ON PLAN
**MINIMUM THICKNESS SHALL NOT BE LESS THAN THAT REQUIRED TO MEET AASHTO H-20 LOADINGS

4 STANDARD STORM SEWER MANHOLE DETAIL N.T.S.



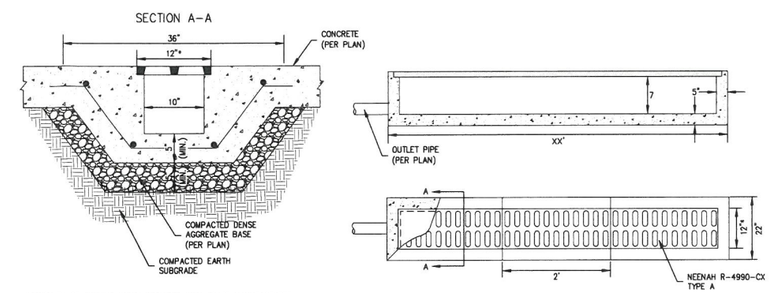
NOTES:
FINAL SIZE AND SHAPE OF LEVELING TRENCH TO MATCH DIMENSIONS SHOWN ON THE GRADING PLAN SHEET

2 LEVELING TRENCH DETAIL N.T.S.



NOTE: SEWER CLEANOUTS TO BE LOCATED A MAXIMUM OF 5' OUTSIDE OF BUILDING WALL AND WHERE SHOWN ON PLAN

6 SEWER CLEANOUT (CO) RISER DETAIL N.T.S.



*VERIFY EXACT OPENING WIDTH REQUIRED WITH GRATE MANUFACTURER

7 CAST IN PLACE TRENCH DRAIN DETAIL N.T.S.

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FOR
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VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR: MRM
DRAFTED: JWR
DATE: 5-28-2024
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DATE: 6-3-2024

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ISSUE FOR REVIEW: 6-5-2024

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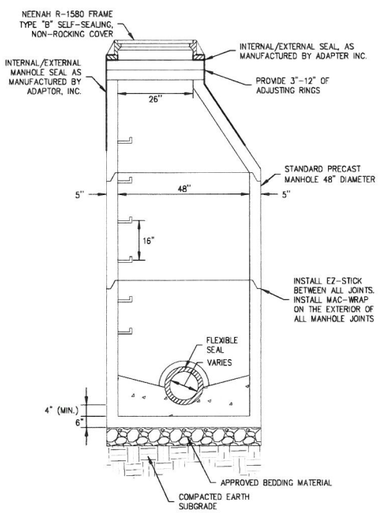
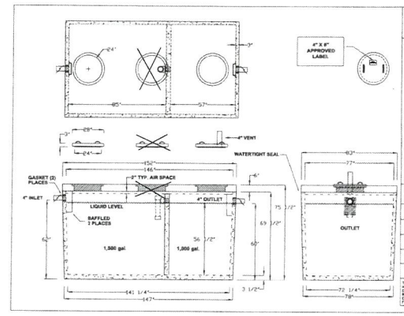
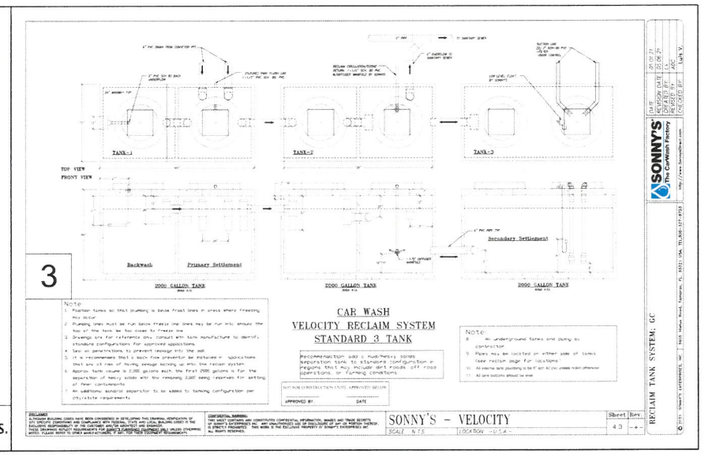


1	STANDARD SANITARY SEWER MANHOLE DETAIL (PRIVATE)	N.T.S.



2	GREASE INTERCEPTOR VAULT DETAIL	N.T.S.



3

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SHEET
C-13

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Sec 36-1442 — Street Frontage Landscape Requirements

Minimum Requirement

A minimum of 60 landscape points shall be provided along a public right-of-way on a prorated basis for every 100 LF of right-of-way frontage.

Street Frontage	LF of Frontage	Required Points
East Wolf Run	339.07 LF	203.4
Maple Avenue	382.22 LF	229.3
		432.8

Required Tall Trees: **10.8**

Located within ten (10) feet of the public right-of-way

Only Tall Trees may be used for street frontage landscaping.

Sec 36-1443 — Building Foundation Landscape Requirements

Minimum Requirement

A minimum of 25 landscape points shall be provided on a prorated basis for every 100 LF of building foundation perimeter.

Proposed Building Founation Perimeter: 377.3 LF

Required Landscape Points: 94 Points

Generally located within ten (10) feet of building foundation

Sec 36-1444 — Parking Lot Landscape Requirements

Minimum Requirement

A minimum of 120 landscape points shall be provided on a prorated basis for every 10,000 SF of paved area.

Proposed Paved Area: 21,563 SF

Required Landscape Points: 259 Points

A minimum of 60 percent of all landscape points shall be devoted to tall trees

Required Landscape Points: 155

Required Tall Trees: 4 trees

A minimum of 20 percent of all landscape points shall be devoted to shrubs

Required Landscape Points: 52

Required Shrubs: 17 shrubs

Placement within landscape area:

a minimum of 325 SF of landscaped area shall be located withing ten (10) feet of the perimeter of the paved area for the placement of every 100 landscape points or fraction thereof. A landscaped island consisting of a minimum of 380 SF shall be located at the end of a parking aisle (i.e., two rows of stalls). In addition, an intermediate island consisting of a minimum of 180 SF per row of stalls shall be used to separate a continuous run of 20 parking stalls in a single row.

Required 325 SF interior landscaped area: 2.6 SF

Required total interior landcaped areas: 841 SF

This requirement is part of the overall parking lot landscape requirements

Sec 36-1445 — Lot Interior Landscape Requirements

a minimum of ten (10) landscape points shall be provided within the interior of the lot on a pro rated basis for every 1,000 SF of building floor area.

Proposed Building Floor Area: 5321 SF

Required Landscape Points: 53 Points

Located away from other landscape requirements: Street Frontages, Building Foundations, and Parking Lot areas.

Sec 36-1446 — Landscaping around exterior features

Exterior perimeter appurtenses, such as HVAC/utility boxes, stand pipes, stormwater discharge pipes and other pipes, shall be screened from sight by landscape plantings of a minimum of five feet in height.

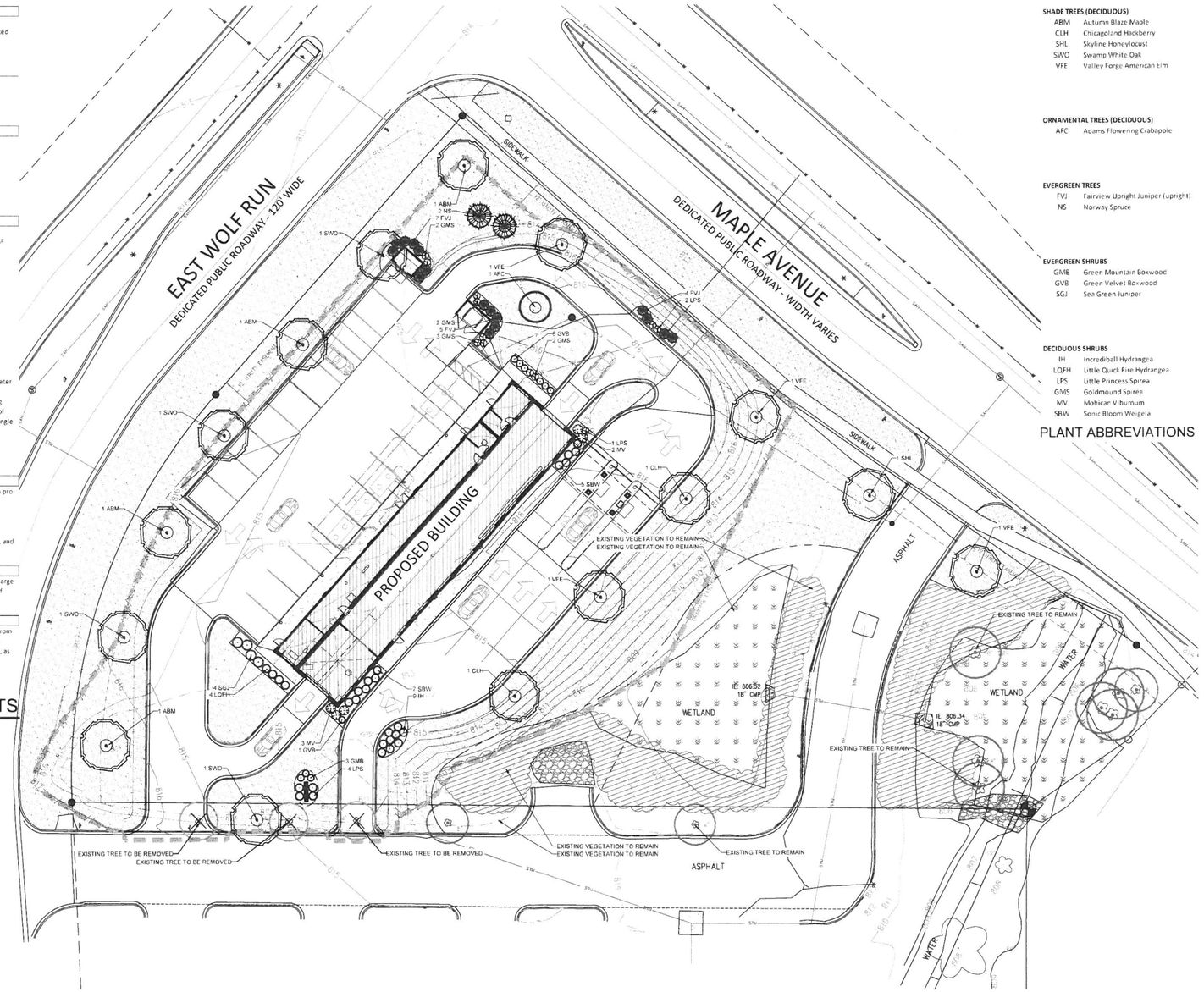
Sec 36-1447 — Landscaping for outdoor storage areas

When a permitted land use includes an outdoor storage area, such area shall be screened from view from public streets and public use areas on adjoining properties. Such screening may consist of a berm, non-metallic fencing, a decorative wall, landscaping, or any combination, as determined by the plan commission.

Total Required Landscape Points: 787

Total Landscape Points shown on Landscape Plan: 848

CODE REQUIREMENTS



OVERALL LANDSCAPE PLAN

NORTH

Scale: 1" = 8'0"

0 4 8 16

SHADE TREES (DECIDUOUS)

ABM	Autumn Blaze Maple
CLH	Chicagoland Hackberry
SHL	Skyline Honeylocust
SWO	Swamp White Oak
VFE	Valley Forge American Elm

ORNAMENTAL TREES (DECIDUOUS)

AFC	Adams Flowering Crabapple

EVERGREEN TREES

FVJ	Fairview Upright Juniper (upright)
NS	Norway Spruce

EVERGREEN SHRUBS

GMB	Green Mountain Boxwood
GVB	Green Velvet Boxwood
SGJ	Sea Green Juniper

DECIDUOUS SHRUBS

IH	Incrediball Hydrangea
LQFH	Little Quick Fire Hydrangea
LPS	Little Princess Spirea
GMS	Goldmound Spirea
MV	Mohican Viburnum
SBW	Sonic Bloom Weigela

PLANT ABBREVIATIONS

HELLER & ASSOCIATES, LLC
LANDSCAPE ARCHITECTURE
P.O. Box 1359
Lake Geneva, Wisconsin 53147-1359
ph 262.639.9733
david@wdavidheller.com
www.wdavidheller.com

PROJECT

TSUNAMI EXPRESS

East Wolf Run
at Maple Ave.
Mukwanago, WI

ISSUANCE AND REVISIONS

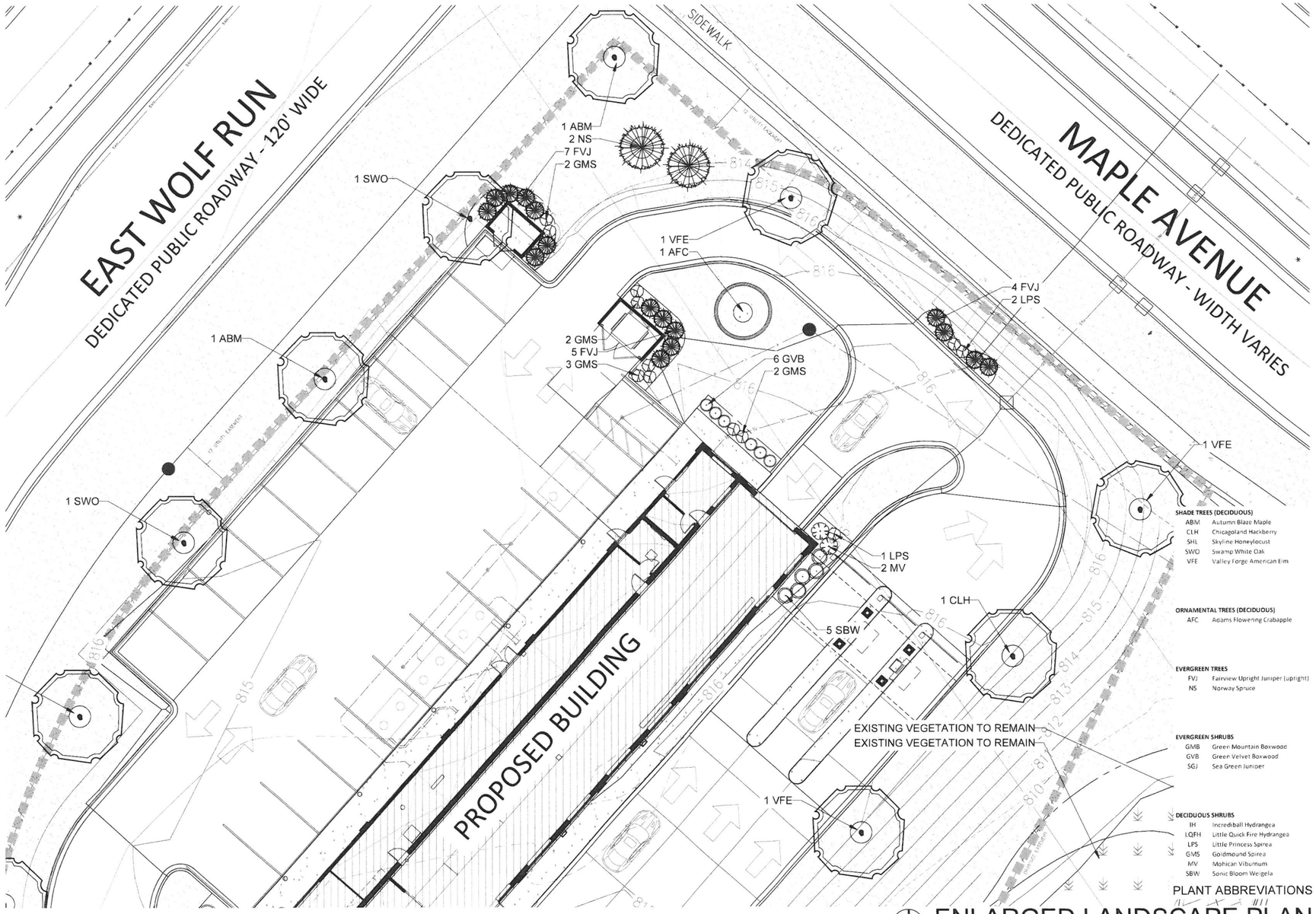
DATE	DESCRIPTION
8.08.24	FIRST ISSUE

Information contained herein is based on survey information, field inspection, and believed to be accurate

SHEET TITLE

OVERALL LANDSCAPE PLAN

PROJECT MANAGER	WDH
PROJECT NUMBER	24-038
DATE	08.08.24
SHEET NUMBER	L 1.0



SHADE TREES (DECIDUOUS)

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GMS	Goldmound Spirea
MV	Mohican Viburnum
SBW	Sonic Bloom Weigela

PLANT ABBREVIATIONS

NORTH

ENLARGED LANDSCAPE PLAN

Scale: 1" = 10'0"

0 5 10 20

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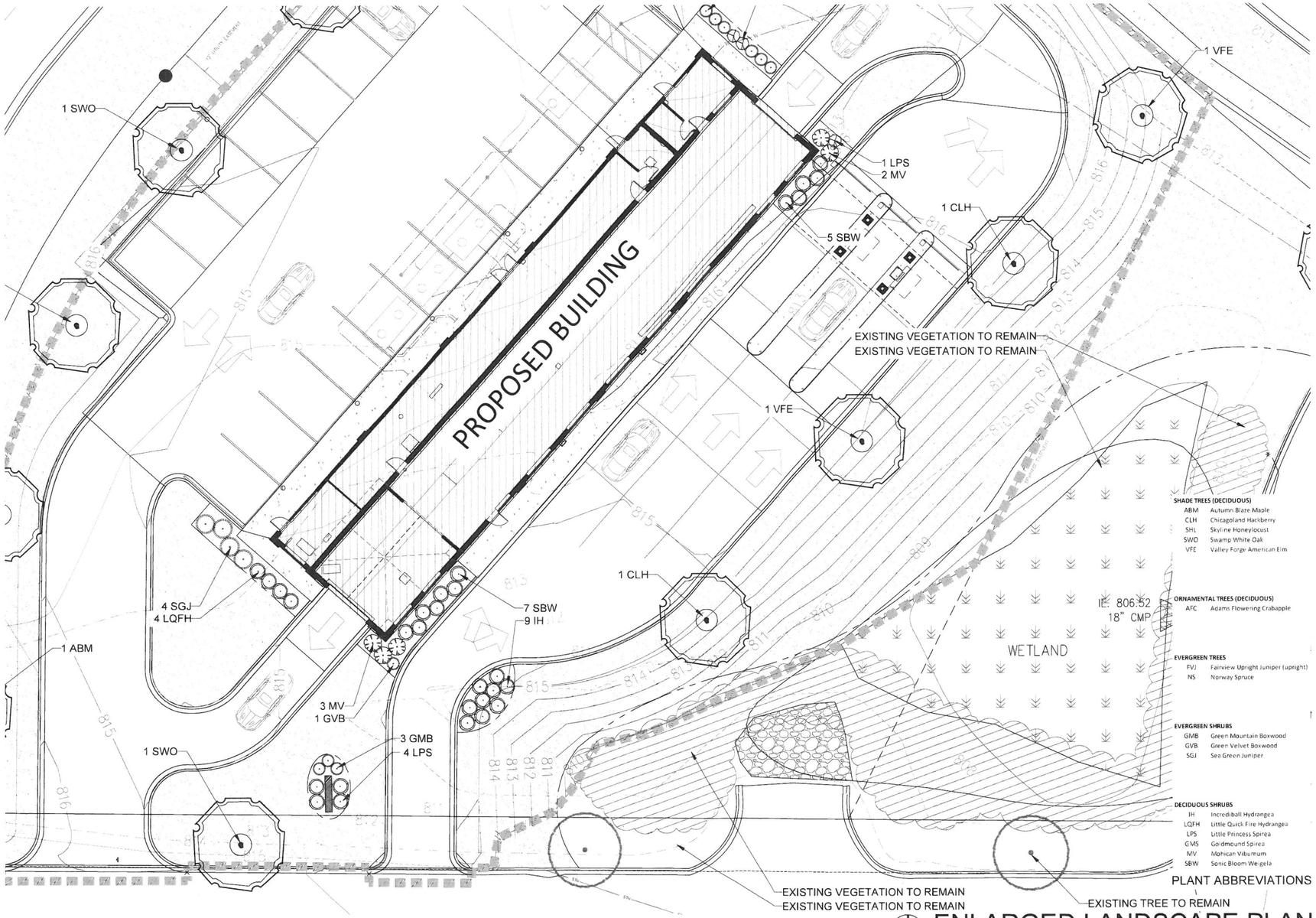
ENLARGED LANDSCAPE PLAN

PROJECT MANAGER	WDH
PROJECT NUMBER	24-038
DATE	08.08.24
SHEET NUMBER	L 1.1



ENLARGED LANDSCAPE PLAN

Scale: 1" = 10'0"

0 5 10 20

SHADE TREES (DECIDUOUS)

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PROJECT MANAGER	WDH
PROJECT NUMBER	24-038
DATE	08.08.24
SHEET NUMBER	

L 1.2

1. Contractor responsible for contacting Diggers Hotline (811 or 800-242-8511) to have site marked prior to excavation or planting.

2. Contractor to verify all plant quantities shown on Plant & Material List and landscape planting symbols and report any discrepancies to Landscape Architect or General Contractor.

3. All plantings shall comply with standards as described in American Standard of Nursery Stock - Z60.1 ANSI (latest version). Landscape Architect reserves the right to inspect, and potentially reject any plants that are inferior, compromised, undersized, diseased, improperly transported, installed incorrectly or damaged. No sub-standard "B Grade" or "Park Grade" plant material shall be accepted. Plant material shall originate from nursery(ies) with a similar climate as the planting site.

4. Any potential plant substitutions must be approved by Landscape Architect or Owner. All plants must be installed as per sizes indicated on Plant & Material Schedule, unless approved by Landscape Architect. Any changes to sizes shown on plan must be submitted in writing to the Landscape Architect prior to installation.

5. Topsoil in Parking Lot Islands (if applicable). All parking lot islands to be backfilled with topsoil to a minimum depth of 12" to insure long-term plant health. Topsoil should be placed within 3' of finish grade by General Contractor / Excavation Contractor during rough grading operations/activity. The landscape contractor shall be responsible for the fine grading of all disturbed areas, planting bed areas, and lawn areas. Crown all parking lot islands a minimum of 4" to provide proper drainage, unless otherwise specified.

6. Tree Planting: Plant all trees slightly higher than finished grade at the root flare. Remove excess soil from the top of the root ball, if needed. Remove and discard non-biodegradable ball wrapping and support wire. Removed biodegradable burlap and wire cage (if present) from the top $\frac{2}{3}$ of the rootball and carefully bend remaining wire down to the bottom of the hole. Once the tree has been placed into the hole and will no longer be moved, score the remaining $\frac{2}{3}$ of the burlap and remove the twine. Provide one slow release fertilizer packets (per 1" caliper) for each tree planted.

7. Tree Planting: Backfill tree planting holes 80% existing soils removed from excavation and 20% Soil Amendments (see Note 11). Avoid air pockets and do not tamp soil down. Discard any gravel, rocks, heavy clay, or concrete pieces. When hole is $\frac{2}{3}$ full, trees shall be watered thoroughly, and water left to soak in before proceeding to fill the remainder of the hole. Water again to full soak in the new planting. Each tree shall receive a 3" deep, 4-5' diameter (see planting details or planting plan) shredded hardwood bark mulch ring / saucer around all trees. Do not build up any mulch onto the trunk of any tree. Trees that are installed incorrectly will be replaced at the time and expense of the Landscape Contractor.

8. Shrub Planting: All shrubs to be planted in groupings as indicated on the Landscape Plan. Install with the planting of shrubs a 3/3 mix of Soil Amendments with blended, pulverized topsoil. Install topsoil into all plant beds as needed to achieve proper grade and displace undesirable soils (see planting detail). Remove all excessive gravel, clay and stones from plant beds prior to planting. When hole(s) are $\frac{2}{3}$ full, shrubs shall be watered thoroughly, and water left to soak in before proceeding. Provide slow-release fertilizer packets at the rate of 1 per 24" height/diameter of shrub at planting.

9. Mulching: All tree rings to receive a 3" deep layer of high quality shredded hardwood bark mulch (not pigment dyed or enviro-mulch). All shrub planting and perennial planting bed areas (groupings) shall receive a 2" layer of double-shredded hardwood bark mulch, and groundcover areas a 2" layer of the same mulch. Do not mulch annual flower beds (if applicable). Do not allow mulch to contact plant stems and tree trunks.

10. Edging: All planting beds shall be edged with a 4" deep spade edge using a flat landscape spade or a mechanical edger. Bedlines are to be cut crisp, smooth as per plan. A clean definition between landscape beds and lawn is required. Pack mulch against lawn edge to hold in place.

11. Plant bed preparation/Soil Amendment composition: All perennial, groundcover and annual areas (if applicable) are required to receive a blend of organic soil (Soil Amendments) amendments prior to installation. Rototill the following materials at the following ratio, into existing soil beds or installed topsoil beds to a depth of approximately 8"-10". Containerized and balled & burlapped plant material should be back-filled with amended soil.

Per 100 SF of bed area (Soil Amendment composition):
⅓ CY Peat Moss or Mushroom Compost
⅓ CY blended/pulverized Topsoil
⅓ CY composted manure

In roto-tilled beds only, also include in above mixture:
2 lbs Starter Fertilizer

12. Installation preparation for all seeded areas: remove/kill off any existing unwanted vegetation prior to seeding. Prepare the topsoil (if adequate or provide as in item #8 above) and seed bed by removing all surface stones 1" or larger. Apply a starter fertilizer (20-10-5, or approved comparable) and specified seed uniformly at the specified rate, and provide mulch covering suitable to germinate and establish turf. Provide seed and fertilizer specifications to Landscape Architect and Owner prior to installation. Erosion control measures are to be used in swales and on slopes in excess of 1:3 and where applicable (see Civil Engineering Drawings). Methods of installation may vary are the discretion of the Landscape Contractor on his/her responsibility to establish and guarantee a smooth, uniform, quality turf. A minimum of 2" of blended, prepared and non-compacted topsoil is required for all lawn areas. If straw mulch is used as a mulch covering, a tackifier may be necessary to avoid wind dispersal of mulch covering. Marsh hay containing reed canary grass is NOT acceptable as a mulch covering.

An acceptable quality seed installation is defined as having:
No bare spots larger than one (1) square foot
No more than 10% of the total area with bare areas larger than one (1) square foot
A uniform coverage through all turf areas

13. Warranty and Replacements: All plantings are to be watered thoroughly at the time of planting, through construction and upon completion of project as required. Trees, Evergreens, and Shrubs (deciduous and evergreen) shall be guaranteed (100% replacement) for a minimum of one (1) year from the date of project completion. Perennials, groundcovers, and ornamental grasses shall be guaranteed for a minimum of one (1) growing season. Perennials, groundcovers, and ornamental grasses planted after September 15th shall be guaranteed through May 31st of the following year. Only one replacement per plant will be required during the warranty period, except for losses or replacements due to failure to comply with specified requirements. Watering and general ongoing maintenance instructions are to be supplied by the Landscape Contractor to the Owner upon completion of the project.

14. The Landscape Contractor is responsible for the watering and maintenance of all landscape areas for a period of 45 days after the substantial completion of the landscape installation. This shall include all trees, shrubs, evergreens, perennials, ornamental grasses, turf grass, no-mow grass, and native prairie seed mix / stormwater seed mix. Work also includes weeding, edging, mulching (only if required), fertilizing, trimming, sweeping up grass clippings, pruning and deadheading.

15. Project Completion: Landscape Contractor is responsible to conduct a final review of the project, upon completion, with the Landscape Architect, Client or Owner / Client Representative, and the General Contractor to answer questions, provide written care instructions for new plantings and turf, and insure that all specifications have been met.

LANDSCAPE GENERAL NOTES

PLANT KEY	QUANTITY	PLANT MATERIAL PROPOSED BOTANICAL NAME	COMMON NAME	CALIPER/HEIGHT SIZE	ROOT	SPECIFICATION / NOTES	PLANT SPACING	LANDSCAPE POINTS EACH	LANDSCAPE POINTS TOTAL	MATURE SIZE (HxW)
Proposed Landscape Materials										
SHADE TREES (DECIDUOUS)										
ABM	4	Acer x freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.0"	B&B	Straight central leader, full and even crown. Prune only after planting		30	120	
CLH	2	Celtis occidentalis 'Chicagoland'	Chicagoland Hackberry	2.0"	B&B	Straight central leader, full and even crown. Prune only after planting		30	60	
SHL	1	Gleditsia triacanthos 'Skyline'	Skyline Honeylocust	2.0"	B&B	Straight central leader, full and even crown. Prune only after planting		30	30	
SWO	4	Quercus bicolor	Swamp White Oak	2.0"	B&B	Straight central leader, full and even crown. Prune only after planting		30	120	
VLI	4	Ulmus americana 'Valley Forge'	Valley Forge American Elm	2.0"	B&B	Straight central leader, full and even crown. Prune only after planting		30	120	
						Total Points Proposed			**450**	

PLANT KEY	QUANTITY	PLANT MATERIAL PROPOSED BOTANICAL NAME	COMMON NAME	HEIGHT SIZE	ROOT	SPECIFICATION / NOTES	PLANT SPACING	LANDSCAPE POINTS EACH	LANDSCAPE POINTS TOTAL	MATURE SIZE (HxW)
ORNAMENTAL TREES (DECIDUOUS)										
AFC	1	Malus x 'Adams'	Adams Flowering Crabapple	6' H	B&B	Well balanced multi-stemmed tree with minimum four canes, and full appearance		10	10	20'
						Total Points Proposed			**10**	

PLANT KEY	QUANTITY	PLANT MATERIAL PROPOSED BOTANICAL NAME	COMMON NAME	HEIGHT SIZE	ROOT	SPECIFICATION / NOTES	PLANT SPACING	LANDSCAPE POINTS EACH	LANDSCAPE POINTS TOTAL	MATURE SIZE (HxW)
EVERGREEN TREES										
FVJ	16	Juniperus scopulorum 'Fairview'	Fairview Upright Juniper (upright)	5' H	B&B	Evenly shaped tree with branching to the ground	60"	12	192	
NS	2	Picea abies	Norway Spruce	6' H	B&B	Evenly shaped tree with branching to the ground	12"	40	80	
						Total Points Proposed			**272**	

PLANT KEY	QUANTITY	PLANT MATERIAL PROPOSED BOTANICAL NAME	COMMON NAME	SHRUB SIZE (HEIGHT)	ROOT/ CONT.	SPECIFICATION / NOTES	PLANT SPACING	LANDSCAPE POINTS EACH	LANDSCAPE POINTS TOTAL	MATURE SIZE (HxW)
EVERGREEN SHRUBS										
GMB	3	Buxus 'Green Mountain'	Green Mountain Boxwood	24"	B&B	Full rounded well branched shrub	24"	3	9	42"
GVB	7	Buxus 'Green Velvet'	Green Velvet Boxwood	18"	Cont.	Full rounded well branched shrub	24-30"	3	21	36"
SGJ	4	Juniperus chinensis 'Sea Green'	Sea Green Juniper	#5	Cont.	Full rounded well branched shrub	54"	5	20	72"
						Total Points Proposed			**50**	

PLANT KEY	QUANTITY	PLANT MATERIAL PROPOSED BOTANICAL NAME	COMMON NAME	SHRUB SIZE (HEIGHT)	ROOT/ CONT.	SPECIFICATION / NOTES	PLANT SPACING	LANDSCAPE POINTS EACH	LANDSCAPE POINTS TOTAL	MATURE SIZE (HxW)
DECIDUOUS SHRUBS										
IH	9	Hydrangea arborescens 'Abetwo'	Incrediball Hydrangea	#5	Cont.	Full, well rooted plant, evenly shaped	48"	1	9	48"
LQFH	4	Hydrangea paniculata 'SMPHLQF'	Little Quick Fire Hydrangea	#5	Cont.	Full, well rooted plant, evenly shaped	60"	1	4	60"
LPS	7	Spirea japonica 'Little Princess'	Little Princess Spirea	#3	Cont.	Full, well rooted plant, evenly shaped	30"	1	7	30"
GVS	9	Spirea x bumalda 'Goldmound'	Goldmound Spirea	24"	Cont.	Full, well rooted plant, evenly shaped	36"	1	9	36"
MV	5	Viburnum lantana 'Mohican'	Mohican Viburnum	42"	B&B	Full, well rounded plant with moist rootball and healthy appearance	60"	5	25	72"
SBW	12	Weigela florida 'Sonic Bloom'	Sonic Bloom Weigela	24"	Cont.	Full, well rooted plant, evenly shaped	42"	1	12	48"
						Total Points Proposed			**66**	
						Total Points Proposed (all plantings):			**848**	

PLAN KEY	QUANTITY	PLANT MATERIAL PROPOSED SPECIFIED SEED MIX / SOD	CONTAINER SIZE		SPECIFICATION / NOTES	PLANT SPACING
LAWN	4049	Lawn Establishment Area / Grading Area		SY	Reinder's Deluxe 50 Seed Mix (800-785-3301)	
	36437	Erosion Matting for sloped lawn areas	*see plan for area delineation*	SF	EroTex DS75 Erosion Control Blanket (or approved equal)	
Hardscape Materials						
	18	Shredded Hardwood Mulch (3" depth)	*Area: 1,950 SF*	CY	Bark Mulch; apply Preemergent after installation of mulch	
	12	Soil Amendments (2" depth)	*Area: 1,950 SF*	CY		
	112	Pulverized Topsoil (Lawn Area)	*Area: 36,440 SF*	CY		
	12	Pulverized Topsoil (2" over bed areas)	*Area: 1,950 SF*	CY		
		Downspout Extentions	*determine at time of installation*	LF		
		Downspout Adapters	*determine at time of installation*	EA		

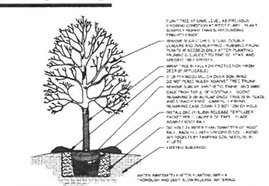
*Landscape counts & quantities are provided as a service to the Landscape Contractor. Landscape Contractor is responsible for verifying these counts and quantities in order to provide a complete landscape installation as outlined on this Landscape Master Plan. In the event that a discrepancy occurs between this schedule and the Landscape Master Plan, the Landscape Master Plan, including the graphics and notations depicted thereon, shall govern.

Seed Compositions:

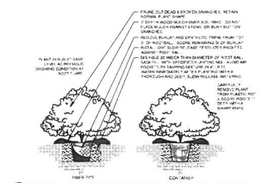
Reinder's Deluxe 50 Seed Mix (800-785-3301)
20% Kentucky Bluegrass (Sod Quality)
15% Newport Kentucky Bluegrass
15% Kenblue Kentucky Bluegrass
25% Creeping Red Fescue
15% Quebec Perennial Ryegrass
10% Pinnacle II Perennial Ryegrass

Seed at rate of 150-200# per acre

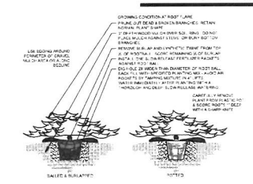
PLANT & MATERIAL SCHEDULE



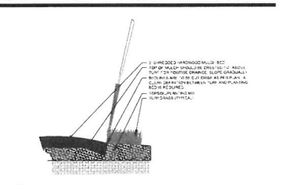
1 DETAIL SHADE TREE PLANTING



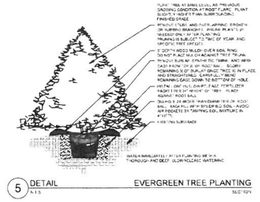
2 DETAIL DECIDUOUS SHRUB PLANTING (POTTED)



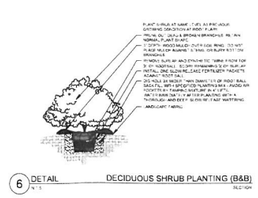
3 DETAIL EVERGREEN SHRUB PLANTING



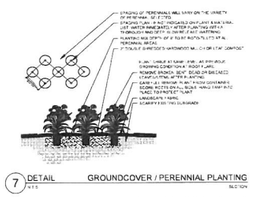
4 DETAIL SPADE EDGE PLANT BED EDGE DETAIL



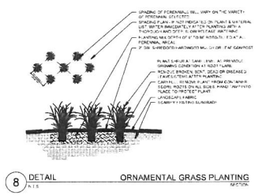
5 DETAIL EVERGREEN TREE PLANTING



6 DETAIL DECIDUOUS SHRUB PLANTING (B&B)



7 DETAIL GROUNDCOVER / PERENNIAL PLANTING



8 DETAIL ORNAMENTAL GRASS PLANTING

PLANTING & HARDSCAPE DETAILS

HELLER & ASSOCIATES, LLC
LANDSCAPE ARCHITECTURE
P.O. Box 1359
Lake Geneva, Wisconsin 53147-1359
ph 262.639.9733
david@wdavidheller.com
www.wdavidheller.com

PROJECT

TSUNAMI EXPRESS

East Wolf Run
at Maple Ave.
Mukwanago, WI

ISSUANCE AND REVISIONS

DATE	DESCRIPTION
8.08.24	FIRST ISSUE

Information contained herein is based on survey information, field inspection, and believed to be accurate

SHEET TITLE

LANDSCAPE DETAILS, NOTES & SCHEDULES

PROJECT MANAGER	WDH
PROJECT NUMBER	24-038
DATE	08.08.24
SHEET NUMBER	

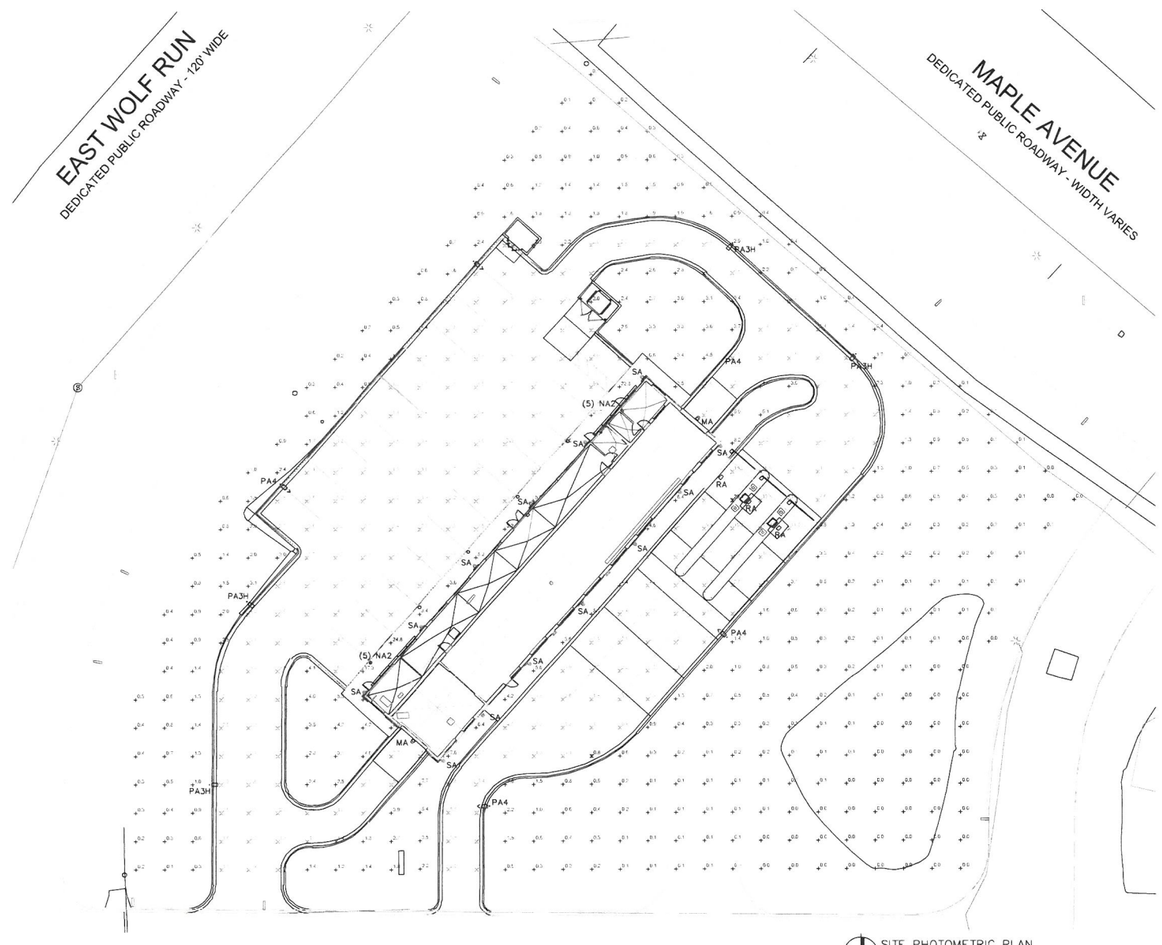
L 1.3

Schedule

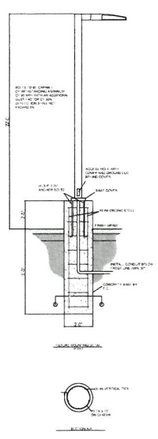
Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	MA	2	Lithonia Lighting	DSXW2 LED 30C 700 40K T4M MVOLT	WALLPACK MOUNTED 8' AFG	4000K LED	1	DSXW2_LED_30C_700_40K_TFTM_MVOLT.ies	8082	0.9	71
	NA2	16	Lithonia Lighting	VAP 4000LM FST WD 40K 80CRI	VAPORTIGHT FIXTURE MOUNTED UNDER THE CANOPY	4000K LED	1	VAP_4000LM_FST_WD_40K_80CRI.ies	3810	0.9	32.9
	PA3H	4	Lithonia Lighting	DSX0 LED P4 40K T3M MVOLT HS	TYPE III LUMINAIRE WITH HOUSE SIDE SHIELD MOUNTED ON A 20' POLE ON A 2' BASE	4000K LED	1	DSX0_LED_P4_40K_T3M_MVOLT_HS.ies	8310	0.9	97
	PA4	4	Lithonia Lighting	DSX1 LED P4 40K T4M MVOLT	TYPE IV LUMINAIRE MOUNTED ON A 20' POLE ON A 2' BASE	4000K LED	1	DSX1_LED_P4_40K_T4M_MVOLT.ies	14181	0.9	175
	RA	3	Lithonia Lighting	DSX0C LED 30C 700 40K T5M MVOLT	CANOPY MOUNT FIXTURE	4000K LED	1	DSX0C_LED_30C_700_40K_T5M_MVOLT.ies	8587	0.9	67
	SA	13	Lithonia Lighting	DSXW1 LED 10C 700 40K T4W MVOLT	WALLPACK MOUNTED 12' AFG	4000K LED	1	DSXW1_LED_10C_700_40K_T4W_MVOLT.ies	2751	0.9	25.2

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE PHOTOMETRICS	+	2.3 fc	24.8 fc	0.0 fc	N/A	N/A
PARKING LOT	X	3.7 fc	20.4 fc	0.8 fc	25.5:1	4.6:1



SITE PHOTOMETRIC PLAN
1" = 30'-0"



THE REDMOND COMPANY

REMARKS:

PROJECT: TSUNAMI CAR WASH

PROJECT LOCATION: MUKWONAGO, WI

JDP ELECTRICAL DESIGN, LLC
ELECTRICAL DESIGN & CONSULTING

DATE: 08/06/2024

DRAWN BY: J. PRUSINSKI

PROJECT NUMBER: 00753

SITE PHOTOMETRIC DRAWING

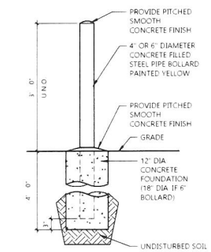
SCALE: NTS

ES100

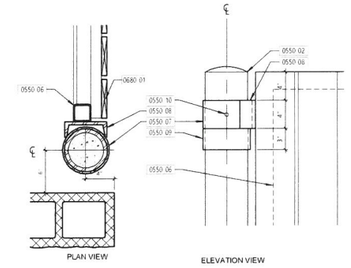
N

A1 ARCHITECTURAL SITE PLAN
1" = 20' 0"

KEYNOTES PER SHEET	
0330.02	POURED CONCRETE SIDEWALK / CURB / SLAB (SEE CIVIL DRAWINGS)
0550.02	6" DIAMETER CONCRETE BOLLARD FILLED GALVANIZED STEEL PIPE BOLLARD. FIELD PAINT YELLOW.
0550.06	2 1/2" X 2 1/2" X 3/16" TUBE STEEL WELDED TO FORM GATE FRAME. PROVIDE DIAGONAL TUBE BRACE. GRIND ALL WELDS SMOOTH (SHOP PRIME AND FIELD PAINT). PROVIDE TREATED 2X4 HORIZONTAL AT TOP, MIDDLE AND BOTTOM.
0550.07	4" HIGH STEEL PIPE HINGE (PRIMED AND FIELD PAINTED)
0550.08	4" HIGH CBK13 WELDED TO STEEL PIPE HINGE (PRIMED AND FIELD PAINTED)
0550.09	3" HIGH STEEL PIPE WELDED TO 6" PIPE BOLLARD (SHOP PRIMED AND FIELD PAINTED)
0550.10	ZERC FITTING
0680.01	1x6 COMPOSITE BOARD (COLOR TO BE SELECTED BY ARCHITECT)
1014.08	HANDICAP SIGNAGE. SEE CIVIL DRAWINGS
1044.04	KNOX BOX. VERIFY LOCATION WITH AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO INSTALLATION
1121.01	VACUUM HOSE BOOM. TYP.
2656.01	POLE MOUNTED LIGHT FIXTURE (SEE ELECTRICAL DRAWINGS)
3216.07	HANDICAP RAMP. SEE CIVIL DRAWINGS



B5 BOLLARD DETAIL
3/4" = 1' 0"



A5 REFUSE/RECYCLING ENCLOSURE DOOR HINGE Copy 1
1 1/2" = 1' 0"

Tsunami Express Car Wash

ARCHITECTURAL SITE PLAN

24052

05.30.2024

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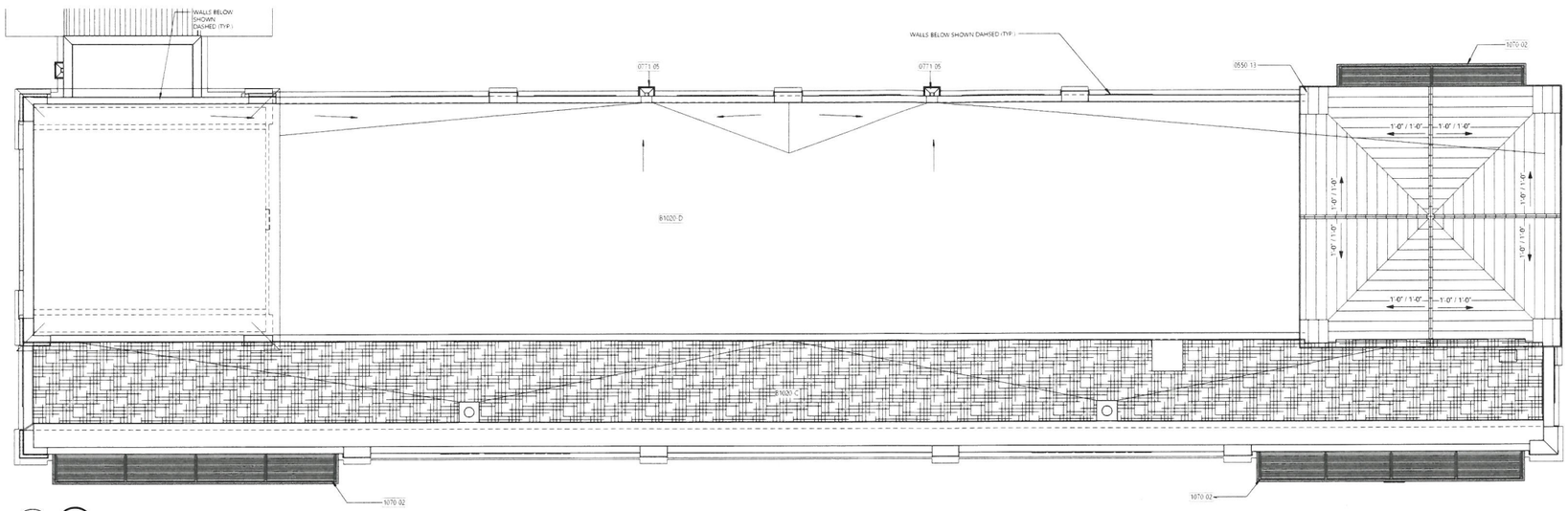
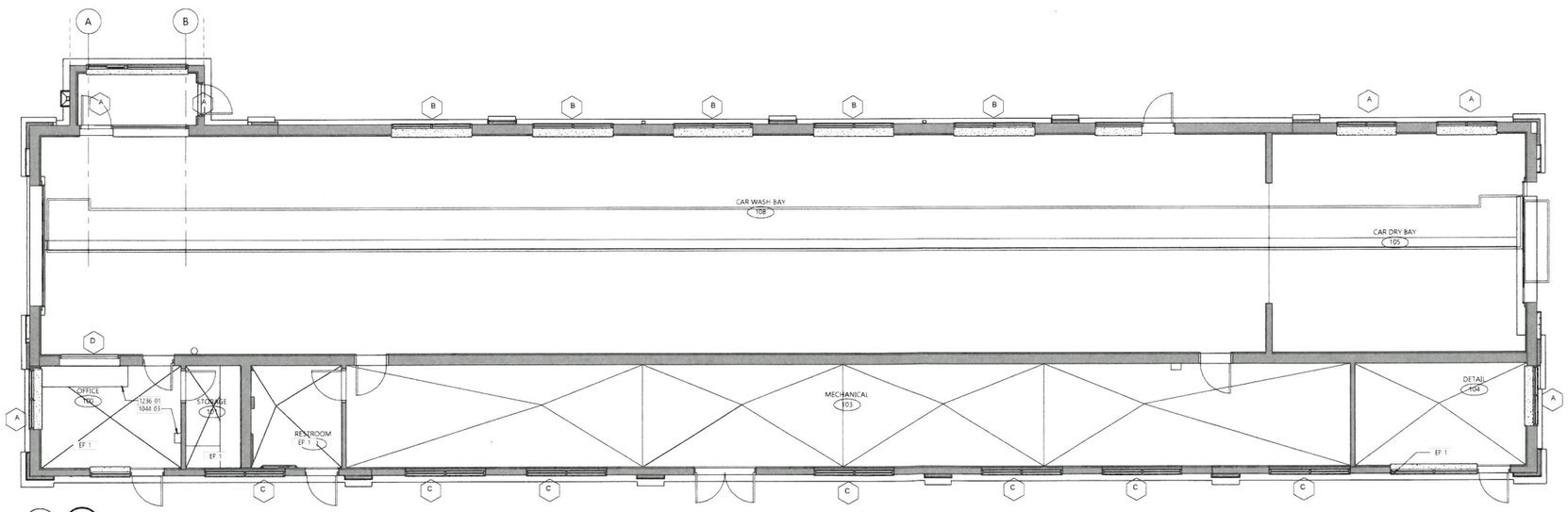


2 HN_150_EN_DE_ROOF PLAN PRESENTATION
3/16" = 1'-0"



1 HN_150_EN_DE_FLOOR PLAN PRESENTATION
3/16" = 1'-0"

EXTERIOR MATERIAL LEGEND

(BR-X): STRUCTURAL BRICK
MANUFACTURER: COUNTY MATERIALS
PRODUCT: HERITAGE (STRUCTURAL BRICK)
COLOR: CARDINAL
MORTAR COLOR: NATURAL

(BR-1): 4" X 4" X 16" STRUCTURAL BRICK
(BR-2): 8" X 4" X 16" STRUCTURAL BRICK
(BR-3): 12" X 4" X 16" STRUCTURAL BRICK

(CS-X): CAST STONE
MANUFACTURER: MARCSTONE
COLOR: INDIANA GRAY
(SEE CAST STONE PROFILES)

(CMU-X): - SPLIT FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SPLIT FACE
COLOR: SIENNA CREAM

(CMU-1): 8" X 8" X 16"
(CMU-2): 12" X 8" X 16"

(CMU-X): - SMOOTH FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SMOOTH FACE
COLOR: WINTER

(CMU-3): 8" X 8" X 16"
(CMU-4): 12" X 8" X 16"

(MR-1): STANDING SEAM METAL ROOF:
MANUFACTURER: PAC-CLAD
PRODUCT:
COLOR: AWARD BLUE

(EIFS-1): EXTERIOR FINISH SYSTEM
MANUFACTURER: DRYVIT
PRODUCT: OUTSULATION PLUS MD
COLOR: #600 SILVERADO
FINISH: SANDBLAST

(AC-1): PREFINISHED ALUMINUM COPING
MANUFACTURER: PAC-CLAD
PRODUCT: PAC-TITE COPING TAPERED
COLOR: PACIFIC BLUE

(AF-1): PREFINISHED ALUMINUM FASCIA
MANUFACTURER: PAC-CLAD
PRODUCT: FORMED ALUMINUM
COLOR: PACIFIC BLUE

(AS-1): PREFINISHED ALUMINUM SOFFIT PANEL
MANUFACTURER: PAC-CLAD
PRODUCT: VENTED ALUMINUM PANEL
COLOR: PACIFIC BLUE

(CTR-1): PREFINISHED ALUMINUM GUTTER/DOWNSPOUT
MANUFACTURER: PAC-CLAD
PRODUCT: 5" BEVELED PROFILE GUTTERS
COLOR: PACIFIC BLUE

KEYNOTES PER SHEET

0550.13	TAPERED METAL SADDLE (TYP.)
0771.05	PREFINISHED ALUMINUM SCUPPER W/ DOWNSPOUT (TYP.) SEE EXTERIOR MATERIAL LEGEND FOR COLOR. CONNECT TO STORM SEWER. SEE CIVIL DRAWINGS
1044.03	SURFACE MOUNTED FIRE EXTINGUISHER. VERIFY LOCATION WITH AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO INSTALLATION
1070.02	PREFABRICATED ALUMINUM CANOPY
1236.01	PLASTIC LAMINATE COUNTERTOP
B1020.C	FULLY ADHERED 60 MIL EPDM MEMBRANE ROOFING OVER 4" (R-30) MIN POLYISOCYANURATE RIGID INSULATION (FORMED FROM 2 LAYERS WITH JOINTS OFFSET; BOTTOM LAYER MECHANICALLY ATTACHED; TOP LAYER ADHERED); OVER STRUCTURAL METAL DECK. PROVIDE CRICKETS AND SADDLES FROM XPS RIGID INSULATION TO MAINTAIN 1/4" PER FOOT (MIN.) POSITIVE DRAINAGE TO ROOF DRAINS.
B1020.D	FULLY ADHERED MEMBRANE ROOFING MATERIAL OVER 2 LAYERS OF STAGGERED RIGID INSULATION; 5" TOTAL HEIGHT (R-30 MIN.) AIR BARRIER OVER 8" PRECAST HOLLOW CORE PLANK. TAPER RIGID INSULATION TO ROOF SCUPPER LOCATIONS PER ROOF PLAN, AT A MINIMUM 1/4 INCH PER FOOT SLOPE.
EP-1	EPOXY FLOOR FINISH

Tsunami Express Car Wash

FLOOR PLAN & ROOF PLAN

THE REDMOND COMPANY

24052

05.30.2024

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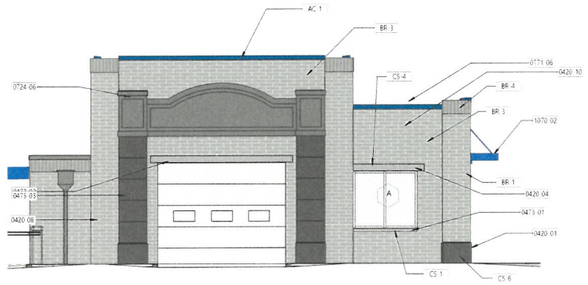
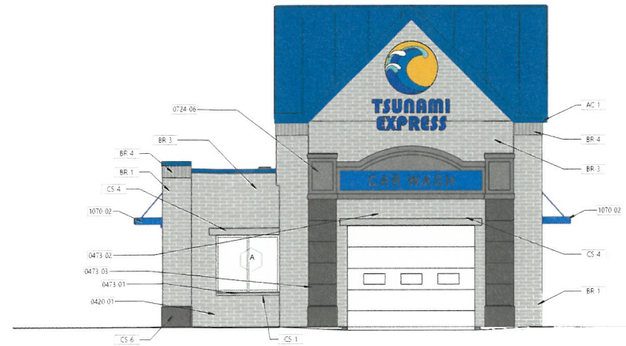


3 H_150_EN_DE_ENTRANCE ELEVATION PRESENTATION
3/16" = 1' 0"



4 H_150_EN_DE_EXIT ELEVATION PRESENTATION
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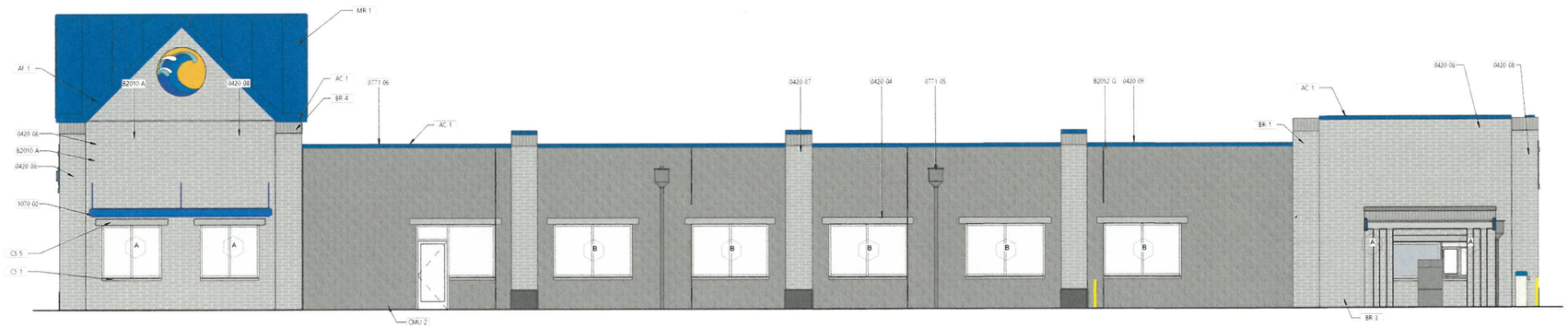

2 H_150_EN_DE_REAR ELEVATION PRESENTATION
3/16" = 1' 0"

1 H_150_EN_DE_FRONT ELEVATION PRESENTATION
3/16" = 1' 0"

EXTERIOR MATERIAL LEGEND

(BR-X): STRUCTURAL BRICK
MANUFACTURER: COUNTY MATERIALS
PRODUCT: HERITAGE (STRUCTURAL BRICK)
COLOR: CARDINAL
MORTAR COLOR: NATURAL

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(BR 2): 8" X 4" X 16" STRUCTURAL BRICK
(BR 3): 12" X 4" X 16" STRUCTURAL BRICK

(CS-X): CAST STONE
MANUFACTURER: MARCSTONE
COLOR: INDIANA GRAY
(SEE CAST STONE PROFILES)

(CMU-X): - SPLIT FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SPLIT FACE
COLOR: SIENNA CREAM

(CMU 1) 8" X 8" X 16"
(CMU 2) 12" X 8" X 16"

(CMU-X): - SMOOTH FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SMOOTH FACE
COLOR: WINTER

(CMU 3) 8" X 8" X 16"
(CMU 4) 12" X 8" X 16"

(MR-1:) STANDING SEAM METAL ROOF:
MANUFACTURER: PAC CLAD
PRODUCT:
COLOR: AWARD BLUE

(EIFS- 1): EXTERIOR FINISH SYSTEM
MANUFACTURER: DRYVIT
PRODUCT: OUTSULATION PLUS MD
COLOR: #600 SILVERADO
FINISH: SANDBLAST

(AC-1): PREFINISHED ALUMINUM COPING
MANUFACTURER: PAC CLAD
PRODUCT: PAC TITE COPING TAPERED
COLOR: PACIFIC BLUE

(AF-1): PREFINISHED ALUMINUM FASCIA
MANUFACTURER: PAC CLAD
PRODUCT: FORMED ALUMINUM
COLOR: PACIFIC BLUE

(AS-1): PREFINISHED ALUMINUM SOFFIT PANEL
MANUFACTURER: PAC CLAD
PRODUCT: VENTED ALUMINUM PANEL
COLOR: PACIFIC BLUE

(GTR- 1): PREFINISHED ALUMINUM GUTTER/DOWNSPOUT
MANUFACTURER: PAC CLAD
PRODUCT: 5" BEVELED PROFILE GUTTERS
COLOR: PACIFIC BLUE

KEYNOTES PER SHEET

0420 01	BRICK VENEER
0420 04	12" CMU
0420 07	4" BRICK VENEER
0420 08	8" STRUCTURAL BRICK (TYP)
0420 09	8" SPLIT FACE CMU
0420 10	12" STRUCTURAL BRICK (TYP)
0473 01	CAST STONE SILL
0473 02	CAST STONE HEADER
0473 03	CAST STONE PIER
0724 06	WALL MOUNTED DECORATIVE E.I.F.S. FRAME
0771 06	PREFINISHED ALUMINUM SCUPPER W/ DOWNSPOUT (TYP.) SEE EXTERIOR MATERIAL LEGEND FOR COLOR. CONNECT TO STORM SEWER. SEE CIVIL DRAWINGS.
0771 06	PREFINISHED ALUMINUM COPING ANCHORED TO EXTERIOR GRADE WOOD BLOCKING
1070 02	PREFABRICATED ALUMINUM CANOPY
AC 1	PREFINISHED ALUMINUM COPING. SEE EXTERIOR MATERIAL LEGEND
AF 1	PREFINISHED ALUMINUM FASCIA ON EXTERIOR GRADE 2X12 BAKE BOARD AND 1X6 TRIM BOARD. SEE EXTERIOR MATERIAL LEGEND
B2010 A	4" X 4" X 16" STRUCTURAL BRICK, ANCHORED WITH ADJUSTABLE METAL WALL TIES. VENTED WEEP INSERTS AT TOP AND BOTTOM OF WALL AT 24" O.C. (MAX.) WITH FLUID APPLIED VAPOR PERMEABLE AIR BARRIER ON 5/8" GLASS MAT FACED GYPSUM SHEATHING ON COLD FORMED METAL STUD FRAMING (SEE STRUCTURAL DRAWINGS).
B2012 G	8" X 4" X 16" SINGLE WYTHE STRUCTURAL BRICK (SEE STRUCTURAL DRAWINGS) 5/8" MOISTURE RESISTANT GYP BD ON 1 5/8" FURRING AT 24" O.C. WITH CONTINUOUS XPS INSULATION AT INTERIOR SIDE OF WALL
BR 1	4" X 4" X 16" STRUCTURAL BRICK. SEE EXTERIOR MATERIAL LEGEND
BR 2	8" X 4" X 16" STRUCTURAL BRICK. SEE EXTERIOR MATERIAL LEGEND
BR 3	12" X 4" X 16" STRUCTURAL BRICK. SEE EXTERIOR MATERIAL LEGEND
BR 4	4" X 4" X 16" STRUCTURAL BRICK SOLDIER COURSE. SEE EXTERIOR MATERIAL LEGEND
CMU 1	8" X 8" X 16" SPLIT FACE CMU. SEE EXTERIOR MATERIAL LEGEND
CMU 2	12" X 8" X 16" SPLIT FACE CMU. SEE EXTERIOR MATERIAL LEGEND
CS 1	CAST STONE SILL. SEE CAST STONE PROFILES
CS 3	CAST STONE BASE. SEE CAST STONE PROFILES
CS 4	CAST STONE SILL. SEE CAST STONE PROFILES
CS 5	CAST STONE HEAD. SEE CAST STONE PROFILES
CS 6	CAST STONE PIER. SEE CAST STONE PROFILES
MR 1	STANDING SEAM METAL ROOF. SEE EXTERIOR MATERIAL LEGEND

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Tsunami Express Car Wash

EXTERIOR ELEVATIONS

24052

05.30.2024

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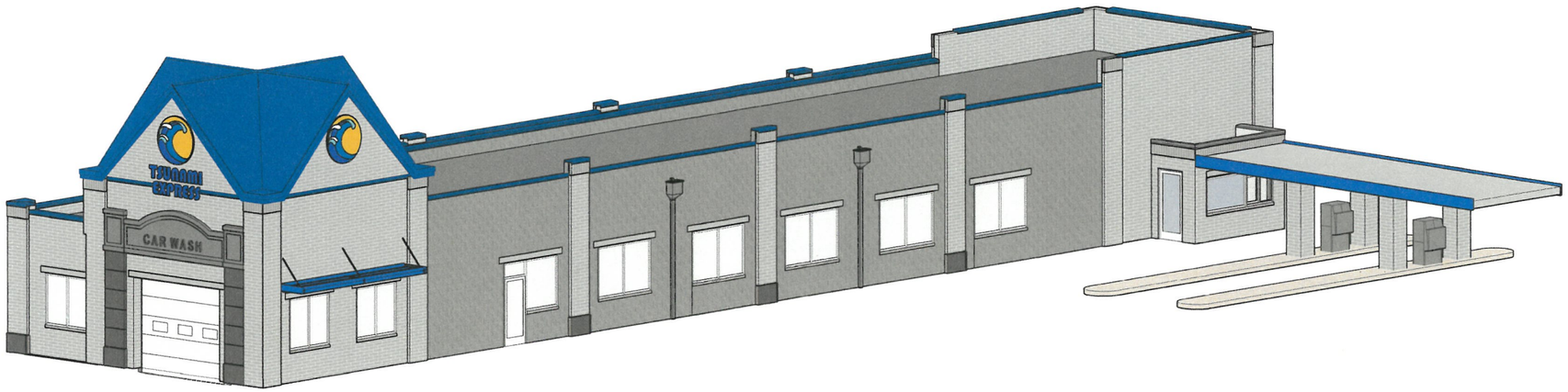

1 3D ORTHOGRAPHIC VIEW

Tsunami Express Car Wash

3D ORTHOGRAPHIC

THE REDMOND COMPANY

24052

05 30 2024

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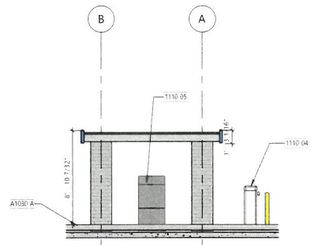
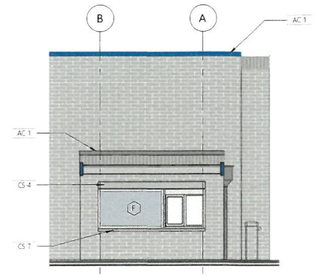
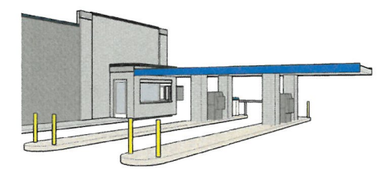


2 SALES LANE ELVAT
3/16" = 1' 0"



D2 H_DE_SALES BOOTH - WEST ELEVATION
3/16" = 1' 0"



1 3D View 2

EXTERIOR MATERIAL LEGEND

(BR-X): STRUCTURAL BRICK
MANUFACTURER: COUNTY MATERIALS
PRODUCT: HERITAGE (STRUCTURAL BRICK)
COLOR: CARDINAL
MORTAR COLOR: NATURAL

(BR-1): 4" X 4" X 16" STRUCTURAL BRICK
(BR-2): 8" X 4" X 16" STRUCTURAL BRICK
(BR-3): 12" X 4" X 16" STRUCTURAL BRICK

(CS-X): CAST STONE
MANUFACTURER: MARCSTONE
COLOR: INDIANA GRAY
(SEE CAST STONE PROFILES)

(CMU-X): - SPLIT FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SPLIT FACE
COLOR: SIENNA CREAM

(CMU-1): 8" X 8" X 16"
(CMU-2): 12" X 8" X 16"

(CMU-X): - SMOOTH FACE CMU
MANUFACTURER: COUNTY MATERIALS
PRODUCT: SMOOTH FACE
COLOR: WINTER

(CMU-3): 8" X 8" X 16"
(CMU-4): 12" X 8" X 16"

(MR-1): STANDING SEAM METAL ROOF:
MANUFACTURER: PAC CLAD
PRODUCT:
COLOR: AWARD BLUE

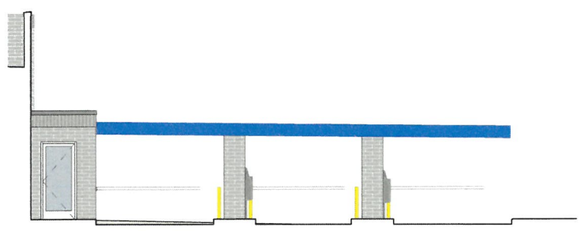
(EIFS-1): EXTERIOR FINISH SYSTEM
MANUFACTURER: DRYVIT
PRODUCT: OUTSULATION PLUS MD
COLOR: #600 SILVERADO
FINISH: SANDBLAST

(AC-1): PREFINISHED ALUMINUM COPING
MANUFACTURER: PAC CLAD
PRODUCT: PAC TITE COPING TAPERED
COLOR: PACIFIC BLUE

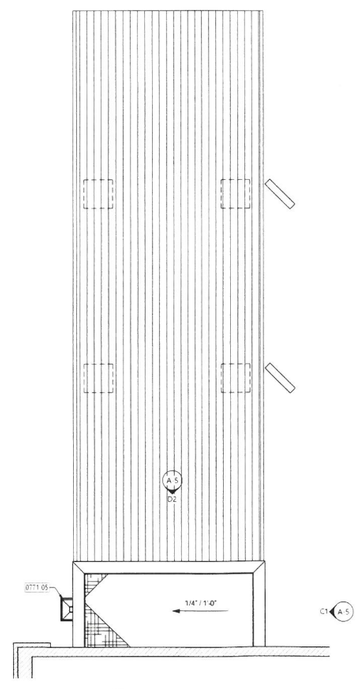
(AF-1): PREFINISHED ALUMINUM FASCIA
MANUFACTURER: PAC CLAD
PRODUCT: FORMED ALUMINUM
COLOR: PACIFIC BLUE

(AS-1): PREFINISHED ALUMINUM SOFFIT PANEL
MANUFACTURER: PAC CLAD
PRODUCT: VENTED ALUMINUM PANEL
COLOR: PACIFIC BLUE

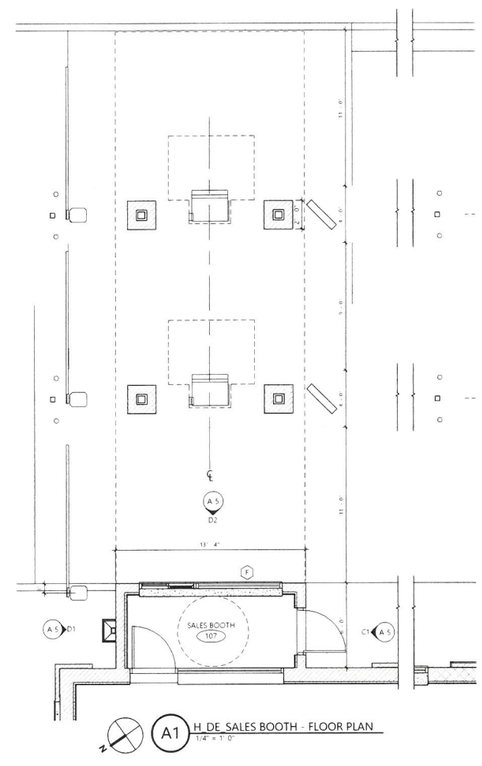
(GTR-1): PREFINISHED ALUMINUM GUTTER/DOWNSPOUT
MANUFACTURER: PAC CLAD
PRODUCT: 5" BEVELED PROFILE GUTTERS
COLOR: PACIFIC BLUE



C1 SALES BOOTH - APPROACH ELEVATION
3/16" = 1' 0"



A3 H_DE_SALES BOOTH - ROOF PLAN
1/4" = 1' 0"



A1 H_DE_SALES BOOTH - FLOOR PLAN
1/4" = 1' 0"

KEYNOTES PER SHEET

0771.05	PREFINISHED ALUMINUM SCUPPER W/ DOWNSPOUT (TYP.) SEE EXTERIOR MATERIAL LEGEND FOR COLOR. CONNECT TO STORM SEWER. SEE CIVIL DRAWINGS
1110.04	SWINGING GATE ARM
1110.05	SALES KIOSK
A1030.A	CONCRETE SLAB ON GRADE OVER VAPOR BARRIER ON COMPACTED GRANULAR FILL (SEE STRUCTURAL DRAWINGS)
AC.1	PREFINISHED ALUMINUM COPING. SEE EXTERIOR MATERIAL LEGEND
CS.4	CAST STONE SILL. SEE CAST STONE PROFILES
CS.7	CAST STONE SILL. SEE CAST STONE PROFILES

Tsunami Express Car Wash

SALES BOOTH

24052

05.30.2024

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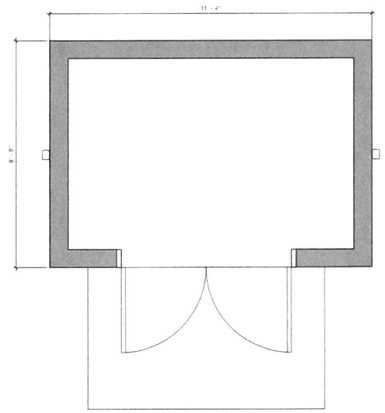
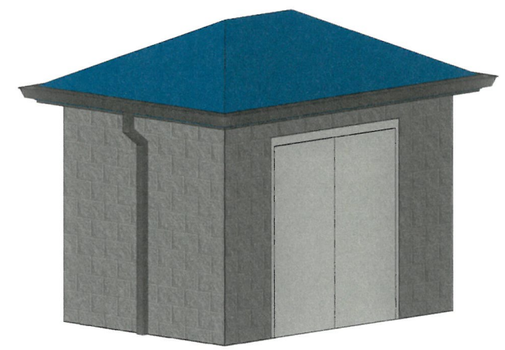
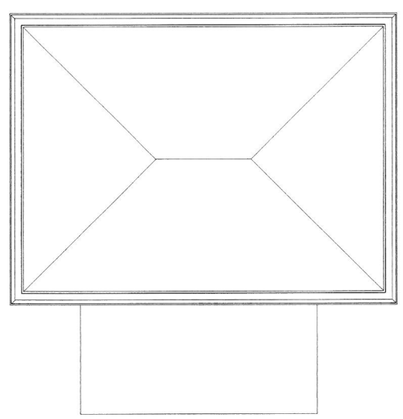


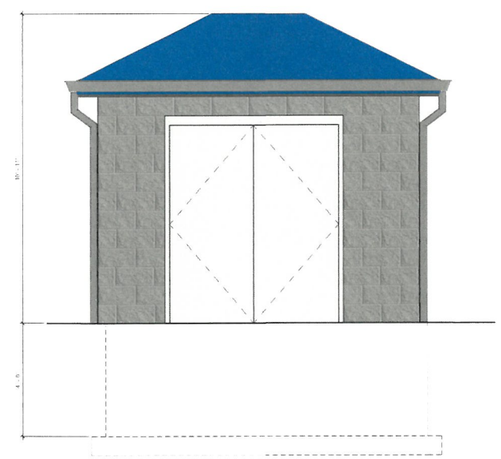
3 H_PUMP HOUSE - FLOOR PLAN PRESENTATION
1/2" = 1'-0"



4 3D - PUMP Only



1 H_PUMP HOUSE - ROOF PLAN PRESENTATION
1/2" = 1'-0"



2 H_PUMP HOUSE - FRONT ELEVATION PRESENTATION
1/2" = 1'-0"

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Tsunami Express Car Wash

SEP_Pump Bldg_Presentation

24023

06.07.2024

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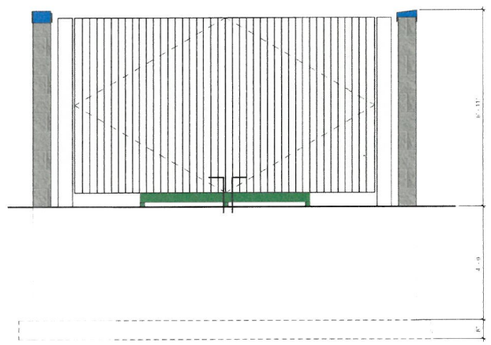
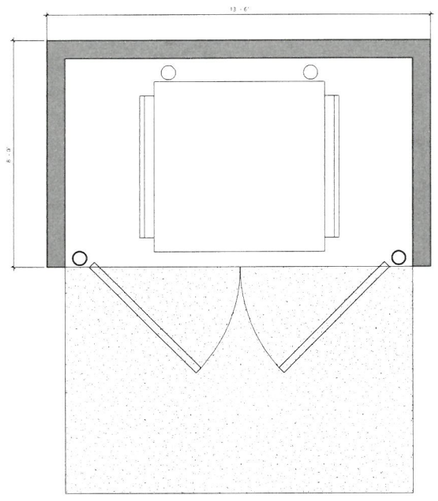
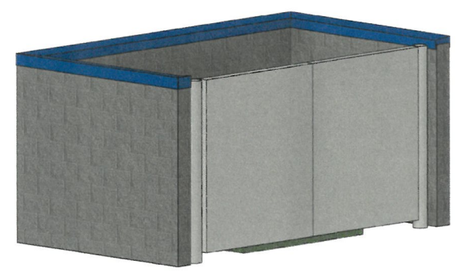


2 H_TRASH ENCLOSURE - FRONT ELEVATION PRESENTATION
1/2" = 1'-0"



1 H_TRASH ENCLOSURE - PLAN PRESENTATION
1/2" = 1'-0"



3 3D - TRASH Only

Tsunami Express Car Wash

SEP_Trash Bldg_Presentation

24023

06.07.2024

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TYPOGRAPHY, ARROWS, FINISHES & VINYLS

LOGOS

TSUNAMI EXPRESS CAR WASH

(VERTICAL VERSION)

TSUNAMI EXPRESS CAR WASH

(HORIZONTAL VERSION)

ARROWS

TYPOGRAPHY

T-01

Aa

UNIVA PRO BLACK

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#$%&*()?/"':;,.

T-02

Aa

MONTSERRAT REGULAR

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890!@#$%&*()?/"':;,.

FINISHES

- P-01 - TO MATCH PMS BLACK C
- P-02 - WHITE, SATIN FINISH
- P-03 - TO MATCH PMS 2382 C (BLUE)
- P-04 - TO MATCH PMS 915 U (LT. BLUE)
- P-05 - TO MATCH PMS 7548 XGC (YELLOW)
- P-06 - TO MATCH PMS 2420 C (GREEN)
- P-07 - TO MATCH EXISTING BUILDING (TBD)
- P-08 - TO MATCH PMS 4715 C (DK BRICK RED)

VINYLS

- V-01 3M 7725 12 BLACK
- V-02 3M 7725 10 WHITE
- V-03 DIGITALLY PRINTED ON 3M 7725 10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)
- V-04 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 915 U (LT. BLUE)
- V-05 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 7548 XGC (YELLOW)
- V-06 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2420 C (GREEN)
- V-07 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 33% OF PMS 915 U (LT. BLUE)
- V-08 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 10% OF PMS 915 U (LT. BLUE)
- V-09 - DIGITALLY PRINTED ON 3M 3635-210 PERFORATED WHITE VINYL

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
PROJECT LOGO(S), TYPOGRAPHY, ARROWS, FINISHES, & VINYLS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	-

DWG. NO.	SHEET
13323CH	2 OF 20

MN-2 SECONDARY MONUMENT SIGN

GENERAL NOTES:

ILLUMINATED: YES
S/F OR D/F: D/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

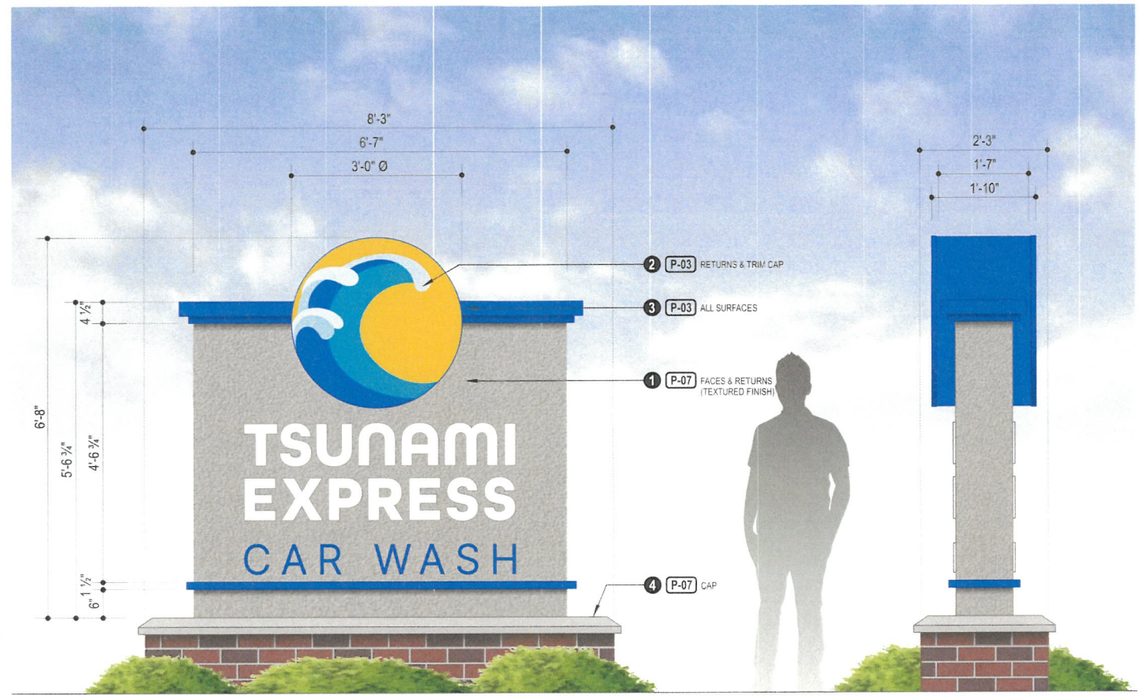
1. **CABINET:** D/F INTERNALLY ILLUMINATED CABINET. 1'-0" DEEP. ALUMINUM FACES & RETURNS OVER ALUMINUM ANGLE FRAME. FACES & OUTER RETURN TO HAVE A PAINTED TEXTURED FINISH. FACES TO HAVE ROUTED OUT W/ PUSHED THRU ACRYLIC COPY GRAPHICS. PUSHED THRU ACRYLIC TO BE CLEAR W/ APPLIED TRANS. VINYL OVERLAID ONTO THE FACES. INTERNAL ILLUMINATION TO BE WHITE LED'S. CABINET MOUNTED TO INSIDE OF BRICK COLUMN & BOTTOM CABINET VIA INTERNAL MAIN STEEL SUPPORT.

2. **LOGO CABINETS:** (2) S/F INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL CABINET. RETURNS & BACKS TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACES TO BE TRANS. WHITE ACRYLIC WITH APPLIED VINYL GRAPHICS. FACES ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. MOUNTED TO TOP CABINET.

3. **ACCENT MOLDING:** ALUMINUM TUBE DIMENSIONAL MOLDING. MOLDING TO HAVE A PAINTED FINISH. MOLDING MOUNTED TO CABINET FACE & OUTER RETURNS.

4. **BRICK BASE:** FAB'D STEEL FRAME WITH CEMENT BOARD CLADDING & BRICK VENEER W/ MORTAR. MOUNTED TO CONCRETE SLAB. BRICK VENEER TO MATCH BRICK ON EXISTING BUILDING. CAP TO BE FAB'D ALUMINUM WITH A PAINTED FINISH.

5. **BRICK COLUMN:** FAB'D STEEL FRAME WITH CEMENT BOARD CLADDING & BRICK VENEER W/ MORTAR. MOUNTED TO TOP OF BRICK BASE. INTERIOR OF COLUMN TO HAVE A STEEL TUBE SUPPORT. BRICK VENEER TO MATCH BRICK ON EXISTING BUILDING.



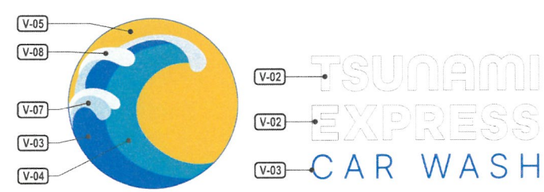
1 **ELEVATION VIEW**
SCALE: NTS

PAINTED FINISHES:

- P-03 - TO MATCH PMS 2382 C (BLUE)
- P-07 - TO MATCH EXISTING BUILDING (TBD)

VINYLS:

- V-02 - 3M 7725-10 WHITE
- V-03 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)
- V-04 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 915 U (LT. BLUE)
- V-05 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 7548 XGC (YELLOW)
- V-07 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 33% OF PMS 915 U (LT. BLUE)
- V-08 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 10% OF PMS 915 U (LT. BLUE)



3 **VINYL CALL OUTS**
SCALE: NTS

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
SECONDARY MONUMENT SIGN

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	1

DWG. NO.	SHEET
13323CH	6 OF 20

IDX-1 BUILDING ID - CAR WASH ENTRANCE

GENERAL NOTES:

ILLUMINATED: YES
S/F OR D/F: S/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

1. **LOGO CABINET:** S/F INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL CABINET. RETURNS & BACK TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACE TO BE TRANS. WHITE ACRYLIC w/ APPLIED VINYL GRAPHICS. FACE ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO EXISTING BRICK BUILDING.

2. **CHANNEL LETTERS:** INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL LETTERS. RETURNS & BACKS TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACES TO BE TRANS. WHITE ACRYLIC. FACES ARE ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO EXISTING BRICK BUILDING.

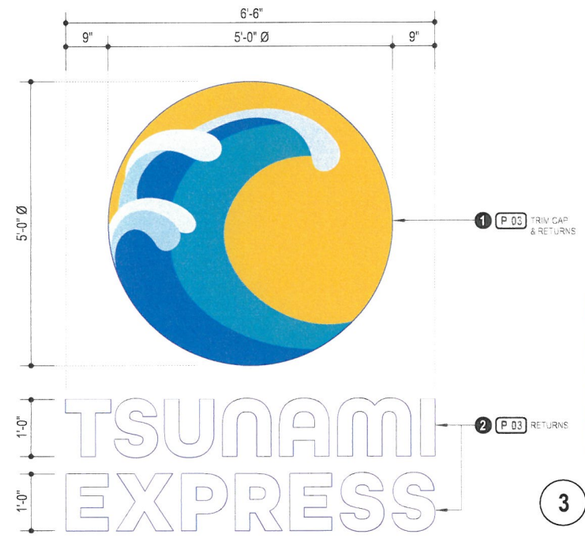
3. **CAR WASH CABINET:** S/F INTERNALLY ILLUMINATED 5" DEEP FAB'D CABINET. RETURNS & BACK TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACE TO BE ALUMINUM - FAB'D ALUMINUM "SHOE BOX" STYLE w/ 1 1/2" WELDED ALUMINUM RETURNS FACE AND WELDED RETURNS TO HAVE A PAINTED FINISH. COPY TO BE ROUTED OUT OF ALUMINUM FACE. THE ROUTED OPENINGS TO BE BACKED w/ TRANS. WHITE ACRYLIC. FACE ATTACHED TO CABINET RETURNS VIA 1 1/2" WELDED ALUMINUM RETURNS. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO EXISTING BRICK BUILDING.

PAINTED FINISHES:

- P-03 - TO MATCH PMS 2382 C (BLUE)

VINYLS:

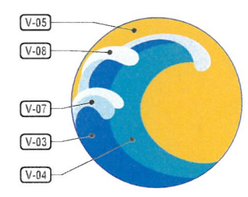
- V-03 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)
- V-04 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 915 U (LT. BLUE)
- V-05 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 7548 XGC (YELLOW)
- V-07 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 33% OF PMS 915 U (LT. BLUE)
- V-08 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 10% OF PMS 915 U (LT. BLUE)



1 **ELEVATION DETAIL**
SCALE NTS

3 **PROPOSED ELEVATION VIEW**
SCALE NTS

2 **ELEVATION DETAIL**
SCALE: NTS



4 **VINYL CALL OUTS**
SCALE: NTS

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
SECONDARY MONUMENT SIGN

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	1 SET

DWG. NO.	SHEET
13323CH	7 OF 20

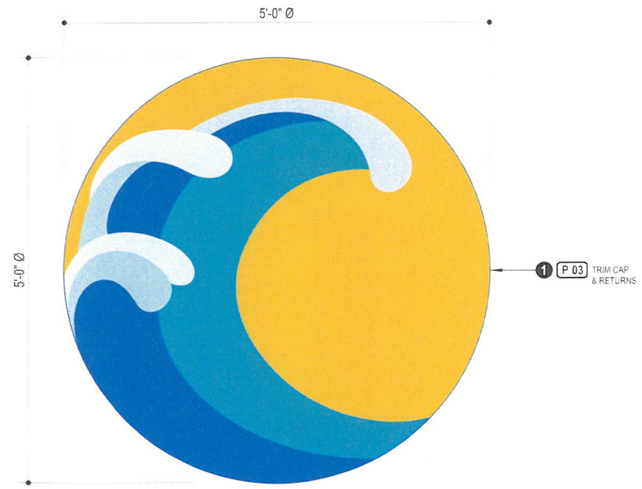
IDX-2 BUILDING ID - TOWER SIDES

GENERAL NOTES:

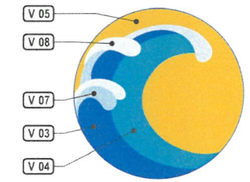
ILLUMINATED: YES
S/F OR D/F: S/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

1. **LOGO CABINET:** S/F INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL CABINET. RETURNS & BACK TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACE TO BE TRANS. WHITE ACRYLIC WITH APPLIED VINYL GRAPHICS. FACE ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO EXISTING BRICK BUILDING.



1 **ELEVATION DETAIL**
SCALE NTS



4 **VINYL CALL OUTS**
SCALE NTS

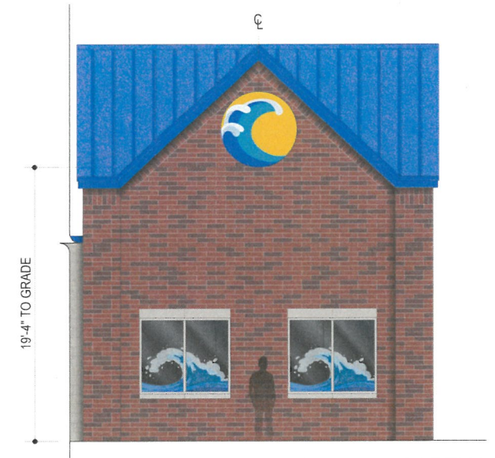
PAINTED FINISHES:

- P-03 - TO MATCH PMS 2382 C (BLUE)

VINYLS:

- V-03 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)
- V-04 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 915 U (LT. BLUE)
- V-05 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 7548 XGC (YELLOW)
- V-07 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 33% OF PMS 915 U (LT. BLUE)
- V-08 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH 10% OF PMS 915 U (LT. BLUE)

2 **SOUTH ELEVATION VIEW - PARTIAL**
SCALE: NTS



3 **NORTH ELEVATION VIEW - PARTIAL**
SCALE: NTS

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
SECONDARY MONUMENT SIGN

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	2

DWG. NO.	SHEET
13323CH	8 OF 20

CL-1 CHANNEL LETTERS

1 **ELEVATION DETAIL**
SCALE: NTS

GENERAL NOTES:

ILLUMINATED: YES
S/F OR D/F: S/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

1 **CHANNEL LETTERS:** INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL LETTERS. RETURNS & BACKS TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACES TO BE TRANS. WHITE ACRYLIC w/ APPLIED VINYL INLAYS. FACES ARE ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO CMU BLOCK OF EXISTING BUILDING.

PAINTED FINISHES:

P-03 - TO MATCH PMS 2382 C (BLUE)

VINYLS:

V-03 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)

2 **SOUTH ELEVATION VIEW - PARTIAL**
SCALE: NTS

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
CHANNEL LETTERS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	1 SET

DWG. NO.	SHEET
13323CH	9 OF 20

CL-2 CHANNEL LETTERS

GENERAL NOTES:

ILLUMINATED: YES
S/F OR D/F: S/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

1. **CHANNEL LETTERS:** INTERNALLY ILLUMINATED 5" DEEP FAB'D CHANNEL LETTERS. RETURNS & BACKS TO BE ALUMINUM & TO HAVE A PAINTED FINISH. FACES TO BE TRANS. WHITE ACRYLIC w/ APPLIED VINYL INLAYS. FACES ARE ATTACHED TO RETURNS VIA 1" PLASTIC TRIM CAP. TRIM CAP FINISH TO MATCH RETURNS FINISH. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO CMU BLOCK OF EXISTING BUILDING.

1 **ELEVATION DETAIL**
SCALE NTS

2 **SOUTH ELEVATION VIEW - PARTIAL**
SCALE: NTS

PAINTED FINISHES:

P-03 - TO MATCH PMS 2382 C (BLUE)

VINYLS:

V-03 - DIGITALLY PRINTED ON 3M 7725-10 WHITE VINYL TO MATCH PMS 2382 C (BLUE)

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
CHANNEL LETTERS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	1 SET

DWG. NO.	SHEET
13323CH	10 OF 20

LB-1 LIGHT BANDS

GENERAL NOTES:

ILLUMINATED: YES
S/F OR D/F: S/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.
ELECTRIC TO INSTALL LOCATION TO BE COORDINATED WITH E.C. AND TO BE PROVIDED BY THE E.C.

NOTES:

1. **LIGHT BAND:** INTERNALLY ILLUMINATED 6" DEEP FAB'D ALUMINUM TUBE FRAME. TOPS & BACKS TO HAVE ALUMINUM CLADDING. CLADDING TO HAVE A PAINTED FINISH. FACE TO BE #5025 REFLEX BLUE COOLEY BRITE®. COPY ON THE TWO OUTER LIGHT BANDS TO BE ERADICATED FROM COOLEY MATERIAL. BOTTOM OF LIGHT BAND CABINET TO HAVE TRANS. WHITE ACRYLIC LENS. INTERNALLY ILLUMINATED VIA WHITE LED'S. FLUSH MOUNTED TO CMU BLOCK OF EXISTING BUILDING.

1 **ELEVATION DETAIL**
SCALE NTS
QTY 1

1 P 02 INTERIOR OF CABINET BACKS & FRAME
P 03 EXPOSED FRAME & TOP ALUMINUM CLADDING

2 **ELEVATION DETAIL**
SCALE NTS
QTY 4

1 P 02 INTERIOR OF CABINET BACKS & FRAME
P 03 EXPOSED FRAME & TOP ALUMINUM CLADDING

3 **SOUTH ELEVATION VIEW**
SCALE: NTS

PAINTED FINISHES:

P-02 - WHITE, SATIN FINISH

P-03 - TO MATCH PMS 2382 C (BLUE)

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
LIGHT BANDS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	AS NOTED

DWG. NO.	SHEET
13323CH	11 OF 20

LB-1 LIGHT BANDS

1 **SOUTH ELEVATION VIEW - EVENING VIEW**
SCALE: NTS

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
LIGHT BANDS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	AS NOTED

DWG. NO.	SHEET
13323CH	12 OF 20

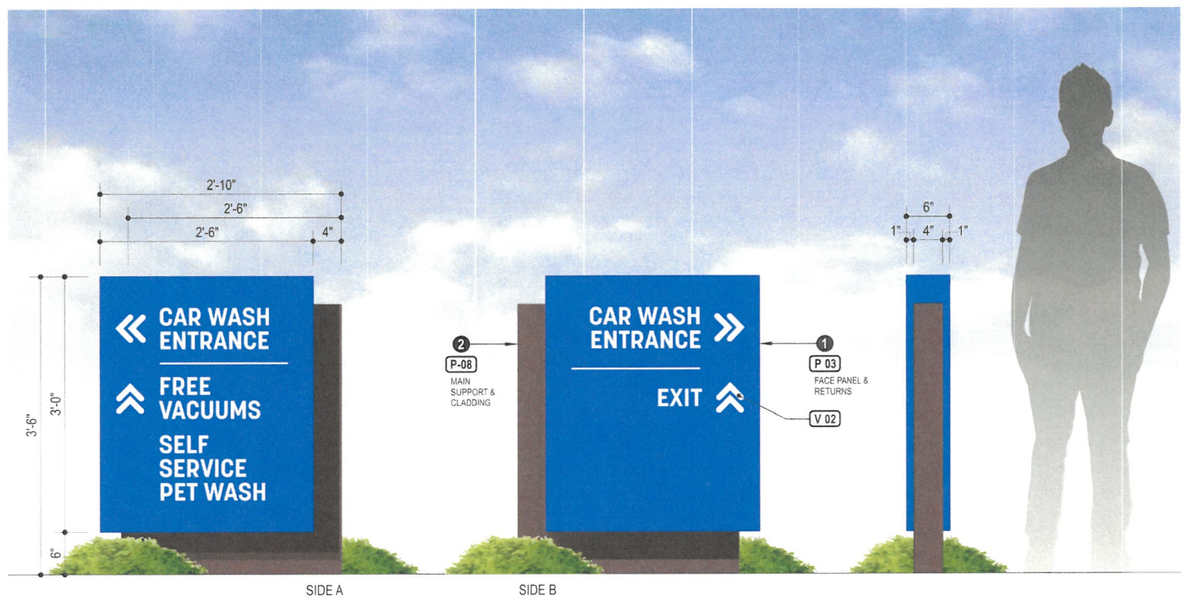
DIR-1 DIRECTIONAL SIGN

GENERAL NOTES:

ILLUMINATED: NO
S/F OR D/F: D/F
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.

NOTES:

1. **FACE PANEL:** D/F 6" DEEP FAB'D ALUMINUM PANEL. PANEL TO HAVE A PAINTED FINISH. WHITE VINYL GRAPHICS APPLIED TO FACE. FLAG MOUNTED TO MAIN SUPPORT.
2. **MAIN SUPPORT:** (1) ALUMINUM TUBE SUPPORT w/ ALUMINUM CLADDING TO WRAP UNDER FACE PANEL TO GRADE. CLADDING TO HAVE A PAINTED FINISH. MAIN SUPPORT TO BE MOUNTED TO GROUND VIA CONCRETE FOOTER. MAIN SUPPORT TO BE DIRECTLY BURIED INTO CONCRETE FOOTER.



1 **TYPICAL ELEVATION VIEW**
SCALE: NTS

2 **SIDE VIEW**
SCALE: NTS

PAINTED FINISHES:

P-03 - TO MATCH PMS 2382 C (BLUE)

P-08 - TO MATCH PMS 4715 C (DK BRICK RED)

VINYLS:

V-02 - 3M 7725-10 WHITE

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
DIRECTIONAL SIGN

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	3

DWG. NO.	SHEET
13323CH	17 OF 20

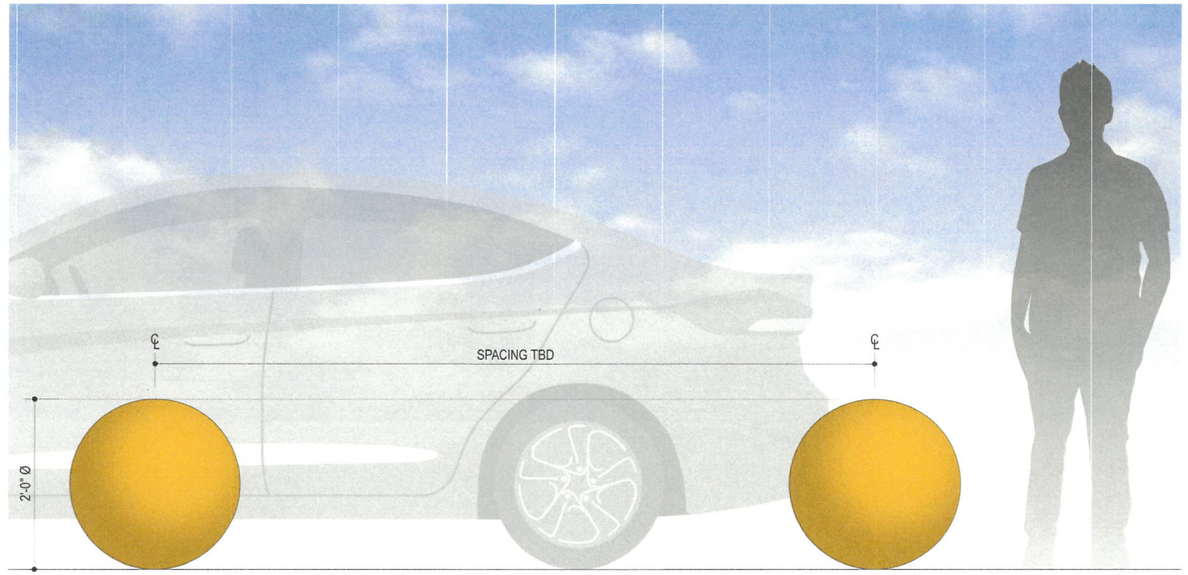
BOL-1 CONCRETE SPHERE BOLLARDS

GENERAL NOTES:

ILLUMINATED: NO
S/F OR D/F: N/A
EXACT INSTALL LOCATION TO BE COORDINATED WITH G.C.

NOTES:

1. **CONCRETE BOLLARDS:** 2'-0"Ø PRE-CAST CONCRETE SPHERES. BOLLARDS TO HAVE A STAINED FINISH. BOLLARDS ARE PLACED ON OUTSIDE PERIMETER OF PATH TO THE CAR WASH IN THE GRASS AREA.



1 **TYPICAL ELEVATION VIEW**
SCALE NTS

2 **EXAMPLES OF CONCRETE SPHERE BOLLARDS**
SCALE: NTS

PAINTED FINISHES:

P-05 - TO MATCH PMS 7548 XGC (YELLOW)

FASTSIGNS of KANKAKEE

PROJECT TITLE:
TSUNAMI CAR WASH

ENGINEER OF RECORD SEAL:

ENGINEER OF RECORD SIGNATURE/DATE:

REVISION HISTORY

NO.	DATE	PREV DRWG	DESCRIPTION

PRODUCT TYPE:
CONCRETE SPHERE BOLLARDS

DRAWING TYPE:
CONCEPTUAL

PROJECT NO.	TASK NO.	QTY.
93745	233633	14

DWG. NO.	SHEET
13323CH	18 OF 20

d#series

D-Series Size 2
LED Wall Luminaire

Catalog Number	DSXW2 LED 30C 700 40K TFTM MVOLT
Notes	
Type	MA

Specifications

Luminaire

Width: 18-1/2" (47.0 cm) **Weight:** 21 lbs (9.5 kg)

Depth: 10" (25.4 cm)

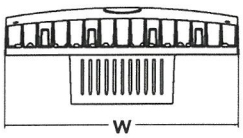
Height: 7-5/8" (19.4 cm)

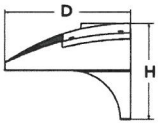
Back Box (BBW)

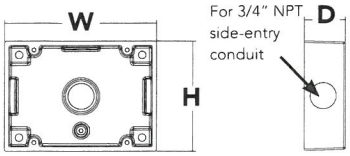
Width: 5-1/2" (14.0 cm) **BBW Weight:** 1 lbs (0.5 kg)

Depth: 1-1/2" (3.8 cm)

Height: 4" (10.2 cm)







A+ Capable options indicated by this color background.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

Ordering Information

EXAMPLE: DSXW2 LED 30C 700 40K T3M MVOLT DDBTXD

DSXW2 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW2 LED	20C 20 LEDs (two engines) 30C 30 LEDs (three engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted[2]	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT[3] 120[4] 208[4] 240[4] 277[4] 347[4,5] 480[4,5]	**Shipped included** (blank) Surface mounting bracket **Shipped separately[6]** BBW Surface-mounted back box (for conduit entry)	**Shipped installed** PE Photoelectric cell, button type[7] PER NEMA twist-lock receptacle only (control ordered separate)[8] PER5 Five-wire receptacle only (control ordered separate)[8,9] PER7 Seven-wire receptacle only (control ordered separate)[8,9] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht[10,11] PIRH 180° motion/ambient light sensor, 15-30' mtg ht[10,11] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[11,12] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[11,12]

Other Options

Shipped installed

SF	Single fuse (120, 277, 347V)[3]
DF	Double fuse (208, 240, 480V)[3]
HS	House-side shield[4]
SPD	Separate surge protection[13]

Shipped separately[13]

BSW	Bird-deterrent spikes
VG	Vandal guard

Finish *(required)*

DDBXD	Dark bronze	DSSXD	Sandstone	DWHGXD	Textured white
DBLXD	Black	DDBTXD	Textured dark bronze	DSSTXD	Textured sandstone
DNAXD	Natural aluminum	DBLBXD	Textured black		
DWHXD	White	DNATXD	Textured natural aluminum		

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [13]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [14]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [14]
DSHORT SBK U	Shorting cap (Included when ordering PER, PER5 or PER7) [14]
DSXWHS U	House-side shield (one per light engine)
DSXWBSW U	Bird-deterrent spikes
DSXW2VG U	Vandal guard accessory
DSXW2BBW DDBXD U	Back box accessory (specify finish)

For more control options, visit DTL and ROAM online.

NOTES

1 1000mA is not available with AMBPC.
2 AMBPC is not available with 1000mA.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
4 Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
5 Available with 30 LED/700mA options only (DSXW2 LED 30C 700). DMG option not available.
6 Also available as a separate accessory; see Accessories information.
7 Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
8 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
9 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
10 Reference Motion Sensor table on page 3.
11 Reference PER Table on page 3 for functionality.
12 PIR and PIR1FC3V specify the SensorSwitch SBGR-10-ODP control; PIRH and PIRH1FC3V specify the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with PER5 or PER7. Separate on/off required.
13 See the electrical section on page 2 for more details.
14 Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item. See PER Table.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K					40K					50K				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
20C (20 LEDs)	350 mA	25W	T2S	2,783	1	0	1	111	2,989	1	0	1	120	3,008	1	0	1	120
			T2M	2,709	1	0	1	108	2,908	1	0	1	116	2,926	1	0	1	117
			T3S	2,748	1	0	1	110	2,951	1	0	1	118	2,969	1	0	1	119
			T3M	2,793	1	0	1	112	2,999	1	0	1	120	3,018	1	0	1	121
			T4M	2,756	1	0	1	110	2,959	1	0	1	118	2,977	1	0	1	119
			TFTM	2,753	1	0	1	110	2,956	1	0	1	118	2,975	1	0	1	119
	530 mA	36W	T2S	4,030	1	0	1	112	4,327	1	0	1	120	4,354	1	0	1	121
			T2M	3,920	1	0	1	109	4,210	1	0	1	117	4,236	1	0	1	118
			T3S	3,978	1	0	1	111	4,272	1	0	1	119	4,299	1	0	1	119
			T3M	4,044	1	0	2	112	4,343	1	0	2	121	4,370	1	0	2	121
			T4M	3,990	1	0	1	111	4,284	1	0	1	119	4,310	1	0	1	120
			TFTM	3,987	1	0	1	111	4,281	1	0	1	119	4,308	1	0	1	120
	700 mA	47W	T2S	5,130	1	0	1	109	5,509	1	0	1	117	5,544	1	0	1	118
			T2M	4,991	1	0	2	106	5,360	1	0	2	114	5,393	1	0	2	115
			T3S	5,066	1	0	1	108	5,440	1	0	1	116	5,474	1	0	1	116
			T3M	5,148	1	0	2	110	5,529	1	0	2	118	5,563	1	0	2	118
			T4M	5,080	1	0	2	108	5,455	1	0	2	116	5,488	1	0	2	117
			TFTM	5,075	1	0	2	108	5,450	1	0	2	116	5,484	1	0	2	117
	1000 mA	73W	T2S	7,147	2	0	2	98	7,675	2	0	2	105	7,723	1	0	1	104
			T2M	6,954	2	0	2	95	7,467	2	0	2	102	7,514	2	0	2	103
			T3S	7,057	1	0	2	97	7,579	1	0	2	104	7,627	1	0	2	104
			T3M	7,172	2	0	3	98	7,702	2	0	3	106	7,751	2	0	3	106
			T4M	7,076	1	0	2	97	7,599	1	0	2	104	7,646	1	0	2	105
			TFTM	7,071	1	0	2	97	7,594	1	0	2	104	7,641	1	0	2	105
30C (30 LEDs)	350 mA	36W	T2S	4,160	1	0	1	116	4,467	1	0	1	124	4,494	1	0	1	125
			T2M	4,048	1	0	1	112	4,346	1	0	2	121	4,373	1	0	2	121
			T3S	4,108	1	0	1	114	4,411	1	0	1	123	4,438	1	0	1	123
			T3M	4,174	1	0	2	116	4,483	1	0	2	125	4,510	1	0	2	125
			T4M	4,119	1	0	1	114	4,423	1	0	2	123	4,450	1	0	2	124
			TFTM	4,115	1	0	1	114	4,419	1	0	1	123	4,446	1	0	1	124
	530 mA	54W	T2S	6,001	1	0	1	111	6,444	1	0	1	119	6,484	1	0	1	120
			T2M	5,838	1	0	2	108	6,270	2	0	2	116	6,308	2	0	2	117
			T3S	5,926	1	0	2	110	6,364	1	0	2	118	6,403	1	0	2	119
			T3M	6,023	1	0	2	112	6,467	1	0	2	120	6,507	1	0	2	121
			T4M	5,942	1	0	2	110	6,380	1	0	2	118	6,420	1	0	2	119
			TFTM	5,937	1	0	2	110	6,376	1	0	2	118	6,415	1	0	2	119
	700 mA	71W	T2S	7,403	2	0	2	104	8,170	2	0	2	115	8,221	2	0	2	116
			T2M	7,609	2	0	2	107	7,949	2	0	2	112	7,998	2	0	2	113
			T3S	7,513	1	0	2	106	8,068	1	0	2	114	8,118	1	0	2	114
			T3M	7,635	2	0	3	108	8,199	2	0	3	115	8,250	2	0	3	116
			T4M	7,534	1	0	2	106	8,089	1	0	2	114	8,140	1	0	2	115
			TFTM	7,527	1	0	2	106	8,082	2	0	2	114	8,134	2	0	2	115
	1000 mA	109W	T2S	10,468	2	0	2	96	11,241	2	0	2	103	11,311	2	0	2	104
			T2M	10,184	2	0	3	93	10,936	2	0	3	100	11,005	2	0	3	101
			T3S	10,335	2	0	2	95	11,099	2	0	2	102	11,169	2	0	2	102
			T3M	10,505	2	0	3	96	11,280	2	0	3	103	11,351	2	0	3	104
			T4M	10,365	2	0	2	95	11,129	2	0	2	102	11,198	2	0	2	103
			TFTM	10,356	2	0	2	95	11,121	2	0	3	102	11,190	2	0	3	103

Note:
Available with phosphor-converted amber LED's (nomenclature AMBPC). These LED's produce light with 97+% >530 nm.
Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files.

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
20C	350	25 W	0.23	0.13	0.12	0.10	-	-
	530	36 W	0.33	0.19	0.17	0.14	-	-
	700	47 W	0.44	0.25	0.22	0.19	-	-
	1000	74 W	0.68	0.39	0.34	0.29	-	-
30C	350	36 W	0.33	0.19	0.17	0.14	-	-
	530	54 W	0.50	0.29	0.25	0.22	-	-
	700	71 W	0.66	0.38	0.33	0.28	0.23	0.16
	1000	109 W	1.01	0.58	0.50	0.44	-	-

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXW2 LED 30C 1000** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.92	0.87

Motion Sensor Default Settings

Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*For use when motion sensor is used as dusk to dawn control

PER Table

Control	PER (3 wire)	PER5 (5 wire)		PER7 (7 wire)		
			Wire 4/Wire5		Wire 4/Wire5	Wire 6/Wire7
Photocontrol Only (On/Off)	✓	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM	⊘	✓	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
ROAM with Motion	⊘	⚠	Wired to dimming leads on driver	⚠	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof*	⊘	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture
Futureproof* with Motion	⊘	⚠	Wired to dimming leads on driver	✓	Wired to dimming leads on driver	Wires Capped inside fixture

✓ Recommended

⊘ Will not work

⚠ Alternate

*Futureproof means: Ability to change controls in the future.

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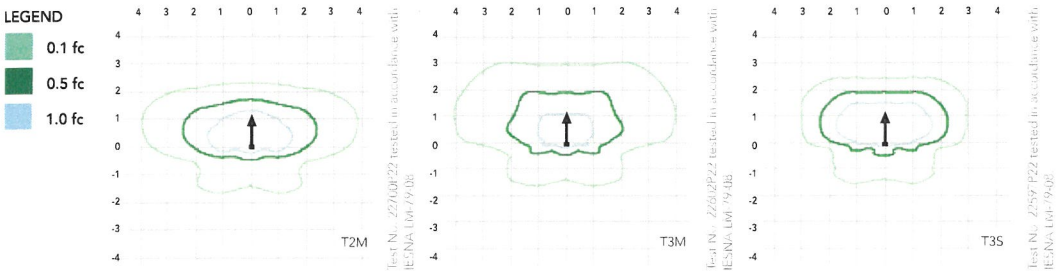
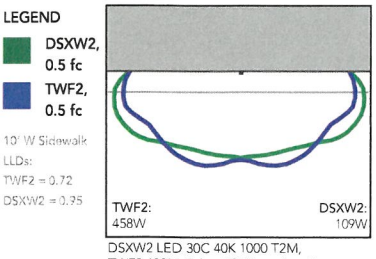
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 2 homepage.

Isofootcandle plots for the DSXW2 LED 30C 1000 40K. Distances are in units of mounting height (25').



Distribution overlay comparison to 400W metal halide.



DSXW2 LED 30C 40K 1000 T2M, TWF2 400M Pulse, 25' Mounting Ht

FEATURES & SPECIFICATIONS

INTENDED USE
The energy savings, long life and easy-to-install design of the D-Series Wall Size 2 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

CONSTRUCTION
Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (70 min. CRI), 4000 K (70 min. CRI) or 5000 K (70 min. CRI) configurations.

ELECTRICAL
Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L87/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION
Included universal mounting bracket attaches securely to any 4" round or square outlet box for quick and easy installation. Luminaire has a slotted gasket wireway and attaches to the mounting bracket via corrosion-resistant screws.

LISTINGS
CSA certified to U.S. and Canadian standards. Rated for -40°C minimum ambient.

BUY AMERICAN ACT
This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

WARRANTY
Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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LITHONIA LIGHTING®

Catalog Number	VAP 4000LM FST WD 40K 80CRI
Notes	
Type	NA2

FEATURES & SPECIFICATIONS

INTENDED USE — Ideal for use in applications where smart, energy-efficient fixtures are desired. Typical applications include parking garages, canopies, transportation, schools, hospitals, cold storage and exterior retail environments where moisture or dust is a concern. Polycarbonate enclosure protects fixture while remaining easy to service and clean. Not for use or installation in direct outdoor sunlight. Must be installed under canopy or covered ceiling. For direct sunlight installations, please refer to the FEX product family. **Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate. Click here for Acrylic-Polycarbonate Compatibility table for suitable uses.**

CONSTRUCTION — UV-stabilized, injection-molded, impact-resistant, frosted polycarbonate housing with continuous poured in place, closed-cell gasket. 20-gauge steel channel and channel cover. Aluminum sheet metal board plate for thermal conduction and support. Captive, tamper-resistant, polycarbonate latches standard (8 Torx T-20 tamper-resistant screws included). Stainless steel latches also available. Fixture design allows for approximately 4% up-light.

OPTICS — UV-stabilized, injection-molded, impact-resistant, clear transparent and frosted, polycarbonate lens with aesthetic rib detail (.080" thick). Miro 5 aluminum reflector used to achieve wide distribution.

ELECTRICAL — Utilizes high-output LEDs integrated on a two-layer circuit board, ensuring cool-running operation. Standard 0-10V dimming. Integral 6kV/3kA surge protection, tested in accordance to IEEE/ANSI standards. >L88 at 60,000 hours (see chart on page 3).

INSTALLATION — Two stainless steel surface mount brackets standard (unless another mounting option is chosen) allowing for ceiling or suspended mount. A variety of mounting options are available including stainless steel mounting options: J-box mounting and mounting brackets for suspension with aircraft cable (cable not included). Optional stainless steel V-hooks available for chain hanging (chain not included). Surface conduit entry on one end or each end (WLFEND or WLFEND2) and on top (WLF or WLFIN) allow for rigid conduit entry. For horizontal and vertical mounting on a wall, application must be under a covered ceiling and QMB option recommended. 1/2" - 3/4" KO. When wall mounted the product will be rated for damp location only.

LISTINGS — CSA Certified to UL and C-UL standards. For use in ambient temperatures ranging from -20°F (-29°C) to 104°F(40°C). VAP LED is wet location listed for covered ceiling applications. IP65 and IP66 rated. VAP LED is NSF Splash Zone rated when suspended or ceiling mounted. When wall mounted the product will be rated for damp location only. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

BUY AMERICAN ACT — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY — 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions

For installed Rough Service Product(s), Acuity warrants that, for the lifetime of the product(s), the polycarbonate lens and/or polycarbonate housing will withstand breakage resulting from occasional physical abuse and rough handling (the "Rough Service Warranty"), not withstanding the vandalism exclusion set forth at www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

ARCHWAY™ PASSAGE

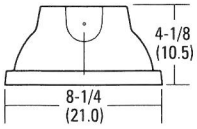
Rough Service Fixture

VAP LED

CEILING/
SUSPEND MOUNT

Specifications

Length: 54-3/4 (139.1)
Width: 8-1/4 (21.0)
Depth: 4-1/8 (10.5)
Weight: 13.5 lbs. (5.9 kg)



All dimensions are shown in inches (centimeters) unless otherwise noted.

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® or control networks marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

VAP Linear Rough Service, LED

A+ Capable options indicated by this color background.

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: VAP 4000LM FST MD MVOLT GZ10 40K 80CRI

VAP							
Series	**Nominal lumens**	**Diffuser**	**Distribution**	**Voltage**	**Driver**	**Color temperature**	**CRI**
VAP	4000LM 4,000 lumens	FST Frosted polycarbonate lens	MD Medium	MVOLT 120-277V	GZ10 0 - 10V dimming	30K 3000K	80CRI 80 CRI
	6000LM 6,000 lumens	PCL Clear polycarbonate lens	WD Wide	120 120V		35K 3500K	90CRI 90 CRI
	8000LM 8,000 lumens‡			277 277V		40K 4000K	
	12000LM 12,000 lumens‡			HVOLT 347-480V		50K 5000K	
	15000LM 15,000 lumens‡			347 347V			
				480 480V			

Options

Emergency:

BGTD	Bodine® generator transformer device‡
BSL722C	Bodine® emergency LED battery pack for -20°C and up, CA Title 20 Noncompliant‡
E15WCP	Emergency battery pack, 15W constant power, Certified in CA Title 20 MAEDBS‡

Other Options:

BAA	Buy America(n) Act Compliant
DL	Damp location
LSC	Lens safety clip
SPD	Surge protection device‡
WLF	Wet location fitting (two outboard, top)‡
WLFIN	Wet location fitting (two inboard, top)‡
WLFEND	Wet location fitting (one end)
WLFEND2	Wet location fitting (both ends)‡

Cord Sets:

CS89	Cord only (no plug), 16 gauge, 3 conductors, 6ft, white, wet location‡
CS88	Brad Harrison Mini-Change® cordset with straight blade plug, 16 gauge, 3 conductors, 6ft, yellow‡
CS88L12	Brad Harrsion Mini-Change® cordset with straight blade plug, 16 gauge, 3 conductors, 12ft, yellow‡

Mounting Brackets:

CMB	Chain-mount suspension bracket
JSB	Junction box snap-bracket
STSL	Stainless steel tamper resistant latches
QMB	Quick-mount ceiling bracket

Individual Controls:‡

MSI10NWL	360° Low mount sensor, (8-15' mounting heights), outdoor PIR, ON/OFF occupancy, wet location (LINK)
MSI102L3VWL	360° Low mount sensor, (8-15' mounting heights), outdoor PIR, occupancy controlled dimming (bi-level), wet location (LINK)
MSI10NWL DSCNWL	360° Low mount sensor, (8-15' mounting heights), outdoor PIR, ON/OFF photocell, wet location (LINK)

nLight® Wireless:‡

NLTAIR2 RSBOR10	nLight® Air Generation 2 enabled, 360° low mount sensor, (8-15' heights), (LINK)

Accessories: *Order as separate catalog number. (Ships separately)*

VAPSMB	Surface-mount bracket
VAPQMB	Quick-mount ceiling bracket
VAPCMB	Chain-mount bracket
VAPJSB	Junction box snap bracket
HC36 M12	Wire hook and 36" chain set‡
HC36 STS M12	Wire hook and 36" chain set‡
RK1 T20BIT U	Hex base driver bit, Torx T20 Tamper resistant screws with center reject pin

‡ Option Value Ordering Restrictions

Option Value	Restriction
8000LM	Not available with BSL722C.
12000LM	Not available with BSL722C or E15WCP.
15000LM	Not available with BSL722C, E15WCP, HVOLT, 347 or 480. Maximum ambient temperature 35°C.
BGTD	Must specify voltage. Not available with HVOLT, 347 or 480. If used with 8000LM, 12000LM or 15000LM, maximum ambient temperature is 35°C. SPD is standard and does not require specification in nomenclature. Not available with battieries.
BSL722C	Not available with HVOLT, 347 or 480. SPD is standard and does not require specification in nomenclature. Maximum ambient temperature 35°C.
CS88, CS88L12	Must specify voltage. 6 foot is the standard cord length. Other lengths are available by specifying the cord length in the nomenclature. Example: CS88L15.
CS89	6 foot is the standard cord length. Other lengths are available by specifying the cord length in the nomenclature. Example: CS89L15.
E15WCP	Utilizes PS1555CP. Not available with HVOLT, 347 or 480. SPD is standard and does not require specification in nomenclature. Minimum ambient temperature is 0°C. Maximum mounting height is 25ft.
HC36, HC36 STS	Requires CMB (chain mount bracket) option.
Individual Controls	Must specify voltage. Not available with HVOLT, 347, 480 or other sensors. SPD is standard and does not require specification in nomenclature.
nLight® Wireless	Must specify voltage. Not available with HVOLT, 347, 480 or other sensors. SPD is standard and does not require specification in nomenclature. Normal luminaires (non-emergency) can be used as a normal power sensing device for nearby nLight AIR devices and luminaires with EM emergency options.
SPD	For additional protection up to 10kV. Not available with BSL722C, E15WCP, BGTD, MSI10NWL, MSI102L3VWL and MSI10NWL DSCNWL. The SPD is already included when the fixture is ordered with those options. SPD will not be called out in the nomenclature.
WLF, WLFIN, WLFEND	Utilizes 5/8" long NPT threaded hub.
WLFEND2	Not available with cordsets or sensor options. Utilizes 5/8" long NPT threaded hub.

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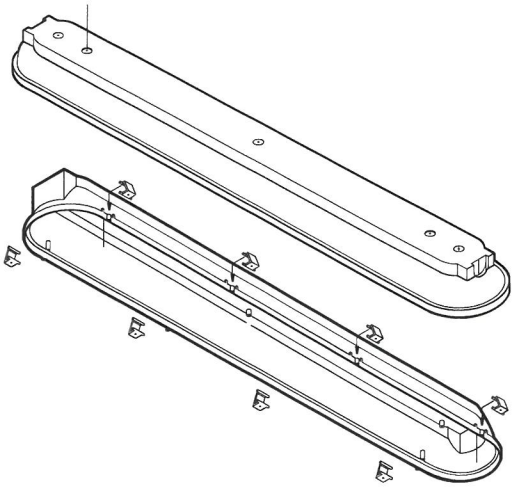
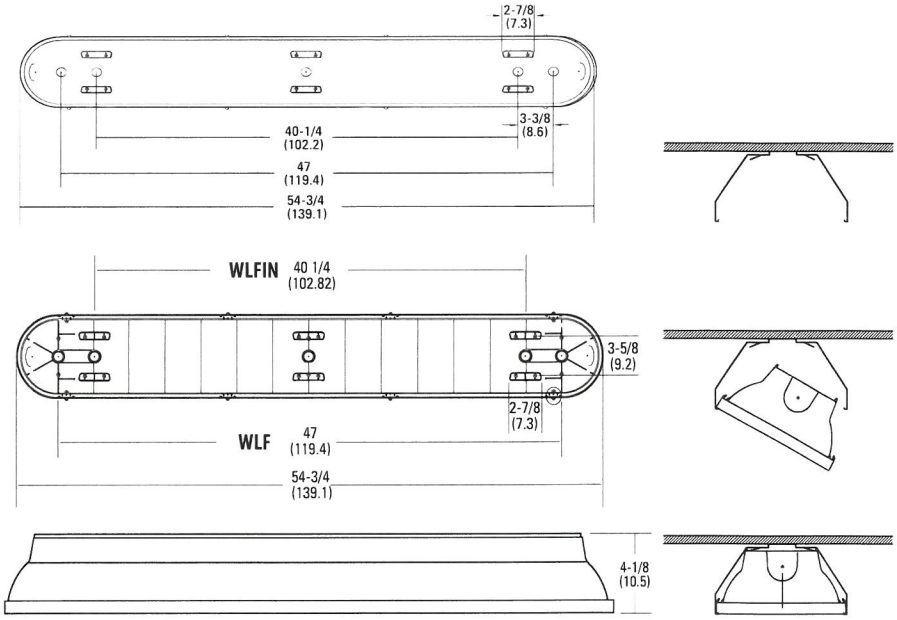
DIMENSIONS

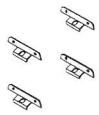
All dimensions are shown in inches (centimeters) unless otherwise noted.

Specifications subject to change without notice.



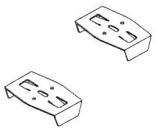


MOUNTING ACCESSORIES

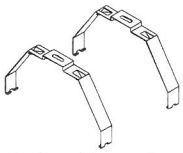


CMB - Chain Mounting Brackets

JSB - Junction Box Mounting Bracket



QMB - Quick-Mount Mounting Brackets



SMB - Surface Mount Brackets (ship with fixture as standard)

ARCHWAY™ PASSAGE™ LED Specification Matrix											
Nominal lumens	Distribution	Initial delivered lumens @ 80CRI with clear polycarbonate lens				Initial delivered lumens @80CRI with frosted polycarbonate lens				Wattage @120V	Comparable source
		30K	35K	40K	50K	30K	35K	40K	50K		
4000LM	MD	4295	4446	4517	4647	3695	3777	3887	3998	33	2-lamp 32W T8, 1-lamp 54W T5, 70W HID
	WD	4208	4357	4426	4553	3623	3750	3810	3919		
6000LM	MD	6013	6226	6325	6506	5174	5357	5443	5598	49	3-lamp 32W T8, 2-lamp 54W T5, 100W HID
	WD	5892	6100	6198	6375	5072	5251	5335	5488		
8000LM	MD	8348	8643	8781	9032	7183	7437	7556	7772	67	4-lamp 32W T8, 2-lamp 54W T5, 150W HID
	WD	8180	8469	8604	8850	7042	7290	7407	7618		
12000LM	MD	11742	12156	12350	12703	10103	10460	10627	10931	99	6-lamp 32W T8, 3-lamp 54W T5, 250W HID
	WD	11505	11911	12101	12447	9904	10254	10417	10715		
15000LM	MD	14519	15031	15271	15708	12493	12934	13140	13516	115	6-lamp 32W T8, 4-lamp 54W T5, 250W HID
	WD	14226	14728	14963	15391	12246	12679	12881	13249		

Lumen Mantenance @ 25C

Operating Hours	0	10,000	20,000	25,000	35,000	50,000	60,000	75,000	100,000
4000LM	1	0.980	0.973	0.969	0.962	0.952	0.95	0.935	0.919
6000LM	1	0.972	0.962	0.957	0.950	0.933	0.923	0.909	0.886
8000LM	1	0.962	0.947	0.94	0.925	0.903	0.889	0.868	0.834
12000LM	1	0.970	0.960	0.952	0.940	0.922	0.910	0.900	0.865
15000LM	1	0.969	0.956	0.949	0.936	0.917	0.905	0.886	0.857

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OPTIONS AND ACCESSORIES

The VAP Series fixture offers numerous options for almost every electrical and optical component, including a long list of field-installable accessories.

rSBOR/SBOR – Fixture Mount Sensor (see www.sensorswitch.com for additional information)

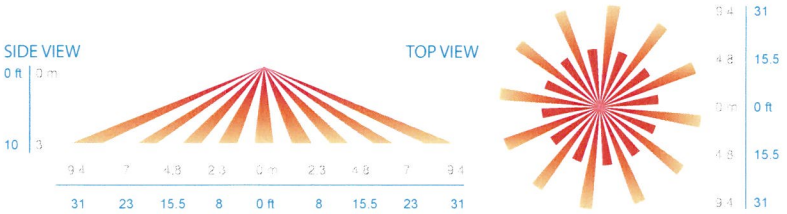
- 360° coverage
- On/Off dim
- Photocell optional
- IP66 rated
- Photocell and 0-10VDC dimming options.

Fixture sensor nomenclature	RSBOR/SBOR sensor nomenclature
For shortest lead times use one of the following SBOR configurations	
NLTAIR2 RSBOR10	RSBOR 10 EB4 WH G2
MSI10NWL	SBOR 10 OEX EB4 WH
MSI102L3VWL	SBOR 10 OEX D EB4 WH 3V
MSI10NWL DSCNWL	SBOR 10 OEX P EB4 WH

COVERAGE PATTERNS

PARKING GARAGE / LOW MOUNT APPLICATIONS

In general, the SBOR 10 is recommended for 8-15 ft (2.44-4.57 m) mounting and provides a coverage area radius for walking motion of greater than 2x the mounting height. The SBOR 10 ODP is ideal for parking garage and low pole mount applications. When mounted 10 ft high, for example, on a luminaire in a parking garage, the sensor's coverage for walking motion extends out 30 ft in a 360° pattern. This closely matches the lighting distribution of a typical parking garage luminaire. When mounted to a light pole, for example, in a parking lot or along a path, the sensor provides 270° of coverage (90° is blocked by the pole). Note, walking askew to sensor typically results in earlier detection than walking directly at sensor.



Coverage Pattern of Low Mount Lens Option (SBOR 10)

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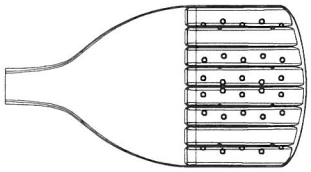
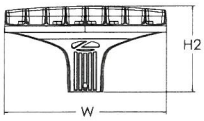
D-Series Size 0
LED Area Luminaire

Catalog Number	DSX0 LED P4 40K T3M MVOLT HS
Notes	
Type	PA3H

Specifications

EPA:	0.44 ft² (0.04 m²)
Length:	26.18" (66.5 cm)
Width:	14.06" (35.7 cm)
Height H1:	2.26" (5.7 cm)
Height H2:	7.46" (18.9 cm)
Weight:	23 lbs (10.4 kg)





Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series

DSX0 LED

LEDs

Forward optics

P1	P5
P2	P6
P3	P7
P4	

Rotated optics

P10[1]	P12[1]
P11[1]	P13[1]

Color temperature[2]

(this section 70CRI only)

30K	3000K	70CRI
40K	4000K	70CRI
50K	5000K	70CRI

(this section 80CRI only, extended lead times apply)

27K	2700K	80CRI
30K	3000K	80CRI
35K	3500K	80CRI
40K	4000K	80CRI
50K	5000K	80CRI

Distribution

AFR	Automotive front row
T1S	Type I short
T2M	Type II medium
T3M	Type III medium
T3LG	Type III low glare[3]
T4M	Type IV medium
T4LG	Type IV low glare[3]
TFTM	Forward throw medium
T5M	Type V medium
T5LG	Type V low glare
T5W	Type V wide
BLC3	Type III backlight control[3]
BLC4	Type IV backlight control[3]
LCCO	Left corner cutoff[3]
RCCO	Right corner cutoff[3]

Voltage

MVOLT	(120V-277V)[4]
HVOLT	(347V-480V)[5,6]
XVOLT	(277V-480V)[7,8]
120[16,24]	
208[16,24]	
240[16,24]	
277[16,24]	
347[16,24]	
480[16,24]	

Mounting

Shipped included

SPA	Square pole mounting (#8 drilling, 3.5" min. SQ pole)
RPA	Round pole mounting (#8 drilling, 3" min. RND pole)
SPA5	Square pole mounting (#5 drilling. 3" min. SQ pole)[9]
RPA5	Round pole mounting (#5 drilling, 3" min. RND pole)[9]
SPA8N	Square narrow pole mounting (#8 drilling, 3" min. SQ pole)
WBA	Wall bracket[10]
MA	Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options

Shipped installed

NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[13,12,18,19]
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[13,18,19]
PER	NEMA twist-lock receptacle only (controls ordered separate)[14]
PER5	Five-pin receptacle only (controls ordered separate)[14,19]
PER7	Seven-pin receptacle only (controls ordered separate)[14,19]
FAO	Field adjustable output[15,19]
BL30	Bi-level switched dimming, 30%[16,19]
BL50	Bi-level switched dimming, 50%[16,19]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]

Other options

Shipped installed

HS	Houseside shield (black finish standard)[20]
L90	Left rotated optics[21]
R90	Right rotated optics[21]
CCE	Coastal Construction[22]
HA	50°C ambient operation[22]
BAA	Buy America(n) Act Compliant
SF	Single fuse (120, 277, 347V)[24]
DF	Double fuse (208, 240, 480V)[24]

Shipped separately

EGSR	External Glare Shield (reversible, field install required, matches housing finish)
BSDB	Bird Spikes (field install required)

Finish *(required)*

DDBXD	Dark Bronze
DBLXD	Black
DNAXD	Natural Aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

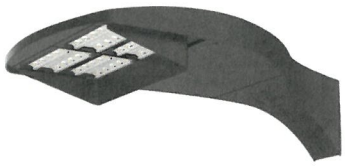
Accessories

Ordered and shipped separately.

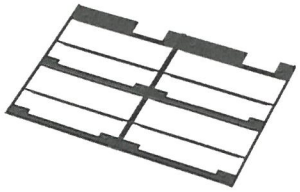
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [23]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [23]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [23]
DSHORT SBK	Shorting cap [23]
DSX0HS P#	House-side shield (enter package number P1-7, P10-13 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSX0EGSR (FINISH)	External glare shield (specify finish)
DSX0BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

NOTES
1 Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or R90.
2 30K, 40K, and 50K available in 70CRI and 80CRI. 27K and 35K only available with 80CRI. Contact Technical Support for other possible combinations.
3 T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
6 HVOLT not available with package P1, P2 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
7 XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
8 XVOLT not available in packages P1, P2 or P10. XVOLT not available with fusing (SF or DF).
9 SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
10 WBA cannot be combined with Type 5 distributions plus photocell (PER).
11 NLTAIR2 and PIRHN must be ordered together. For more information on nLight Air 2.
12 NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50 and DMG. NLTAIR2 PIRHN not available with P1, P2 and P10 using HVOLT. NLTAIR2 PIRHN not available with P1, P2 and P10 using XVOLT. NLTAIR2 PIRHN not available with P1 using MVOLT.
13 PIR not available with NLTAIR2, PER, PER5, PER7, FAO BL30, BL50 and DMG. PIR not available with P1, P2 and P10 using HVOLT. PIR not available with P1, P2 and P10 using XVOLT. PIR not available with P1 using MVOLT.
14 PER/PER5/PER7 not available with NLTAIR2, PIR, BL30, BL50. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
15 FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, or DMG.
16 BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO and DMG. BL30 or BL50 must specify 120, 277 or 347V. Consult tech support for 208, 240 or 480V.
17 DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50 and FAO.
18 Reference Motion Sensor Default Settings table on page 4 to see functionality.
19 Reference Controls Options table on page 4.
20 Option HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 CCE option not available with option BS and EGSR. Contact Technical Support for availability.
22 Option HA not available with performance packages P6, P7, P12 and P13.
23 Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.
24 Single fuse (SF) requires 120V, 277V, or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF).

Shield Accessories



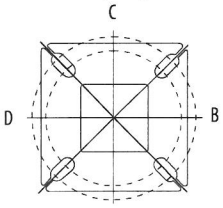
External Glare Shield (EGSR)

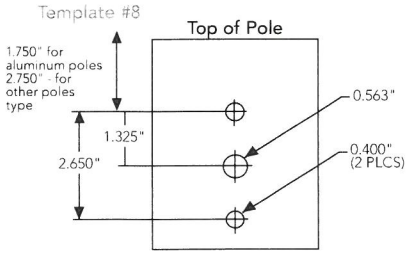


House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION
(from top of pole)





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX0 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX0 with SPA	0.44	0.88	0.96	1.18	---	1.16
DSX0 with SPA5, SPA8N	0.51	1.02	1.06	1.26	---	1.29
DSX0 with RPA, RPA5	0.51	1.02	1.06	1.26	1.24	1.29
DSX0 with MA	0.64	1.28	1.24	1.67	1.70	1.93

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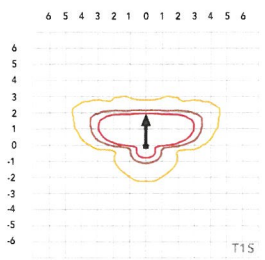
Photometric Diagrams

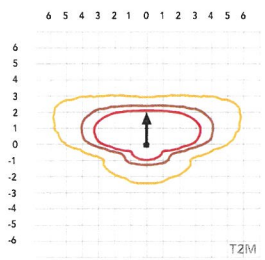
To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's homepage.

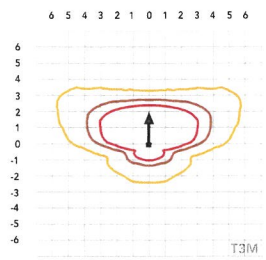
Isofootcandle plots for the DSX0 LED P7 40K 70CRI. Distances are in units of mounting height (20').

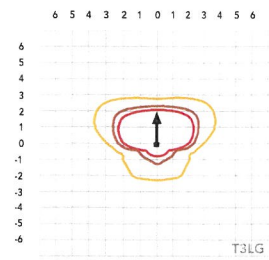
LEGEND

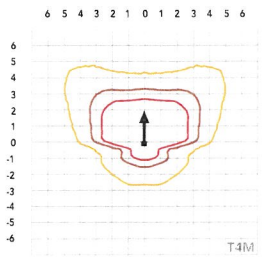
- 0.1 fc
- 0.5 fc
- 1.0 fc

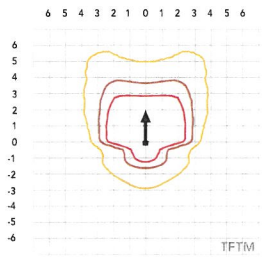


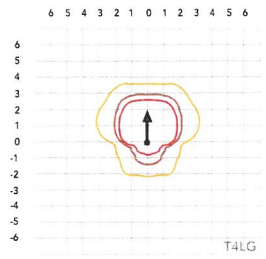


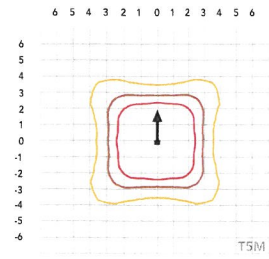


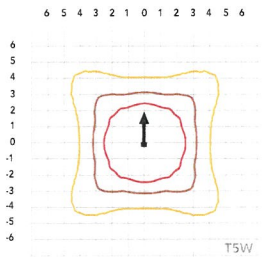


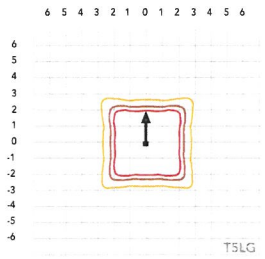


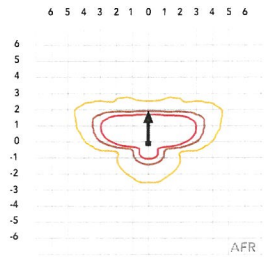


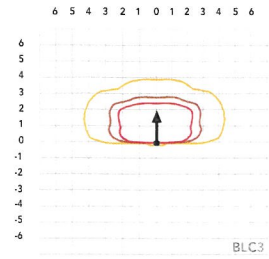


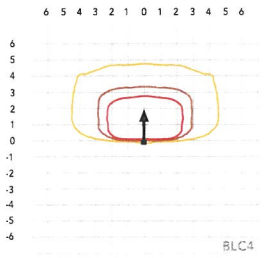


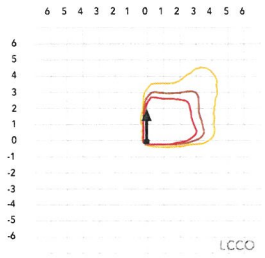


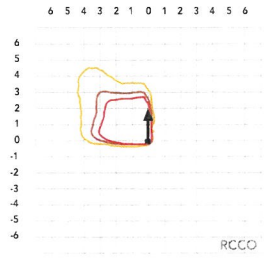












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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°C**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.94
50,000	0.89
100,000	0.80

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use published values for each package based on input watts and lumens by optic type.

Electrical Load

					Current (A)					
	Performance Package	LED Count	Drive Current (mA)	Wattage	120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	20	530	34	0.28	0.16	0.14	0.12	0.10	0.07
	P2	20	700	45	0.38	0.22	0.19	0.16	0.13	0.09
	P3	20	1050	69	0.57	0.33	0.29	0.25	0.20	0.14
	P4	20	1400	94	0.78	0.45	0.39	0.34	0.27	0.19
	P5	40	700	89	0.75	0.43	0.38	0.33	0.26	0.19
	P6	40	1050	136	1.14	0.66	0.57	0.49	0.39	0.29
	P7	40	1300	170	1.42	0.82	0.71	0.62	0.49	0.36
Rotated Optics (Requires L90 or R90)	P10	30	530	51	0.42	0.24	0.21	0.18	0.15	0.11
	P11	30	700	67	0.57	0.33	0.28	0.25	0.20	0.14
	P12	30	1050	103	0.86	0.50	0.43	0.37	0.30	0.22
	P13	30	1300	129	1.07	0.62	0.54	0.46	0.37	0.27

LED Color Temperature / Color Rendering Multipliers

	70 CRI		80CRI		90CRI	
	Lumen Multiplier	Availability	Lumen Multiplier	Availability	Lumen Multiplier	Availability
5000K	102%	Standard	92%	Extended lead-time	71%	(see note)
4000K	100%	Standard	92%	Extended lead-time	67%	(see note)
3500K	100%	(see note)	90%	Extended lead-time	63%	(see note)
3000K	96%	Standard	87%	Extended lead-time	61%	(see note)
2700K	94%	(see note)	85%	Extended lead-time	57%	(see note)

Note: Some LED types are available as per special request. Contact Technical Support for more information.

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Phototcell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	33W	20	530	T1S	4,906	1	0	1	148	5,113	1	0	1	154	5,213	1	0	1	157
				T2M	4,545	1	0	2	137	4,736	1	0	2	143	4,829	1	0	2	145
				T3M	4,597	1	0	2	138	4,791	1	0	2	144	4,885	1	0	2	147
				T3LG	4,107	1	0	1	124	4,280	1	0	1	129	4,363	1	0	1	131
				T4M	4,666	1	0	2	141	4,863	1	0	2	146	4,957	1	0	2	149
				T4LG	4,244	1	0	1	128	4,423	1	0	1	133	4,509	1	0	1	136
				TFTM	4,698	1	0	2	141	4,896	1	0	2	147	4,992	1	0	2	150
				T5M	4,801	3	0	1	145	5,003	3	0	1	151	5,101	3	0	1	154
				T5W	4,878	3	0	1	147	5,084	3	0	2	153	5,183	3	0	2	156
				T5LG	4,814	2	0	1	145	5,018	2	0	1	151	5,115	2	0	1	154
				BLC3	3,344	0	0	1	101	3,485	0	0	1	105	3,553	0	0	1	107
				BLC4	3,454	0	0	2	104	3,599	0	0	2	108	3,670	0	0	2	111
				RCCO	3,374	0	0	1	102	3,517	0	0	1	106	3,585	0	0	1	108
				LCCO	3,374	0	0	1	102	3,517	0	0	1	106	3,585	0	0	1	108
				AFR	4,906	1	0	1	148	5,113	1	0	1	154	5,213	1	0	1	157
P2	45W	20	700	T1S	6,328	1	0	1	140	6,595	1	0	1	146	6,724	1	0	1	149
				T2M	5,862	1	0	2	130	6,109	1	0	2	135	6,228	1	0	2	138
				T3M	5,930	1	0	3	131	6,180	1	0	3	137	6,301	1	0	3	140
				T3LG	5,297	1	0	1	117	5,521	1	0	1	122	5,628	1	0	1	125
				T4M	6,018	1	0	3	133	6,272	1	0	3	139	6,395	1	0	3	142
				T4LG	5,474	1	0	1	121	5,705	1	0	1	126	5,816	1	0	1	129
				TFTM	6,060	1	0	3	134	6,316	1	0	3	140	6,439	1	0	3	143
				T5M	6,192	3	0	1	137	6,453	3	0	2	143	6,579	3	0	2	146
				T5W	6,293	3	0	2	139	6,558	3	0	2	145	6,686	3	0	2	148
				T5LG	6,210	2	0	1	138	6,472	3	0	1	143	6,598	3	0	1	146
				BLC3	4,313	0	0	2	96	4,495	0	0	2	100	4,583	0	0	2	102
				BLC4	4,455	0	0	2	99	4,643	0	0	2	103	4,733	0	0	2	105
				RCCO	4,352	0	0	2	96	4,536	0	0	2	100	4,624	0	0	2	102
				LCCO	4,352	0	0	2	96	4,536	0	0	2	100	4,624	0	0	2	102
				AFR	6,328	1	0	1	140	6,595	1	0	1	146	6,724	1	0	1	149
P3	69W	20	1050	T1S	9,006	1	0	2	131	9,386	1	0	2	136	9,569	1	0	2	139
				T2M	8,343	2	0	3	121	8,694	2	0	3	126	8,864	2	0	3	129
				T3M	8,439	2	0	3	122	8,795	2	0	3	128	8,967	2	0	3	130
				T3LG	7,539	1	0	2	109	7,857	1	0	2	114	8,010	1	0	2	116
				T4M	8,565	2	0	3	124	8,926	2	0	3	129	9,100	2	0	3	132
				T4LG	7,790	1	0	2	113	8,119	1	0	2	118	8,277	1	0	2	120
				TFTM	8,624	1	0	3	125	8,988	1	0	3	130	9,163	2	0	3	133
				T5M	8,812	3	0	2	128	9,184	4	0	2	133	9,363	4	0	2	136
				T5W	8,955	4	0	2	130	9,333	4	0	2	135	9,515	4	0	2	138
				T5LG	8,838	3	0	1	128	9,211	3	0	1	134	9,390	3	0	1	136
				BLC3	6,139	0	0	2	89	6,398	0	0	2	93	6,522	0	0	2	95
				BLC4	6,340	0	0	3	92	6,607	0	0	3	96	6,736	0	0	3	98
				RCCO	6,194	1	0	2	90	6,455	1	0	2	94	6,581	1	0	2	95
				LCCO	6,194	1	0	2	90	6,455	1	0	2	94	6,581	1	0	2	95
				AFR	9,006	1	0	2	131	9,386	1	0	2	136	9,569	1	0	2	139
P4	93W	20	1400	T1S	11,396	1	0	2	122	11,877	1	0	2	128	12,109	2	0	2	130
				T2M	10,557	2	0	3	113	11,003	2	0	3	118	11,217	2	0	3	121
				T3M	10,680	2	0	3	115	11,130	2	0	3	120	11,347	2	0	3	122
				T3LG	9,540	1	0	2	103	9,942	1	0	2	107	10,136	1	0	2	109
				T4M	10,839	2	0	3	117	11,296	2	0	3	121	11,516	2	0	4	124
				T4LG	9,858	1	0	2	106	10,274	1	0	2	110	10,474	1	0	2	113
				TFTM	10,914	2	0	3	117	11,374	2	0	3	122	11,596	2	0	3	125
				T5M	11,152	4	0	2	120	11,622	4	0	2	125	11,849	4	0	2	127
				T5W	11,332	4	0	3	122	11,811	4	0	3	127	12,041	4	0	3	129
				T5LG	11,184	3	0	1	120	11,656	3	0	2	125	11,883	3	0	2	128
				BLC3	7,768	0	0	2	83	8,096	0	0	2	87	8,254	0	0	2	89
				BLC4	8,023	0	0	3	86	8,362	0	0	3	90	8,524	0	0	3	92
				RCCO	7,838	1	0	2	84	8,169	1	0	2	88	8,328	1	0	2	90
				LCCO	7,838	1	0	2	84	8,169	1	0	2	88	8,328	1	0	2	90
				AFR	11,396	1	0	2	122	11,877	1	0	2	128	12,109	2	0	2	130

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P5	90W	40	700	T1S	12,380	2	0	2	137	12,902	2	0	2	143	13,154	2	0	2	146
				T2M	11,468	2	0	3	127	11,952	2	0	3	133	12,185	2	0	3	135
				T3M	11,601	2	0	3	129	12,091	2	0	3	134	12,326	2	0	4	137
				T3LG	10,363	2	0	2	115	10,800	2	0	2	120	11,011	2	0	2	122
				T4M	11,774	2	0	4	131	12,271	2	0	4	136	12,510	2	0	4	139
				T4LG	10,709	1	0	2	119	11,160	2	0	2	124	11,378	2	0	2	126
				TFTM	11,856	2	0	3	132	12,356	2	0	4	137	12,596	2	0	4	140
				T5M	12,114	4	0	2	134	12,625	4	0	2	140	12,871	4	0	2	143
				T5W	12,310	4	0	3	137	12,830	4	0	3	142	13,080	4	0	3	145
				T5LG	12,149	3	0	2	135	12,662	3	0	2	141	12,908	3	0	2	143
				BLC3	8,438	0	0	2	94	8,794	0	0	2	98	8,966	0	0	2	99
				BLC4	8,715	0	0	3	97	9,083	0	0	3	101	9,260	0	0	3	103
				RCCO	8,515	1	0	2	94	8,874	1	0	2	98	9,047	1	0	2	100
				LCCO	8,515	1	0	2	94	8,874	1	0	2	98	9,047	1	0	2	100
				AFR	12,380	2	0	2	137	12,902	2	0	2	143	13,154	2	0	2	146
P6	137W	40	1050	T1S	17,545	2	0	3	128	18,285	2	0	3	133	18,642	2	0	3	136
				T2M	16,253	3	0	4	119	16,939	3	0	4	124	17,269	3	0	4	126
				T3M	16,442	2	0	4	120	17,135	3	0	4	125	17,469	3	0	4	128
				T3LG	14,687	2	0	2	107	15,306	2	0	2	112	15,605	2	0	2	114
				T4M	16,687	2	0	4	122	17,391	3	0	5	127	17,730	3	0	5	129
				T4LG	15,177	2	0	2	111	15,817	2	0	2	115	16,125	2	0	2	118
				TFTM	16,802	2	0	4	123	17,511	2	0	4	128	17,852	2	0	5	130
				T5M	17,168	4	0	2	125	17,893	5	0	3	131	18,241	5	0	3	133
				T5W	17,447	5	0	3	127	18,183	5	0	3	133	18,537	5	0	3	135
				T5LG	17,218	4	0	2	126	17,944	4	0	2	131	18,294	4	0	2	134
				BLC3	11,959	0	0	3	87	12,464	0	0	3	91	12,707	0	0	3	93
				BLC4	12,352	0	0	4	90	12,873	0	0	4	94	13,124	0	0	4	96
				RCCO	12,067	1	0	3	88	12,576	1	0	3	92	12,821	1	0	3	94
				LCCO	12,067	1	0	3	88	12,576	1	0	3	92	12,821	1	0	3	94
				AFR	17,545	2	0	3	128	18,285	2	0	3	133	18,642	2	0	3	136
P7	171W	40	1300	T1S	20,806	2	0	3	122	21,683	2	0	3	127	22,106	2	0	3	129
				T2M	19,273	3	0	4	113	20,086	3	0	4	118	20,478	3	0	4	120
				T3M	19,497	3	0	5	114	20,319	3	0	5	119	20,715	3	0	5	121
				T3LG	17,416	2	0	2	102	18,151	2	0	2	106	18,504	2	0	2	108
				T4M	19,787	3	0	5	116	20,622	3	0	5	121	21,024	3	0	5	123
				T4LG	17,997	2	0	2	105	18,756	2	0	2	110	19,121	2	0	2	112
				TFTM	19,924	3	0	5	117	20,765	3	0	5	122	21,170	3	0	5	124
				T5M	20,359	5	0	3	119	21,217	5	0	3	124	21,631	5	0	3	127
				T5W	20,689	5	0	3	121	21,561	5	0	3	126	21,982	5	0	3	129
				T5LG	20,418	4	0	2	120	21,279	4	0	2	125	21,694	4	0	2	127
				BLC3	14,182	0	0	3	83	14,780	0	0	3	87	15,068	0	0	3	88
				BLC4	14,647	0	0	4	86	15,265	0	0	4	89	15,562	0	0	4	91
				RCCO	14,309	1	0	3	84	14,913	1	0	3	87	15,204	1	0	3	89
				LCCO	14,309	1	0	3	84	14,913	1	0	3	87	15,204	1	0	3	89
				AFR	20,806	2	0	3	122	21,683	2	0	3	127	22,106	2	0	3	129

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Rotated Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	51W	30	530	T1S	7,399	3	0	3	145	7,711	3	0	3	151	7,862	3	0	3	154
				T2M	6,854	3	0	3	135	7,144	3	0	3	140	7,283	3	0	3	143
				T3M	6,933	3	0	3	136	7,225	3	0	3	142	7,366	3	0	3	145
				T3LG	6,194	2	0	2	122	6,455	2	0	2	127	6,581	2	0	2	129
				T4M	7,036	3	0	3	138	7,333	3	0	3	144	7,476	3	0	3	147
				T4LG	6,399	2	0	2	126	6,669	2	0	2	131	6,799	2	0	2	134
				TFTM	7,086	3	0	3	139	7,385	3	0	3	145	7,529	3	0	3	148
				T5M	7,239	3	0	2	142	7,545	3	0	2	148	7,692	3	0	2	151
				T5W	7,357	3	0	2	145	7,667	3	0	2	151	7,816	4	0	2	154
				T5LG	7,260	3	0	1	143	7,567	3	0	1	149	7,714	3	0	1	152
				BLC3	5,043	3	0	3	99	5,256	3	0	3	103	5,358	3	0	3	105
				BLC4	5,208	3	0	3	102	5,428	3	0	3	107	5,534	3	0	3	109
				RCCO	5,089	0	0	2	100	5,303	0	0	2	104	5,407	0	0	2	106
				LCCO	5,089	0	0	2	100	5,303	0	0	2	104	5,407	0	0	2	106
				AFR	7,399	3	0	3	145	7,711	3	0	3	151	7,862	3	0	3	154
P11	68W	30	700	T1S	9,358	3	0	3	138	9,753	3	0	3	143	9,943	3	0	3	146
				T2M	8,669	3	0	3	127	9,034	3	0	3	133	9,211	3	0	3	135
				T3M	8,768	3	0	3	129	9,138	3	0	3	134	9,316	3	0	3	137
				T3LG	7,833	3	0	3	115	8,164	3	0	3	120	8,323	3	0	3	122
				T4M	8,899	3	0	3	131	9,274	3	0	3	136	9,455	3	0	3	139
				T4LG	8,093	3	0	3	119	8,435	3	0	3	124	8,599	3	0	3	126
				TFTM	8,962	3	0	3	132	9,340	3	0	3	137	9,522	3	0	3	140
				T5M	9,156	4	0	2	135	9,542	4	0	2	140	9,728	4	0	2	143
				T5W	9,304	4	0	2	137	9,696	4	0	2	143	9,885	4	0	2	145
				T5LG	9,182	3	0	1	135	9,569	3	0	1	141	9,756	3	0	1	143
				BLC3	6,378	3	0	3	94	6,647	3	0	3	98	6,777	3	0	3	100
				BLC4	6,587	3	0	3	97	6,865	3	0	3	101	6,999	3	0	3	103
				RCCO	6,436	0	0	2	95	6,707	0	0	2	99	6,838	0	0	2	101
				LCCO	6,436	0	0	2	95	6,707	0	0	2	99	6,838	0	0	2	101
				AFR	9,358	3	0	3	138	9,753	3	0	3	143	9,943	3	0	3	146
P12	103W	30	1050	T1S	13,247	3	0	3	128	13,806	3	0	3	134	14,075	3	0	3	136
				T2M	12,271	4	0	4	119	12,789	4	0	4	124	13,038	4	0	4	126
				T3M	12,412	4	0	4	120	12,935	4	0	4	125	13,187	4	0	4	128
				T3LG	11,089	3	0	3	107	11,556	3	0	3	112	11,782	3	0	3	114
				T4M	12,597	4	0	4	122	13,128	4	0	4	127	13,384	4	0	4	129
				T4LG	11,457	3	0	3	111	11,940	3	0	3	116	12,173	3	0	3	118
				TFTM	12,686	4	0	4	123	13,221	4	0	4	128	13,479	4	0	4	130
				T5M	12,960	4	0	2	125	13,507	4	0	2	131	13,770	4	0	2	133
				T5W	13,170	4	0	3	127	13,726	4	0	3	133	13,994	4	0	3	135
				T5LG	12,998	3	0	2	126	13,546	3	0	2	131	13,810	3	0	2	134
				BLC3	9,029	3	0	3	87	9,409	3	0	3	91	9,593	3	0	3	93
				BLC4	9,324	4	0	4	90	9,718	4	0	4	94	9,907	4	0	4	96
				RCCO	9,110	1	0	2	88	9,495	1	0	2	92	9,680	1	0	2	94
				LCCO	9,110	1	0	2	88	9,494	1	0	2	92	9,680	1	0	2	94
				AFR	13,247	3	0	3	128	13,806	3	0	3	134	14,075	3	0	3	136
P13	129W	30	1300	T1S	15,704	3	0	3	122	16,366	3	0	3	127	16,685	4	0	4	130
				T2M	14,547	4	0	4	113	15,161	4	0	4	118	15,457	4	0	4	120
				T3M	14,714	4	0	4	114	15,335	4	0	4	119	15,634	4	0	4	121
				T3LG	13,145	3	0	3	102	13,700	3	0	3	106	13,967	3	0	3	108
				T4M	14,933	4	0	4	116	15,563	4	0	4	121	15,867	4	0	4	123
				T4LG	13,582	3	0	3	105	14,155	3	0	3	110	14,431	3	0	3	112
				TFTM	15,039	4	0	4	117	15,673	4	0	4	122	15,979	4	0	4	124
				T5M	15,364	4	0	2	119	16,013	4	0	2	124	16,325	4	0	2	127
				T5W	15,613	5	0	3	121	16,272	5	0	3	126	16,589	5	0	3	129
				T5LG	15,409	3	0	2	120	16,059	3	0	2	125	16,372	4	0	2	127
				BLC3	10,703	4	0	4	83	11,155	4	0	4	87	11,372	4	0	4	88
				BLC4	11,054	4	0	4	86	11,520	4	0	4	89	11,745	4	0	4	91
				RCCO	10,800	1	0	2	84	11,256	1	0	2	87	11,475	1	0	3	89
				LCCO	10,800	1	0	2	84	11,255	1	0	2	87	11,475	1	0	3	89
				AFR	15,704	3	0	3	122	16,366	3	0	3	127	16,685	4	0	4	130

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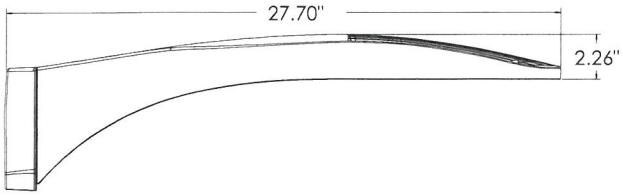
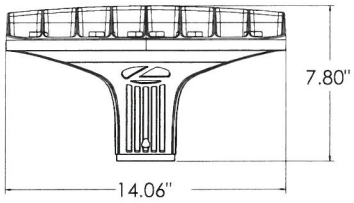
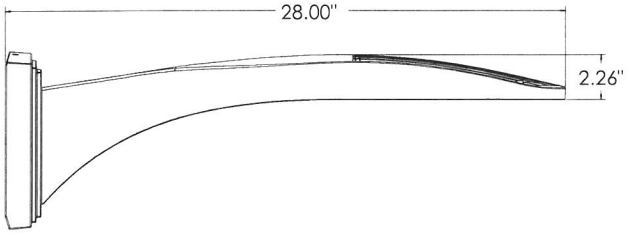
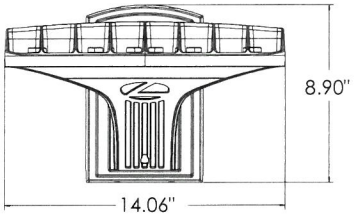
Dimensions



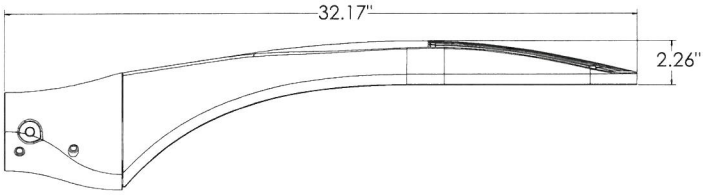


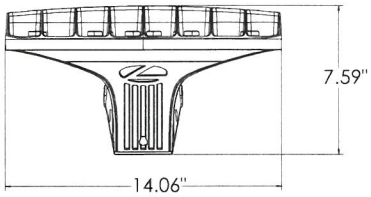
DSX0 with RPA, RPA5, SPA5, SPA8N mount
Weight: 25 lbs





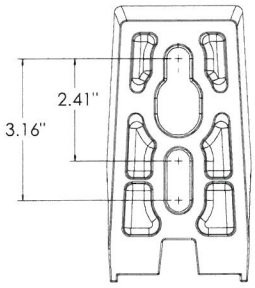
DSX0 with WBA mount
Weight: 27 lb



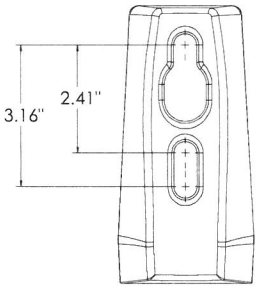


DSX0 with MA mount
Weight: 28 lbs

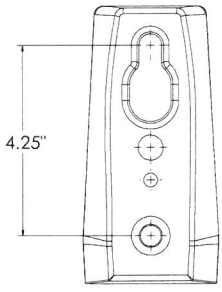
SPA (STANDARD ARM)



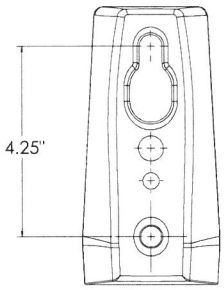
RPA



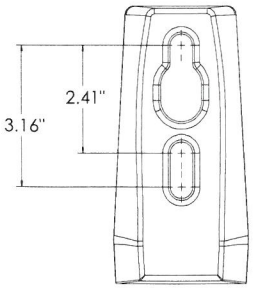
SPA5



RPA5



SPA8N



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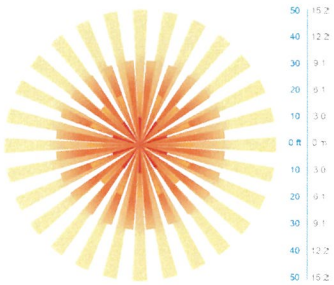
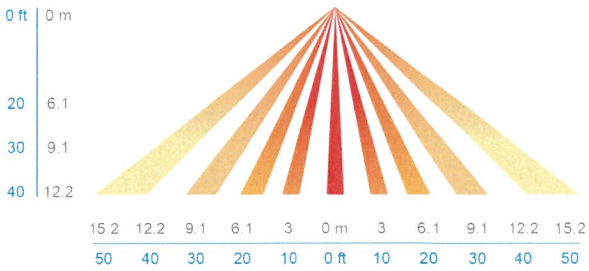
nLight Control - Sensor Coverage and Settings

nLight Sensor Coverage Pattern

NLTAIR2 PIRHN



Top



Side

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G. Low EPA (0.44 ft²) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

COASTAL CONSTRUCTION (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS

Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. 80CRI configurations are also available. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L80/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX0 LED area luminaire has a number of control options. DSX Size 0, comes standard with 0-10V dimming driver. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. PIR integrated motion sensor with on-board photocell feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS

The DSX0 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION

Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

BUY AMERICAN ACT

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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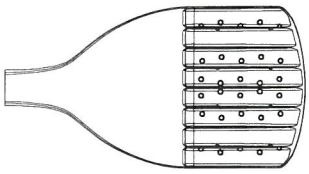
d"series

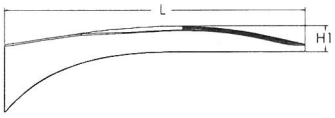
D-Series Size 0
LED Area Luminaire

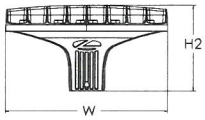
Catalog Number	DSX0 LED P4 40K T4M MVOLT
Notes	
Type	PA4

Specifications

EPA:	0.44 ft² (0.04 m²)
Length:	26.18" (66.5 cm)
Width:	14.06" (35.7 cm)
Height H1:	2.26" (5.7 cm)
Height H2:	7.46" (18.9 cm)
Weight:	23 lbs (10.4 kg)







Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series

DSX0 LED

LEDs

Forward optics

P1	P5
P2	P6
P3	P7
P4	

Rotated optics

P10[1]	P12[1]
P11[1]	P13[1]

Color temperature[2] / Color Rendering Index[2]

(this section 70CRI only)		
30K	3000K	70CRI
40K	4000K	70CRI
50K	5000K	70CRI
(this section 80CRI only, extended lead times apply)		
27K	2700K	80CRI
30K	3000K	80CRI
35K	3500K	80CRI
40K	4000K	80CRI
50K	5000K	80CRI

Distribution

AFR	Automotive front row
T1S	Type I short
T2M	Type II medium
T3M	Type III medium
T3LG	Type III low glare[3]
T4M	Type IV medium
T4LG	Type IV low glare[3]
TFTM	Forward throw medium
T5M	Type V medium
T5LG	Type V low glare
T5W	Type V wide
BLC3	Type III backlight control[3]
BLC4	Type IV backlight control[3]
LCCO	Left corner cutoff[3]
RCCO	Right corner cutoff[3]

Voltage

MVOLT	(120V-277V)[4]
HVOLT	(347V-480V)[5,6]
XVOLT	(277V-480V)[7,8]
120[16,24]	
208[16,24]	
240[16,24]	
277[16,24]	
347[16,24]	
480[16,24]	

Mounting

Shipped included

SPA	Square pole mounting (#8 drilling, 3.5" min. SQ pole)
RPA	Round pole mounting (#8 drilling, 3" min. RND pole)
SPA5	Square pole mounting (#5 drilling. 3" min. SQ pole)[9]
RPA5	Round pole mounting (#5 drilling, 3" min. RND pole)[9]
SPA8N	Square narrow pole mounting (#8 drilling, 3" min. SQ pole)
WBA	Wall bracket[10]
MA	Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options

Shipped installed

NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[11,12,18,19]
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[13,18,19]
PER	NEMA twist-lock receptacle only (controls ordered separate)[14]
PER5	Five-pin receptacle only (controls ordered separate)[14,19]
PER7	Seven-pin receptacle only (controls ordered separate)[14,19]
FAO	Field adjustable output[15,19]
BL30	Bi-level switched dimming, 30%[16,19]
BL50	Bi-level switched dimming, 50%[16,19]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]

Other options

Shipped installed

HS	Houseside shield (black finish standard)[20]
L90	Left rotated optics[21]
R90	Right rotated optics[21]
CCE	Coastal Construction[22]
HA	50°C ambient operation[22]
BAA	Buy America(n) Act Compliant
SF	Single fuse (120, 277, 347V)[24]
DF	Double fuse (208, 240, 480V)[24]

Shipped separately

EGSR	External Glare Shield (reversible, field install required, matches housing finish)
BSDB	Bird Spikes (field install required)

Finish *(required)*

DDBXD	Dark Bronze
DBLXD	Black
DNAXD	Natural Aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

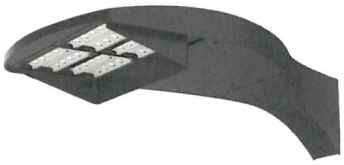
Accessories

Ordered and shipped separately.

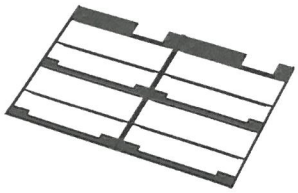
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [23]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [23]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [23]
DSHORT SBK	Shorting cap [23]
DSX0HS P#	House-side shield (enter package number P1-7, P10-13 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSX0EGSR (FINISH)	External glare shield (specify finish)
DSX0BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

NOTES
1 Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or R90.
2 30K, 40K, and 50K available in 70CRI and 80CRI. 27K and 35K only available with 80CRI. Contact Technical Support for other possible combinations.
3 T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
6 HVOLT not available with package P1, P2 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
7 XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
8 XVOLT not available in packages P1, P2 or P10. XVOLT not available with fusing (SF or DF).
9 SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
10 WBA cannot be combined with Type 5 distributions plus photocell (PER).
11 NLTAIR2 and PIRHN must be ordered together. For more information on nLight Air 2.
12 NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50 and DMG. NLTAIR2 PIRHN not available with P1, P2 and P10 using HVOLT. NLTAIR2 PIRHN not available with P1, P2 and P10 using XVOLT. NLTAIR2 PIRHN not available with P1 using MVOLT.
13 PIR not available with NLTAIR2, PER, PER5, PER7, FAO BL30, BL50 and DMG. PIR not available with P1, P2 and P10 using HVOLT. PIR not available with P1, P2 and P10 using XVOLT. PIR not available with P1 using MVOLT.
14 PER/PER5/PER7 not available with NLTAIR2, PIR, BL30, BL50. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
15 FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, or DMG.
16 BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO and DMG. BL30 or BL50 must specify 120, 277 or 347V. Consult tech support for 208, 240 or 480V.
17 DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50 and FAO.
18 Reference Motion Sensor Default Settings table on page 4 to see functionality.
19 Reference Controls Options table on page 4.
20 Option HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
21 CCE option not available with option BS and EGSR. Contact Technical Support for availability.
22 Option HA not available with performance packages P6, P7, P12 and P13.
23 Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.
24 Single fuse (SF) requires 120V, 277V, or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF).

Shield Accessories



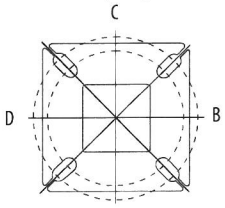
External Glare Shield (EGSR)

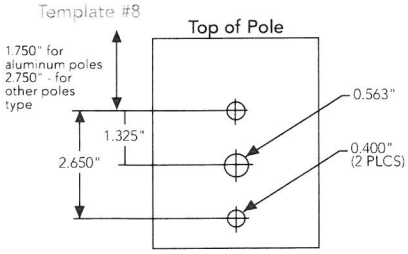


House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION
(from top of pole)





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX0 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX0 with SPA	0.44	0.88	0.96	1.18	---	1.16
DSX0 with SPA5, SPA8N	0.51	1.02	1.06	1.26	---	1.29
DSX0 with RPA, RPA5	0.51	1.02	1.06	1.26	1.24	1.29
DSX0 with MA	0.64	1.28	1.24	1.67	1.70	1.93

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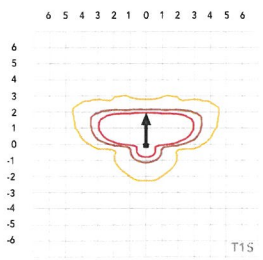
Photometric Diagrams

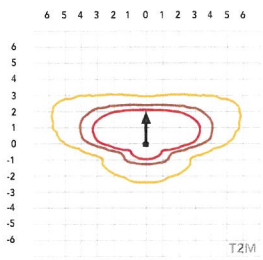
To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's homepage.

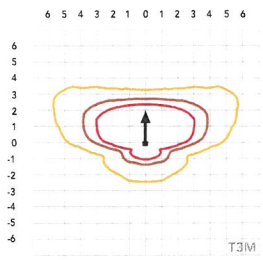
Isofootcandle plots for the DSX0 LED P7 40K 70CRI. Distances are in units of mounting height (20').

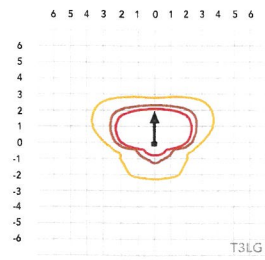
LEGEND

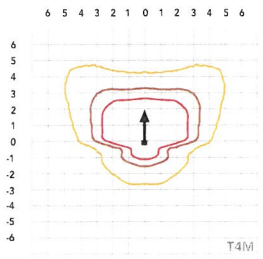
- 0.1 fc
- 0.5 fc
- 1.0 fc

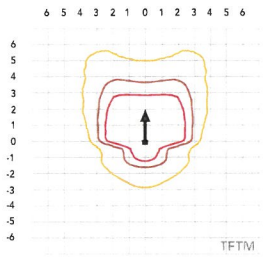


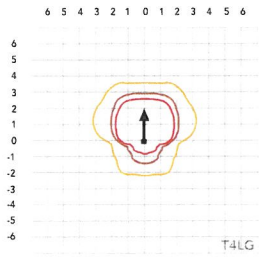


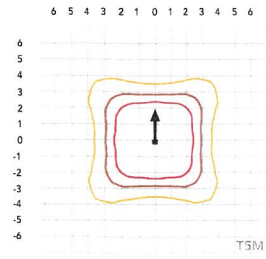


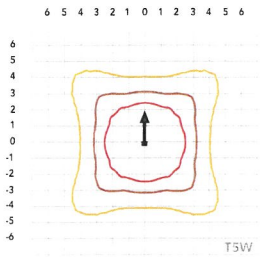


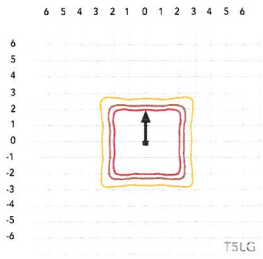


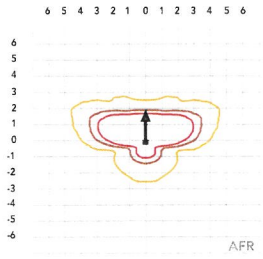


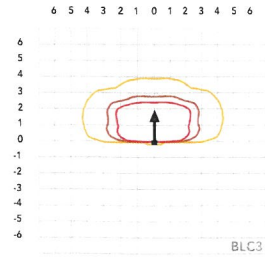


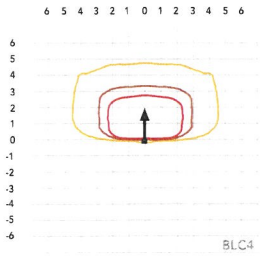


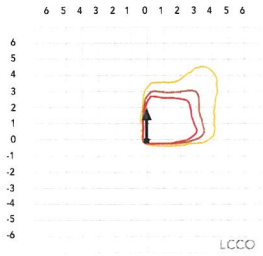


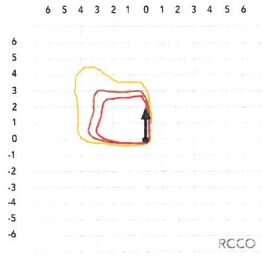












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Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°C**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.94
50,000	0.89
100,000	0.80

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use published values for each package based on input watts and lumens by optic type.

Electrical Load

	Performance Package	LED Count	Drive Current (mA)	Wattage	Current (A) 120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	20	530	34	0.28	0.16	0.14	0.12	0.10	0.07
	P2	20	700	45	0.38	0.22	0.19	0.16	0.13	0.09
	P3	20	1050	69	0.57	0.33	0.29	0.25	0.20	0.14
	P4	20	1400	94	0.78	0.45	0.39	0.34	0.27	0.19
	P5	40	700	89	0.75	0.43	0.38	0.33	0.26	0.19
	P6	40	1050	136	1.14	0.66	0.57	0.49	0.39	0.29
	P7	40	1300	170	1.42	0.82	0.71	0.62	0.49	0.36
Rotated Optics (Requires L90 or R90)	P10	30	530	51	0.42	0.24	0.21	0.18	0.15	0.11
	P11	30	700	67	0.57	0.33	0.28	0.25	0.20	0.14
	P12	30	1050	103	0.86	0.50	0.43	0.37	0.30	0.22
	P13	30	1300	129	1.07	0.62	0.54	0.46	0.37	0.27

LED Color Temperature / Color Rendering Multipliers

	70 CRI		80CRI		90CRI	
	Lumen Multiplier	Availability	Lumen Multiplier	Availability	Lumen Multiplier	Availability
5000K	102%	Standard	92%	Extended lead-time	71%	(see note)
4000K	100%	Standard	92%	Extended lead-time	67%	(see note)
3500K	100%	(see note)	90%	Extended lead-time	63%	(see note)
3000K	96%	Standard	87%	Extended lead-time	61%	(see note)
2700K	94%	(see note)	85%	Extended lead-time	57%	(see note)

Note: Some LED types are available as per special request. Contact Technical Support for more information.

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Phototcell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V

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Performance Data

Lumen Output

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Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	33W	20	530	T1S	4,906	1	0	1	148	5,113	1	0	1	154	5,213	1	0	1	157
				T2M	4,545	1	0	2	137	4,736	1	0	2	143	4,829	1	0	2	145
				T3M	4,597	1	0	2	138	4,791	1	0	2	144	4,885	1	0	2	147
				T3LG	4,107	1	0	1	124	4,280	1	0	1	129	4,363	1	0	1	131
				T4M	4,666	1	0	2	141	4,863	1	0	2	146	4,957	1	0	2	149
				T4LG	4,244	1	0	1	128	4,423	1	0	1	133	4,509	1	0	1	136
				TFTM	4,698	1	0	2	141	4,896	1	0	2	147	4,992	1	0	2	150
				T5M	4,801	3	0	1	145	5,003	3	0	1	151	5,101	3	0	1	154
				T5W	4,878	3	0	1	147	5,084	3	0	2	153	5,183	3	0	2	156
				T5LG	4,814	2	0	1	145	5,018	2	0	1	151	5,115	2	0	1	154
				BLC3	3,344	0	0	1	101	3,485	0	0	1	105	3,553	0	0	1	107
				BLC4	3,454	0	0	2	104	3,599	0	0	2	108	3,670	0	0	2	111
				RCCO	3,374	0	0	1	102	3,517	0	0	1	106	3,585	0	0	1	108
				LCCO	3,374	0	0	1	102	3,517	0	0	1	106	3,585	0	0	1	108
				AFR	4,906	1	0	1	148	5,113	1	0	1	154	5,213	1	0	1	157
P2	45W	20	700	T1S	6,328	1	0	1	140	6,595	1	0	1	146	6,724	1	0	1	149
				T2M	5,862	1	0	2	130	6,109	1	0	2	135	6,228	1	0	2	138
				T3M	5,930	1	0	3	131	6,180	1	0	3	137	6,301	1	0	3	140
				T3LG	5,297	1	0	1	117	5,521	1	0	1	122	5,628	1	0	1	125
				T4M	6,018	1	0	3	133	6,272	1	0	3	139	6,395	1	0	3	142
				T4LG	5,474	1	0	1	121	5,705	1	0	1	126	5,816	1	0	1	129
				TFTM	6,060	1	0	3	134	6,316	1	0	3	140	6,439	1	0	3	143
				T5M	6,192	3	0	1	137	6,453	3	0	2	143	6,579	3	0	2	146
				T5W	6,293	3	0	2	139	6,558	3	0	2	145	6,686	3	0	2	148
				T5LG	6,210	2	0	1	138	6,472	3	0	1	143	6,598	3	0	1	146
				BLC3	4,313	0	0	2	96	4,495	0	0	2	100	4,583	0	0	2	102
				BLC4	4,455	0	0	2	99	4,643	0	0	2	103	4,733	0	0	2	105
				RCCO	4,352	0	0	2	96	4,536	0	0	2	100	4,624	0	0	2	102
				LCCO	4,352	0	0	2	96	4,536	0	0	2	100	4,624	0	0	2	102
				AFR	6,328	1	0	1	140	6,595	1	0	1	146	6,724	1	0	1	149
P3	69W	20	1050	T1S	9,006	1	0	2	131	9,386	1	0	2	136	9,569	1	0	2	139
				T2M	8,343	2	0	3	121	8,694	2	0	3	126	8,864	2	0	3	129
				T3M	8,439	2	0	3	122	8,795	2	0	3	128	8,967	2	0	3	130
				T3LG	7,539	1	0	2	109	7,857	1	0	2	114	8,010	1	0	2	116
				T4M	8,565	2	0	3	124	8,926	2	0	3	129	9,100	2	0	3	132
				T4LG	7,790	1	0	2	113	8,119	1	0	2	118	8,277	1	0	2	120
				TFTM	8,624	1	0	3	125	8,988	1	0	3	130	9,163	2	0	3	133
				T5M	8,812	3	0	2	128	9,184	4	0	2	133	9,363	4	0	2	136
				T5W	8,955	4	0	2	130	9,333	4	0	2	135	9,515	4	0	2	138
				T5LG	8,838	3	0	1	128	9,211	3	0	1	134	9,390	3	0	1	136
				BLC3	6,139	0	0	2	89	6,398	0	0	2	93	6,522	0	0	2	95
				BLC4	6,340	0	0	3	92	6,607	0	0	3	96	6,736	0	0	3	98
				RCCO	6,194	1	0	2	90	6,455	1	0	2	94	6,581	1	0	2	95
				LCCO	6,194	1	0	2	90	6,455	1	0	2	94	6,581	1	0	2	95
				AFR	9,006	1	0	2	131	9,386	1	0	2	136	9,569	1	0	2	139
P4	93W	20	1400	T1S	11,396	1	0	2	122	11,877	1	0	2	128	12,109	2	0	2	130
				T2M	10,557	2	0	3	113	11,003	2	0	3	118	11,217	2	0	3	121
				T3M	10,680	2	0	3	115	11,130	2	0	3	120	11,347	2	0	3	122
				T3LG	9,540	1	0	2	103	9,942	1	0	2	107	10,136	1	0	2	109
				T4M	10,839	2	0	3	117	11,296	2	0	3	121	11,516	2	0	4	124
				T4LG	9,858	1	0	2	106	10,274	1	0	2	110	10,474	1	0	2	113
				TFTM	10,914	2	0	3	117	11,374	2	0	3	122	11,596	2	0	3	125
				T5M	11,152	4	0	2	120	11,622	4	0	2	125	11,849	4	0	2	127
				T5W	11,332	4	0	3	122	11,811	4	0	3	127	12,041	4	0	3	129
				T5LG	11,184	3	0	1	120	11,656	3	0	2	125	11,883	3	0	2	128
				BLC3	7,768	0	0	2	83	8,096	0	0	2	87	8,254	0	0	2	89
				BLC4	8,023	0	0	3	86	8,362	0	0	3	90	8,524	0	0	3	92
				RCCO	7,838	1	0	2	84	8,169	1	0	2	88	8,328	1	0	2	90
				LCCO	7,838	1	0	2	84	8,169	1	0	2	88	8,328	1	0	2	90
				AFR	11,396	1	0	2	122	11,877	1	0	2	128	12,109	2	0	2	130

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Performance Data

Lumen Output

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Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P5	90W	40	700	T1S	12,380	2	0	2	137	12,902	2	0	2	143	13,154	2	0	2	146
				T2M	11,468	2	0	3	127	11,952	2	0	3	133	12,185	2	0	3	135
				T3M	11,601	2	0	3	129	12,091	2	0	3	134	12,326	2	0	4	137
				T3LG	10,363	2	0	2	115	10,800	2	0	2	120	11,011	2	0	2	122
				T4M	11,774	2	0	4	131	12,271	2	0	4	136	12,510	2	0	4	139
				T4LG	10,709	1	0	2	119	11,160	2	0	2	124	11,378	2	0	2	126
				TFTM	11,856	2	0	3	132	12,356	2	0	4	137	12,596	2	0	4	140
				T5M	12,114	4	0	2	134	12,625	4	0	2	140	12,871	4	0	2	143
				T5W	12,310	4	0	3	137	12,830	4	0	3	142	13,080	4	0	3	145
				T5LG	12,149	3	0	2	135	12,662	3	0	2	141	12,908	3	0	2	143
				BLC3	8,438	0	0	2	94	8,794	0	0	2	98	8,966	0	0	2	99
				BLC4	8,715	0	0	3	97	9,083	0	0	3	101	9,260	0	0	3	103
				RCCO	8,515	1	0	2	94	8,874	1	0	2	98	9,047	1	0	2	100
				LCCO	8,515	1	0	2	94	8,874	1	0	2	98	9,047	1	0	2	100
				AFR	12,380	2	0	2	137	12,902	2	0	2	143	13,154	2	0	2	146
P6	137W	40	1050	T1S	17,545	2	0	3	128	18,285	2	0	3	133	18,642	2	0	3	136
				T2M	16,253	3	0	4	119	16,939	3	0	4	124	17,269	3	0	4	126
				T3M	16,442	2	0	4	120	17,135	3	0	4	125	17,469	3	0	4	128
				T3LG	14,687	2	0	2	107	15,306	2	0	2	112	15,605	2	0	2	114
				T4M	16,687	2	0	4	122	17,391	3	0	5	127	17,730	3	0	5	129
				T4LG	15,177	2	0	2	111	15,817	2	0	2	115	16,125	2	0	2	118
				TFTM	16,802	2	0	4	123	17,511	2	0	4	128	17,852	2	0	5	130
				T5M	17,168	4	0	2	125	17,893	5	0	3	131	18,241	5	0	3	133
				T5W	17,447	5	0	3	127	18,183	5	0	3	133	18,537	5	0	3	135
				T5LG	17,218	4	0	2	126	17,944	4	0	2	131	18,294	4	0	2	134
				BLC3	11,959	0	0	3	87	12,464	0	0	3	91	12,707	0	0	3	93
				BLC4	12,352	0	0	4	90	12,873	0	0	4	94	13,124	0	0	4	96
				RCCO	12,067	1	0	3	88	12,576	1	0	3	92	12,821	1	0	3	94
				LCCO	12,067	1	0	3	88	12,576	1	0	3	92	12,821	1	0	3	94
				AFR	17,545	2	0	3	128	18,285	2	0	3	133	18,642	2	0	3	136
P7	171W	40	1300	T1S	20,806	2	0	3	122	21,683	2	0	3	127	22,106	2	0	3	129
				T2M	19,273	3	0	4	113	20,086	3	0	4	118	20,478	3	0	4	120
				T3M	19,497	3	0	5	114	20,319	3	0	5	119	20,715	3	0	5	121
				T3LG	17,416	2	0	2	102	18,151	2	0	2	106	18,504	2	0	2	108
				T4M	19,787	3	0	5	116	20,622	3	0	5	121	21,024	3	0	5	123
				T4LG	17,997	2	0	2	105	18,756	2	0	2	110	19,121	2	0	2	112
				TFTM	19,924	3	0	5	117	20,765	3	0	5	122	21,170	3	0	5	124
				T5M	20,359	5	0	3	119	21,217	5	0	3	124	21,631	5	0	3	127
				T5W	20,689	5	0	3	121	21,561	5	0	3	126	21,982	5	0	3	129
				T5LG	20,418	4	0	2	120	21,279	4	0	2	125	21,694	4	0	2	127
				BLC3	14,182	0	0	3	83	14,780	0	0	3	87	15,068	0	0	3	88
				BLC4	14,647	0	0	4	86	15,265	0	0	4	89	15,562	0	0	4	91
				RCCO	14,309	1	0	3	84	14,913	1	0	3	87	15,204	1	0	3	89
				LCCO	14,309	1	0	3	84	14,913	1	0	3	87	15,204	1	0	3	89
				AFR	20,806	2	0	3	122	21,683	2	0	3	127	22,106	2	0	3	129

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Performance Data

Lumen Output

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Rotated Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	51W	30	530	T1S	7,399	3	0	3	145	7,711	3	0	3	151	7,862	3	0	3	154
				T2M	6,854	3	0	3	135	7,144	3	0	3	140	7,283	3	0	3	143
				T3M	6,933	3	0	3	136	7,225	3	0	3	142	7,366	3	0	3	145
				T3LG	6,194	2	0	2	122	6,455	2	0	2	127	6,581	2	0	2	129
				T4M	7,036	3	0	3	138	7,333	3	0	3	144	7,476	3	0	3	147
				T4LG	6,399	2	0	2	126	6,669	2	0	2	131	6,799	2	0	2	134
				TFTM	7,086	3	0	3	139	7,385	3	0	3	145	7,529	3	0	3	148
				T5M	7,239	3	0	2	142	7,545	3	0	2	148	7,692	3	0	2	151
				T5W	7,357	3	0	2	145	7,667	3	0	2	151	7,816	4	0	2	154
				T5LG	7,260	3	0	1	143	7,567	3	0	1	149	7,714	3	0	1	152
				BLC3	5,043	3	0	3	99	5,256	3	0	3	103	5,358	3	0	3	105
				BLC4	5,208	3	0	3	102	5,428	3	0	3	107	5,534	3	0	3	109
				RCCO	5,089	0	0	2	100	5,303	0	0	2	104	5,407	0	0	2	106
				LCCO	5,089	0	0	2	100	5,303	0	0	2	104	5,407	0	0	2	106
				AFR	7,399	3	0	3	145	7,711	3	0	3	151	7,862	3	0	3	154
P11	68W	30	700	T1S	9,358	3	0	3	138	9,753	3	0	3	143	9,943	3	0	3	146
				T2M	8,669	3	0	3	127	9,034	3	0	3	133	9,211	3	0	3	135
				T3M	8,768	3	0	3	129	9,138	3	0	3	134	9,316	3	0	3	137
				T3LG	7,833	3	0	3	115	8,164	3	0	3	120	8,323	3	0	3	122
				T4M	8,899	3	0	3	131	9,274	3	0	3	136	9,455	3	0	3	139
				T4LG	8,093	3	0	3	119	8,435	3	0	3	124	8,599	3	0	3	126
				TFTM	8,962	3	0	3	132	9,340	3	0	3	137	9,522	3	0	3	140
				T5M	9,156	4	0	2	135	9,542	4	0	2	140	9,728	4	0	2	143
				T5W	9,304	4	0	2	137	9,696	4	0	2	143	9,885	4	0	2	145
				T5LG	9,182	3	0	1	135	9,569	3	0	1	141	9,756	3	0	1	143
				BLC3	6,378	3	0	3	94	6,647	3	0	3	98	6,777	3	0	3	100
				BLC4	6,587	3	0	3	97	6,865	3	0	3	101	6,999	3	0	3	103
				RCCO	6,436	0	0	2	95	6,707	0	0	2	99	6,838	0	0	2	101
				LCCO	6,436	0	0	2	95	6,707	0	0	2	99	6,838	0	0	2	101
				AFR	9,358	3	0	3	138	9,753	3	0	3	143	9,943	3	0	3	146
P12	103W	30	1050	T1S	13,247	3	0	3	128	13,806	3	0	3	134	14,075	3	0	3	136
				T2M	12,271	4	0	4	119	12,789	4	0	4	124	13,038	4	0	4	126
				T3M	12,412	4	0	4	120	12,935	4	0	4	125	13,187	4	0	4	128
				T3LG	11,089	3	0	3	107	11,556	3	0	3	112	11,782	3	0	3	114
				T4M	12,597	4	0	4	122	13,128	4	0	4	127	13,384	4	0	4	129
				T4LG	11,457	3	0	3	111	11,940	3	0	3	116	12,173	3	0	3	118
				TFTM	12,686	4	0	4	123	13,221	4	0	4	128	13,479	4	0	4	130
				T5M	12,960	4	0	2	125	13,507	4	0	2	131	13,770	4	0	2	133
				T5W	13,170	4	0	3	127	13,726	4	0	3	133	13,994	4	0	3	135
				T5LG	12,998	3	0	2	126	13,546	3	0	2	131	13,810	3	0	2	134
				BLC3	9,029	3	0	3	87	9,409	3	0	3	91	9,593	3	0	3	93
				BLC4	9,324	4	0	4	90	9,718	4	0	4	94	9,907	4	0	4	96
				RCCO	9,110	1	0	2	88	9,495	1	0	2	92	9,680	1	0	2	94
				LCCO	9,110	1	0	2	88	9,494	1	0	2	92	9,680	1	0	2	94
				AFR	13,247	3	0	3	128	13,806	3	0	3	134	14,075	3	0	3	136
P13	129W	30	1300	T1S	15,704	3	0	3	122	16,366	3	0	3	127	16,685	4	0	4	130
				T2M	14,547	4	0	4	113	15,161	4	0	4	118	15,457	4	0	4	120
				T3M	14,714	4	0	4	114	15,335	4	0	4	119	15,634	4	0	4	121
				T3LG	13,145	3	0	3	102	13,700	3	0	3	106	13,967	3	0	3	108
				T4M	14,933	4	0	4	116	15,563	4	0	4	121	15,867	4	0	4	123
				T4LG	13,582	3	0	3	105	14,155	3	0	3	110	14,431	3	0	3	112
				TFTM	15,039	4	0	4	117	15,673	4	0	4	122	15,979	4	0	4	124
				T5M	15,364	4	0	2	119	16,013	4	0	2	124	16,325	4	0	2	127
				T5W	15,613	5	0	3	121	16,272	5	0	3	126	16,589	5	0	3	129
				T5LG	15,409	3	0	2	120	16,059	3	0	2	125	16,372	4	0	2	127
				BLC3	10,703	4	0	4	83	11,155	4	0	4	87	11,372	4	0	4	88
				BLC4	11,054	4	0	4	86	11,520	4	0	4	89	11,745	4	0	4	91
				RCCO	10,800	1	0	2	84	11,256	1	0	2	87	11,475	1	0	3	89
				LCCO	10,800	1	0	2	84	11,255	1	0	2	87	11,475	1	0	3	89
				AFR	15,704	3	0	3	122	16,366	3	0	3	127	16,685	4	0	4	130

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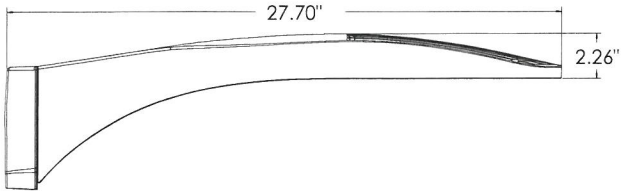
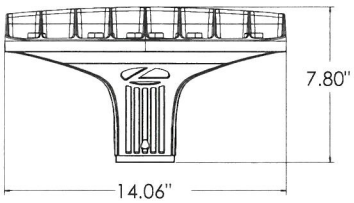
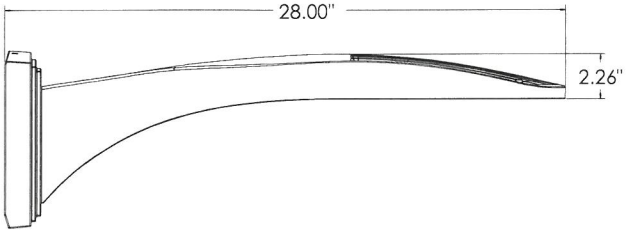
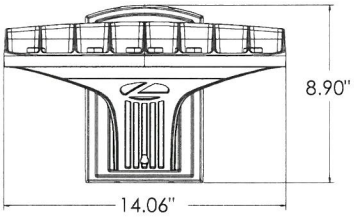
Dimensions



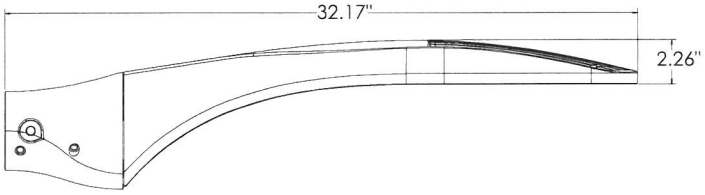


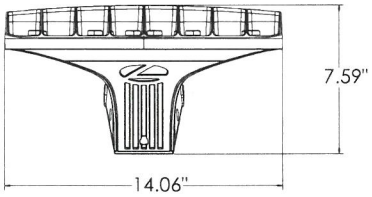
DSX0 with RPA, RPA5, SPA5, SPA8N mount
Weight: 25 lbs





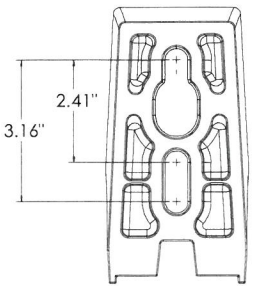
DSX0 with WBA mount
Weight: 27 lb



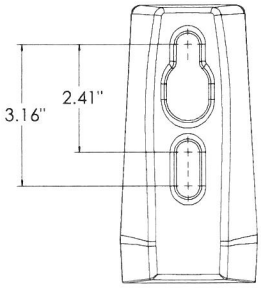


DSX0 with MA mount
Weight: 28 lbs

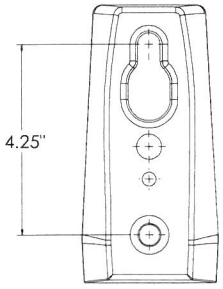
SPA (STANDARD ARM)



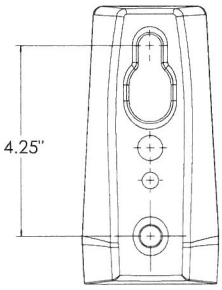
RPA



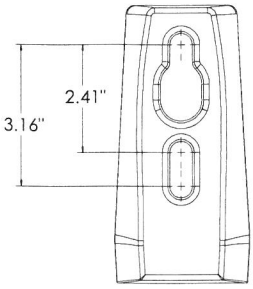
SPA5



RPA5



SPA8N



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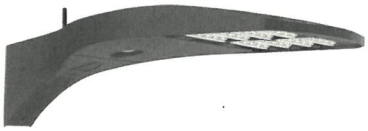
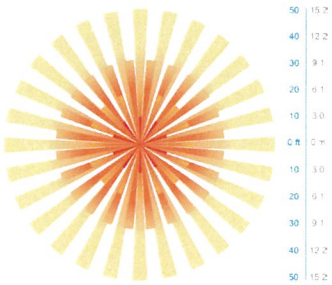
nLight Control - Sensor Coverage and Settings

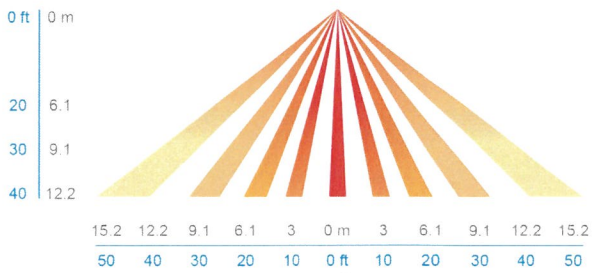
nLight Sensor Coverage Pattern

NLTAIR2 PIRHN





Top



Side

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G. Low EPA (0.44 ft^2) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

COASTAL CONSTRUCTION (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS

Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. 80CRI configurations are also available. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L80/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX0 LED area luminaire has a number of control options. DSX Size 0, comes standard with 0-10V dimming driver. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. PIR integrated motion sensor with on-board photocell feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS

The DSX0 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION

Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

BUY AMERICAN ACT

Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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d#series

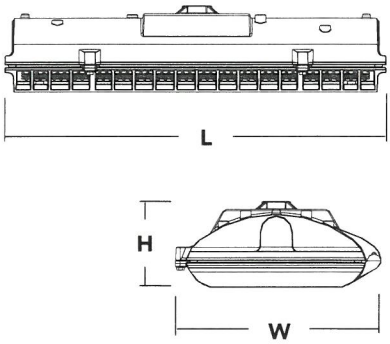
D-Series
LED Surface Canopy

BAA

Catalog Number	DSXSC LED 30C 700 40K T5M MVOLT
Notes	
Type	RA

Specifications

Length:	17-3/4" (45.1 cm)
Width:	8-1/2" (21.6 cm)
Height:	3-7/16" (8.7 cm)
Weight (max):	16 lbs (7.3 kg)



Introduction

The D-Series LED Surface Canopy luminaire is ideal for covered walkways or drive-thrus, semi-covered outdoor aisles, and walk-in coolers and freezers. Its five optical choices provide the design flexibility to potentially reduce luminaire counts while still meeting IES criteria, lowering overall energy consumption.

Its expected service life of over 100,000 hours (20 years of nighttime operation) combined with the available motion/ambient sensor offers an extremely low maintenance solution that yields quick payback.

Ordering Information

EXAMPLE: DSXSC LED 20C 700 40K T5M MVOLT SRM DWHXD

DSXSC LED

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting
DSXSC LED	10C 10 LEDs (one engine) [1,2] 20C 20 LEDs (two engines) 30C 30 LEDs (three engines)	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A)	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted [3]	T5E Type V, entryway [4] T5M Type V, medium T5W Type V, wide T5R Type V, rectangular ASY Asymmetric	MVOLT [5] 120 [5] 208 [5] 240 [5] 277 [5] 347 [6] 480 [6]	**Shipped included** SRM Surface mount (12-inch length supply leads)

Options

Shipped installed

HS	House-side shield (housing visor) [7]
SF	Single fuse (120, 277, 347V) [8]
DF	Double fuse (208, 240, 480V) [8]
SPD	Separate surge protection [9]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [10,11]
PIR	Motion/ambient sensor for 8-15' mounting heights [12]
PIRH	Motion/ambient sensor for 15-30' mounting heights [12]
PIR3FC3V	Motion/ambient sensor for 8-15' mounting heights and for typical applications requiring daylight harvesting and Title 24 compliance [12]
PIRH3FC3V	Motion/ambient sensor for 15-30' mounting heights and typical applications requiring daylight harvesting and Title 24 compliance [12]

Shipped separately

BDS	Bird shroud [7]

Finish *(required)*

DWHXD	White
DNAXD	Natural aluminum
DDBXD	Dark bronze

Accessories

Ordered and shipped separately.

DSXSCHS U	House-side shield (1 per light engine)
DSXSCBDSSJ DWHXD U	Bird shroud for SRM on surface J-box only, white (specify finish)

NOTES

1. Available with 700mA or 1000mA option only.
2. Not available with 347 or 480V.
3. AMBPC only available with 530mA or 700mA.
4. DesignLights Consortium qualified.
5. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
6. N/A with one light engine (10C). Only available with 700mA or 1000mA.
7. Also available as a separate accessory; see Accessories information at left.
8. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
9. See the electrical section on page 3 for more details.
10. DMG not available with all PIR options
11. Dimming driver standard. Available in layouts up to 30'. Not available with 347V or 480V. Not available with fusing.
12. PIR & PIR3FC3V specifies the Acuity Controls SBOR 10 ODP motion/ambient sensor, the PIRH & PIRH3FC3V specifies the Acuity Controls SBOR 6 ODP motion/ambient sensor.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08.

Light Engines	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 80 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 65 CRI)					AMBPC				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	700 mA	26W	ASY	2,601	0	0	1	100	2,793	1	0	1	107	2,810	1	0	1	108	2,253	1	0	1	87
			T5E	2,731	1	0	0	105	2,933	1	0	0	113	2,951	1	0	0	113	2,366	1	0	0	91
			T5M	2,742	1	0	0	105	2,945	2	0	0	113	2,963	2	0	0	114	2,376	2	0	0	91
			T5R	2,700	2	0	2	104	2,899	2	0	2	112	2,918	2	0	2	112	2,339	2	0	2	90
			T5W	2,570	2	0	1	99	2,760	2	0	1	106	2,777	2	0	1	107	2,226	2	0	1	86
	1000 mA	37W	ASY	3,647	1	0	1	99	3,917	1	0	1	106	3,941	1	0	1	107					
			T5E	3,830	1	0	0	104	4,113	2	0	0	111	4,138	2	0	0	112					
			T5M	3,846	2	0	0	104	4,130	2	0	1	112	4,156	2	0	1	112					
			T5R	3,786	2	0	2	102	4,066	2	0	2	110	4,091	3	0	3	111					
			T5W	3,604	2	0	1	97	3,870	2	0	1	105	3,894	3	0	1	105					
20C (20 LEDs)	350 mA	25W	ASY	2,798	1	0	1	112	3,004	1	0	1	120	3,023	1	0	1	121					
			T5E	2,938	1	0	0	118	3,155	1	0	0	126	3,174	2	0	0	127					
			T5M	2,950	2	0	0	118	3,168	2	0	0	127	3,188	2	0	1	128					
			T5R	2,905	2	0	2	116	3,119	2	0	2	125	3,139	2	0	2	126					
			T5W	2,765	2	0	1	111	2,969	2	0	1	119	2,987	2	0	1	119					
	530 mA	37W	ASY	4,041	1	0	1	109	4,339	1	0	1	117	4,366	1	0	1	118	3,525	1	0	1	95
			T5E	4,243	2	0	0	115	4,556	2	0	0	123	4,584	2	0	0	124	3,702	2	0	0	100
			T5M	4,260	2	0	1	115	4,575	2	0	1	124	4,604	2	0	1	124	3,717	2	0	1	100
			T5R	4,195	2	0	2	113	4,504	3	0	3	122	4,532	3	0	3	122	3,660	3	0	3	99
			T5W	3,992	2	0	1	108	4,287	3	0	1	116	4,314	3	0	1	117	3,484	3	0	1	94
	700 mA	46W	ASY	5,129	1	0	1	112	5,508	1	0	1	120	5,543	1	0	1	120	4,337	1	0	1	94
			T5E	5,386	2	0	0	117	5,784	2	0	0	126	5,820	2	0	0	127	4,554	2	0	0	99
			T5M	5,409	2	0	1	118	5,808	3	0	1	126	5,844	3	0	1	127	4,573	3	0	1	99
			T5R	5,325	3	0	3	116	5,718	3	0	3	124	5,754	3	0	3	125	4,502	3	0	3	98
			T5W	5,068	3	0	1	110	5,443	3	0	1	118	5,477	3	0	1	119	4,285	3	0	1	93
	1000 mA	74W	ASY	7,083	1	0	1	96	7,606	1	0	1	103	7,653	1	0	2	103					
			T5E	7,437	2	0	0	101	7,986	2	0	0	108	8,036	2	0	1	109					
			T5M	7,468	3	0	1	101	8,020	3	0	1	108	8,070	3	0	1	109					
			T5R	7,353	3	0	3	99	7,896	3	0	3	107	7,945	3	0	3	107					
			T5W	6,998	3	0	1	95	7,515	3	0	2	102	7,562	3	0	2	102					
30C (30 LEDs)	350 mA	35W	ASY	4,174	1	0	1	119	4,482	1	0	1	128	4,510	1	0	1	129					
			T5E	4,382	2	0	0	125	4,706	2	0	0	134	4,735	2	0	0	135					
			T5M	4,401	2	0	1	126	4,726	2	0	1	135	4,755	3	0	1	136					
			T5R	4,333	2	0	2	124	4,653	3	0	3	133	4,682	3	0	3	134					
			T5W	4,124	2	0	1	118	4,428	3	0	1	127	4,456	3	0	1	127					
	530 mA	53W	ASY	5,996	1	0	1	113	6,438	1	0	1	121	6,478	1	0	1	122	5,333	1	0	1	101
			T5E	6,296	2	0	0	119	6,760	2	0	0	128	6,803	2	0	0	128	5,599	2	0	0	106
			T5M	6,322	3	0	1	119	6,789	3	0	1	128	6,831	3	0	1	129	5,623	3	0	1	106
			T5R	6,224	3	0	3	117	6,684	3	0	3	126	6,726	3	0	3	127	5,536	3	0	3	104
			T5W	5,924	3	0	1	112	6,362	3	0	1	120	6,401	3	0	1	121	5,269	3	0	1	99
	700 mA	67W	ASY	7,557	1	0	1	113	8,115	1	0	2	121	8,166	1	0	2	122	6,504	1	0	2	97
			T5E	7,936	2	0	0	118	8,521	3	0	1	127	8,575	3	0	1	128	6,829	3	0	1	102
			T5M	7,969	3	0	1	119	8,557	3	0	1	128	8,610	3	0	2	129	6,858	3	0	1	102
			T5R	7,846	3	0	3	117	8,425	3	0	3	126	8,478	3	0	3	127	6,752	3	0	3	101
			T5W	7,467	3	0	1	111	8,019	3	0	2	120	8,069	3	0	2	120	6,426	3	0	2	96
	1000 mA	107W	ASY	10,213	1	0	2	95	10,967	2	0	2	102	11,036	2	0	2	103					
			T5E	10,724	3	0	1	100	11,516	3	0	1	108	11,588	3	0	1	108					
			T5M	10,769	3	0	1	101	11,564	3	0	2	108	11,636	3	0	2	109					
			T5R	10,603	3	0	3	99	11,385	4	0	4	106	11,457	4	0	4	107					
			T5W	10,092	3	0	2	94	10,837	4	0	2	101	10,904	4	0	2	102					

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
10C	700	26W	0.25	0.15	0.13	0.11	–	–
	1000	37W	0.37	0.21	0.18	0.16	–	–
20C	350	25W	0.23	0.13	0.12	0.10	–	–
	530	37W	0.33	0.19	0.17	0.14	–	–
	700	46W	0.43	0.25	0.22	0.19	0.15	0.11
	1000	74W	0.68	0.39	0.34	0.29	0.23	0.17
30C	350	35W	0.33	0.19	0.16	0.14	–	–
	530	53W	0.50	0.29	0.25	0.22	–	–
	700	67W	0.66	0.38	0.33	0.29	0.23	0.17
	1000	107W	1.01	0.58	0.50	0.44	0.35	0.25

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSXSC LED 10C 1000			
	1.0	0.97	0.94	0.90
	DSXSC LED 30C 1000			
	1.0	0.93	0.89	0.80
	DSXSC LED 30C 700			
	1.0	0.98	0.97	0.95

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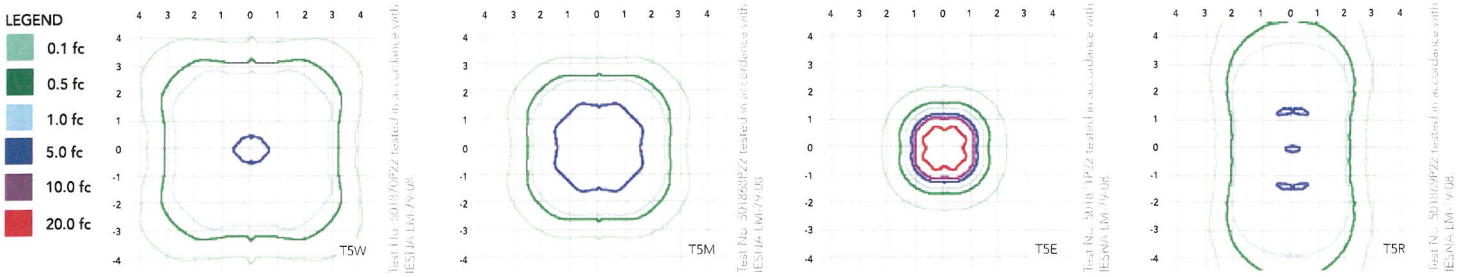
Photometric Diagrams

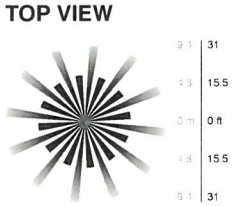
To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Parking Garage homepage.

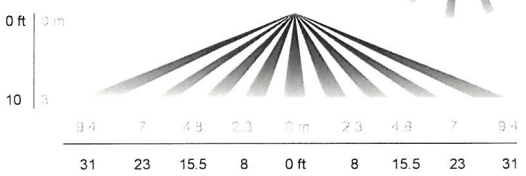
Isofootcandle plots for the DSXSC LED 30C 700 40K. Distances are in units of mounting height (8').



Motion Sensing

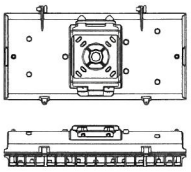
The motion/ambient sensor options (PIR360SS or PIRH360SS) have 360° of passive infrared sensing and adjustable bi-level dimming to save energy when there are no occupants.





Mounting Options

Surface Mounting



FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life, and easy-to-install design of the D-Series LED Surface Canopy luminaire make it the smart choice for canopy lighting in commercial, industrial and institutional applications with mounting heights of 8-15'.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP66) and is suitable for hose-down.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling.

OPTICS

Precision-molded proprietary acrylic lenses provide five different photometric distributions suited to a variety of canopy and walkway applications. Light engines are available in 3000 K (80 min. CRI), 4000 K (70 min. CRI) or 5000 K (65 min. CRI) configurations.

ELECTRICAL

Light engines consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life. The electronic driver has a power factor of >90%, THD <20%, and a minimum 2.5 KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION

Mounts to a 4x4" recessed or surface mount outlet box using a quick-mount kit (included); kit contains galvanized steel luminaire and outlet box plates and a full pad gasket. Kit has an integral mounting support that allows the luminaire to hinge down for easy electrical connections. Luminaire and plates are secured with captive screws. Supply leads are 12" in length as standard. For longer supply leads, please consult factory.

LISTINGS

CSA certified to U.S. and Canadian standards. Light engines and luminaire are IP66 rated. Rated for -40°C minimum ambient.

BUY AMERICAN ACT

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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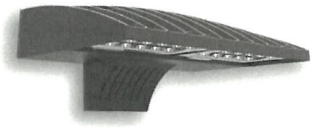


d#series

D-Series Size 1
LED Wall Luminaire

NIGHTTIME FRIENDLY

BAA

Catalog Number	DSXW1 LED 10C 700 40K T4M MVOLT
Notes	
Type	SA

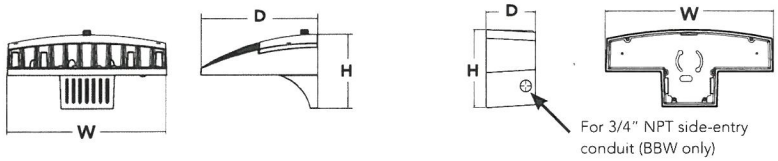
Specifications

Luminaire

Width:	13-3/4" (34.9 cm)	**Weight:**	12 lbs (5.4 kg)
Depth:	10" (25.4 cm)		
Height:	6-3/8" (16.2 cm)		

Back Box (BBW, E20WC)

Width:	13-3/4" (34.9 cm)	**BBW Weight:**	5 lbs (2.3 kg)
Depth:	4" (10.2 cm)	**E20WC Weight:**	10 lbs (4.5 kg)
Height:	6-3/8" (16.2 cm)		



Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

Ordering Information

EXAMPLE: DSXW1 LED 20C 1000 40K T3M MVOLT DDBTXD

DSXW1 LED

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSXW1 LED	10C 10 LEDs (one engine) 20C 20 LEDs (two engines) [1]	350 350 mA 530 530 mA 700 700 mA 1000 1000 mA (1 A) [1]	30K 3000 K 40K 4000 K 50K 5000 K AMBPC Amber phosphor converted	T2S Type II Short T2M Type II Medium T3S Type III Short T3M Type III Medium T4M Type IV Medium TFTM Forward Throw Medium	MVOLT [2] 120 [3] 208 [3] 240 [3] 277 [3] 347 [3,4] 480 [3,4]	**Shipped included** (blank) Surface mounting bracket BBW Surface-mounted back box (for conduit entry) [5]	**Shipped installed** PE Photoelectric cell, button type [6] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) PIR 180° motion/ambient light sensor, <15' mtg ht [6,7] PIRH 180° motion/ambient light sensor, 15-30' mtg ht [6,7] PIR1FC3V Motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc [6,7] PIRH1FC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc [6,7] E20WC Emergency battery backup (includes external component enclosure), CA Title 20 compliant [8,9]

Other Options		Finish (required)					
Shipped installed		DDBXD	Dark bronze	DSSXD	Sandstone	DWHGXD	Textured white
SF	Single fuse (120, 277 or 347V) [3,10]	DBLXD	Black	DDBTXD	Textured dark bronze	DSSTXD	Textured sandstone
DF	Double fuse (208, 240 or 480V) [3,10]	DNAXD	Natural aluminum	DBLBXD	Textured black		
HS	House-side shield [11]	DWHXD	White	DNATXD	Textured natural aluminum		
SPD	Separate surge protection [12]						
Shipped separately [11]							
BSW	Bird-deterrent spikes						
VG	Vandal guard						
DDL	Diffused drop lens						

Accessories

Ordered and shipped separately.

DSXWHS U	House-side shield (one per light engine)
DSXWBSW U	Bird-deterrent spikes
DSXW1VG U	Vandal guard accessory

NOTES

1. 20C 1000 is not available with PIR, PIRH, PIR1FC3V or PIRH1FC3V.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4. Only available with 20C, 700mA or 1000mA. Not available with PIR or PIRH.
5. Back box ships installed on fixture. Cannot be field installed. Cannot be ordered as an accessory.
6. Photocontrol (PE) requires 120, 208, 240, 277 or 347 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
7. Reference Motion Sensor table on page 3.
8. Same as old ELCW. Cold weather (-20C) rated. Not compatible with conduit entry applications. Not available with BBW mounting option. Not available with fusing. Not available with 347 or 480 voltage options. Emergency components located in back box housing. Emergency mode IES files located on product page at www.lithonia.com
9. Not available with SPD.
10. Not available with E20WC.
11. Also available as a separate accessory; see Accessories information.
12. Not available with E20WC.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70CRI)					40K (4000 K, 70CRI)					50K (5000 K, 70CRI)					AMBPC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
10C (10 LEDs)	350mA	13W	T2S	1,415	0	0	1	109	1,520	0	0	1	117	1,530	0	0	1	118	894	0	0	1	69
			T2M	1,349	0	0	1	104	1,448	0	0	1	111	1,458	0	0	1	112	852	0	0	1	66
			T3S	1,399	0	0	1	108	1,503	0	0	1	116	1,512	0	0	1	116	884	0	0	1	68
			T3M	1,385	0	0	1	107	1,488	0	0	1	114	1,497	0	0	1	115	876	0	0	1	67
			T4M	1,357	0	0	1	104	1,458	0	0	1	112	1,467	0	0	1	113	858	0	0	1	66
			TFTM	1,411	0	0	1	109	1,515	0	0	1	117	1,525	0	0	1	117	892	0	0	1	69
	530 mA	19W	T2S	2,053	1	0	1	108	2,205	1	0	1	116	2,220	1	0	1	117	1,264	0	0	1	67
			T2M	1,957	1	0	1	103	2,102	1	0	1	111	2,115	1	0	1	111	1,205	0	0	1	63
			T3S	2,031	1	0	1	107	2,181	1	0	1	115	2,194	1	0	1	115	1,250	0	0	1	66
			T3M	2,010	1	0	1	106	2,159	1	0	1	114	2,172	1	0	1	114	1,237	0	0	1	65
			T4M	1,970	1	0	1	104	2,115	1	0	1	111	2,129	1	0	1	112	1,212	0	0	1	64
			TFTM	2,047	0	0	1	108	2,198	1	0	1	116	2,212	1	0	1	116	1,260	0	0	1	66
	700 mA	26W	T2S	2,623	1	0	1	101	2,816	1	0	1	108	2,834	1	0	1	109	1,544	0	0	1	59
			T2M	2,499	1	0	1	96	2,684	1	0	1	103	2,701	1	0	1	104	1,472	0	0	1	57
			T3S	2,593	1	0	1	100	2,785	1	0	1	107	2,802	1	0	1	108	1,527	0	0	1	59
			T3M	2,567	1	0	1	99	2,757	1	0	1	106	2,774	1	0	1	107	1,512	0	0	1	58
			T4M	2,515	1	0	1	97	2,701	1	0	1	104	2,718	1	0	1	105	1,481	0	0	1	57
			TFTM	2,614	1	0	1	101	2,808	1	0	1	108	2,825	1	0	1	109	1,539	0	0	1	59
	1000 mA	39W	T2S	3,685	1	0	1	94	3,957	1	0	1	101	3,982	1	0	1	102	2,235	1	0	1	57
			T2M	3,512	1	0	1	90	3,771	1	0	1	97	3,794	1	0	1	97	2,130	1	0	1	55
			T3S	3,644	1	0	1	93	3,913	1	0	1	100	3,938	1	0	1	101	2,210	1	0	1	57
			T3M	3,607	1	0	1	92	3,873	1	0	1	99	3,898	1	0	1	100	2,187	1	0	1	56
			T4M	3,534	1	0	2	91	3,796	1	0	2	97	3,819	1	0	2	98	2,143	1	0	1	55
			TFTM	3,673	1	0	1	94	3,945	1	0	1	101	3,969	1	0	1	102	2,228	1	0	1	57
20C (20 LEDs)	350mA	23W	T2S	2,820	1	0	1	123	3,028	1	0	1	132	3,047	1	0	1	132	1,777	1	0	1	77
			T2M	2,688	1	0	1	117	2,886	1	0	1	125	2,904	1	0	1	126	1,693	1	0	1	74
			T3S	2,789	1	0	1	121	2,994	1	0	1	130	3,014	1	0	1	131	1,757	0	0	1	76
			T3M	2,760	1	0	1	120	2,965	1	0	1	129	2,983	1	0	1	130	1,739	1	0	1	76
			T4M	2,704	1	0	1	118	2,905	1	0	1	126	2,922	1	0	1	127	1,704	1	0	1	74
			TFTM	2,811	1	0	1	122	3,019	1	0	1	131	3,038	1	0	1	132	1,771	0	0	1	77
	530 mA	35W	T2S	4,079	1	0	1	117	4,380	1	0	1	125	4,407	1	0	1	126	2,504	1	0	1	72
			T2M	3,887	1	0	1	111	4,174	1	0	1	119	4,201	1	0	1	120	2,387	1	0	1	68
			T3S	4,033	1	0	1	115	4,331	1	0	1	124	4,359	1	0	1	125	2,477	1	0	1	71
			T3M	3,993	1	0	2	114	4,288	1	0	2	123	4,315	1	0	2	123	2,451	1	0	1	70
			T4M	3,912	1	0	2	112	4,201	1	0	2	120	4,227	1	0	2	121	2,402	1	0	1	69
			TFTM	4,066	1	0	2	116	4,366	1	0	2	125	4,394	1	0	2	126	2,496	1	0	1	71
	700 mA	46W	T2S	5,188	1	0	1	113	5,572	1	0	1	121	5,607	1	0	1	122	3,065	1	0	1	67
			T2M	4,945	1	0	2	108	5,309	1	0	2	115	5,343	1	0	2	116	2,921	1	0	1	64
			T3S	5,131	1	0	2	112	5,510	1	0	2	120	5,544	1	0	2	121	3,031	1	0	1	66
			T3M	5,078	1	0	2	110	5,454	1	0	2	119	5,487	1	0	2	119	3,000	1	0	1	65
			T4M	4,975	1	0	2	108	5,343	1	0	2	116	5,376	1	0	2	117	2,939	1	0	1	64
			TFTM	5,172	1	0	2	112	5,554	1	0	2	121	5,589	1	0	2	122	3,055	1	0	1	66
	1000 mA	73W	T2S	7,204	1	0	2	99	7,736	2	0	2	106	7,784	2	0	2	107	4,429	1	0	1	61
			T2M	6,865	1	0	2	94	7,373	2	0	2	101	7,419	2	0	2	102	4,221	1	0	1	58
			T3S	7,125	1	0	2	98	7,651	1	0	2	105	7,698	1	0	2	105	4,380	1	0	1	60
			T3M	7,052	1	0	2	97	7,573	2	0	2	104	7,620	2	0	2	104	4,335	1	0	2	59
			T4M	6,909	1	0	2	95	7,420	1	0	2	102	7,466	1	0	2	102	4,248	1	0	2	58
			TFTM	7,182	1	0	2	98	7,712	1	0	2	106	7,761	1	0	2	106	4,415	1	0	2	60

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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	**77°F**	**1.00**
30°C	86°F	1.00
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **DSXW1 LED 20C 1000** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.93	0.88

Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
10C	350	14 W	0.13	0.07	0.06	0.06	-	-
	530	20 W	0.19	0.11	0.09	0.08	-	-
	700	27 W	0.25	0.14	0.13	0.11	-	-
	1000	40 W	0.37	0.21	0.19	0.16	-	-
20C	350	24 W	0.23	0.13	0.12	0.10	-	-
	530	36 W	0.33	0.19	0.17	0.14	-	-
	700	47 W	0.44	0.25	0.22	0.19	0.15	0.11
	1000	74 W	0.69	0.40	0.35	0.30	0.23	0.17

Motion Sensor Default Settings

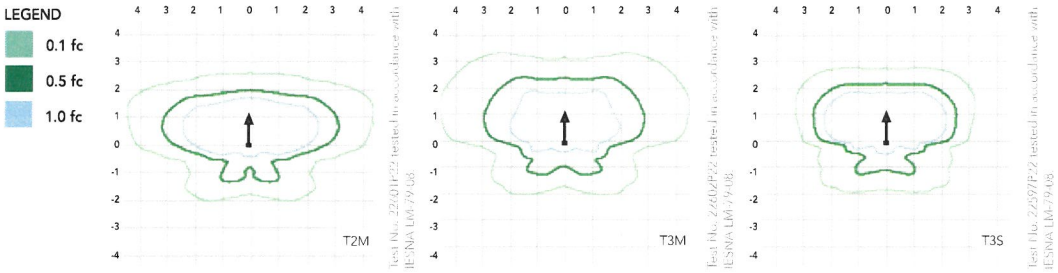
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min

*For use when motion sensor is used as dusk to dawn control

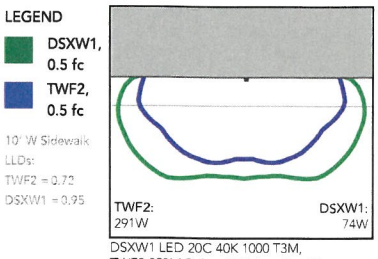
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 1 homepage.

Isofootcandle plots for the DSXW1 LED 20C 1000 40K. Distances are in units of mounting height (15').



Distribution overlay comparison to 250W metal halide.



DSXW1 LED 20C 40K 1000 T3M, TWF2 250M Pulse, 15' Mounting Ht

Options and Accessories

T3M (left)

HS - House-side shields

BSW - Bird-deterrent spikes

VG - Vandal guard

DDL - Diffused drop lens

FEATURES & SPECIFICATIONS

INTENDED USE

The energy savings, long life and easy-to-install design of the D-Series Wall Size 1 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (70 min. CRI), 4000 K (70 min. CRI) or 5000 K (70 min. CRI) configurations.

ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L88/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C Low (per ANSI/IEEE C62.41.2).

INSTALLATION

Included universal mounting bracket attaches securely to any 4" round or square outlet box for quick and easy installation. Luminaire has a slotted gasket wireway and attaches to the mounting bracket via corrosion-resistant screws.

LISTINGS

CSA certified to U.S. and Canadian standards. Rated for -40°C minimum ambient.

BUY AMERICAN ACT

This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/resources/buy-american for additional information.

WARRANTY

Five-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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STORM WATER MANAGEMENT PLAN

FOR

TSUNAMI EXPRESS CAR WASH

Village of Mukwonago, Waukesha County, Wisconsin

August 9, 2024

PREPARED FOR:
Miranda Seals
The Redmond Company
W228 N745 Westmound Drive
Waukesha, WI 53186
Ph: (262) 896-8728
Email: mseals@theredmondco.com

PREPARED BY:
Joshua Murray, P.E.
Nielsen Madsen + Barber
1458 Horizon Boulevard
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Racine, WI 53406
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STORM WATER MANAGEMENT PLAN

FOR

Tsunami Express Car Wash

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1. Introduction
2. Method of Analysis
3. Pre-Developed Conditions
4. Post-Developed Conditions
5. Storm Water Quality and Quantity
6. Routing Data
7. Conclusion

Appendix A
- Soil Map

Appendix B
- WinSLAMM Water Quality Analysis

Appendix C
- HydroCAD Routing Details

Appendix D
- Storm Sewer Drainage Area Map and Calculations (STM-1)

Appendix E
- Post-Developed Conditions Map (DEV-1)

INTRODUCTION

Nielsen Madsen + Barber (NMB) was retained by The Redmond Company to prepare site grading, drainage, paving, utility, and a Storm Water Management Plan for the proposed Tsunami Express Car Wash located south of the intersection of East Wolf Run and Maple Avenue in the Village of Mukwonago, Waukesha County, Wisconsin.

The proposed improvements include the car wash and associated driveway and parking areas, landscaping, and storm water management facilities.

The proposed project will disturb approximately 1.16 acres and increase the impervious area by about 0.7 acres requiring the project to meet the Village of Mukwonago's storm water quality and peak discharge requirements, which includes storm water runoff management as required by the Wisconsin Department of Natural Resources (WDNR) Chapter NR 151 of the State of Wisconsin Administrative Code. The peak discharge control requirements are met by a regional storm water basin at the end of East Wolf Run.

To address the water quality requirements, an underground detention and water quality system (WQS) has been designed to serve the site.

METHOD OF ANALYSIS

The method used for this storm water analysis was the United States Department of Agriculture, Natural Resources Conservation Service, Urban Hydrology for Small Watersheds, Technical Release No. 55 (TR-55). The specific software is HydroCAD V10, as produced by HydroCAD Software Solutions, LLC. In running this model, NMB determined runoff curve numbers (CN) and times of concentration (Tc) for the individual drainage areas. This information was then used to generate storm hydrographs and peak discharge rates. In addition, WinSLAMM V10.5, as produced by PV and Associates, LLC., was utilized to analyze the water quality of the post-developed runoff.

PRE - DEVELOPED CONDITIONS

Pre-Developed conditions at the site consist of grassed and wetland areas. Since the peak discharges requirements are met by a regional storm water basin, an existing conditions, or pre-developed conditions, model was not prepared.

POST - DEVELOPED CONDITIONS

Post-Developed conditions at the site will consist of a building, pavement areas, and grassed areas. An underground WQS has been designed to meet the water quality requirements for the site.

A storm sewer system has been designed to accommodate runoff from the 10-year storm. Calculations for the storm sewer sizing can be found in Appendix "D" of this report.

A Post-Developed Conditions map can be found in Appendix "E" of this report.

The post-developed drainage area is further described as follows:

DEV-1 (Area tributary to the proposed underground WQS)

Sub-basin DEV-1 totals 1.071 acres, includes all of the proposed impervious surfaces, and consists of roof, pavement and grassed areas tributary to the proposed underground WQS that discharges to the existing Maple Avenue storm sewer.

STORM WATER QUALITY AND QUANTITY

The Village of Mukwonago has established stormwater quality and peak discharge requirements in its Stormwater Management Ordinance. Water quality management standards are as required by WDNR Chapter NR 151.

Due to the increase in impervious surface of about 0.7 acres and a total disturbed area of approximately 1.16 acres, the proposed Tsunami Express Car Wash development will be required to follow the stormwater runoff management requirements established by the Village of Mukwonago and WDNR Chapter NR 151 which apply as follows:

Soil Data and Infiltration: Existing soils have been reviewed using the Web Soil Survey developed by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). The Web Soil Survey indicates Brookston silt loam, Griswold silt loam, and Kane silt loam throughout the site. From the WDNR Technical Standard 1002, "Site Evaluation for Stormwater Infiltration" silt loam is listed with a design infiltration rate of 0.13 inches/hour. This infiltration rate is less than the 0.6 inches/hour exemption threshold rate. A map of the existing soils on site is included in Appendix "A".

Total Suspended Solids Load Reduction: The Village of Mukwonago and WDNR Chapter NR 151 require an 80% reduction of the Total Suspended Solids (TSS) load for new developments. An underground WQS has been designed to treat runoff from the site.

The WQS consists of 150 linear feet of 120" corrugated metal pipe (CMP) enclosed on both ends with a designed outlet control structure. The outlet control structure is a multi-stage device with an orifice and weir opening and requires an additional four (4) linear feet of 120" CMP that was not included in calculations for a total system length of 154 linear feet. The discharge from this device will then enter a 15" PVC culvert that discharges to the existing Maple Avenue storm sewer system. The WQS is designed to have a five foot (5') deep permanent wet pool which will act as a settling basin. The 'wet pond' control practice was used to model the WQS in accordance with WDNR and WinSLAMM guidance.

When these parameters were analyzed in WinSLAMM, the WQS was found to remove a total of 335.5 lbs of particulate solids from the DEV-1 area, resulting in a TSS reduction of 80.41% for the

1.071-acre site (DEV-1). In addition, the WQS removed 0.6352 lbs of total phosphorus from the DEV-1 area, resulting in a phosphorus reduction of 66.39%.

The proposed treatment system, as designed, meets the Village's and WDNR's treatment goals by achieving a TSS reduction of 80%. The WinSLAMM input data and output summaries can be found in Appendix "B" of this report.

Peak Discharge Management: The peak discharge control requirements are met by a regional storm water basin at the end of East Wolf Run.

Detailed routing information can be found in Appendix "C" of this report.

A summary of the proposed design is as follows:

Proposed Water Quality System

Contributory Watershed:	1.071 Acres (DEV-1)
System Design:	150 LF – 120" CMP
Design Surface Area:	1404 Square Feet
Normal Water Level (NWL):	808.83
Bottom of WQS:	803.83
Top of WQS:	813.83
High Water Mark (100-Year):	812.25
High Water Mark (10-Year):	812.07
High Water Mark (2-Year):	811.86
High Water Mark (1-Year):	811.68
Outlet Control:	1-1.2" Orifice @ 808.83
	8' Sharp Crested Weir @ 811.83
	46'-15" PVC @ 0.26%, IE @ 808.83

Emergency Spillway Conditions:
A 100-year emergency spillway condition was routed for the proposed WQS assuming the 1.2" orifice was plugged and flow over the weir was the only available outflow for the system. The resultant routing indicates a peak discharge of 7.05 cfs and an elevation of 812.25.

ROUTING DATA

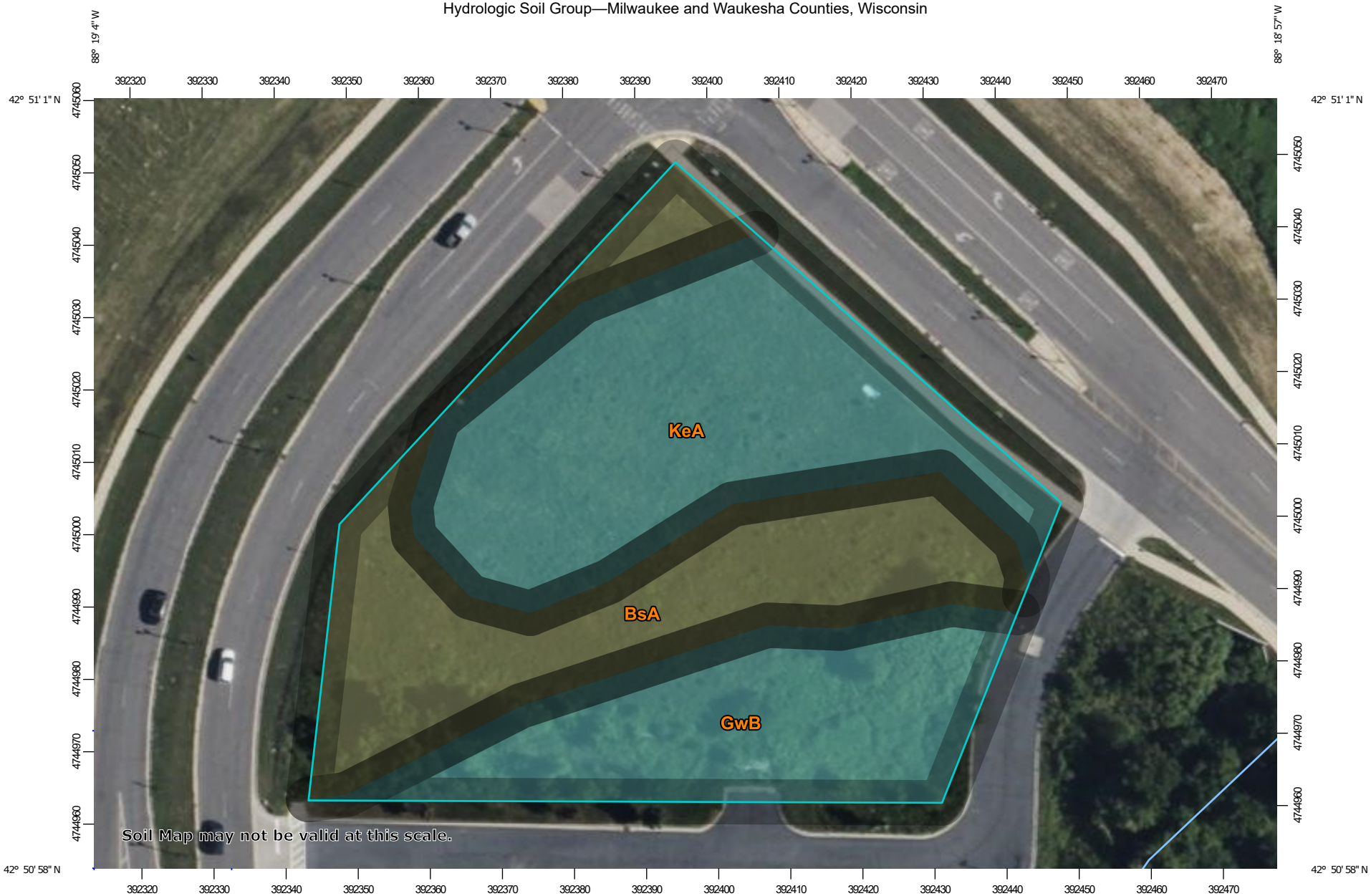
WQS	NWL	Peak Inflow	Peak Outflow	HWM	Storage Above NWL (Ac-ft)
1-Yr. 24-Hour Storm	808.83	2.15 cfs	0.06 cfs	811.68	0.092
2-Yr. 24-Hour Storm	808.83	2.54 cfs	0.29 cfs	811.86	0.097
10-Yr. 24-Hour Storm	808.83	3.99 cfs	3.14 cfs	812.07	0.103
100-Yr. 24-Hour Storm	808.83	7.08 cfs	7.05 cfs	812.25	0.108

CONCLUSION

By utilizing the proposed WQS, the Village of Mukwinago's and WDNR's water quality goals have been met reducing TSS loading by more than 80%, on an average annual basis.

APPENDIX
"A"

Hydrologic Soil Group—Milwaukee and Waukesha Counties, Wisconsin



Map Scale: 1:750 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Milwaukee and Waukesha Counties, Wisconsin
Survey Area Data: Version 19, Sep 8, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2022—Aug 18, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BsA	Brookston silt loam, 0 to 2 percent slopes	C/D	0.5	35.7%
GwB	Griswold silt loam, mottled subsoil variant, 2 to 6 percent slopes	C	0.4	25.4%
KeA	Kane silt loam, 1 to 3 percent slopes	C	0.6	38.9%
Totals for Area of Interest			**1.5**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

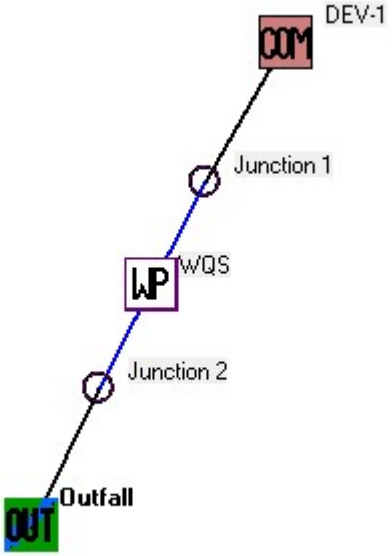
Tie-break Rule: Higher

APPENDIX
"B"

Tsunami Express Car Wash

Water Quality Analysis

System Map



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WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Date: 08-08-2024 Time: 07:41:05
Site information:

LU# 1 - Commercial: DEV-1 Total area (ac): 1.071
1 - Roofs 1: 0.122 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.587 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.362 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - WQS
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.1
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 8
2. Weir crest width (ft): 0.05
3. Height from datum to bottom of weir opening: 8
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0322	0.00	0.00
2	1.00	0.0322	0.00	0.00
3	2.00	0.0322	0.00	0.00
4	3.00	0.0322	0.00	0.00
5	4.00	0.0322	0.00	0.00
6	5.00	0.0322	0.00	0.00
7	6.00	0.0322	0.00	0.00
8	7.00	0.0322	0.00	0.00
9	8.00	0.0322	0.00	0.00
10	9.00	0.0322	0.00	0.00
11	10.00	0.0322	0.00	0.00

SLAMM for Windows Version 10.5.0
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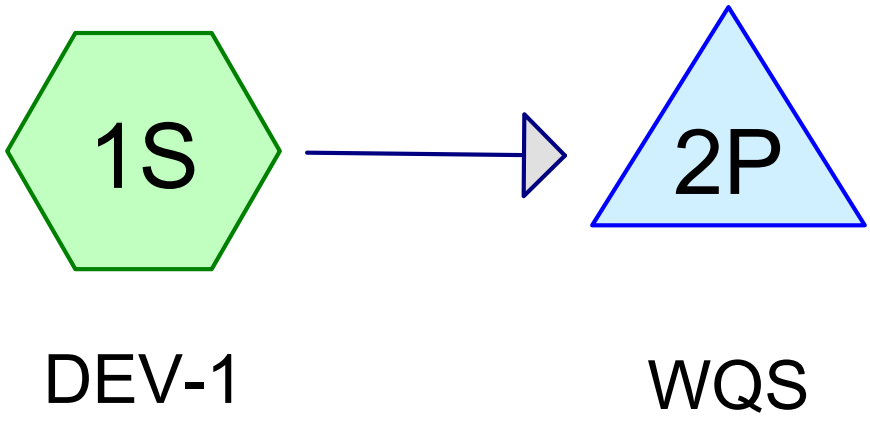
Data file name: Z:\2024\2024.0060.01\Design Documents\Stormwater Management\WinSLAMM\2024.0060.01-WinSLAMM.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 08-08-2024 Time of run: 07:40:41
Total Area Modeled (acres): 1.071
Years in Model Run: 0.99

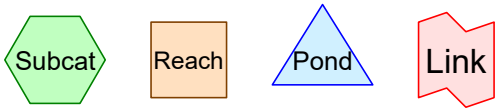
	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	58814	-	113.6	417.2	-
Outfall Total with Controls:	58846	-0.05%	22.25	81.73	80.41%
Annualized Total After Outfall Controls:	59663			82.86	

Pollutant	Conc. No Controls	Conc. With Controls	Conc. Units	Pollutant Yield No Controls	Pollutant Yield With Controls	Pol. Yield Units	Percent Reduction
Particulate Solids	113.6	22.25	mg/L	417.2	81.73	lbs	80.41 %
Total Phosphorus	0.2606	0.08752	mg/L	0.9567	0.3215	lbs	66.39 %

APPENDIX
"C"

POST-DEVELOPED CONDITIONS





Routing Diagram for 2024.0060.01-Post-Developed
Prepared by Nielsen Madsen & Barber, Printed 8/8/2024
HydroCAD® 10.20-5a s/n 10479 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	MSE 24-hr	3	Default	24.00	1	2.40	2
2	2-yr	MSE 24-hr	3	Default	24.00	1	2.70	2
3	10-yr	MSE 24-hr	3	Default	24.00	1	3.81	2
4	100-yr	MSE 24-hr	3	Default	24.00	1	6.18	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.362	74	>75% Grass cover, Good, HSG C (1S)
0.587	98	Pavement (1S)
0.122	98	Roofs (1S)
1.071	**90**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.03 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DEV-1 Runoff Area=1.071 ac 66.20% Impervious Runoff Depth=1.44"
Flow Length=431' Tc=12.7 min CN=90 Runoff=2.15 cfs 0.129 af

Pond 2P: WQS Peak Elev=811.68' Storage=0.228 af Inflow=2.15 cfs 0.129 af
Outflow=0.06 cfs 0.129 af

Total Runoff Area = 1.071 ac Runoff Volume = 0.129 af Average Runoff Depth = 1.44"
33.80% Pervious = 0.362 ac 66.20% Impervious = 0.709 ac

Summary for Subcatchment 1S: DEV-1

Runoff = 2.15 cfs @ 12.21 hrs, Volume= 0.129 af, Depth= 1.44"
Routed to Pond 2P : WQS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

	Area (ac)	CN	Description
*	0.122	98	Roofs
*	0.587	98	Pavement
	0.362	74	>75% Grass cover, Good, HSG C
	1.071	90	Weighted Average
	0.362		33.80% Pervious Area
	0.709		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	43	0.0090	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	41	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	347	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 PVC, smooth interior
12.7	431	Total			

Summary for Pond 2P: WQS

Inflow Area = 1.071 ac, 66.20% Impervious, Inflow Depth = 1.44" for 1-yr event
Inflow = 2.15 cfs @ 12.21 hrs, Volume= 0.129 af
Outflow = 0.06 cfs @ 15.15 hrs, Volume= 0.129 af, Atten= 97%, Lag= 176.6 min
Primary = 0.06 cfs @ 15.15 hrs, Volume= 0.129 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Starting Elev= 808.83' Surf.Area= 0.034 ac Storage= 0.135 af
Peak Elev= 811.68' @ 15.15 hrs Surf.Area= 0.028 ac Storage= 0.228 af (0.092 af above start)

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= 808.6 min (1,612.1 - 803.4)

Volume	Invert	Avail.Storage	Storage Description
#1	803.83'	0.270 af	**120.0" Round CMP_Round 120"** L= 150.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	808.83'	**15.0" Round Culvert** L= 46.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 808.83' / 808.71' S= 0.0026 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	808.83'	**1.2" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	811.83'	**8.0' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.06 cfs @ 15.15 hrs HW=811.68' (Free Discharge)
└─**1=Culvert** (Passes 0.06 cfs of 8.57 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.06 cfs @ 8.05 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Time span=0.00-72.00 hrs, dt=0.03 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DEV-1 Runoff Area=1.071 ac 66.20% Impervious Runoff Depth=1.71"
Flow Length=431' Tc=12.7 min CN=90 Runoff=2.54 cfs 0.153 af

Pond 2P: WQS Peak Elev=811.86' Storage=0.233 af Inflow=2.54 cfs 0.153 af
Outflow=0.29 cfs 0.153 af

Total Runoff Area = 1.071 ac Runoff Volume = 0.153 af Average Runoff Depth = 1.71"
33.80% Pervious = 0.362 ac 66.20% Impervious = 0.709 ac

Summary for Subcatchment 1S: DEV-1

Runoff = 2.54 cfs @ 12.21 hrs, Volume= 0.153 af, Depth= 1.71"
Routed to Pond 2P : WQS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

	Area (ac)	CN	Description
*	0.122	98	Roofs
*	0.587	98	Pavement
	0.362	74	>75% Grass cover, Good, HSG C
	1.071	90	Weighted Average
	0.362		33.80% Pervious Area
	0.709		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	43	0.0090	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	41	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	347	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 PVC, smooth interior
12.7	431	Total			

Summary for Pond 2P: WQS

Inflow Area = 1.071 ac, 66.20% Impervious, Inflow Depth = 1.71" for 2-yr event
Inflow = 2.54 cfs @ 12.21 hrs, Volume= 0.153 af
Outflow = 0.29 cfs @ 12.91 hrs, Volume= 0.153 af, Atten= 89%, Lag= 42.4 min
Primary = 0.29 cfs @ 12.91 hrs, Volume= 0.153 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Starting Elev= 808.83' Surf.Area= 0.034 ac Storage= 0.135 af
Peak Elev= 811.86' @ 12.91 hrs Surf.Area= 0.027 ac Storage= 0.233 af (0.097 af above start)

Plug-Flow detention time= 2,158.8 min calculated for 0.017 af (11% of inflow)
Center-of-Mass det. time= 747.1 min (1,547.2 - 800.0)

Volume	Invert	Avail.Storage	Storage Description
#1	803.83'	0.270 af	**120.0" Round CMP_Round 120"** L= 150.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	808.83'	**15.0" Round Culvert** L= 46.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 808.83' / 808.71' S= 0.0026 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	808.83'	**1.2" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	811.83'	**8.0' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.18 cfs @ 12.91 hrs HW=811.86' (Free Discharge)
└─**1=Culvert** (Passes 0.18 cfs of 9.01 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.31 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.12 cfs @ 0.54 fps)

Time span=0.00-72.00 hrs, dt=0.03 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DEV-1 Runoff Area=1.071 ac 66.20% Impervious Runoff Depth=2.74"
Flow Length=431' Tc=12.7 min CN=90 Runoff=3.99 cfs 0.244 af

Pond 2P: WQS Peak Elev=812.07' Storage=0.238 af Inflow=3.99 cfs 0.244 af
Outflow=3.14 cfs 0.244 af

Total Runoff Area = 1.071 ac Runoff Volume = 0.244 af Average Runoff Depth = 2.74"
33.80% Pervious = 0.362 ac 66.20% Impervious = 0.709 ac

Summary for Subcatchment 1S: DEV-1

Runoff = 3.99 cfs @ 12.20 hrs, Volume= 0.244 af, Depth= 2.74"
Routed to Pond 2P : WQS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

	Area (ac)	CN	Description
*	0.122	98	Roofs
*	0.587	98	Pavement
	0.362	74	>75% Grass cover, Good, HSG C
	1.071	90	Weighted Average
	0.362		33.80% Pervious Area
	0.709		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	43	0.0090	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	41	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	347	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 PVC, smooth interior
12.7	431	Total			

Summary for Pond 2P: WQS

Inflow Area = 1.071 ac, 66.20% Impervious, Inflow Depth = 2.74" for 10-yr event
Inflow = 3.99 cfs @ 12.20 hrs, Volume= 0.244 af
Outflow = 3.14 cfs @ 12.30 hrs, Volume= 0.244 af, Atten= 21%, Lag= 5.7 min
Primary = 3.14 cfs @ 12.30 hrs, Volume= 0.244 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Starting Elev= 808.83' Surf.Area= 0.034 ac Storage= 0.135 af
Peak Elev= 812.07' @ 12.30 hrs Surf.Area= 0.026 ac Storage= 0.238 af (0.103 af above start)

Plug-Flow detention time= 1,222.6 min calculated for 0.109 af (45% of inflow)
Center-of-Mass det. time= 518.6 min (1,309.2 - 790.6)

Volume	Invert	Avail.Storage	Storage Description
#1	803.83'	0.270 af	**120.0" Round CMP_Round 120"** L= 150.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	808.83'	**15.0" Round Culvert** L= 46.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 808.83' / 808.71' S= 0.0026 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	808.83'	**1.2" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	811.83'	**8.0' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=3.09 cfs @ 12.30 hrs HW=812.07' (Free Discharge)
└─**1=Culvert** (Passes 3.09 cfs of 9.49 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.60 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 3.02 cfs @ 1.60 fps)

Time span=0.00-72.00 hrs, dt=0.03 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DEV-1 Runoff Area=1.071 ac 66.20% Impervious Runoff Depth=5.02"
Flow Length=431' Tc=12.7 min CN=90 Runoff=7.08 cfs 0.448 af

Pond 2P: WQS Peak Elev=812.25' Storage=0.243 af Inflow=7.08 cfs 0.448 af
Outflow=7.05 cfs 0.448 af

Total Runoff Area = 1.071 ac Runoff Volume = 0.448 af Average Runoff Depth = 5.02"
33.80% Pervious = 0.362 ac 66.20% Impervious = 0.709 ac

Summary for Subcatchment 1S: DEV-1

Runoff = 7.08 cfs @ 12.20 hrs, Volume= 0.448 af, Depth= 5.02"
Routed to Pond 2P : WQS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

	Area (ac)	CN	Description
*	0.122	98	Roofs
*	0.587	98	Pavement
	0.362	74	>75% Grass cover, Good, HSG C
	1.071	90	Weighted Average
	0.362		33.80% Pervious Area
	0.709		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	43	0.0090	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	41	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	347	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 PVC, smooth interior
12.7	431	Total			

Summary for Pond 2P: WQS

Inflow Area = 1.071 ac, 66.20% Impervious, Inflow Depth = 5.02" for 100-yr event
Inflow = 7.08 cfs @ 12.20 hrs, Volume= 0.448 af
Outflow = 7.05 cfs @ 12.21 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.7 min
Primary = 7.05 cfs @ 12.21 hrs, Volume= 0.448 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Starting Elev= 808.83' Surf.Area= 0.034 ac Storage= 0.135 af
Peak Elev= 812.25' @ 12.21 hrs Surf.Area= 0.025 ac Storage= 0.243 af (0.108 af above start)

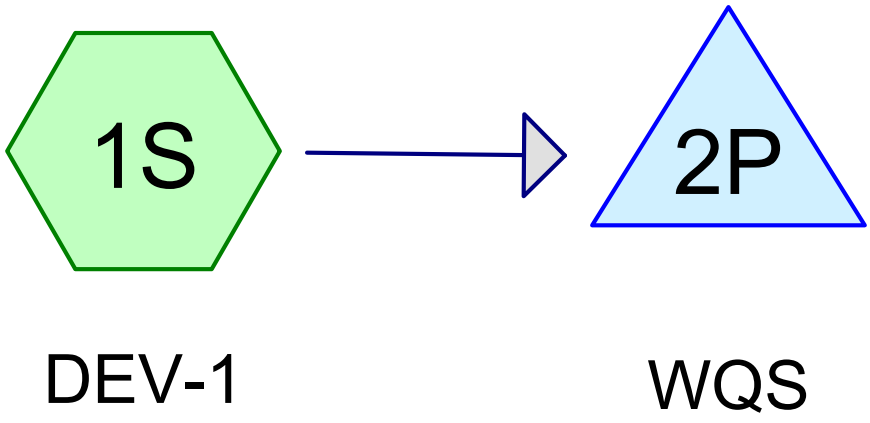
Plug-Flow detention time= 541.2 min calculated for 0.313 af (70% of inflow)
Center-of-Mass det. time= 314.4 min (1,093.1 - 778.7)

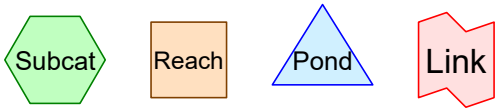
Volume	Invert	Avail.Storage	Storage Description
#1	803.83'	0.270 af	**120.0" Round CMP_Round 120"** L= 150.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	808.83'	**15.0" Round Culvert** L= 46.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 808.83' / 808.71' S= 0.0026 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	808.83'	**1.2" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	811.83'	**8.0' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=6.99 cfs @ 12.21 hrs HW=812.25' (Free Discharge)
└─**1=Culvert** (Passes 6.99 cfs of 9.87 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 0.07 cfs @ 8.83 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 6.92 cfs @ 2.11 fps)

POST-DEVELOPED CONDITIONS (EMERGENCY)





Routing Diagram for 2024.0060.01-Post-Developed-Emergency Spillway
Prepared by Nielsen Madsen & Barber, Printed 8/8/2024
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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100-yr	MSE 24-hr	3	Default	24.00	1	6.18	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.362	74	>75% Grass cover, Good, HSG C (1S)
0.587	98	Pavement (1S)
0.122	98	Roofs (1S)
1.071	**90**	**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.03 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DEV-1 Runoff Area=1.071 ac 66.20% Impervious Runoff Depth=5.02"
Flow Length=431' Tc=12.7 min CN=90 Runoff=7.08 cfs 0.448 af

Pond 2P: WQS Peak Elev=812.25' Storage=0.243 af Inflow=7.08 cfs 0.448 af
Outflow=7.05 cfs 0.351 af

Total Runoff Area = 1.071 ac Runoff Volume = 0.448 af Average Runoff Depth = 5.02"
33.80% Pervious = 0.362 ac 66.20% Impervious = 0.709 ac

Summary for Subcatchment 1S: DEV-1

Runoff = 7.08 cfs @ 12.20 hrs, Volume= 0.448 af, Depth= 5.02"
Routed to Pond 2P : WQS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

	Area (ac)	CN	Description
*	0.122	98	Roofs
*	0.587	98	Pavement
	0.362	74	>75% Grass cover, Good, HSG C
	1.071	90	Weighted Average
	0.362		33.80% Pervious Area
	0.709		66.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.9	43	0.0090	0.07		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	41	0.0120	2.22		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	347	0.0050	3.79	2.98	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.011 PVC, smooth interior
12.7	431	Total			

Summary for Pond 2P: WQS

Inflow Area = 1.071 ac, 66.20% Impervious, Inflow Depth = 5.02" for 100-yr event
Inflow = 7.08 cfs @ 12.20 hrs, Volume= 0.448 af
Outflow = 7.05 cfs @ 12.21 hrs, Volume= 0.351 af, Atten= 0%, Lag= 0.7 min
Primary = 7.05 cfs @ 12.21 hrs, Volume= 0.351 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Starting Elev= 808.83' Surf.Area= 0.034 ac Storage= 0.135 af
Peak Elev= 812.25' @ 12.21 hrs Surf.Area= 0.025 ac Storage= 0.243 af (0.108 af above start)

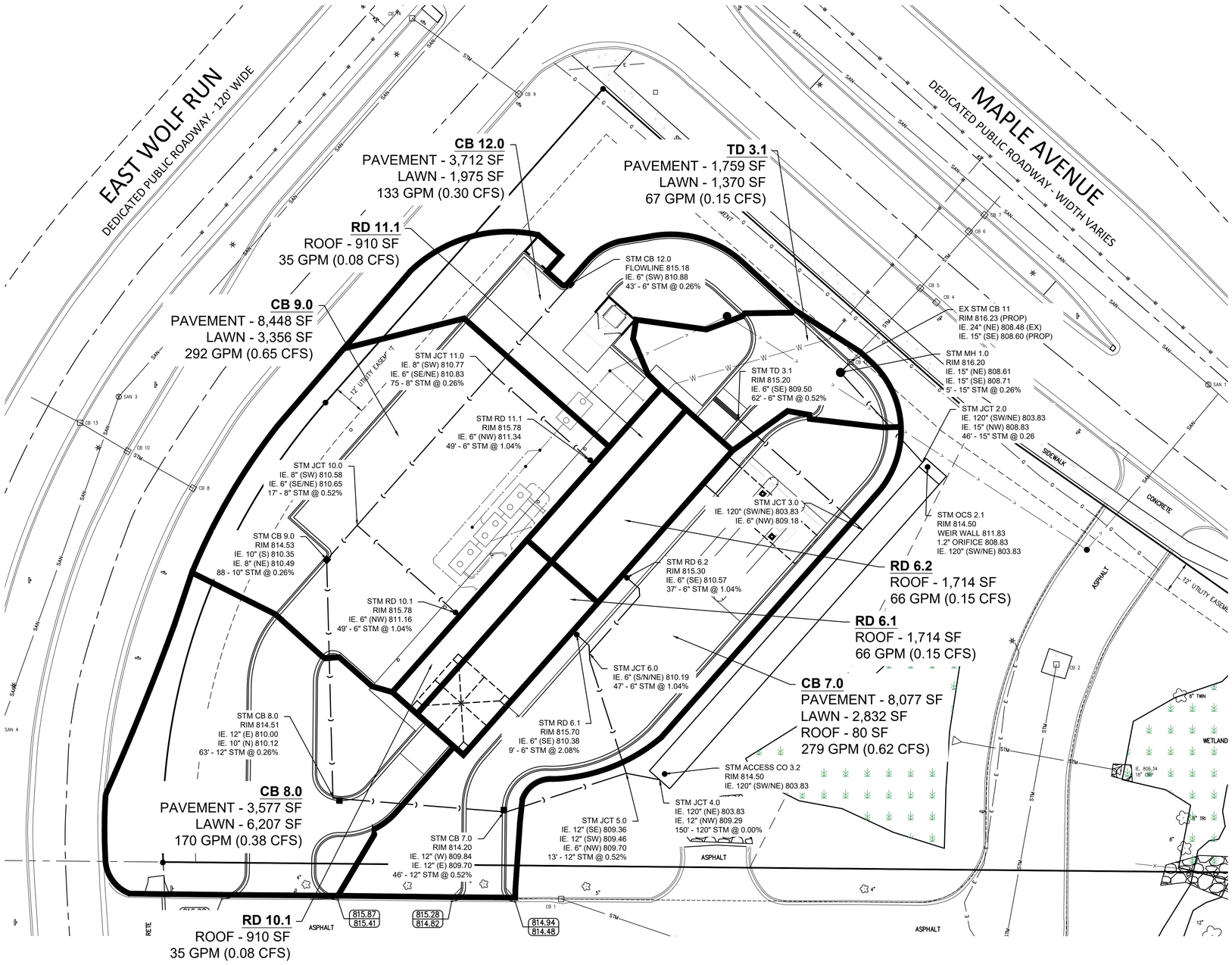
Plug-Flow detention time= 172.1 min calculated for 0.216 af (48% of inflow)
Center-of-Mass det. time= 36.0 min (814.8 - 778.7)

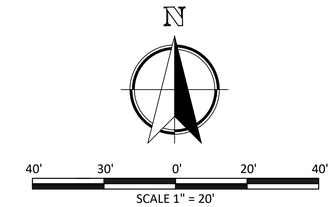
Volume	Invert	Avail.Storage	Storage Description
#1	803.83'	0.270 af	**120.0" Round CMP_Round 120"** L= 150.0'

Device	Routing	Invert	Outlet Devices
#1	Primary	808.83'	**15.0" Round Culvert** L= 46.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 808.83' / 808.71' S= 0.0026 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 1.23 sf
#2	Device 1	811.83'	**8.0' long x 2.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=6.99 cfs @ 12.21 hrs HW=812.25' (Free Discharge)
└─**1=Culvert** (Passes 6.99 cfs of 9.87 cfs potential flow)
└─**2=Sharp-Crested Rectangular Weir** (Weir Controls 6.99 cfs @ 2.11 fps)

APPENDIX
“D”





REFERENCES

EROSION CONTROL, EARTHWORK, SITE GRADING AND PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STATE OF WISCONSIN, STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION", CURRENT EDITION, HEREIN REFERRED TO AS THE "STATE SPECIFICATIONS".

MATERIALS FOR STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES (SPS) AND THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS.

STORM SEWER CONSTRUCTION SHALL BE CONSTRUCTED PER THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS.

PUBLIC UTILITY NOTES

CABLE TV AND TELEPHONE SERVICE INSTALLATION TO BE COORDINATED WITH THE ELECTRICAL SERVICE.

ELECTRICAL SERVICE TO BE COORDINATED WITH WE ENERGIES. EXACT LOCATION OF THE SERVICE ENTRANCE / METER TO BE COORDINATED WITH WE ENERGIES, THE MECHANICAL DESIGNER AND THE ARCHITECT.

IF ANY VILLAGE OF MUKWONAGO OWNED UNDERGROUND ELECTRIC MAY NEED TO BE RELOCATED, THE OWNER/DEVELOPER TO PAY ALL COSTS FOR RELOCATION. CONSTRUCTION TO BE PERFORMED TO MEET THE VILLAGE OF MUKWONAGO STANDARD CONSTRUCTION SPECIFICATIONS. CONTACT THE VILLAGE OF MUKWONAGO ENGINEERING DIVISION TO SCHEDULE INSPECTION.

THE EXACT LOCATION OF THE SANITARY SEWER LATERAL, DOMESTIC WATER LINE, FIRE PROTECTION LEAD, NATURAL GAS SERVICE, ELECTRIC, AND PHONE LINES (AS THEY ENTER THE BUILDING) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

UTILITY CONSTRUCTION GENERAL NOTES

CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS AND SIZES OF EXISTING SANITARY AND STORM SEWERS, WATER MAINS, GAS & ELECTRIC LINES OR OTHER UTILITIES PRIOR TO STARTING CONSTRUCTION. AS-BUILT (FIELD) DATA SHALL BE USED TO CHECK ALL PROPOSED UTILITY CROSSINGS FOR CONFLICTS.

CONTRACTOR SHALL CONTACT DIGGER'S HOTLINE A MINIMUM OF 72 HOURS BEFORE THE START OF CONSTRUCTION TO IDENTIFY ADJACENT UNDERGROUND UTILITIES. THE LOCATION OF EXISTING PRIVATE UTILITIES MAY NOT BE SHOWN ON THE PLANS AND SHOULD BE LOCATED BY THE OWNER PRIOR TO CONSTRUCTION.

ANY WATER PUMPED FROM PITS, TRENCHES, WELLS OR PONDS SHALL BE TREATED FOR SEDIMENT REMOVAL PRIOR TO DISCHARGE OFF-SITE. PUMPING OPERATIONS SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061. PUMPED WATER CAN BE TREATED IN RETENTION BASINS, FILTER BAGS, STONE FILTERS OR BY OTHER WDNR APPROVED METHODS. QUALITY OF PUMPED WATER SHALL BE CONTINUOUSLY MONITORED DURING PUMPING OPERATIONS.

THE EXACT LOCATION OF ALL BUILDING LATERALS, ROOF DRAIN RISERS AND DOWNSPOUTS (IF APPLICABLE) SHALL BE PER THE ARCHITECTURAL OR MECHANICAL DRAWINGS.

STORM SEWER SPECIFICATIONS

STORM SEWERS WERE SIZED IN ACCORDANCE WITH SPS TABLE 382.36-4 "MAXIMUM CAPACITY OF STORM WATER HORIZONTAL CONVEYANCE PIPING FOR CONCRETE, ASTM C76 AND ASTM C14". ANY MATERIAL APPROVED BY THE CITY OF WAUKESHA AND THE WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES MAY BE USED AT THE SLOPES AND SIZES DESIGNED.

STORM SEWER, ROOF DRAIN AND STORM BUILDING SEWER PIPE AND TUBING MATERIALS SHALL CONFORM TO SPS 384.30 OF THE WISCONSIN ADMINISTRATIVE CODE. REINFORCED CONCRETE PIPE (RCP) AND POLYVINYL CHLORIDE (PVC) MATERIALS SHALL BE SELECTED FROM TABLE 384.30-6. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE MATERIAL (IF SELECTED) SHALL MEET THE REQUIREMENTS OF AASHTO M-252 FOR 4"-10" DIAMETER SIZES AND AASHTO M294 FOR 12"-48" DIAMETER SIZES.

BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".

ALL STORM SEWERS INSTALLED IN EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH TABLE 37, CHAPTER 8.43.4 OF THE "STANDARD SPECIFICATIONS". BACKFILL MATERIAL SHALL EXTEND A MINIMUM OF FIVE FEET (5') OUTSIDE OF THE PAVEMENT LIMITS. TRENCHES RUNNING PARALLEL TO AND LESS THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE COMPACTED GRANULAR BACKFILL.

A 10-GAUGE TRACER WIRE SHALL BE INSTALLED THE ENTIRE LENGTH OF ALL PRIVATE STORM SEWERS, ROOF DRAINS AND STORM BUILDING SEWER LATERALS PER SPS 382.36(7)(d)10. THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT THE BUILDING WALL AND ALL OTHER SYSTEM LIMITS (FOR EACH SYSTEM INSTALLED) AND ENCLOSED IN A RISER BOX WITH "STORM" ON THE COVER.

ALL MANHOLES, CATCH BASINS AND/OR DRAIN BASINS INSTALLED IN PAVED SURFACES AND ACCEPTING RUNOFF SHALL BE FURNISHED WITH THE NEENAH FOUNDRY R-2080-D FRAME AND GRATE.

ALL MANHOLES, CATCH BASINS AND/OR DRAIN BASINS INSTALLED IN LAWN AREAS AND ACCEPTING RUNOFF SHALL BE FURNISHED WITH THE NEENAH FOUNDRY R-2560-EA BEEHIVE FRAME AND GRATE.

ALL MANHOLES, CATCH BASINS AND DRAIN BASINS SHALL BE FURNISHED WITH A MINIMUM 12" SUMP.

ALL STORM SEWERS, MANHOLES, CATCH BASINS AND/OR DRAIN BASINS SHALL BE CONSTRUCTED WITH WATER AND GAS TIGHT JOINTS IN CONFORMANCE WITH SPS 384.40.

PRIVATE STORM SEWER DESIGN CALCULATIONS

Pipe No.		Upstream Flow (GPM)	Pipe Inflow (GPM)	Total Flow (GPM)	Pipe Length (feet)	Min. Pipe Diameter (inches)	Min. Slope (%)	Design Pipe Diameter	Design Slope (%)	Design Pipe Capacity (CFS/GPM)
P-17	CB 12.0 - JCT 11.0	0	133	133	43	6"	0.26%	6"	0.26%	0.29 / 130
P-16	RD 11.1 - JCT 11.0	0	35	35	49	6"	0.26%	6"	1.04%	0.58 / 260
P-15	JCT 11.0 - JCT 10.0	168	0	168	75	8"	0.26%	8"	0.26%	0.62 / 280
P-14	RD 10.1 - JCT 10.0	0	35	35	49	6"	0.26%	6"	1.04%	0.58 / 260
P-13	JCT 10.0 - CB 9.0	203	0	203	17	8"	0.26%	8"	0.52%	0.87 / 390
P-12	CB 9.0 - CB 8.0	203	292	495	88	10"	0.26%	10"	0.26%	1.11 / 500
P-11	CB 8.0 - CB 7.0	495	170	665	63	12"	0.26%	12"	0.26%	1.83 / 820
P-10	CB 7.0 - JCT 5.0	665	279	944	46	12"	0.52%	12"	0.52%	2.56 / 1,150
P-9	RD 6.2 - JCT 6.0	0	66	66	37	6"	0.26%	6"	1.04%	0.58 / 260
P-8	RD 6.1 - JCT 6.0	0	66	66	9	6"	0.26%	6"	2.08%	0.80 / 360
P-7	JCT 6.0 - JCT 5.0	132	0	132	47	6"	0.52%	6"	1.04%	0.58 / 260
P-6	JCT 5.0 - JCT 4.0	1076	0	1076	13	12"	0.52%	12"	0.52%	2.56 / 1,150
P-5	JCT 4.0 - JCT 3.0	1076	0	1076	120	120"	0.00%	120"	0.00%	N/A
P-4	TD 3.1 - JCT 3.0	0	67	67	62	6"	0.26%	6"	0.52%	0.40 / 180
P-3	JCT 3.0 - JCT 2.0	1143	0	1143	30	120"	0.00%	120"	0.00%	N/A
P-2	JCT 2.0 - MH 1.0	1143	0	1143	46	15"	0.26%	15"	0.26%	3.30 / 1,480
P-1	MH 1.0 - EX. CB 11	1143	0	1143	5	15"	0.26%	15"	0.26%	3.30 / 1,480

SITE UTILITY LEGEND

—— < —— PROPOSED 6" SANITARY SEWER

—— W —— PROPOSED 2" WATER SERVICE

—— (—— PROPOSED STORM SEWER (VARIOUS SIZES)

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

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.

Thursday, August 08, 2024 11:39:05 AM

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

TSUNAMI EXPRESS CAR WASH
STORM SEWER & DRAINAGE PLAN
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

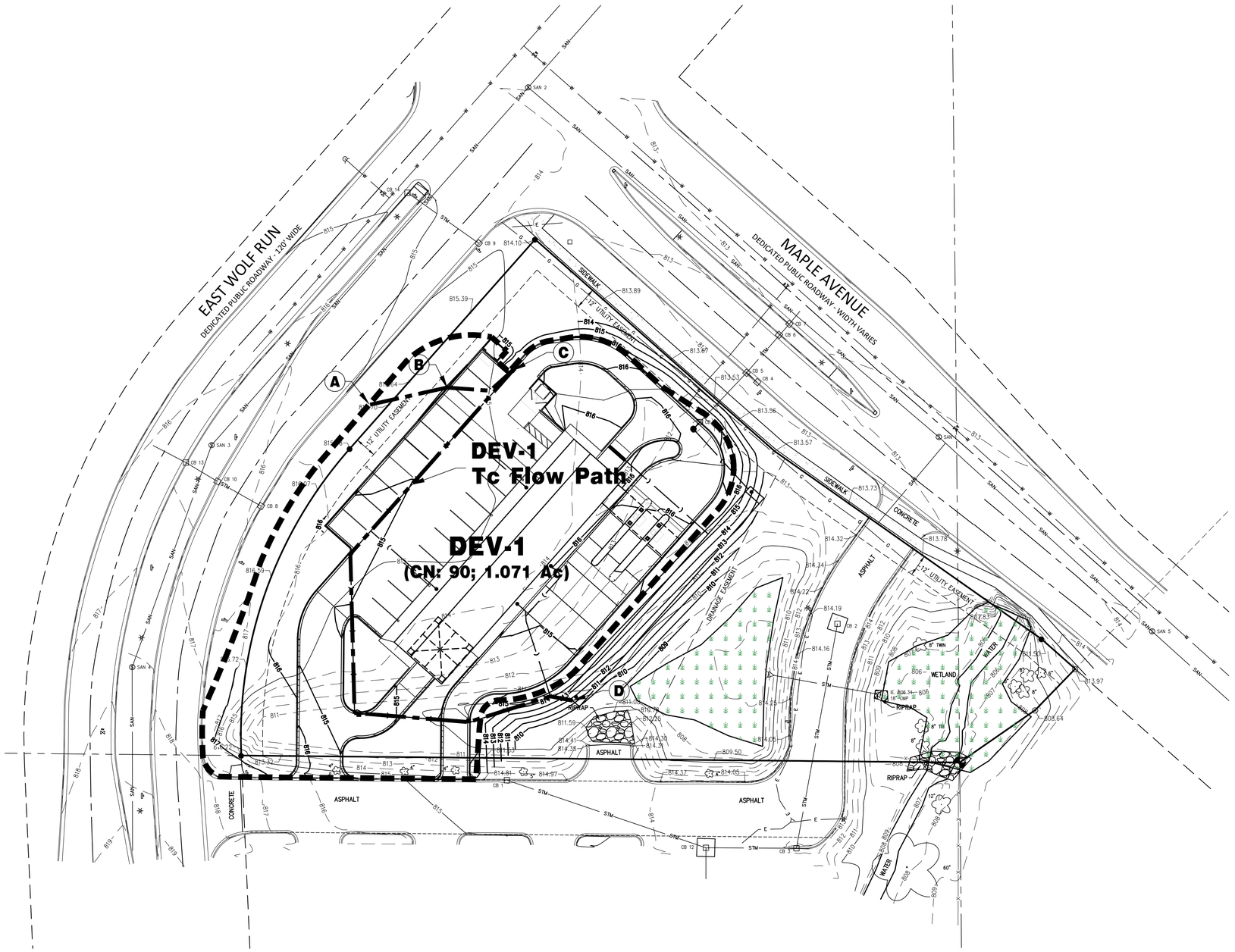
PROJ. MGR: MRM
DRAFTED: JWR
DATE: 5-28-2024
CHECKED: ALI
DATE: 6-3-2024

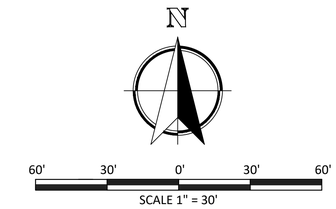
2024.0060.01

SHEET
STM-1

ISSUE FOR REVIEW: 8-8-2024

APPENDIX
"E"





LEGEND

- 692 — EXISTING CONTOURS
- 702 — PROPOSED CONTOURS
- 604.88 EXISTING SPOT GRADES
- VERTICAL FACE, CURB & GUTTER
- REVERSE PAN, CURB & GUTTER
- POST-DEVELOPED DRAINAGE AREA
- POST-DEVELOPED TC FLOW PATH

DIGGERS HOTLINE
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CIVIL ENGINEERS AND LAND SURVEYORS
1458 Horizon Blvd. Suite 200, Racine, WI. 53406
Tele: (262)634-5588 Website: www.nmbsc.net

TSUNAMI EXPRESS CAR WASH
POST-DEVELOPED DRAINAGE EXHIBIT
FOR
TSUNAMI CAR WASH INTERMEDIATE HOLDCO, LLC
VILLAGE OF MUKWONAGO, COUNTY OF WAUKESHA, STATE OF WISCONSIN

NO.	REVISION	BY	DATE

PROJ. MGR:	MRM
DRAFTED:	JWR
DATE:	8-8-2024
CHECKED:	JAM
DATE:	8-8-2024

2024.0060.01

SHEET
DEV-1

ISSUE FOR REVIEW: 8-9-2024

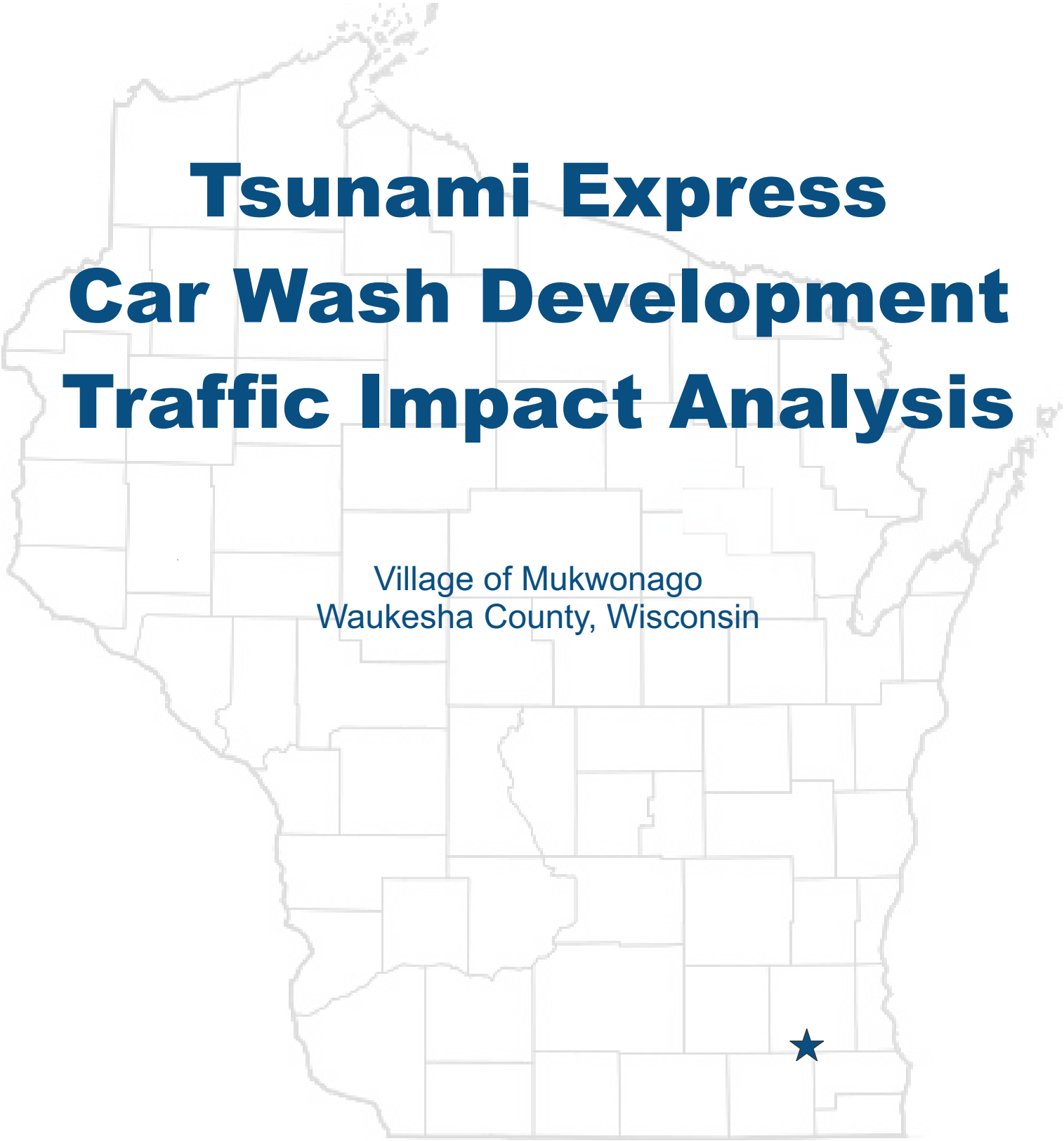
Thursday, August 08, 2024 1:50:39 PM

TRAFFIC ANALYSIS & DESIGN, INC.

P.O. Box 128
Cedarburg, WI 53012
800.605.3091
www.tadi-us.com

Tsunami Express Car Wash Development Traffic Impact Analysis

Village of Mukwonago
Waukesha County, Wisconsin



TRAFFIC IMPACT ANALYSIS

Date: September 9, 2024

Prepared for: Jerry Mortier
The Redmond Company

Prepared by: Don Lee, P.E.
John A. Bieberitz, P.E., PTOE
Traffic Analysis & Design, Inc.

Subject: **Tsunami Express Carwash Development**
Mukwonago, WI
Traffic Impact Analysis

INTRODUCTION

A carwash development is proposed to be constructed on the southeast corner of the East Wolf Run intersection with Maple Avenue in the Village of Mukwonago, Waukesha County, Wisconsin. Access to the site is proposed via two existing access drives, one along East Wolf Run and one along Maple Avenue. A map showing the development site and proposed access locations is on Exhibit 1. The conceptual development site plan is shown on Exhibit 2.

This traffic impact analysis (TIA) was prepared to document the peak hour traffic impacts expected at the study intersections along East Wolf Run and Maple Avenue with existing traffic volumes and with full buildout of the proposed carwash development.

STUDY AREA

Study Intersections

The study intersections, also shown on Exhibit 1, include the following:

- East Wolf Run & Aldi Driveway (one-way stop control)
- Maple Avenue & Aldi Driveway (one-way stop control)

The existing geometrics, traffic control, posted speed limits, and distances between study intersections are shown on Exhibit 3.

Study Area Roadways

East Wolf Run is classified as a Major Collector that generally runs north/south and provides access to a commercial corridor on the south side of the Village of Mukwonago. In the study area, East Wolf Run has a four-lane divided cross-section. The posted speed limit on East Wolf Run is 25 miles per hour (mph) within the limits of the study area. There are no recent Wisconsin

Department of Transportation (WisDOT) Annual Average Daily Traffic (AADT) volumes currently available along East Wolf Run; however, an older year 2009 volume of 10,400 vehicles per day (vpd) was recorded on East Wolf Run, immediately north of STH 83.

Maple Avenue is classified as a Minor Collector and runs east/west within the limits of the development site. Maple Avenue has a four-lane undivided cross-section and a posted speed limit of 35-mph. The WisDOT 2022 AADT volumes on Maple Avenue were 1,200-vpd just west of Janesville Road/CTH L.

EXISTING & FUTURE TRAFFIC VOLUMES

Existing Traffic Volumes

The weekday evening and Saturday midday peak hours are expected to drive the improvements needed to adequately accommodate the proposed development site, as they represent the highest trip generation for the site and the highest volumes along the adjacent transportation system. TADI conducted weekday evening (3:00 – 6:00pm) and Saturday midday (11:00am – 3:00pm) peak hour turning movement traffic counts at the East Wolf Run intersection with the Aldi driveway and the Maple Avenue intersection with the Aldi driveway during a typical weekday and a typical Saturday in late August of 2024.

Based on the turning movement counts, the weekday evening and Saturday midday peak hours were identified as being from 3:30 to 4:30pm and 11:15-12:15pm, respectively. The existing turning movement volumes were compiled for these peak hours and are shown on Exhibit 4. The turning movement traffic count data for each intersection is also included in Appendix A.

Development Site Traffic Volumes

The site is currently a vacant outlot adjacent to an Aldi store that was constructed in 2016. A hospital is located immediately northeast of the site along Maple Avenue and several commercial businesses are located to the north of the site along East Wolf Run. Additional commercial uses are also operating to the south and southwest along STH 83. IH-43 is located about ¼-mile to the west of the site along STH 83.

The proposed development includes a single automatic car wash stall/drive aisle. The expected new trips generated for this land use for the two peak periods were determined based on data from other similar existing facilities noting that these volumes are higher than those calculated per the ITE trip generation rates (comparison table provided in the appendix). The proposed development site is expected to include pass-by trips. Pass-by trips occur when motorists already on the roadway system stop at a development site prior to continuing on their intended route (e.g., an existing motorist northbound on East Wolf Run stops at the site prior to continuing northbound on East Wolf Run). Per WisDOT and Institute of Transportation Engineer (ITE) recommended practice, approximately 25-percent of the expected new trips were included in the pass-by trip reduction calculations.

As shown in Exhibit 5, after pass-by trip reductions, the full buildout, assuming a typical car wash day, is expected to generate 80 new site trips in the PM peak hour, and 80 new site trips in the SAT peak hour.

The new trips for the proposed development were distributed to the study intersections based on existing daily and peak hour traffic patterns. The trip distributions are listed below and shown on Exhibit 5.

- 85% to/from the south on East Wolf Run
- 15% to/from the east on Maple Avenue

Full Build Traffic Volumes

The peak hour new trips expected to be generated by the full buildout of the proposed development were assigned to the study area roadways based on the above trip distribution and are summarized below.

- On-site Development New Trips – Exhibit 6A
- On-site Development Pass-By Trips – Exhibit 6B
- On-site Development Driveway Trips (New Trips + Pass-By Trips) – Exhibit 6C

The on-site development driveway trips were determined by adding the on-site development new trips to the on-site development pass-by trips. The Full Build traffic, which adds the proposed development driveway trips (Exhibit 6C) to the existing traffic volumes, is shown on Exhibit 7.

PEAK HOUR TRAFFIC OPERATIONS & QUEUES

LOS Definition/Description

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.' For the purposes of this study, LOS D or better was used to define acceptable peak hour operating conditions. The LOS descriptions for signalized and unsignalized intersections are in Table 1.

Table 1. LOS Descriptions

LOS	Signalized Intersections Control Delay/Vehicle (sec/veh)	Unsignalized Intersections Avg. Control Delay (sec/veh)	Relative Delay
A	≤10	≤10	Short Delays
	Free-flow traffic operations at avearge travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections		
B	> 10 - 20	> 10 - 15	
	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		
C	> 20 - 35	> 15 - 25	
	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer		
D	> 35 - 55	> 25 - 35	Moderate Delays
	Small increases in traffic flow can cause increased delays. Delays likely attributable to increased traffic, reduced signal progression, and adverse		
E	> 55 - 80	> 35 - 50	
	Significant delays. Travel speeds reduced to one-third of average free flow travel speed.		
F	> 80	> 50	Long Delays
	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		

Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010

Peak Hour Traffic Operations

The study intersections were analyzed using the Synchro 11 traffic analysis model (outputs based on the *Highway Capacity Manual, 6th Edition*) and the peak hour turning movement volumes estimated for each intersection. The Existing traffic LOS, delays, and queues for each movement are shown below in Table 2. As shown, all intersections are currently operating acceptably at LOS B or better during the typical weekday evening and Saturday midday peak hours under existing conditions. The corresponding Synchro analysis files are in Appendix B.

Table 2. Existing Traffic Peak Hour Operations

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Node 100: East Wolf Run & West Aldi Driveway *One-Way Stop Control*		*Lanes->*	-			-		*1*	-	*2*		*2*		
	PM	LOS	-			-		B	-	*		-		
		Delay	-			-		10.0	-	*		-		
		Queue	-			-		25'	-	*		-		
	SAT	LOS	-			-		B	-	*		-		
		Delay	-			-		10.4	-	*		-		
		Queue	-			-		25'	-	*		-		
Node 200: Maple Avenue & East Aldi Driveway *One-Way Stop Control*		*Lanes->*	-	*2*		*2*		-	*1*			-		
	PM	LOS	-	*		A		-	B			-		
		Delay	-	*		7.5		-	10.0			-		
		Queue	-	*		25'		-	25'			-		
	SAT	LOS	-	*		A		-	A			-		
		Delay	-	*		7.5		-	9.8			-		
		Queue	-	*		25'		-	25'			-		

(-) 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.

The Full Build traffic LOS, delays, and queues for each movement are shown below in Table 3. The corresponding Synchro analysis files are in Appendix C. As shown, all movements are expected to continue to operate acceptably at LOS B or better during the typical weekday evening and Saturday midday peak hours under full build conditions. With the additional traffic from the proposed development, minimal additional delay and vehicle queues are expected at each intersection; however, no changes or increases in Levels of Service are expected.

Table 3. Full Build Traffic Peak Hour Operation

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Node 100: East Wolf Run & West Aldi Driveway *One-Way Stop Control*		*Lanes->*	-			-		*1*	-	*2*		*2*		
	PM	LOS	-			-		B	-	*		-		
		Delay	-			-		10.4	-	*		-		
		Queue	-			-		25'	-	*		-		
	SAT	LOS	-			-		B	-	*		-		
		Delay	-			-		10.9	-	*		-		
		Queue	-			-		25'	-	*		-		
Node 200: Maple Avenue & East Aldi Driveway *One-Way Stop Control*		*Lanes->*	-	*2*		*2*		-	*1*			-		
	PM	LOS	-	*		A		-	B			-		
		Delay	-	*		7.5		-	10.4			-		
		Queue	-	*		25'		-	25'			-		
	SAT	LOS	-	*		A		-	B			-		
		Delay	-	*		7.5		-	10.0			-		
		Queue	-	*		25'		-	25'			-		

(-) 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.

RECOMMENDED MODIFICATIONS

Peak Hour Traffic Operations and Queues – With Modifications

Based on the analysis completed as part of this study, the following modifications, as shown on Exhibit 8, are recommended to accommodate the Full Build (with development) traffic volumes.

General

- Provide two driveways onto the existing driveway as shown on the site plan.

Node 100: East Wolf Run & Aldi Driveway

- No modifications are recommended.

Node 200: Maple Avenue & Aldi Driveway

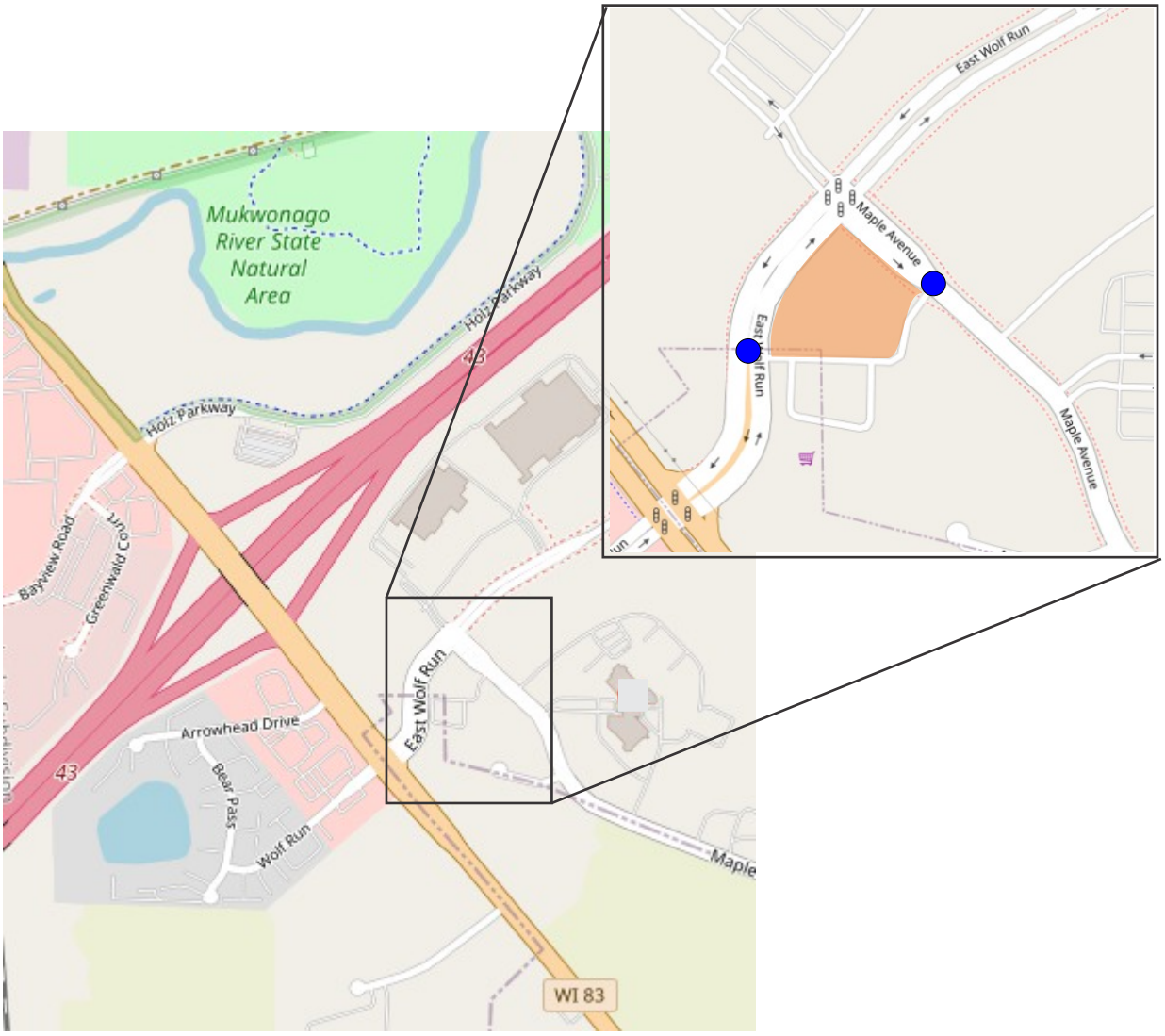
- No modifications are recommended.

CONCLUSIONS

Based on the analysis completed as part of this study, minimal additional delay and vehicle queues are expected at the two existing Aldi driveways onto East Wolf Run and Maple Avenue. Therefore, with the recommended modifications as shown on Exhibit 8, all intersections are expected to operate safely under full build conditions.

Appendices

Appendix A – Traffic
Appendix B – Existing Traffic Peak Hour Analysis Outputs
Appendix C – Full Build Traffic Peak Hour Analysis



LEGEND

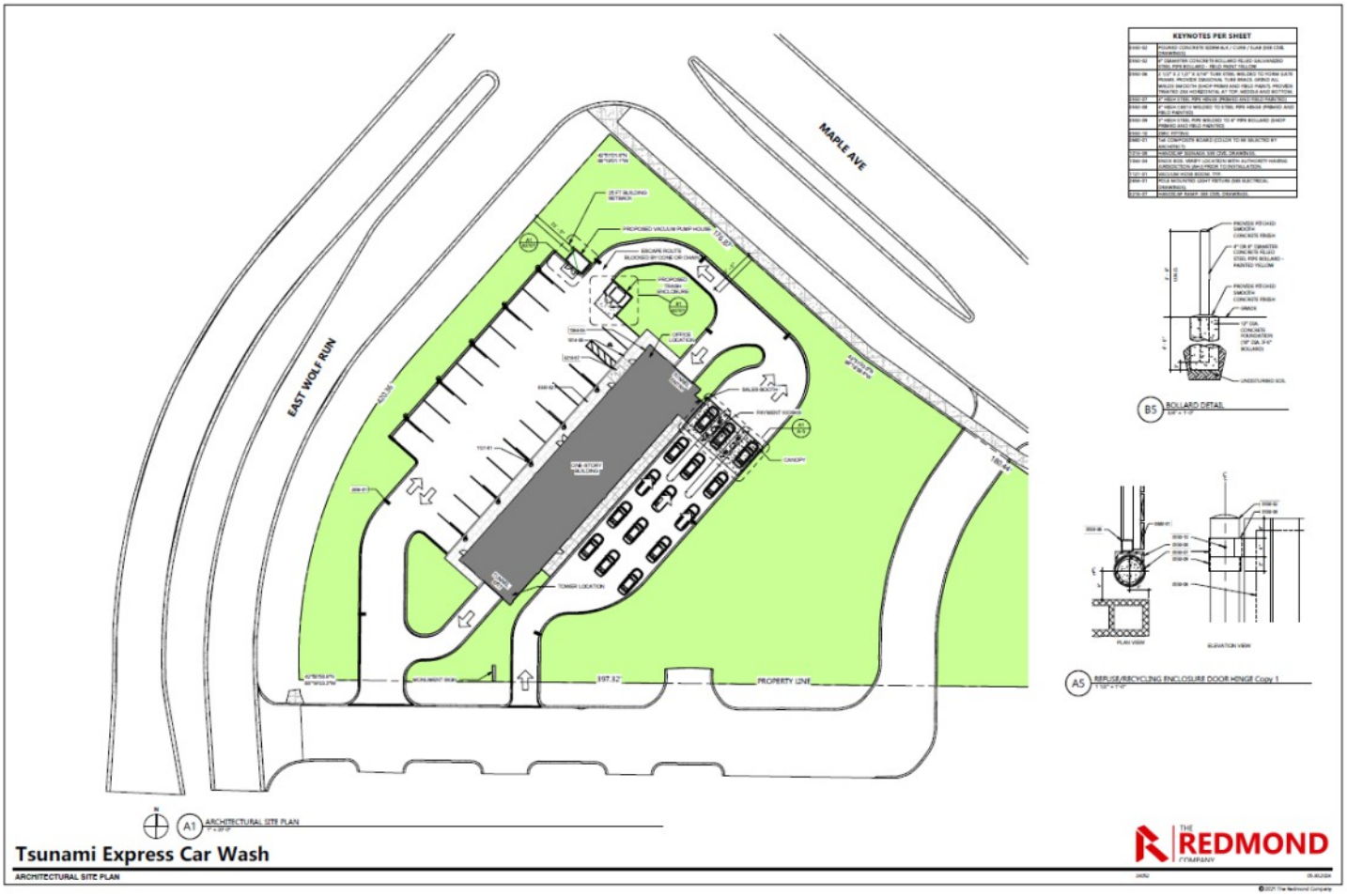
- Study Area Intersection
- Proposed Site Location

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N

EXHIBIT 1
PROJECT OVERVIEW MAP

MUKWONAGO, WISCONSIN



TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N

EXHIBIT 2
CONCEPTUAL SITE PLAN

MUKWONAGO, WISCONSIN

LEGEND

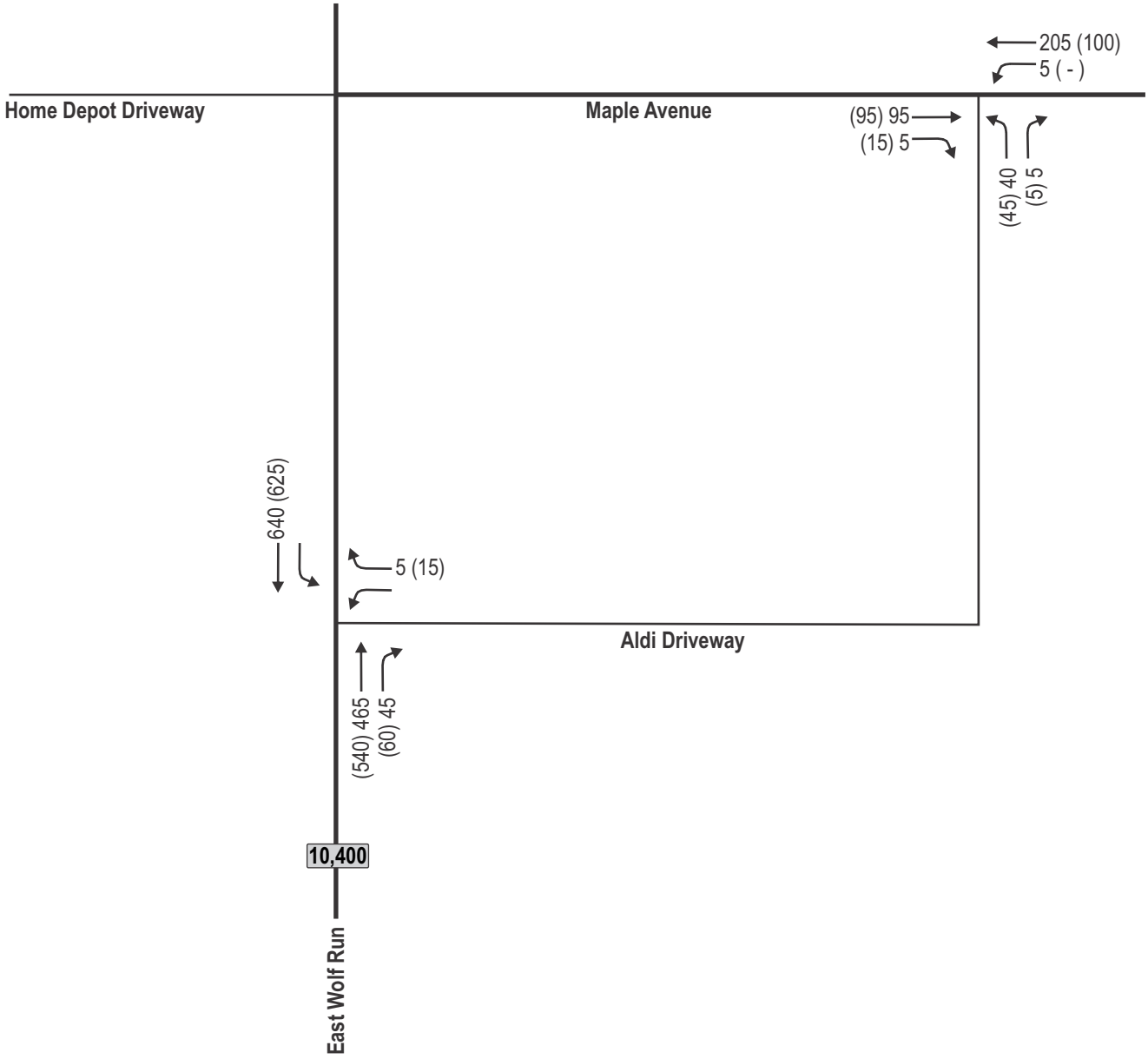
- STOP Stop Sign Control
- → Existing Lane Configuration
- XX' Existing Storage Length (in Feet)
- ***XX'*** Distance Between Roadways (in Feet)
- Divided Roadway Median

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 3
EXISTING TRANSPORTATION DETAIL

MUKWONAGO, WISCONSIN



LEGEND

XX	PM Weekday Peak Hour (3:30 PM - 4:30 PM)
(XX)	Saturday Midday Peak Hour (11:15 AM-12:15 PM)
–	Negligible Traffic Volumes (Fewer than 3 vph)
X,XXX	2009 Annual Average Daily Traffic (AADT)

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3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 4
EXISTING TRAFFIC VOLUMES

MUKWONAGO, WISCONSIN

Exhibit 5
On-Site Trip Generation Table

Land Use	ITE Code	Proposed Size	PM Peak In	PM Peak Out	PM Peak Total	SAT Peak In	SAT Peak Out	SAT Peak Total
Automated Car Wash[1]	TADI	1 Stalls	55	55	110	55	55	110
Total Driveway Trips			**55**	**55**	**110**	**55**	**55**	**110**
PM (SAT) Pass-by Trips	*TADI*	*25% (25%)*	*-15*	*-15*	*-30*	*-15*	*-15*	*-30*
Total Pass-by Trip Reduction			**-15**	**-15**	**-30**	**-15**	**-15**	**-30**
Total New Trips			**40**	**40**	**80**	**40**	**40**	**80**

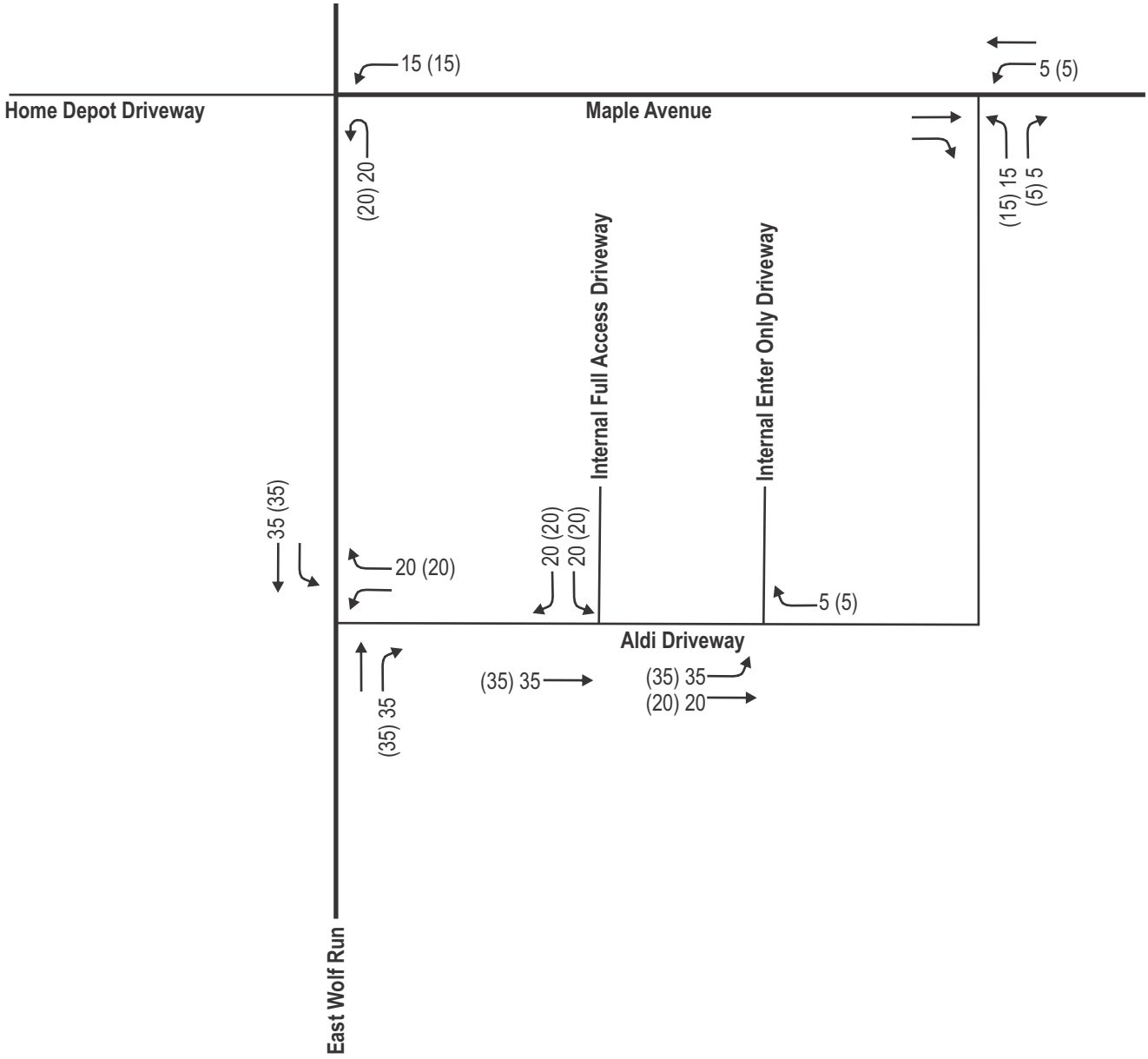
[1] *Volumes based on estimates from study completed for similar type car wash facility*

TRIP DISTRIBUTION (New Trips)

South on Wolf Run	85%	35	35	35	35
East on Maple Avenue	15%	5	5	5	5
	100%	***40***	***40***	***40***	***40***

TRIP DISTRIBUTION (Pass-by Trips)

North on Wolf Run	45% {45%}	10	10	10	10
South on Wolf Run	35% {35%}	5	5	5	5
East on Maple Avenue	10% {10%}	0	0	0	0
		15	***15***	***15***	***15***



LEGEND

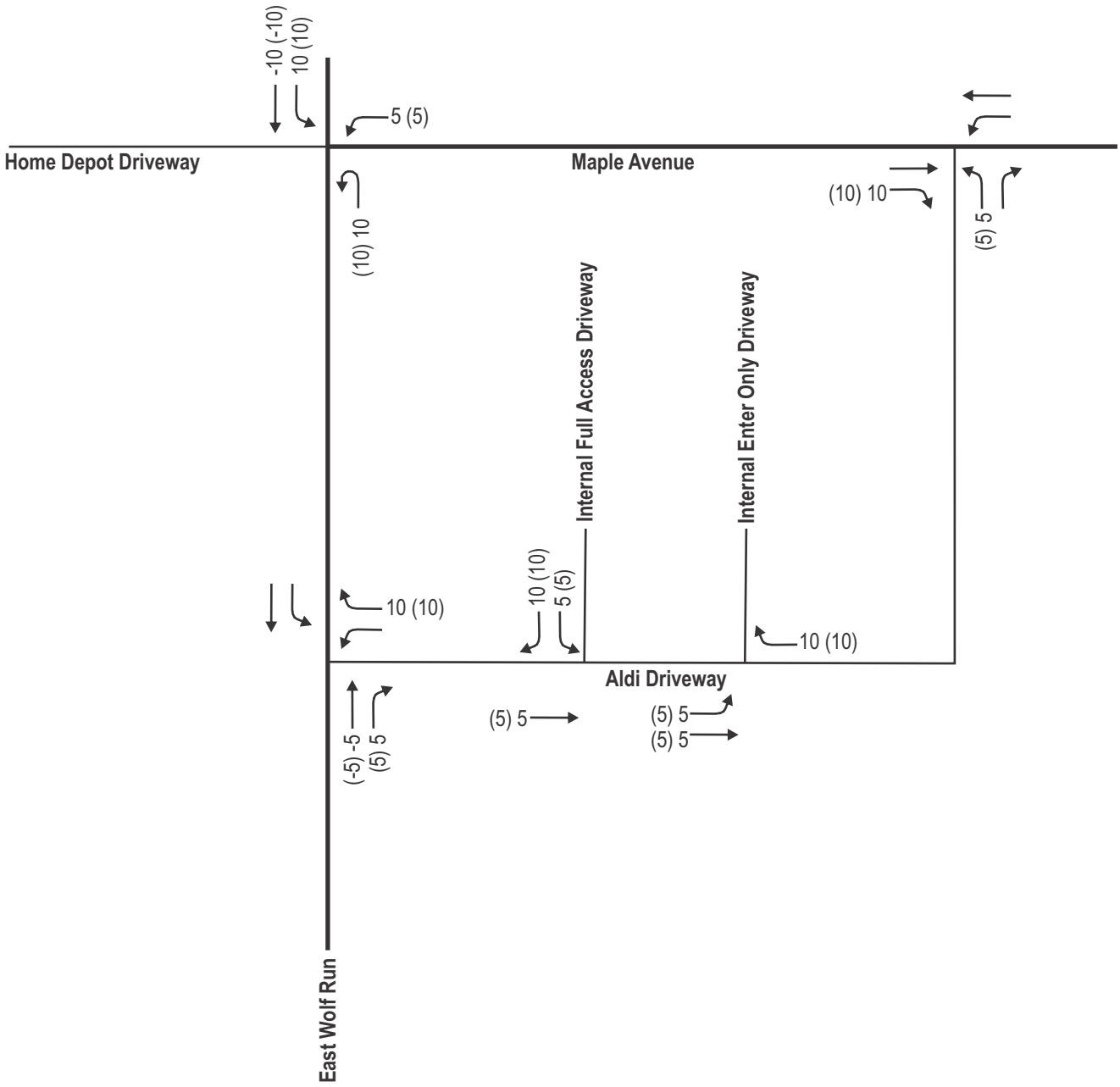
XX	PM Weekday Peak Hour (3:30 PM - 4:30 PM)
(XX)	Saturday Midday Peak Hour (11:15 AM-12:15 PM)
–	Negligible Traffic Volumes (Fewer than 3 vph)

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 6A
NEW TRIPS

MUKWONAGO, WISCONSIN



LEGEND

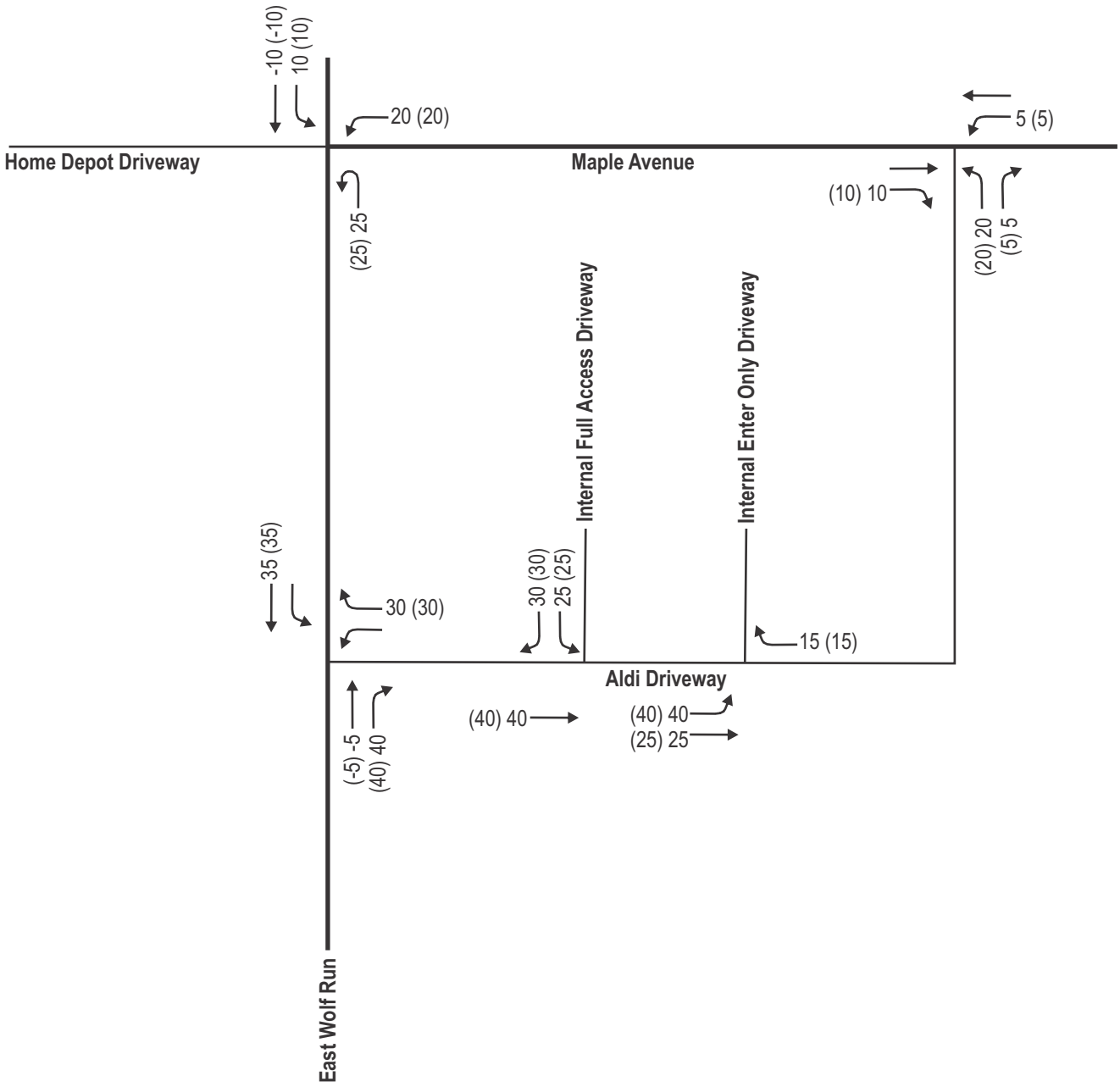
XX	PM Weekday Peak Hour (3:30 PM - 4:30 PM)
(XX)	Saturday Midday Peak Hour (11:15 AM-12:15 PM)
–	Negligible Traffic Volumes (Fewer than 3 vph)

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 6B
PASS-BY TRIPS

MUKWONAGO, WISCONSIN



LEGEND

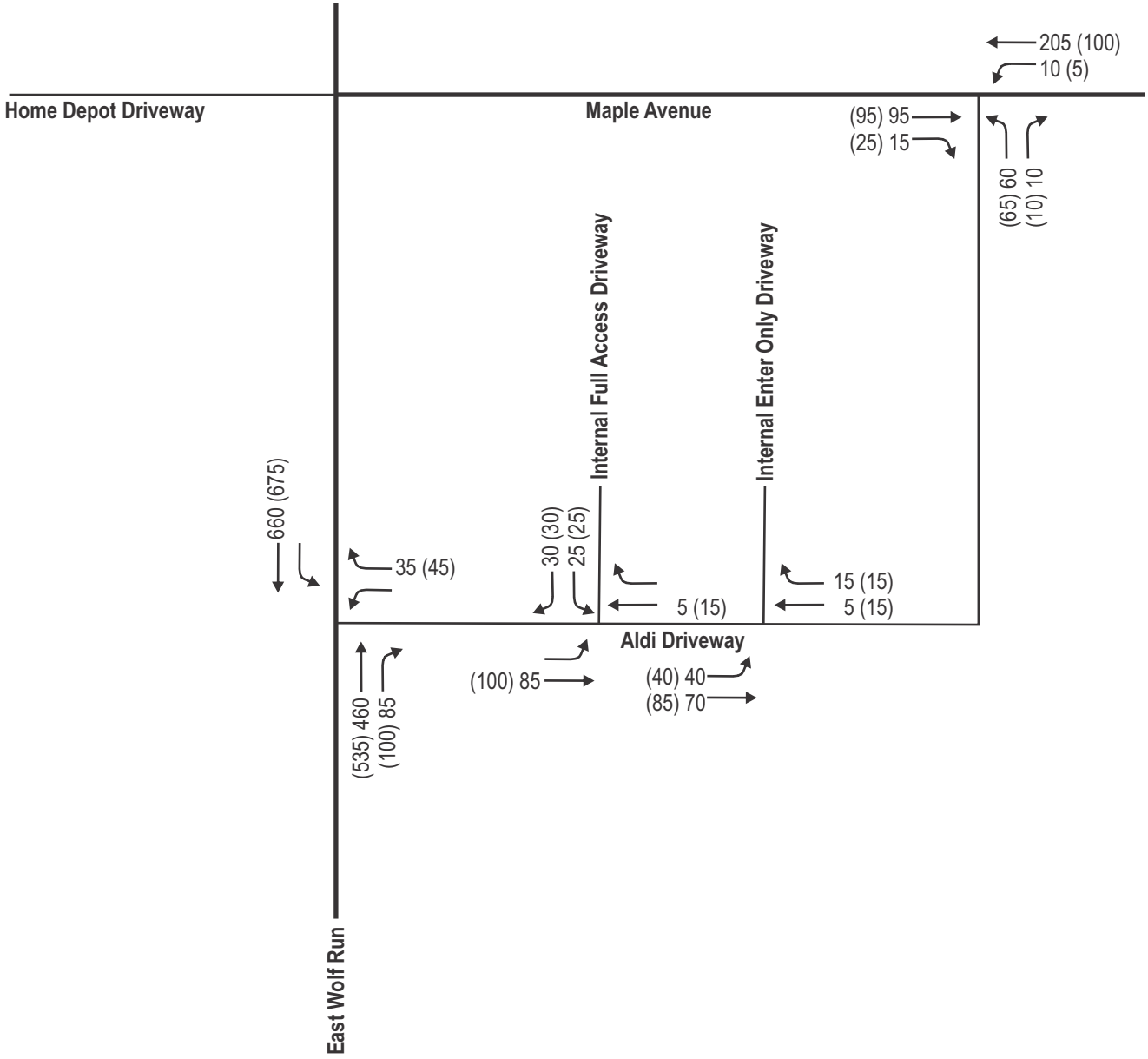
XX	PM Weekday Peak Hour (3:30 PM - 4:30 PM)
(XX)	Saturday Midday Peak Hour (11:15 AM-12:15 PM)
–	Negligible Traffic Volumes (Fewer than 3 vph)

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 6C
DRIVEWAY TRIPS

MUKWONAGO, WISCONSIN



LEGEND

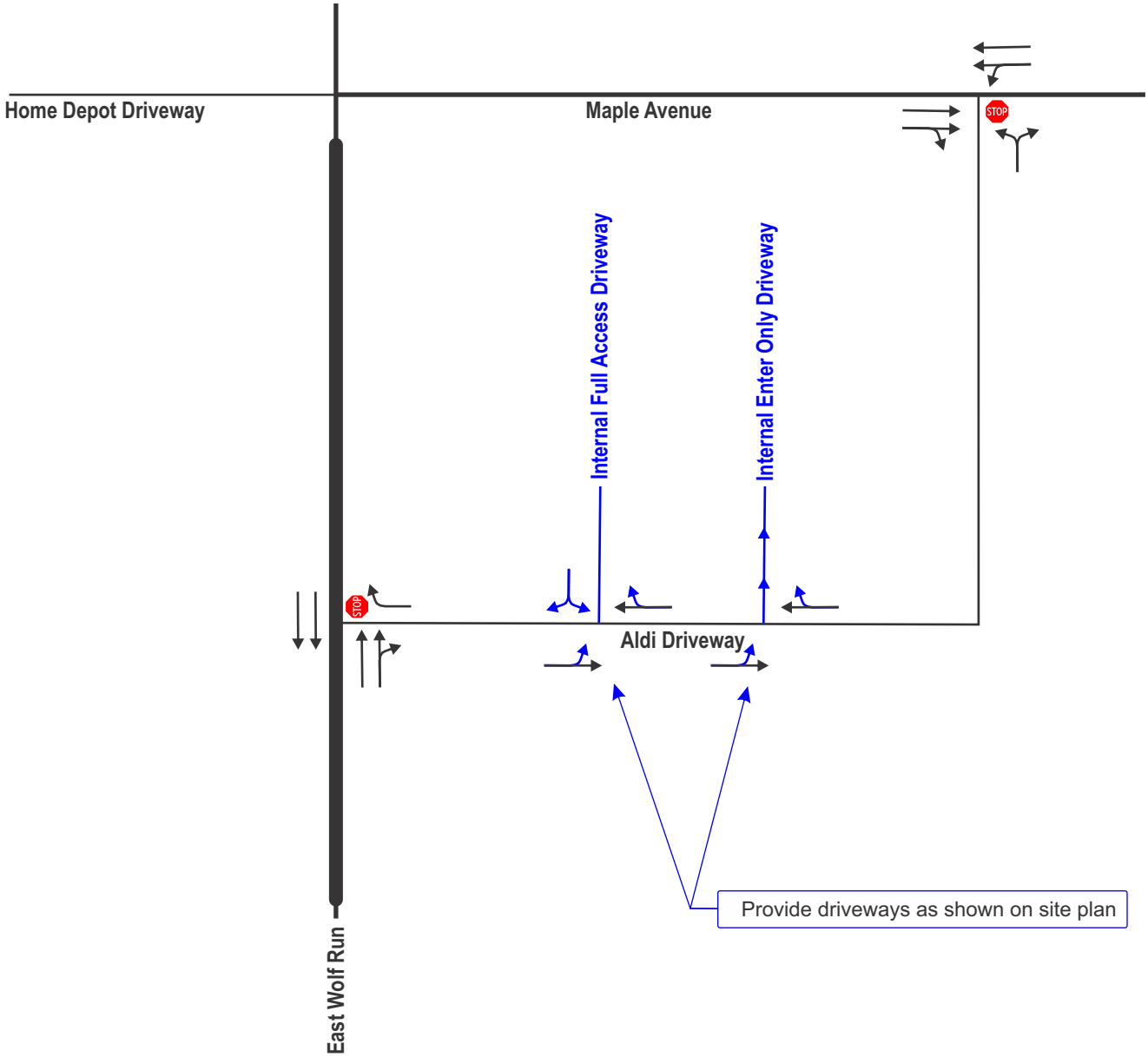
XX	PM Weekday Peak Hour (3:30 PM - 4:30 PM)
(XX)	Saturday Midday Peak Hour (11:15 AM-12:15 PM)
–	Negligible Traffic Volumes (Fewer than 3 vph)

TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 7
FULL BUILD TRAFFIC VOLUMES

MUKWONAGO, WISCONSIN



TADI
TRAFFIC ANALYSIS & DESIGN, INC.
3331 ~ 9/9/24

N
NOT TO SCALE

EXHIBIT 8
RECOMMENDED MODIFICATIONS

MUKWONAGO, WISCONSIN

Appendix A
Traffic

Existing Turning Movement Counts

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Base Information, Observed (3) Hour and Estimated (24) Hour Volume Summaries

Major St: **East Wolf Run**
Minor St: **ALDI Driveway**
Intersection of: ***East Wolf Run*** ***& ALDI Driveway*** **IX_ID:**

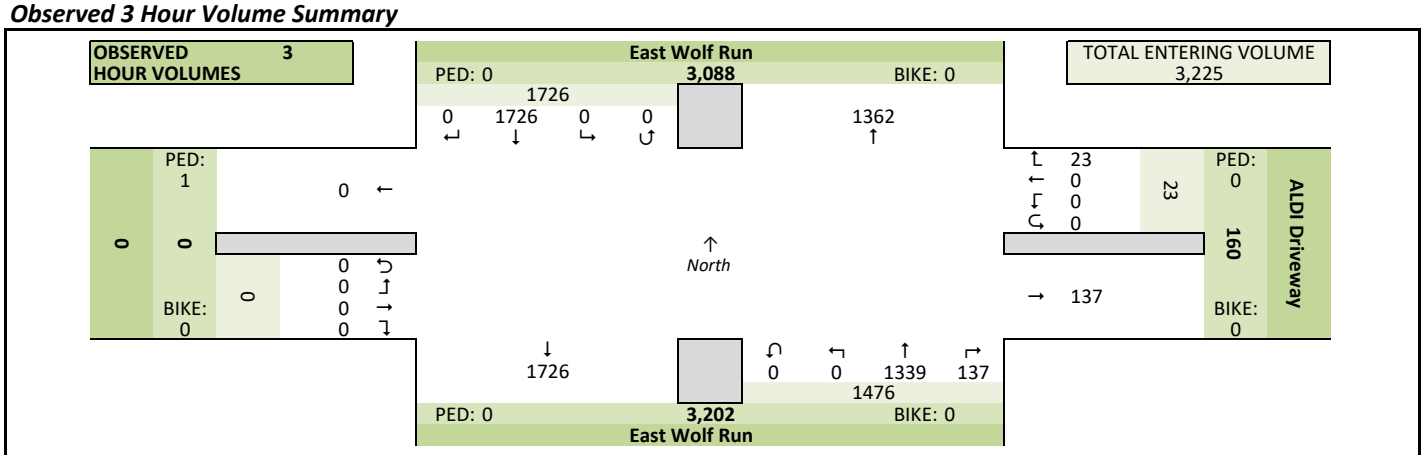
Site Information

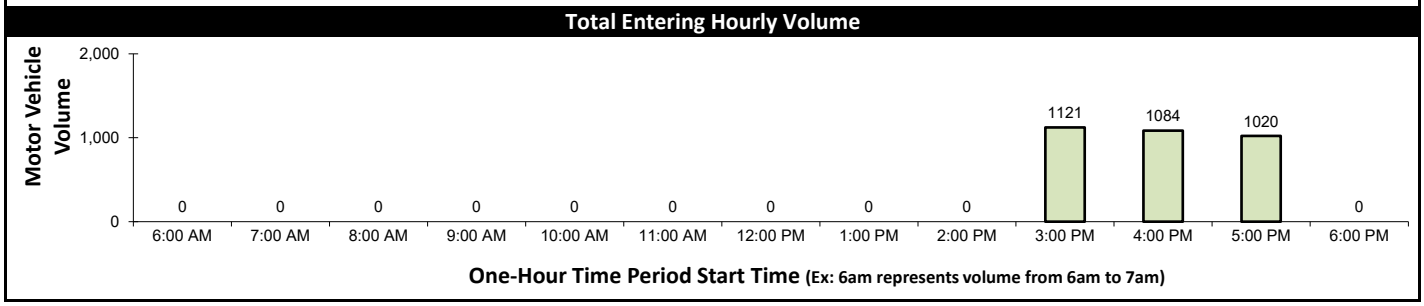
Municipality	Village of Mukwonago		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	East Wolf Run		
East Leg	ALDI Driveway		
South Leg	East Wolf Run		
West Leg			
Special Considerations			
Schools	Not in Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry 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

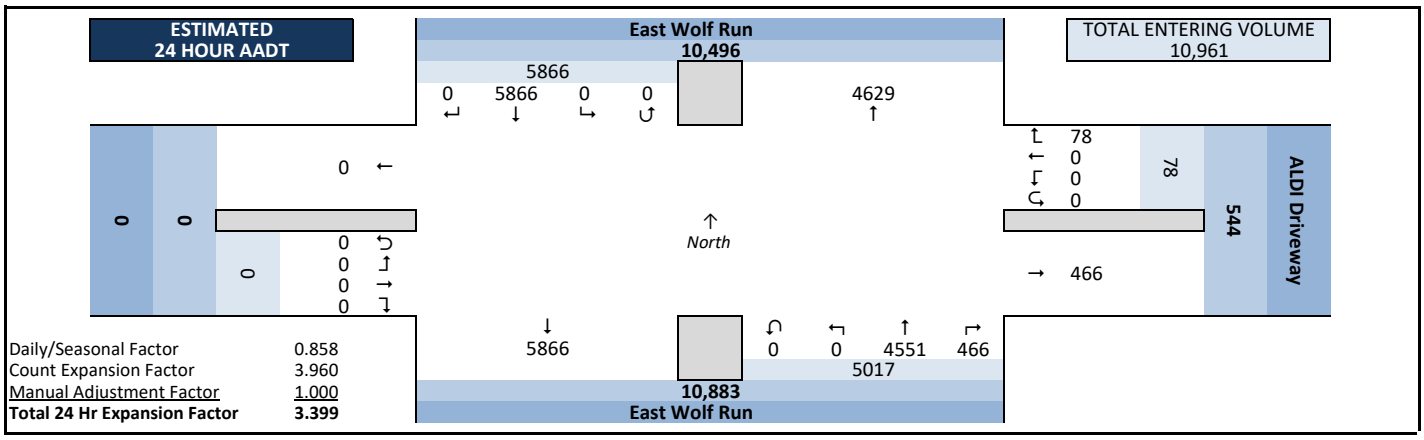
Hrs Counted:	03:00 PM-06:00 PM				
1st Day of Count	Wednesday, August 28, 2024			Weather	
AM Peak Period	Wednesday, August 28, 2024			Clear & Dry	
Midday Peak Period	Wednesday, August 28, 2024			Clear & Dry	
PM Peak Period	Wednesday, August 28, 2024			Clear & Dry	
Calculated Peak Hours					
AM		MD		PM	3:30-4:30pm
Peak Hours Selected for Analysis					
AM		MD		PM	3:30-4:30pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.858	Count Expansion Factor	3.960		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	None			
	Midday Peak Period	None			
	PM Peak Period	Wendy Picard			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 3 Hour Volume Summary





Estimated 24 Hour AADT



Intersection Traffic Volume Report

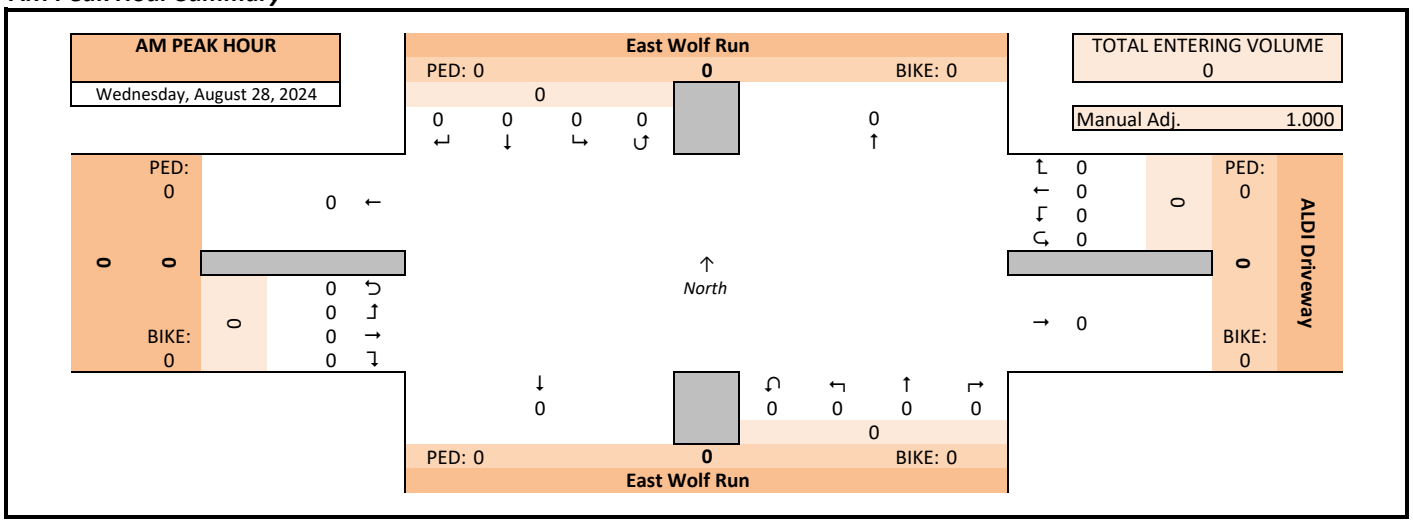
Peak Hour Volume Graphical Summary

Count Basics			*Page 2 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

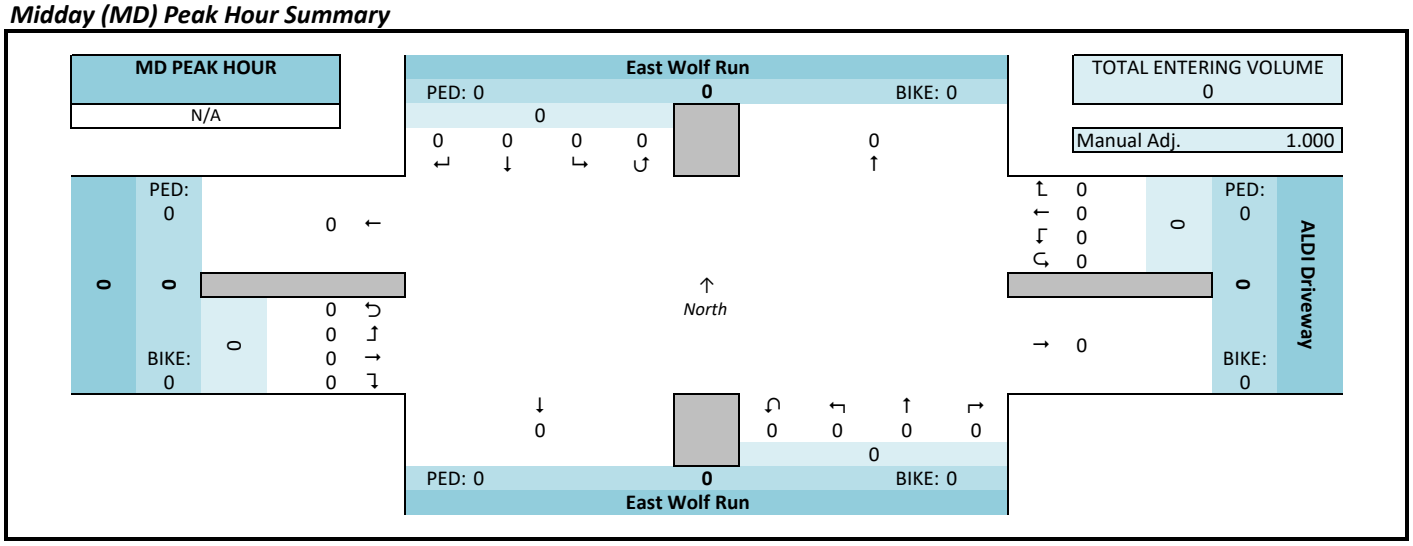
East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

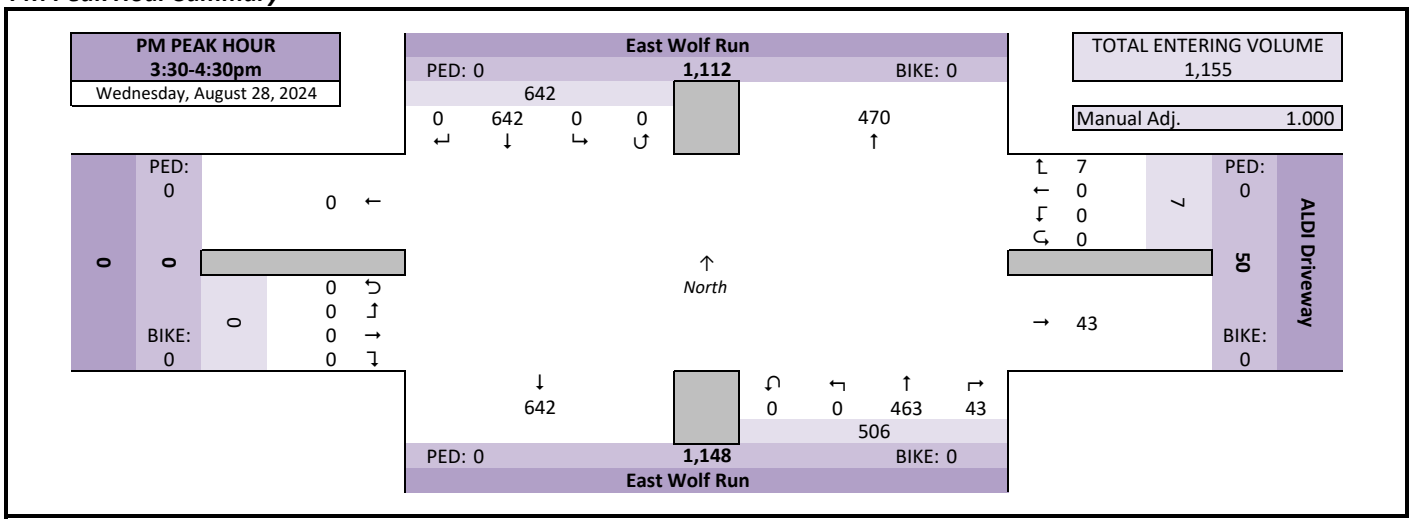
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Peak Hour Volume Summary

East Wolf Run & ALDI Driveway

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Wednesday, August 28, 2024	From North					From East					From South					From West					
AM Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N/A	From North					From East					From South					From West					
Midday (MD) Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Wednesday, August 28, 2024	From North					From East					From South					From West					
PM Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
3:30 PM	0	167	0	0	167	2	0	0	0	2	14	124	0	0	138	0	0	0	0	0	307
3:45 PM	0	150	0	0	150	0	0	0	0	0	12	118	0	0	130	0	0	0	0	0	280
4:00 PM	0	152	0	0	152	3	0	0	0	3	9	109	0	0	118	0	0	0	0	0	273
4:15 PM	0	173	0	0	173	2	0	0	0	2	8	112	0	0	120	0	0	0	0	0	295
Peak Hour Volume	0	642	0	0	642	7	0	0	0	7	43	463	0	0	506	0	0	0	0	0	1155
Rounded Hourly Volume	0	640	0	0	640	5	0	0	0	5	45	465	0	0	510	0	0	0	0	0	1155
% Single Unit Trucks	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	1.1
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
% Trucks (Total)	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.2
Peak Hour Factor (PHF)	0.00	0.93	0.00	0.00	0.93	0.58	0.00	0.00	0.00	0.58	0.77	0.93	0.00	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.94

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
	East Wolf Run			ALDI Driveway			East Wolf Run			0			
15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM													
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD													
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM													
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

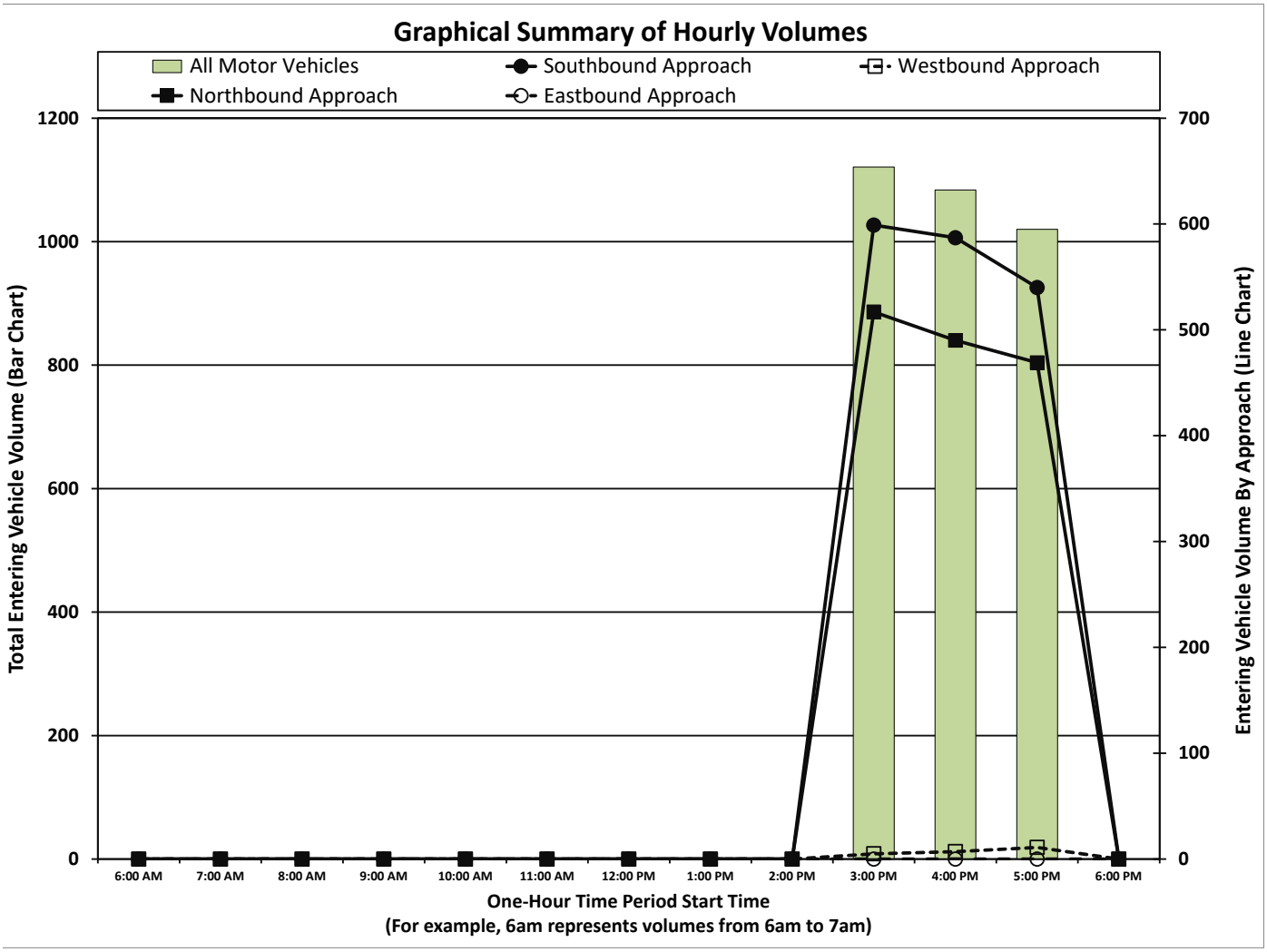
Count Basics			*Page 4 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Vehicle Volume	Directional Volume Totals E/W	N/S
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
MD	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
PM	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	0	599	0	0	599	5	0	0	0	5	46	471	0	0	517	0	0	0	0	0	1121	5	1116
	4:00 PM	0	587	0	0	587	7	0	0	0	7	42	448	0	0	490	0	0	0	0	0	1084	7	1077
	5:00 PM	0	540	0	0	540	11	0	0	0	11	49	420	0	0	469	0	0	0	0	0	1020	11	1009
	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
Totals		0	1726	0	0	1726	23	0	0	0	23	137	1339	0	0	1476	0	0	0	0	0	3225	23	3202



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Count Basics		*Page 5 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					15-Min Totals	Hourly Sum	PHF
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	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		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	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		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	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		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	0	149	0	0	149	2	0	0	0	2	10	116	0	0	126	0	0	0	0	0	277	1121	0.91
	3:15 PM	0	133	0	0	133	1	0	0	0	1	10	113	0	0	123	0	0	0	0	0	257	1117	0.91
	3:30 PM	0	167	0	0	167	2	0	0	0	2	14	124	0	0	138	0	0	0	0	0	307	1155	0.94
	3:45 PM	0	150	0	0	150	0	0	0	0	0	12	118	0	0	130	0	0	0	0	0	280	1117	0.95
	4:00 PM	0	152	0	0	152	3	0	0	0	3	9	109	0	0	118	0	0	0	0	0	273	1084	0.92
	4:15 PM	0	173	0	0	173	2	0	0	0	2	8	112	0	0	120	0	0	0	0	0	295	1084	0.92
	4:30 PM	0	128	0	0	128	2	0	0	0	2	17	122	0	0	139	0	0	0	0	0	269	1073	0.94
	4:45 PM	0	134	0	0	134	0	0	0	0	0	8	105	0	0	113	0	0	0	0	0	247	1019	0.90
	5:00 PM	0	148	0	0	148	3	0	0	0	3	21	101	0	0	122	0	0	0	0	0	273	1020	0.90
	5:15 PM	0	145	0	0	145	3	0	0	0	3	10	126	0	0	136	0	0	0	0	0	284		
	5:30 PM	0	107	0	0	107	4	0	0	0	4	11	93	0	0	104	0	0	0	0	0	215		
	5:45 PM	0	140	0	0	140	1	0	0	0	1	7	100	0	0	107	0	0	0	0	0	248		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	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		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	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		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	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		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		0	1726	0	0	1726	23	0	0	0	23	137	1339	0	0	1476	0	0	0	0	0	3225		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					Total Hourly Volume	PHF
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM	3:30 PM	0	642	0	0	642	7	0	0	0	7	43	463	0	0	506	0	0	0	0	0	1155	0.94

Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics		*Page 6 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	147	0	0	147	2	0	0	0	2	10	115	0	0	125	0	0	0	0	0	274	1111
	3:15 PM	0	132	0	0	132	1	0	0	0	1	10	113	0	0	123	0	0	0	0	0	256	1107
	3:30 PM	0	167	0	0	167	2	0	0	0	2	14	122	0	0	136	0	0	0	0	0	305	1141
	3:45 PM	0	149	0	0	149	0	0	0	0	0	12	115	0	0	127	0	0	0	0	0	276	1099
	4:00 PM	0	151	0	0	151	3	0	0	0	3	9	107	0	0	116	0	0	0	0	0	270	1067
	4:15 PM	0	172	0	0	172	2	0	0	0	2	8	108	0	0	116	0	0	0	0	0	290	1065
	4:30 PM	0	125	0	0	125	2	0	0	0	2	17	119	0	0	136	0	0	0	0	0	263	1058
	4:45 PM	0	132	0	0	132	0	0	0	0	0	8	104	0	0	112	0	0	0	0	0	244	1009
	5:00 PM	0	144	0	0	144	3	0	0	0	3	21	100	0	0	121	0	0	0	0	0	268	1012
	5:15 PM	0	144	0	0	144	3	0	0	0	3	10	126	0	0	136	0	0	0	0	0	283	
	5:30 PM	0	107	0	0	107	4	0	0	0	4	11	92	0	0	103	0	0	0	0	0	214	
	5:45 PM	0	140	0	0	140	1	0	0	0	1	7	99	0	0	106	0	0	0	0	0	247	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	1710	0	0	1710	23	0	0	0	23	137	1320	0	0	1457	0	0	0	0	0	3190	

Peak Hour Automobile Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	639	0	0	639	7	0	0	0	7	43	452	0	0	495	0	0	0	0	0	1141

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Count Basics		*Page 7 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	10
	3:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	13
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	16
	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	15
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	16
	4:30 PM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5	12
	4:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	8
	5:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4	5
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	14	0	0	14	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	30	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	3	0	0	3	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	13

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					15-Min Totals	Hourly Sum
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	2
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	3
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					Total Hourly Volume
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1

Intersection Traffic Volume Report

Count Basics		Page 9 of 13
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

East Wolf Run & ALDI Driveway

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

	15-Minute Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	10
	3:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	14
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	18
	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	17
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5	19
	4:30 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6	15
	4:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	3	10
	5:00 PM	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5	8
	5:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	16	0	0	16	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	35	

Peak Hour Heavy Vehicle Volume Summary

	Hourly Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	3	0	0	3	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	14

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Count Basics		*Page 10 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

% Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Percentages

15-Minute Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PM Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	1.3	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.1	0.9
	3:15 PM	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.7	1.2
	3:45 PM	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	1.4	1.6
	4:00 PM	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.1	1.6
	4:15 PM	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	1.7	1.8
	4:30 PM	0.0	2.3	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	2.2	1.4
	4:45 PM	0.0	1.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.2	1.0
	5:00 PM	0.0	2.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.8	0.8
	5:15 PM	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.5	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.4	
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.1	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period		From North (East Wolf Run)					From East (ALDI Driveway)					From South (East Wolf Run)					From West (0)					Hourly Heavy Vehicle Percent
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM	3:30 PM	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	1.2

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Pedestrians and Bicyclists

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
		East Wolf Run			ALDI Driveway			East Wolf Run			0				
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	0	0	0	1	0	1	1	

Special Pedestrians

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

Intersection Traffic Volume Report

Count Basics			*Page 12 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Adults & Children

East Wolf Run ***& ALDI Driveway***

15-Minute Adult & Children Pedestrian Data

	15-Minute Time Period Start Time	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
		East Wolf Run			ALDI Driveway			East Wolf Run			0				
		Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total		
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	0
	6:15 AM	0		0	0		0	0		0	0		0	0	0
	6:30 AM	0		0	0		0	0		0	0		0	0	0
	6:45 AM	0		0	0		0	0		0	0		0	0	0
	7:00 AM	0		0	0		0	0		0	0		0	0	0
	7:15 AM	0		0	0		0	0		0	0		0	0	0
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	0
	8:45 AM	0		0	0		0	0		0	0		0	0	0
	9:00 AM	0		0	0		0	0		0	0		0	0	0
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	0
	11:30 AM	0		0	0		0	0		0	0		0	0	0
	11:45 AM	0		0	0		0	0		0	0		0	0	0
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	0
	1:45 PM	0		0	0		0	0		0	0		0	0	0
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	0
	2:15 PM	0		0	0		0	0		0	0		0	0	0
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	0
	3:15 PM	0		0	0		0	0		0	0		0	0	0
	3:30 PM	0		0	0		0	0		0	0		0	0	0
	3:45 PM	0		0	0		0	0		0	0		0	0	0
	4:00 PM	0		0	0		0	0		0	0		0	0	0
	4:15 PM	0		0	0		0	0		0	0		0	0	1
	4:30 PM	0		0	0		0	0		0	0		0	0	1
	4:45 PM	0		0	0		0	0		0	0		0	0	1
	5:00 PM	0		0	0		0	0		0	1		1	1	1
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
	9:00 PM	0		0	0		0	0		0	0		0	0	0
	9:15 PM	0		0	0		0	0		0	0		0	0	0
	9:30 PM	0		0	0		0	0		0	0		0	0	0
	9:45 PM	0		0	0		0	0		0	0		0	0	0
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	

Intersection Traffic Volume Report

Count Basics			Page 13 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

15-Minute Bicycle Turning Movement Count (Manual Entry)

East Wolf Run ***& ALDI Driveway***

Bicyclists

15-Minute Bicycle Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM					0					0					0					0	0	0	0
	6:15 AM					0					0					0					0	0	0	0
	6:30 AM					0					0					0					0	0	0	0
	6:45 AM					0					0					0					0	0	0	0
	7:00 AM					0					0					0					0	0	0	0
	7:15 AM					0					0					0					0	0	0	0
	7:30 AM					0					0					0					0	0	0	0
	7:45 AM					0					0					0					0	0	0	0
	8:00 AM					0					0					0					0	0	0	0
	8:15 AM					0					0					0					0	0	0	0
	8:30 AM					0					0					0					0	0	0	0
	8:45 AM					0					0					0					0	0	0	0
	9:00 AM					0					0					0					0	0	0	0
	9:15 AM					0					0					0					0	0	0	0
	9:30 AM					0					0					0					0	0	0	0
	9:45 AM					0					0					0					0	0	0	0
Midday Peak Period	10:00 AM					0					0					0					0	0	0	0
	10:15 AM					0					0					0					0	0	0	0
	10:30 AM					0					0					0					0	0	0	0
	10:45 AM					0					0					0					0	0	0	0
	11:00 AM					0					0					0					0	0	0	0
	11:15 AM					0					0					0					0	0	0	0
	11:30 AM					0					0					0					0	0	0	0
	11:45 AM					0					0					0					0	0	0	0
	12:00 PM					0					0					0					0	0	0	0
	12:15 PM					0					0					0					0	0	0	0
	12:30 PM					0					0					0					0	0	0	0
	12:45 PM					0					0					0					0	0	0	0
	1:00 PM					0					0					0					0	0	0	0
	1:15 PM					0					0					0					0	0	0	0
	1:30 PM					0					0					0					0	0	0	0
	1:45 PM					0					0					0					0	0	0	0
PM Peak Period	2:00 PM					0					0					0					0	0	0	0
	2:15 PM					0					0					0					0	0	0	0
	2:30 PM					0					0					0					0	0	0	0
	2:45 PM					0					0					0					0	0	0	0
	3:00 PM					0					0					0					0	0	0	0
	3:15 PM					0					0					0					0	0	0	0
	3:30 PM					0					0					0					0	0	0	0
	3:45 PM					0					0					0					0	0	0	0
	4:00 PM					0					0					0					0	0	0	0
	4:15 PM					0					0					0					0	0	0	0
	4:30 PM					0					0					0					0	0	0	0
	4:45 PM					0					0					0					0	0	0	0
	5:00 PM					0					0					0					0	0	0	0
	5:15 PM					0					0					0					0	0	0	0
	5:30 PM					0					0					0					0	0	0	0
	5:45 PM					0					0					0					0	0	0	0
	6:00 PM					0					0					0					0	0	0	0
	6:15 PM					0					0					0					0	0	0	0
	6:30 PM					0					0					0					0	0	0	0
	6:45 PM					0					0					0					0	0	0	0
	7:00 PM					0					0					0					0	0	0	0
	7:15 PM					0					0					0					0	0	0	0
	7:30 PM					0					0					0					0	0	0	0
	7:45 PM					0					0					0					0	0	0	0
	8:00 PM					0					0					0					0	0	0	0
	8:15 PM					0					0					0					0	0	0	0
	8:30 PM					0					0					0					0	0	0	0
	8:45 PM					0					0					0					0	0	0	0
	9:00 PM					0					0					0					0	0	0	0
	9:15 PM					0					0					0					0	0	0	0
	9:30 PM					0					0					0					0	0	0	0
	9:45 PM					0					0					0					0	0	0	0
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Bicycle Turning Movement Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Base Information, Observed (4) Hour and Estimated (24) Hour Volume Summaries

Major St: **East Wolf Run**
Minor St: **ALDI Driveway**
Intersection of: ***East Wolf Run*** ***& ALDI Driveway*** **IX_ID:**

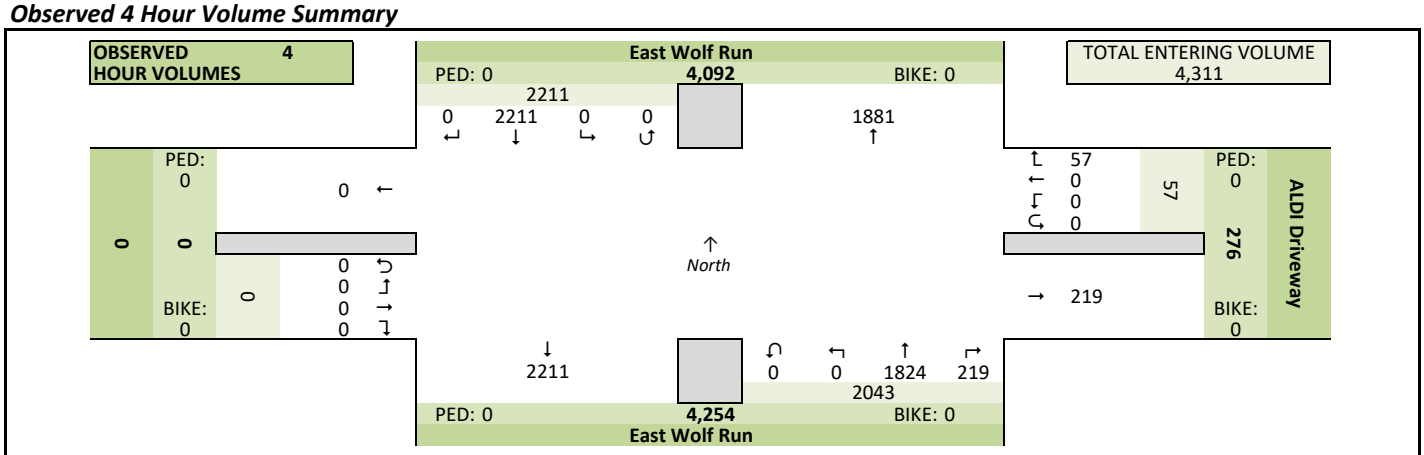
Site Information

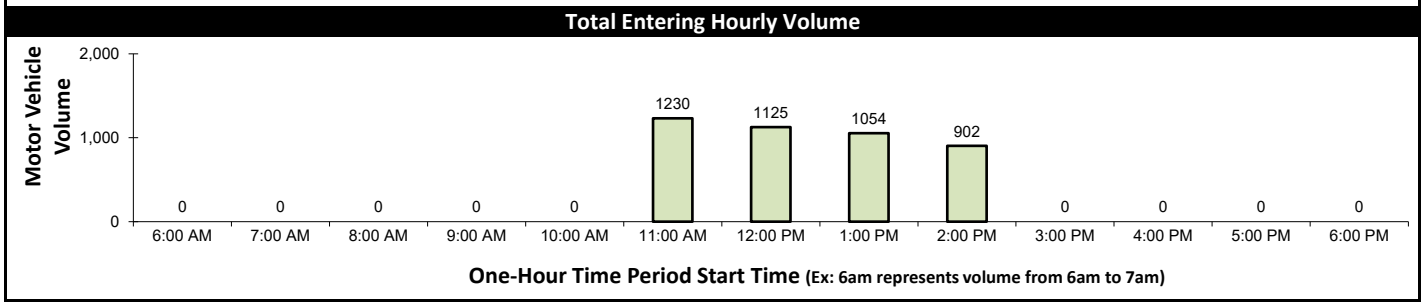
Municipality	Village of Mukwonago		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	East Wolf Run		
East Leg	ALDI Driveway		
South Leg	East Wolf Run		
West Leg			
Special Considerations			
Schools	Not in Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry 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

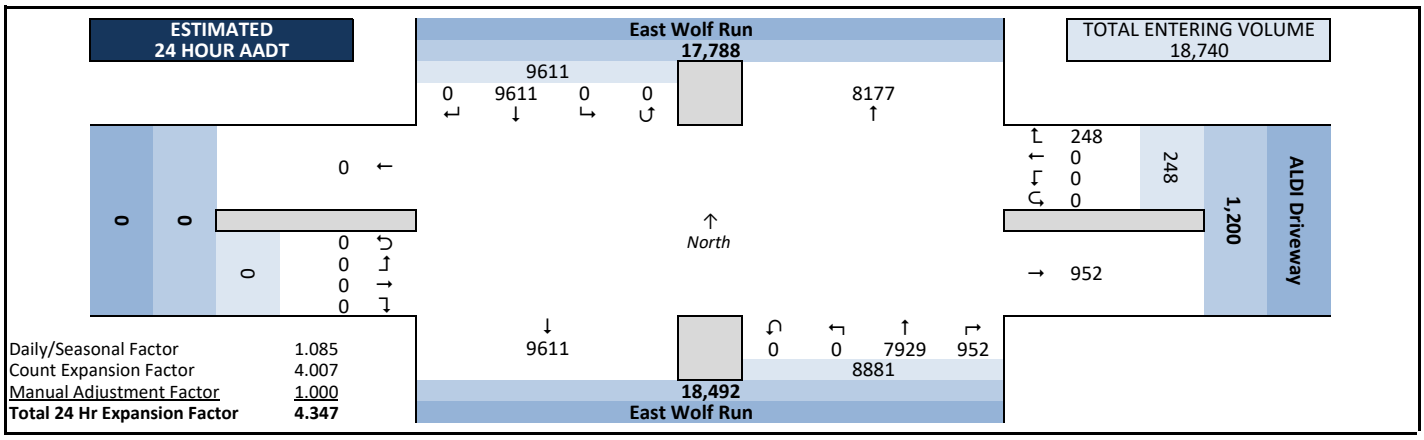
Hrs Counted:	11:00 AM-03:00 PM				
1st Day of Count	Saturday, August 24, 2024			Weather	
AM Peak Period	Saturday, August 24, 2024			Clear & Dry	
Midday Peak Period	Saturday, August 24, 2024			Clear & Dry	
PM Peak Period	Saturday, August 24, 2024			Clear & Dry	
Calculated Peak Hours					
AM		MD	11:15-12:15am	PM	2:00-3:00pm
Peak Hours Selected for Analysis					
AM		MD	11:15-12:15am	PM	
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	1.085	Count Expansion Factor	4.007		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	None			
	Midday Peak Period	Lori Atwell			
	PM Peak Period	None			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 4 Hour Volume Summary





Estimated 24 Hour AADT



Intersection Traffic Volume Report

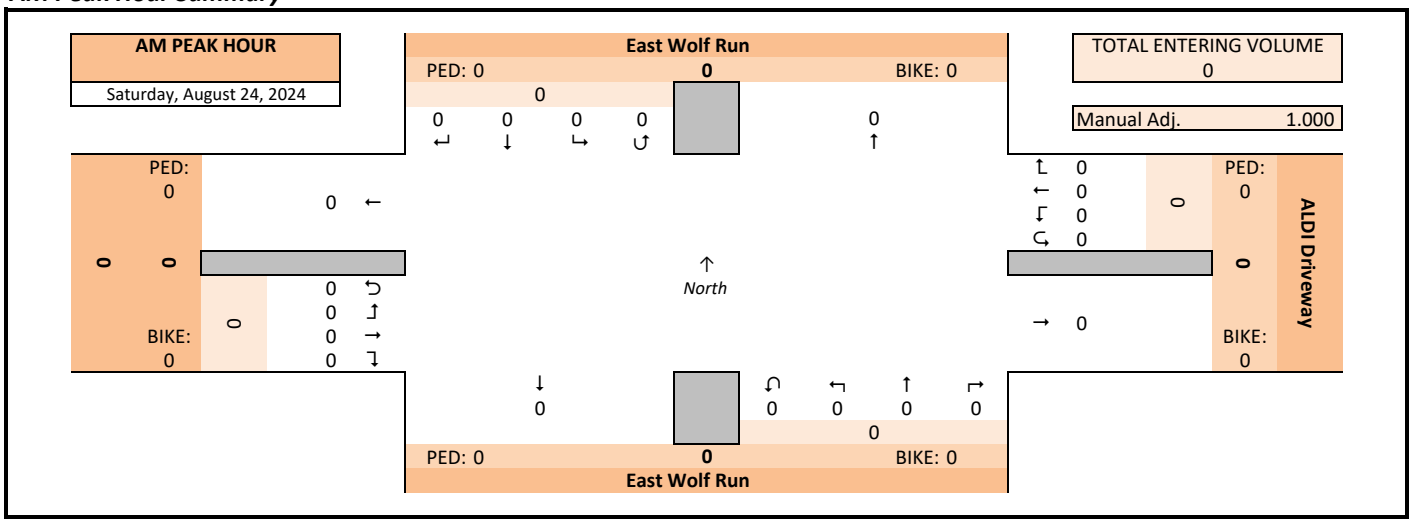
Peak Hour Volume Graphical Summary

Count Basics			*Page 2 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

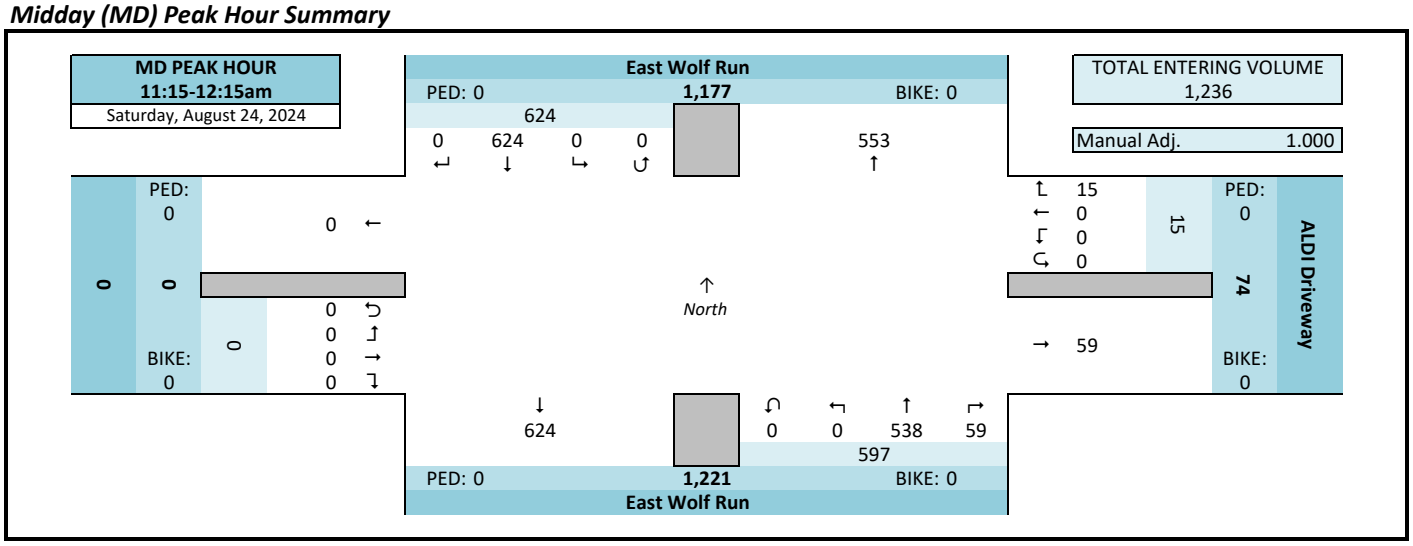
East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

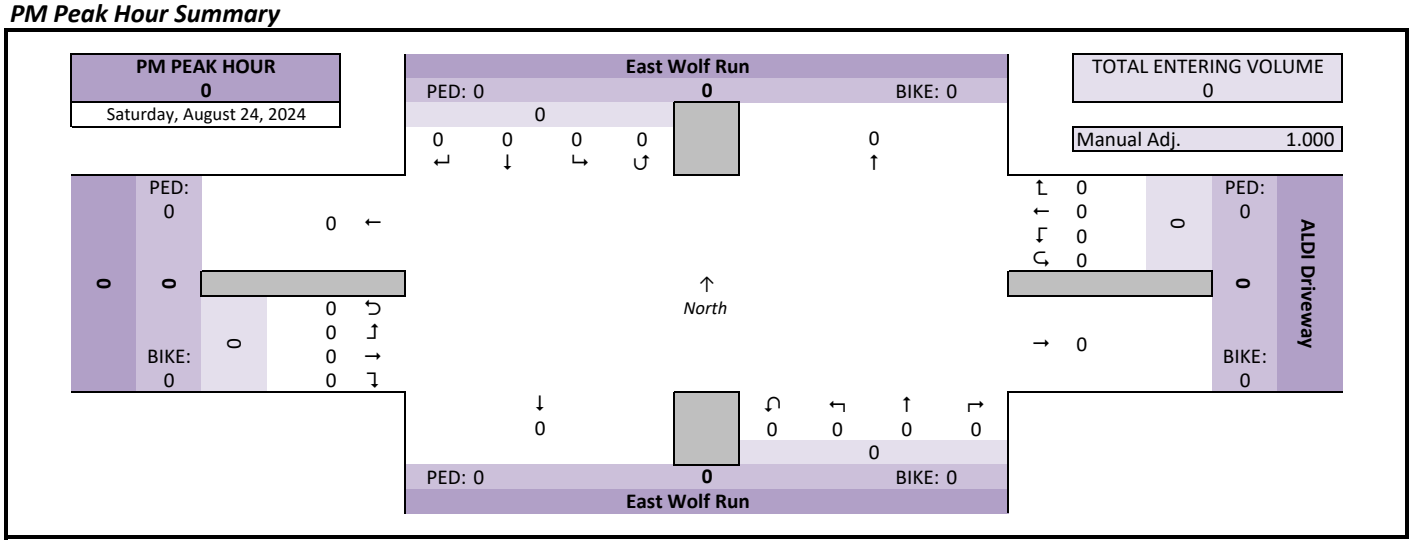
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Peak Hour Volume Summary

East Wolf Run & ALDI Driveway

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Saturday, August 24, 2024	From North					From East					From South					From West					
AM Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Saturday, August 24, 2024	From North					From East					From South					From West					
Midday (MD) Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
11:15 AM	0	148	0	0	148	2	0	0	0	2	15	120	0	0	135	0	0	0	0	0	285
11:30 AM	0	156	0	0	156	3	0	0	0	3	10	140	0	0	150	0	0	0	0	0	309
11:45 AM	0	153	0	0	153	2	0	0	0	2	17	144	0	0	161	0	0	0	0	0	316
12:00 PM	0	167	0	0	167	8	0	0	0	8	17	134	0	0	151	0	0	0	0	0	326
Peak Hour Volume	0	624	0	0	624	15	0	0	0	15	59	538	0	0	597	0	0	0	0	0	1236
Rounded Hourly Volume	0	625	0	0	625	15	0	0	0	15	60	540	0	0	600	0	0	0	0	0	1240
% Single Unit Trucks	0.0	2.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.5
% Heavy Trucks	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
% Trucks (Total)	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.7
Peak Hour Factor (PHF)	0.00	0.93	0.00	0.00	0.93	0.47	0.00	0.00	0.00	0.47	0.87	0.93	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.95

Saturday, August 24, 2024	From North					From East					From South					From West					
PM Peak Hour	East Wolf Run					ALDI Driveway					East Wolf Run					0					
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists	Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
	East Wolf Run			ALDI Driveway			East Wolf Run			0			
15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM: 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM: 8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM: 8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM: 8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM: Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD: 11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
MD: 11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
MD: 11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
MD: 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
MD: Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM: 4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM: 4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM: 4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM: 4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM: Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

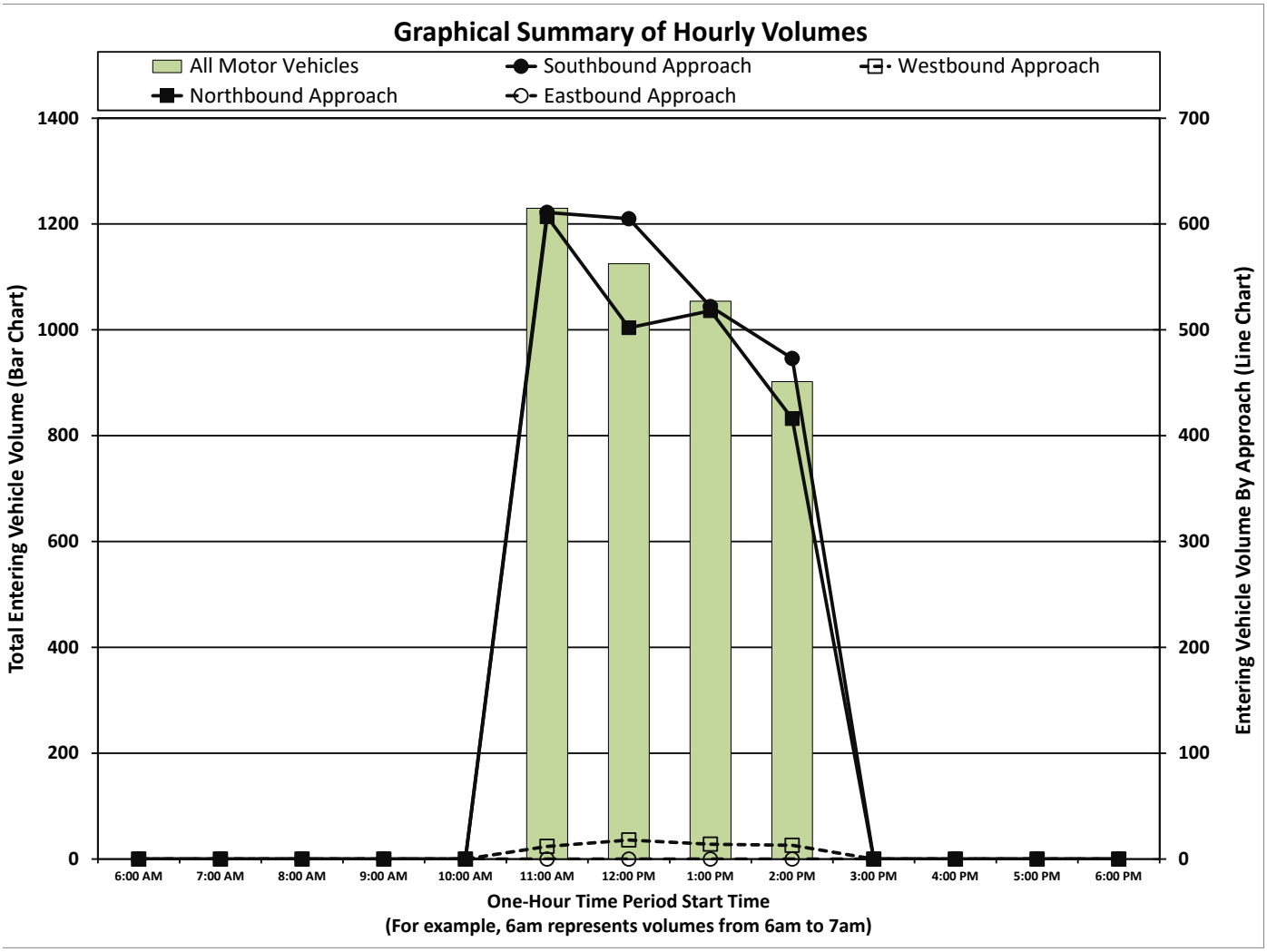
Count Basics			*Page 4 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Vehicle Volume	Directional Volume Totals E/W	N/S
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
MD	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	611	0	0	611	12	0	0	0	12	63	544	0	0	607	0	0	0	0	0	1230	12	1218
	12:00 PM	0	605	0	0	605	18	0	0	0	18	49	453	0	0	502	0	0	0	0	0	1125	18	1107
	1:00 PM	0	522	0	0	522	14	0	0	0	14	57	461	0	0	518	0	0	0	0	0	1054	14	1040
PM	2:00 PM	0	473	0	0	473	13	0	0	0	13	50	366	0	0	416	0	0	0	0	0	902	13	889
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
Totals		0	2211	0	0	2211	57	0	0	0	57	219	1824	0	0	2043	0	0	0	0	0	4311	57	4254



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Count Basics		*Page 5 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		↓ From North					← From East					↑ From South					→ From West							
		East Wolf Run					ALDI Driveway					East Wolf Run					0							
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum	PHF
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	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	154	0	0	154	5	0	0	0	5	21	140	0	0	161	0	0	0	0	0	320	1230	0.96
	11:15 AM	0	148	0	0	148	2	0	0	0	2	15	120	0	0	135	0	0	0	0	0	285	1236	0.95
	11:30 AM	0	156	0	0	156	3	0	0	0	3	10	140	0	0	150	0	0	0	0	0	309	1214	0.93
	11:45 AM	0	153	0	0	153	2	0	0	0	2	17	144	0	0	161	0	0	0	0	0	316	1185	0.91
	12:00 PM	0	167	0	0	167	8	0	0	0	8	17	134	0	0	151	0	0	0	0	0	326	1125	0.86
	12:15 PM	0	145	0	0	145	5	0	0	0	5	7	106	0	0	113	0	0	0	0	0	263	1077	0.96
	12:30 PM	0	161	0	0	161	3	0	0	0	3	11	105	0	0	116	0	0	0	0	0	280	1040	0.93
	12:45 PM	0	132	0	0	132	2	0	0	0	2	14	108	0	0	122	0	0	0	0	0	256	1031	0.93
	1:00 PM	0	140	0	0	140	3	0	0	0	3	14	121	0	0	135	0	0	0	0	0	278	1054	0.94
	1:15 PM	0	113	0	0	113	5	0	0	0	5	13	95	0	0	108	0	0	0	0	0	226	1034	0.93
	1:30 PM	0	129	0	0	129	6	0	0	0	6	14	122	0	0	136	0	0	0	0	0	271	1014	0.91
	1:45 PM	0	140	0	0	140	0	0	0	0	0	16	123	0	0	139	0	0	0	0	0	279	983	0.88
PM Peak Period	2:00 PM	0	140	0	0	140	4	0	0	0	4	13	101	0	0	114	0	0	0	0	0	258	902	0.87
	2:15 PM	0	105	0	0	105	1	0	0	0	1	8	92	0	0	100	0	0	0	0	0	206		
	2:30 PM	0	118	0	0	118	4	0	0	0	4	15	103	0	0	118	0	0	0	0	0	240		
	2:45 PM	0	110	0	0	110	4	0	0	0	4	14	70	0	0	84	0	0	0	0	0	198		
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	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		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	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		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	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		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		0	2211	0	0	2211	57	0	0	0	57	219	1824	0	0	2043	0	0	0	0	0	4311		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume	PHF
		East Wolf Run					ALDI Driveway					East Wolf Run					0						
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MD	11:15 AM	0	624	0	0	624	15	0	0	0	15	59	538	0	0	597	0	0	0	0	0	1236	0.95
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics		*Page 6 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

	15-Minute Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	150	0	0	150	5	0	0	0	5	21	138	0	0	159	0	0	0	0	0	314	1201
	11:15 AM	0	143	0	0	143	2	0	0	0	2	15	114	0	0	129	0	0	0	0	0	274	1203
	11:30 AM	0	153	0	0	153	3	0	0	0	3	10	138	0	0	148	0	0	0	0	0	304	1190
	11:45 AM	0	147	0	0	147	2	0	0	0	2	17	143	0	0	160	0	0	0	0	0	309	1159
	12:00 PM	0	162	0	0	162	8	0	0	0	8	17	129	0	0	146	0	0	0	0	0	316	1094
	12:15 PM	0	144	0	0	144	5	0	0	0	5	7	105	0	0	112	0	0	0	0	0	261	1046
	12:30 PM	0	158	0	0	158	3	0	0	0	3	11	101	0	0	112	0	0	0	0	0	273	1004
	12:45 PM	0	123	0	0	123	2	0	0	0	2	14	105	0	0	119	0	0	0	0	0	244	1002
	1:00 PM	0	132	0	0	132	3	0	0	0	3	14	119	0	0	133	0	0	0	0	0	268	1036
	1:15 PM	0	109	0	0	109	5	0	0	0	5	13	92	0	0	105	0	0	0	0	0	219	1024
	1:30 PM	0	129	0	0	129	6	0	0	0	6	14	122	0	0	136	0	0	0	0	0	271	1008
	1:45 PM	0	139	0	0	139	0	0	0	0	0	16	123	0	0	139	0	0	0	0	0	278	973
PM Peak Period	2:00 PM	0	138	0	0	138	4	0	0	0	4	13	101	0	0	114	0	0	0	0	0	256	888
	2:15 PM	0	104	0	0	104	1	0	0	0	1	8	90	0	0	98	0	0	0	0	0	203	
	2:30 PM	0	117	0	0	117	4	0	0	0	4	15	100	0	0	115	0	0	0	0	0	236	
	2:45 PM	0	108	0	0	108	4	0	0	0	4	14	67	0	0	81	0	0	0	0	0	193	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	2156	0	0	2156	57	0	0	0	57	219	1787	0	0	2006	0	0	0	0	0	4219	

Peak Hour Automobile Volume Summary

	Hourly Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	605	0	0	605	15	0	0	0	15	59	524	0	0	583	0	0	0	0	0	1203
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Count Basics		*Page 7 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5	27
	11:15 AM	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	11	31
	11:30 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5	22
	11:45 AM	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	6	24
	12:00 PM	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	9	29
	12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	30
	12:30 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7	34
	12:45 PM	0	8	0	0	8	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	11	27
	1:00 PM	0	8	0	0	8	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10	17
	1:15 PM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6	9
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	1:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	9
PM Peak Period	2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	13
	2:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	
	2:30 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	
	2:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	51	0	0	51	0	0	0	0	0	0	35	0	0	35	0	0	0	0	0	86	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	17	0	0	17	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	31
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	1	0	0	1	0	0	0	0	0	1	2
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	11:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	12:15 PM	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	2
	12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	1:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Count Basics		*Page 9 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

	15-Minute Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	6	29
	11:15 AM	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	11	33
	11:30 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	5	24
	11:45 AM	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	7	26
	12:00 PM	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	10	31
	12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	31
	12:30 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	7	36
	12:45 PM	0	9	0	0	9	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	12	29
	1:00 PM	0	8	0	0	8	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	10	18
	1:15 PM	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	7	10
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	1:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
PM Peak Period	2:00 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14
	2:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	
	2:30 PM	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4	
	2:45 PM	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	5	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	55	0	0	55	0	0	0	0	0	0	37	0	0	37	0	0	0	0	0	92	

Peak Hour Heavy Vehicle Volume Summary

	Hourly Time Period Start Time	From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	19	0	0	19	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	33
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Count Basics		*Page 10 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

% Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Percentages

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	2.6	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.9	2.4
	11:15 AM	0.0	3.4	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	3.9	2.7
	11:30 AM	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.6	2.0
	11:45 AM	0.0	3.9	0.0	0.0	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	2.2	2.2
	12:00 PM	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	3.1	2.8
	12:15 PM	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.8	2.9
	12:30 PM	0.0	1.9	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	2.5	3.5
	12:45 PM	0.0	6.8	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	4.7	2.8
	1:00 PM	0.0	5.7	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	3.6	1.7
	1:15 PM	0.0	3.5	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	3.1	1.0
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
	1:45 PM	0.0	0.7	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.0
PM Peak Period	2:00 PM	0.0	1.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6
	2:15 PM	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	1.5	
	2:30 PM	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	1.7	
	2:45 PM	0.0	1.8	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	2.5	
	3:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		0.0	2.5	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	2.1	

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Hourly Heavy Vehicle Percent
AM	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	11:15 AM	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	2.7
PM	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

East Wolf Run ***& ALDI Driveway***

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min	Hourly
		East Wolf Run			ALDI Driveway			East Wolf Run			0				
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	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
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	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
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Special Pedestrians

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

Intersection Traffic Volume Report

Count Basics			*Page 12 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Adults & Children

East Wolf Run ***& ALDI Driveway***

15-Minute Adult & Children Pedestrian Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
		East Wolf Run			ALDI Driveway			East Wolf Run			0				
	Start Time	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total		
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	0
	6:15 AM	0		0	0		0	0		0	0		0	0	0
	6:30 AM	0		0	0		0	0		0	0		0	0	0
	6:45 AM	0		0	0		0	0		0	0		0	0	0
	7:00 AM	0		0	0		0	0		0	0		0	0	0
	7:15 AM	0		0	0		0	0		0	0		0	0	0
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	0
	8:45 AM	0		0	0		0	0		0	0		0	0	0
	9:00 AM	0		0	0		0	0		0	0		0	0	0
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	0
	11:30 AM	0		0	0		0	0		0	0		0	0	0
	11:45 AM	0		0	0		0	0		0	0		0	0	0
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	0
	1:45 PM	0		0	0		0	0		0	0		0	0	0
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	0
	2:15 PM	0		0	0		0	0		0	0		0	0	0
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	0
	3:15 PM	0		0	0		0	0		0	0		0	0	0
	3:30 PM	0		0	0		0	0		0	0		0	0	0
	3:45 PM	0		0	0		0	0		0	0		0	0	0
	4:00 PM	0		0	0		0	0		0	0		0	0	0
	4:15 PM	0		0	0		0	0		0	0		0	0	0
	4:30 PM	0		0	0		0	0		0	0		0	0	0
	4:45 PM	0		0	0		0	0		0	0		0	0	0
	5:00 PM	0		0	0		0	0		0	0		0	0	0
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
	9:00 PM	0		0	0		0	0		0	0		0	0	0
	9:15 PM	0		0	0		0	0		0	0		0	0	0
	9:30 PM	0		0	0		0	0		0	0		0	0	0
	9:45 PM	0		0	0		0	0		0	0		0	0	0
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Intersection Traffic Volume Report

Count Basics			Page 13 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

15-Minute Bicycle Turning Movement Count (Manual Entry)

East Wolf Run ***& ALDI Driveway***

Bicyclists

15-Minute Bicycle Data

15-Minute Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM					0					0					0					0	0	0
	6:15 AM					0					0					0					0	0	0
	6:30 AM					0					0					0					0	0	0
	6:45 AM					0					0					0					0	0	0
	7:00 AM					0					0					0					0	0	0
	7:15 AM					0					0					0					0	0	0
	7:30 AM					0					0					0					0	0	0
	7:45 AM					0					0					0					0	0	0
	8:00 AM					0					0					0					0	0	0
	8:15 AM					0					0					0					0	0	0
	8:30 AM					0					0					0					0	0	0
	8:45 AM					0					0					0					0	0	0
	9:00 AM					0					0					0					0	0	0
	9:15 AM					0					0					0					0	0	0
	9:30 AM					0					0					0					0	0	0
	9:45 AM					0					0					0					0	0	0
Midday Peak Period	10:00 AM					0					0					0					0	0	0
	10:15 AM					0					0					0					0	0	0
	10:30 AM					0					0					0					0	0	0
	10:45 AM					0					0					0					0	0	0
	11:00 AM					0					0					0					0	0	0
	11:15 AM					0					0					0					0	0	0
	11:30 AM					0					0					0					0	0	0
	11:45 AM					0					0					0					0	0	0
	12:00 PM					0					0					0					0	0	0
	12:15 PM					0					0					0					0	0	0
	12:30 PM					0					0					0					0	0	0
	12:45 PM					0					0					0					0	0	0
	1:00 PM					0					0					0					0	0	0
	1:15 PM					0					0					0					0	0	0
	1:30 PM					0					0					0					0	0	0
	1:45 PM					0					0					0					0	0	0
PM Peak Period	2:00 PM					0					0					0					0	0	0
	2:15 PM					0					0					0					0	0	0
	2:30 PM					0					0					0					0	0	0
	2:45 PM					0					0					0					0	0	0
	3:00 PM					0					0					0					0	0	0
	3:15 PM					0					0					0					0	0	0
	3:30 PM					0					0					0					0	0	0
	3:45 PM					0					0					0					0	0	0
	4:00 PM					0					0					0					0	0	0
	4:15 PM					0					0					0					0	0	0
	4:30 PM					0					0					0					0	0	0
	4:45 PM					0					0					0					0	0	0
	5:00 PM					0					0					0					0	0	0
	5:15 PM					0					0					0					0	0	0
	5:30 PM					0					0					0					0	0	0
	5:45 PM					0					0					0					0	0	0
	6:00 PM					0					0					0					0	0	0
	6:15 PM					0					0					0					0	0	0
	6:30 PM					0					0					0					0	0	0
	6:45 PM					0					0					0					0	0	0
	7:00 PM					0					0					0					0	0	0
	7:15 PM					0					0					0					0	0	0
	7:30 PM					0					0					0					0	0	0
	7:45 PM					0					0					0					0	0	0
	8:00 PM					0					0					0					0	0	0
	8:15 PM					0					0					0					0	0	0
	8:30 PM					0					0					0					0	0	0
	8:45 PM					0					0					0					0	0	0
	9:00 PM					0					0					0					0	0	0
	9:15 PM					0					0					0					0	0	0
	9:30 PM					0					0					0					0	0	0
	9:45 PM					0					0					0					0	0	0
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Bicycle Turning Movement Volume Summary

Hourly Time Period Start Time		From North (East Wolf Run) Right	Thru	Left	U-Tn	Total	From East (ALDI Driveway) Right	Thru	Left	U-Tn	Total	From South (East Wolf Run) Right	Thru	Left	U-Tn	Total	From West (0) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Base Information, Observed (3) Hour and Estimated (24) Hour Volume Summaries

Major St: **Maple Avenue**
Minor St: **ALDI Driveway**
Intersection of: ***Maple Avenue & ALDI Driveway*** **IX_ID:**

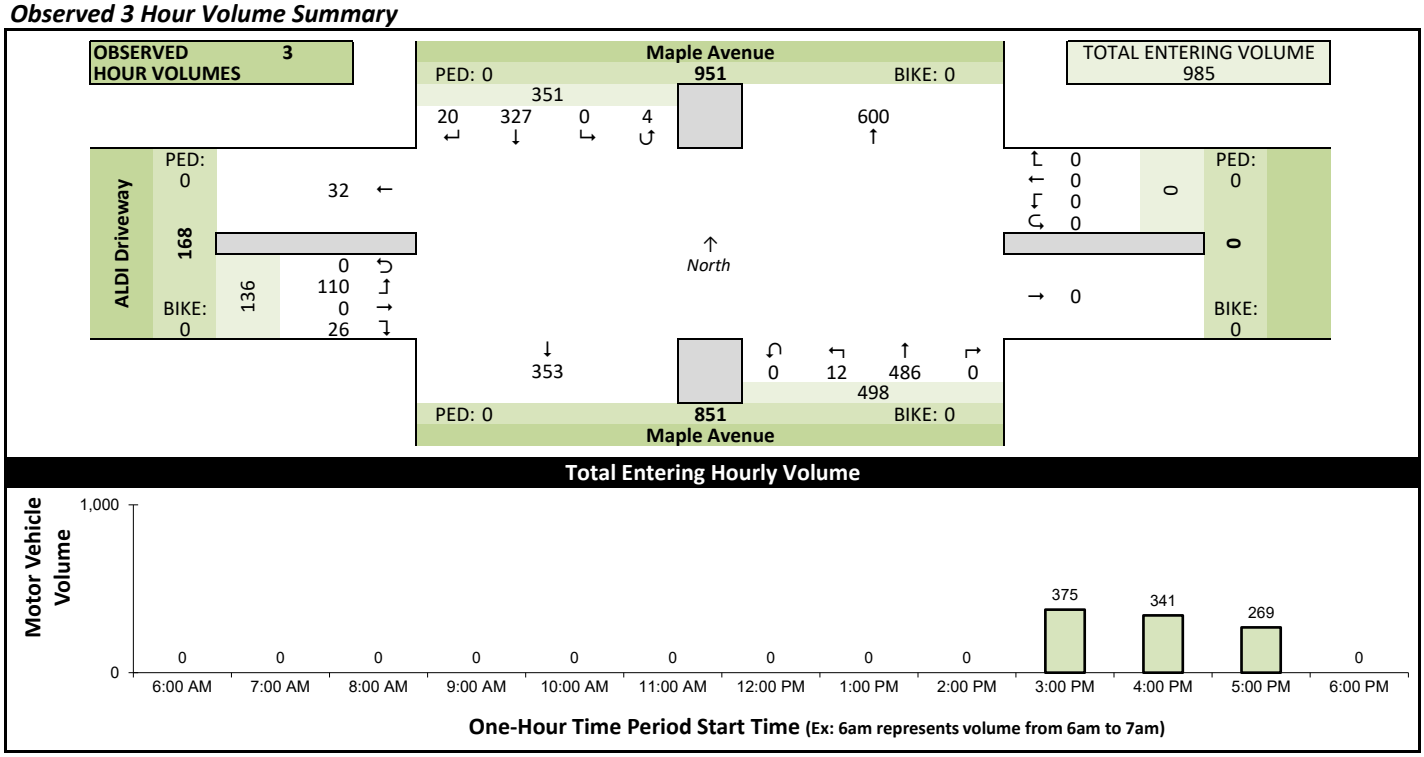
Site Information

Municipality	Village of Mukwonago		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Maple Avenue		
East Leg			
South Leg	Maple Avenue		
West Leg	ALDI Driveway		
Special Considerations			
Schools	Not in Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

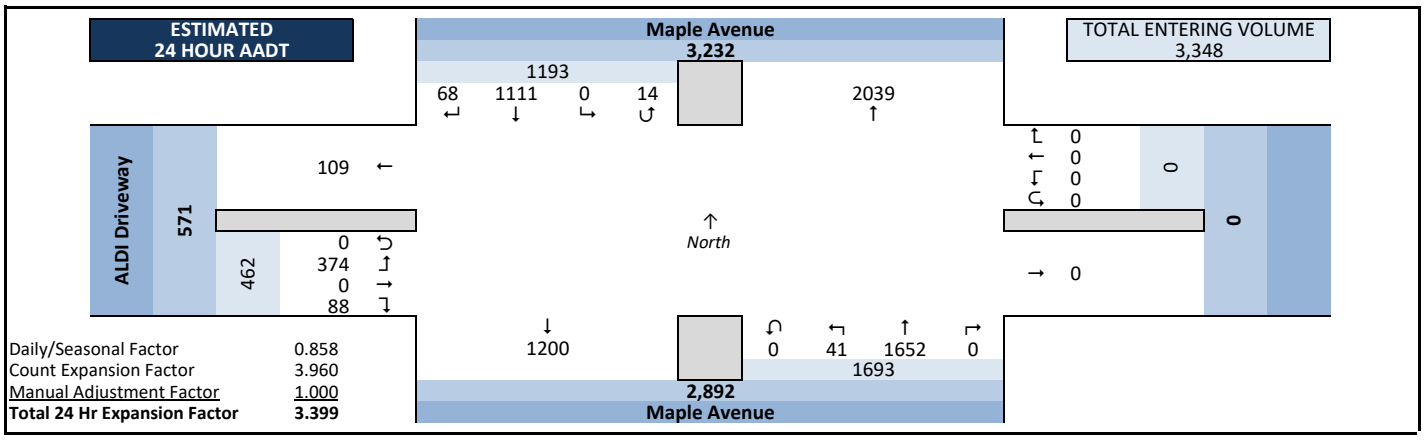
Count Information

Hrs Counted:	03:00 PM-06:00 PM				
1st Day of Count	Wednesday, August 28, 2024			Weather	
AM Peak Period	Wednesday, August 28, 2024			Clear & Dry	
Midday Peak Period	Wednesday, August 28, 2024			Clear & Dry	
PM Peak Period	Wednesday, August 28, 2024			Clear & Dry	
Calculated Peak Hours					
AM		MD		PM	3:15-4:15pm
Peak Hours Selected for Analysis					
AM		MD		PM	3:30-4:30pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.858	Count Expansion Factor	3.960		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	None			
	Midday Peak Period	None			
	PM Peak Period	Jane Fait			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 3 Hour Volume Summary



Estimated 24 Hour AADT



Count Basics			Page 2 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Intersection Traffic Volume Report

Peak Hour Volume Graphical Summary

All Motor Vehicles

Maple Avenue & ALDI Driveway

AM Peak Hour Summary

AM PEAK HOUR
Wednesday, August 28, 2024

TOTAL ENTERING VOLUME: 0
Manual Adj. 1.000

Maple Avenue (North leg)
PED: 0 | **0** | BIKE: 0
Southbound entering: 0 — ↵ 0, ↓ 0, ↳ 0, ↺ 0
Northbound exiting: ↑ 0

ALDI Driveway (West leg)
PED: 0 | **0** | BIKE: 0
Westbound exiting: 0 ←
Eastbound entering: 0 — U-turn 0, left 0, through 0, right 0

East leg
PED: 0 | **0** | BIKE: 0
Westbound entering: 0 — 0, 0, 0, 0
Eastbound exiting: → 0

North

Maple Avenue (South leg)
Southbound exiting: ↓ 0
Northbound entering: 0 — U-turn 0, left 0, through 0, right 0
PED: 0 | **0** | BIKE: 0

Midday (MD) Peak Hour Summary

MD PEAK HOUR
0
N/A

TOTAL ENTERING VOLUME: 0
Manual Adj. 1.000

Maple Avenue (North leg)
PED: 0 | **0** | BIKE: 0
Southbound entering: 0 — ↵ 0, ↓ 0, ↳ 0, ↺ 0
Northbound exiting: ↑ 0

ALDI Driveway (West leg)
PED: 0 | **0** | BIKE: 0
Westbound exiting: 0 ←
Eastbound entering: 0 — U-turn 0, left 0, through 0, right 0

East leg
PED: 0 | **0** | BIKE: 0
Westbound entering: 0 — 0, 0, 0, 0
Eastbound exiting: → 0

North

Maple Avenue (South leg)
Southbound exiting: ↓ 0
Northbound entering: 0 — U-turn 0, left 0, through 0, right 0
PED: 0 | **0** | BIKE: 0

PM Peak Hour Summary

PM PEAK HOUR
3:30-4:30pm
Wednesday, August 28, 2024

TOTAL ENTERING VOLUME: 359
Manual Adj. 1.000

Maple Avenue (North leg)
PED: 0 | **348** | BIKE: 0
Southbound entering: 100 — ↵ 6, ↓ 94, ↳ 0, ↺ 0
Northbound exiting: ↑ 248

ALDI Driveway (West leg)
PED: 0 | **58** | BIKE: 0
Westbound exiting: 11 ←
Eastbound entering: 47 — U-turn 0, left 41, through 0, right 6

East leg
PED: 0 | **0** | BIKE: 0
Westbound entering: 0 — 0, 0, 0, 0
Eastbound exiting: → 0

North

Maple Avenue (South leg)
Southbound exiting: ↓ 100
Northbound entering: 212 — U-turn 0, left 5, through 207, right 0
PED: 0 | **312** | BIKE: 0

Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Peak Hour Volume Summary

Maple Avenue & ALDI Driveway

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Wednesday, August 28, 2024		From North					From East					From South					From West					
AM Peak Hour	AM Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

N/A		From North					From East					From South					From West					
Midday (MD) Peak Hour	MD Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Wednesday, August 28, 2024		From North					From East					From South					From West					
PM Peak Hour	PM Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	3:30 PM	4	28	0	0	32	0	0	0	0	0	0	56	0	0	56	2	0	6	0	8	96
	3:45 PM	0	20	0	0	20	0	0	0	0	0	0	49	1	0	50	1	0	11	0	12	82
	4:00 PM	2	31	0	0	33	0	0	0	0	0	0	48	1	0	49	3	0	11	0	14	96
	4:15 PM	0	15	0	0	15	0	0	0	0	0	0	54	3	0	57	0	0	13	0	13	85
	Peak Hour Volume	6	94	0	0	100	0	0	0	0	0	0	207	5	0	212	6	0	41	0	47	359
	Rounded Hourly Volume	5	95	0	0	100	0	0	0	0	0	0	205	5	0	210	5	0	40	0	45	355
	% Single Unit Trucks	0.0	4.3	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	4.3	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
	Peak Hour Factor (PHF)	0.37	0.76	0.00	0.00	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.42	0.00	0.93	0.50	0.00	0.79	0.00	0.84	0.93

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Maple Avenue						Maple Avenue			ALDI Driveway			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

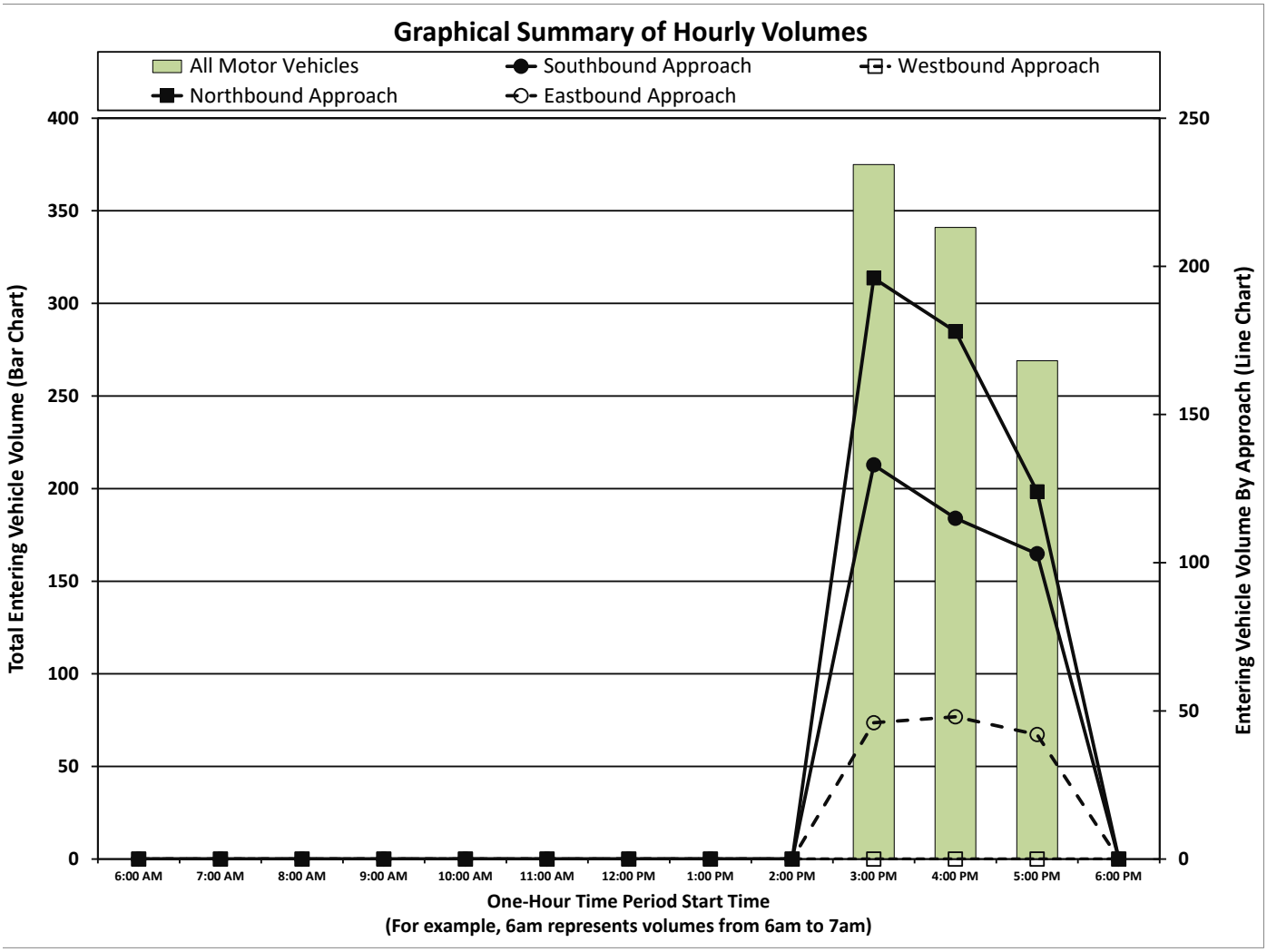
Count Basics			*Page 4 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

All Motor Vehicles

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Vehicle Volume	Directional Volume Totals E/W	N/S
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
MD	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
PM	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	8	123	0	2	133	0	0	0	0	0	0	193	3	0	196	11	0	35	0	46	375	46	329
	4:00 PM	3	110	0	2	115	0	0	0	0	0	0	172	6	0	178	9	0	39	0	48	341	48	293
	5:00 PM	9	94	0	0	103	0	0	0	0	0	0	121	3	0	124	6	0	36	0	42	269	42	227
	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
Totals		20	327	0	4	351	0	0	0	0	0	0	486	12	0	498	26	0	110	0	136	985	136	849



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Count Basics		*Page 5 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum	PHF
AM Peak Period																							
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period																							
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
10:45 AM	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		
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:45 AM	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		
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:45 PM	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		
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period																							
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3:00 PM	2	37	0	1	40	0	0	0	0	0	0	43	2	0	45	1	0	8	0	9	94	375	0.91
3:15 PM	2	38	0	1	41	0	0	0	0	0	0	45	0	0	45	7	0	10	0	17	103	377	0.92
3:30 PM	4	28	0	0	32	0	0	0	0	0	0	56	0	0	56	2	0	6	0	8	96	359	0.93
3:45 PM	0	20	0	0	20	0	0	0	0	0	0	49	1	0	50	1	0	11	0	12	82	342	0.89
4:00 PM	2	31	0	0	33	0	0	0	0	0	0	48	1	0	49	3	0	11	0	14	96	341	0.89
4:15 PM	0	15	0	0	15	0	0	0	0	0	0	54	3	0	57	0	0	13	0	13	85	324	0.95
4:30 PM	0	35	0	0	35	0	0	0	0	0	0	35	0	0	35	4	0	5	0	9	79	321	0.98
4:45 PM	1	29	0	2	32	0	0	0	0	0	0	35	2	0	37	2	0	10	0	12	81	297	0.91
5:00 PM	3	25	0	0	28	0	0	0	0	0	0	42	2	0	44	1	0	6	0	7	79	269	0.82
5:15 PM	3	26	0	0	29	0	0	0	0	0	0	33	0	0	33	3	0	17	0	20	82		
5:30 PM	2	22	0	0	24	0	0	0	0	0	0	24	0	0	24	0	0	7	0	7	55		
5:45 PM	1	21	0	0	22	0	0	0	0	0	0	22	1	0	23	2	0	6	0	8	53		
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6:45 PM	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		
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 PM	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		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	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		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals	20	327	0	4	351	0	0	0	0	0	0	486	12	0	498	26	0	110	0	136	985		

Peak Hour All Vehicle Volume Summary

Hourly Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume	PHF
AM 8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MD 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM 3:30 PM	6	94	0	0	100	0	0	0	0	0	0	207	5	0	212	6	0	41	0	47	359	0.93

Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics		*Page 6 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

	15-Minute Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	2	36	0	1	39	0	0	0	0	0	0	41	2	0	43	1	0	8	0	9	91	370
	3:15 PM	2	38	0	1	41	0	0	0	0	0	0	45	0	0	45	7	0	10	0	17	103	374
	3:30 PM	4	27	0	0	31	0	0	0	0	0	0	56	0	0	56	2	0	6	0	8	95	355
	3:45 PM	0	19	0	0	19	0	0	0	0	0	0	49	1	0	50	1	0	11	0	12	81	338
	4:00 PM	2	30	0	0	32	0	0	0	0	0	0	48	1	0	49	3	0	11	0	14	95	335
	4:15 PM	0	14	0	0	14	0	0	0	0	0	0	54	3	0	57	0	0	13	0	13	84	317
	4:30 PM	0	34	0	0	34	0	0	0	0	0	0	35	0	0	35	4	0	5	0	9	78	315
	4:45 PM	1	28	0	2	31	0	0	0	0	0	0	33	2	0	35	2	0	10	0	12	78	292
	5:00 PM	3	25	0	0	28	0	0	0	0	0	0	40	2	0	42	1	0	6	0	7	77	267
	5:15 PM	3	26	0	0	29	0	0	0	0	0	0	33	0	0	33	3	0	17	0	20	82	
	5:30 PM	2	22	0	0	24	0	0	0	0	0	0	24	0	0	24	0	0	7	0	7	55	
	5:45 PM	1	21	0	0	22	0	0	0	0	0	0	22	1	0	23	2	0	6	0	8	53	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		20	320	0	4	344	0	0	0	0	0	0	480	12	0	492	26	0	110	0	136	972	

Peak Hour Automobile Volume Summary

	Hourly Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	6	90	0	0	96	0	0	0	0	0	0	207	5	0	212	6	0	41	0	47	355

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Count Basics		*Page 7 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period		From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					15-Min Totals	Hourly Sum
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	7	0	0	7	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	13	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period		From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					Total Hourly Volume
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period Start Time		↓ From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	← From East Right	Thru	Left	U-Tn	Total	↑ From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	→ From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time		↓ From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	← From East Right	Thru	Left	U-Tn	Total	↑ From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	→ From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		Page 9 of 13
Start Date: Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3	Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Maple Avenue & ALDI Driveway

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

	15-Minute Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	3:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	3:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
	4:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7
	4:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
	4:45 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	7	0	0	7	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	13	

Peak Hour Heavy Vehicle Volume Summary

	Hourly Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

Intersection Traffic Volume Report

Count Basics			*Page 10 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Percentages

Maple Avenue & ALDI Driveway

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Percentages

	15-Minute Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
PM Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	2.7	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	3.2	1.3
	3:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
	3:30 PM	0.0	3.6	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.1
	3:45 PM	0.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2
	4:00 PM	0.0	3.2	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.8
	4:15 PM	0.0	6.7	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.2
	4:30 PM	0.0	2.9	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.9
	4:45 PM	0.0	3.4	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	3.7	1.7
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	2.5	0.7
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		0.0	2.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.3	

Peak Hour Heavy Vehicle Percentages Summary

	Hourly Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Hourly Heavy Vehicle Percent
AM	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM	3:30 PM	0.0	4.3	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period Start Time		Crossing North Approach (Maple Avenue)			Crossing East Approach			Crossing South Approach (Maple Avenue)			Crossing West Approach (ALDI Driveway)			15-Min Totals	Hourly Sum
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	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	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	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	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Special Pedestrians

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

Intersection Traffic Volume Report

Count Basics			*Page 12 of 13*
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Adults & Children

Maple Avenue & ALDI Driveway

15-Minute Adult & Children Pedestrian Data

	15-Minute Time Period Start Time	Crossing North Approach (Maple Avenue)			Crossing East Approach			Crossing South Approach (Maple Avenue)			Crossing West Approach (ALDI Driveway)			15-Min Totals	Hourly Sum
		Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total		
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	0
	6:15 AM	0		0	0		0	0		0	0		0	0	0
	6:30 AM	0		0	0		0	0		0	0		0	0	0
	6:45 AM	0		0	0		0	0		0	0		0	0	0
	7:00 AM	0		0	0		0	0		0	0		0	0	0
	7:15 AM	0		0	0		0	0		0	0		0	0	0
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	0
	8:45 AM	0		0	0		0	0		0	0		0	0	0
	9:00 AM	0		0	0		0	0		0	0		0	0	0
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	0
	11:30 AM	0		0	0		0	0		0	0		0	0	0
	11:45 AM	0		0	0		0	0		0	0		0	0	0
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	0
	1:45 PM	0		0	0		0	0		0	0		0	0	0
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	0
	2:15 PM	0		0	0		0	0		0	0		0	0	0
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	0
	3:15 PM	0		0	0		0	0		0	0		0	0	0
	3:30 PM	0		0	0		0	0		0	0		0	0	0
	3:45 PM	0		0	0		0	0		0	0		0	0	0
	4:00 PM	0		0	0		0	0		0	0		0	0	0
	4:15 PM	0		0	0		0	0		0	0		0	0	0
	4:30 PM	0		0	0		0	0		0	0		0	0	0
	4:45 PM	0		0	0		0	0		0	0		0	0	0
	5:00 PM	0		0	0		0	0		0	0		0	0	0
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
	9:00 PM	0		0	0		0	0		0	0		0	0	0
	9:15 PM	0		0	0		0	0		0	0		0	0	0
	9:30 PM	0		0	0		0	0		0	0		0	0	0
	9:45 PM	0		0	0		0	0		0	0		0	0	0
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

Intersection Traffic Volume Report

Count Basics			Page 13 of 13
Start Date:	Wednesday, August 28, 2024	Weekday	Schools Not in Session
Total Number of Hours Counted: 3		Non-Holiday	No Special Events

15-Minute Bicycle Turning Movement Count (Manual Entry)

Maple Avenue & ALDI Driveway

Bicyclists

15-Minute Bicycle Data

15-Minute Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM					0					0					0					0	0	0
	6:15 AM					0					0					0					0	0	0
	6:30 AM					0					0					0					0	0	0
	6:45 AM					0					0					0					0	0	0
	7:00 AM					0					0					0					0	0	0
	7:15 AM					0					0					0					0	0	0
	7:30 AM					0					0					0					0	0	0
	7:45 AM					0					0					0					0	0	0
	8:00 AM					0					0					0					0	0	0
	8:15 AM					0					0					0					0	0	0
	8:30 AM					0					0					0					0	0	0
	8:45 AM					0					0					0					0	0	0
	9:00 AM					0					0					0					0	0	0
	9:15 AM					0					0					0					0	0	0
	9:30 AM					0					0					0					0	0	0
	9:45 AM					0					0					0					0	0	0
Midday Peak Period	10:00 AM					0					0					0					0	0	0
	10:15 AM					0					0					0					0	0	0
	10:30 AM					0					0					0					0	0	0
	10:45 AM					0					0					0					0	0	0
	11:00 AM					0					0					0					0	0	0
	11:15 AM					0					0					0					0	0	0
	11:30 AM					0					0					0					0	0	0
	11:45 AM					0					0					0					0	0	0
	12:00 PM					0					0					0					0	0	0
	12:15 PM					0					0					0					0	0	0
	12:30 PM					0					0					0					0	0	0
	12:45 PM					0					0					0					0	0	0
	1:00 PM					0					0					0					0	0	0
	1:15 PM					0					0					0					0	0	0
	1:30 PM					0					0					0					0	0	0
	1:45 PM					0					0					0					0	0	0
PM Peak Period	2:00 PM					0					0					0					0	0	0
	2:15 PM					0					0					0					0	0	0
	2:30 PM					0					0					0					0	0	0
	2:45 PM					0					0					0					0	0	0
	3:00 PM					0					0					0					0	0	0
	3:15 PM					0					0					0					0	0	0
	3:30 PM					0					0					0					0	0	0
	3:45 PM					0					0					0					0	0	0
	4:00 PM					0					0					0					0	0	0
	4:15 PM					0					0					0					0	0	0
	4:30 PM					0					0					0					0	0	0
	4:45 PM					0					0					0					0	0	0
	5:00 PM					0					0					0					0	0	0
	5:15 PM					0					0					0					0	0	0
	5:30 PM					0					0					0					0	0	0
	5:45 PM					0					0					0					0	0	0
	6:00 PM					0					0					0					0	0	0
	6:15 PM					0					0					0					0	0	0
	6:30 PM					0					0					0					0	0	0
	6:45 PM					0					0					0					0	0	0
	7:00 PM					0					0					0					0	0	0
	7:15 PM					0					0					0					0	0	0
	7:30 PM					0					0					0					0	0	0
	7:45 PM					0					0					0					0	0	0
	8:00 PM					0					0					0					0	0	0
	8:15 PM					0					0					0					0	0	0
	8:30 PM					0					0					0					0	0	0
	8:45 PM					0					0					0					0	0	0
	9:00 PM					0					0					0					0	0	0
	9:15 PM					0					0					0					0	0	0
	9:30 PM					0					0					0					0	0	0
	9:45 PM					0					0					0					0	0	0
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Bicycle Turning Movement Volume Summary

Hourly Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics	Version 2024.04		Page 1 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Base Information, Observed (4) Hour and Estimated (24) Hour Volume Summaries

Major St: **Maple Avenue**
Minor St: **ALDI Driveway**
Intersection of: ***Maple Avenue & ALDI Driveway*** **IX_ID:**

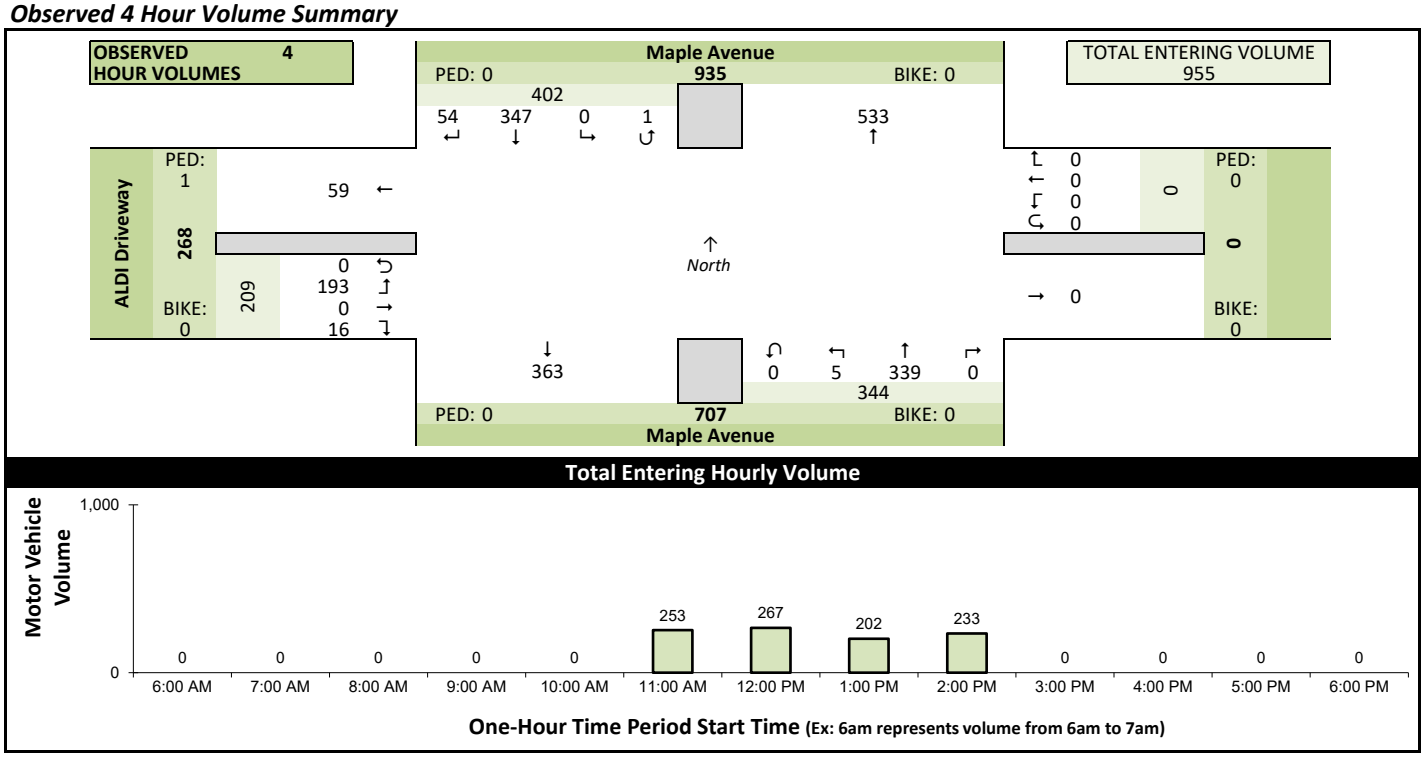
Site Information

Municipality	Village of Mukwonago		
County	67 - Waukesha	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names		North Direction	↑
North Leg	Maple Avenue		
East Leg			
South Leg	Maple Avenue		
West Leg	ALDI Driveway		
Special Considerations			
Schools	Not in Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

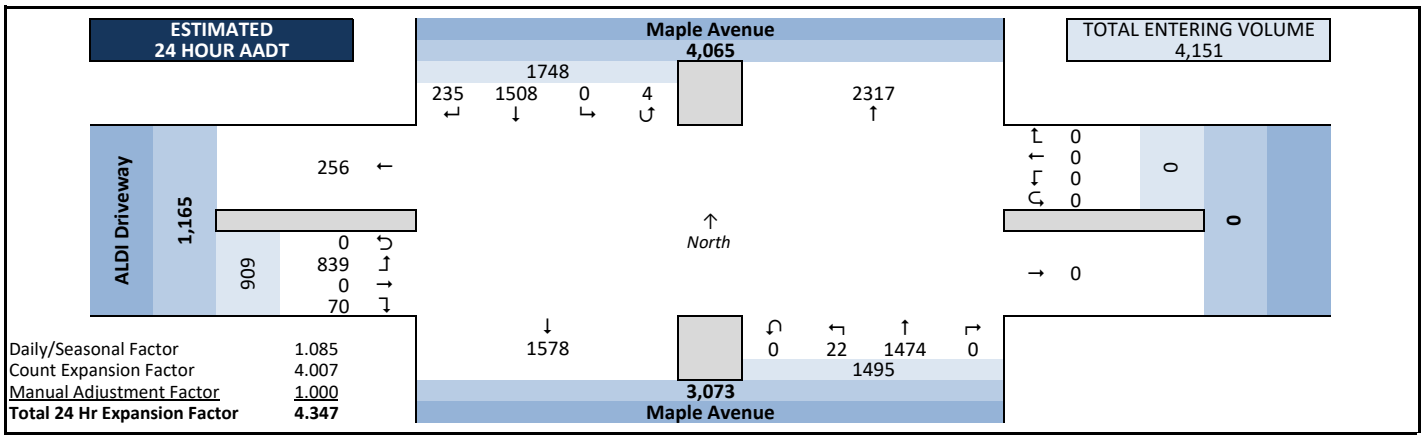
Count Information

Hrs Counted:	11:00 AM-03:00 PM				
1st Day of Count	Saturday, August 24, 2024			Weather	
AM Peak Period	Saturday, August 24, 2024			Clear & Dry	
Midday Peak Period	Saturday, August 24, 2024			Clear & Dry	
PM Peak Period	Saturday, August 24, 2024			Clear & Dry	
Calculated Peak Hours					
AM		MD	11:45-12:45pm	PM	2:00-3:00pm
Peak Hours Selected for Analysis					
AM		MD	11:15-12:15am	PM	
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	1.085	Count Expansion Factor	4.007		
Company Name	TADI, Inc.			Manual Adj.	1.000
Observers	AM Peak Period	None			
	Midday Peak Period	Jane Fait			
	PM Peak Period	None			
Comments	2021 DOT Daily & Seasonal Factors				

Observed 4 Hour Volume Summary



Estimated 24 Hour AADT



Intersection Traffic Volume Report

Count Basics			Page 2 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

All Motor Vehicles

Maple Avenue & ALDI Driveway

AM Peak Hour Summary

AM PEAK HOUR
Saturday, August 24, 2024

TOTAL ENTERING VOLUME
0

Manual Adj. 1.000

Maple Avenue (north leg)
PED: 0 | **0** | BIKE: 0
Southbound approach: 0 — Right 0, Through 0, Left 0, U-turn 0
Northbound departure: 0

ALDI Driveway (west leg)
PED: 0 | **0** | BIKE: 0
Westbound departure: 0
Eastbound approach: 0 — U-turn 0, Left 0, Through 0, Right 0

East leg
PED: 0 | **0** | BIKE: 0
Westbound approach: 0 — Right 0, Through 0, Left 0, U-turn 0
Eastbound departure: 0

North

Maple Avenue (south leg)
Southbound departure: 0
Northbound approach: 0 — U-turn 0, Left 0, Through 0, Right 0
PED: 0 | **0** | BIKE: 0

Midday (MD) Peak Hour Summary

MD PEAK HOUR
11:15-12:15am
Saturday, August 24, 2024

TOTAL ENTERING VOLUME
263

Manual Adj. 1.000

Maple Avenue (north leg)
PED: 0 | **258** | BIKE: 0
Southbound approach: 112 — Right 17, Through 95, Left 0, U-turn 0
Northbound departure: 146

ALDI Driveway (west leg)
PED: 0 | **68** | BIKE: 0
Westbound departure: 19
Eastbound approach: 49 — U-turn 0, Left 46, Through 0, Right 3

East leg
PED: 0 | **0** | BIKE: 0
Westbound approach: 0 — Right 0, Through 0, Left 0, U-turn 0
Eastbound departure: 0

North

Maple Avenue (south leg)
Southbound departure: 98
Northbound approach: 102 — U-turn 0, Left 2, Through 100, Right 0
PED: 0 | **200** | BIKE: 0

PM Peak Hour Summary

PM PEAK HOUR
0
Saturday, August 24, 2024

TOTAL ENTERING VOLUME
0

Manual Adj. 1.000

Maple Avenue (north leg)
PED: 0 | **0** | BIKE: 0
Southbound approach: 0 — Right 0, Through 0, Left 0, U-turn 0
Northbound departure: 0

ALDI Driveway (west leg)
PED: 0 | **0** | BIKE: 0
Westbound departure: 0
Eastbound approach: 0 — U-turn 0, Left 0, Through 0, Right 0

East leg
PED: 0 | **0** | BIKE: 0
Westbound approach: 0 — Right 0, Through 0, Left 0, U-turn 0
Eastbound departure: 0

North

Maple Avenue (south leg)
Southbound departure: 0
Northbound approach: 0 — U-turn 0, Left 0, Through 0, Right 0
PED: 0 | **0** | BIKE: 0

Intersection Traffic Volume Report

Count Basics			*Page 3 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Peak Hour Volume Summary

Maple Avenue & ALDI Driveway

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Saturday, August 24, 2024		From North					From East					From South					From West					
	AM Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Saturday, August 24, 2024		From North					From East					From South					From West					
	MD Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	11:15 AM	7	23	0	0	30	0	0	0	0	0	0	19	1	0	20	0	0	15	0	15	65
	11:30 AM	4	18	0	0	22	0	0	0	0	0	0	25	1	0	26	1	0	13	0	14	62
	11:45 AM	3	30	0	0	33	0	0	0	0	0	0	34	0	0	34	1	0	6	0	7	74
	12:00 PM	3	24	0	0	27	0	0	0	0	0	0	22	0	0	22	1	0	12	0	13	62
	Peak Hour Volume	17	95	0	0	112	0	0	0	0	0	0	100	2	0	102	3	0	46	0	49	263
	Rounded Hourly Volume	15	95	0	0	110	0	0	0	0	0	0	100	0	0	100	5	0	45	0	50	260
	% Single Unit Trucks	0.0	3.2	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2.3
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	3.2	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2.3
	Peak Hour Factor (PHF)	0.61	0.79	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.50	0.00	0.75	0.75	0.00	0.77	0.00	0.82	0.89

Saturday, August 24, 2024		From North					From East					From South					From West					
	PM Peak Hour	Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike Volume
		Maple Avenue						Maple Avenue			ALDI Driveway			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	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
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

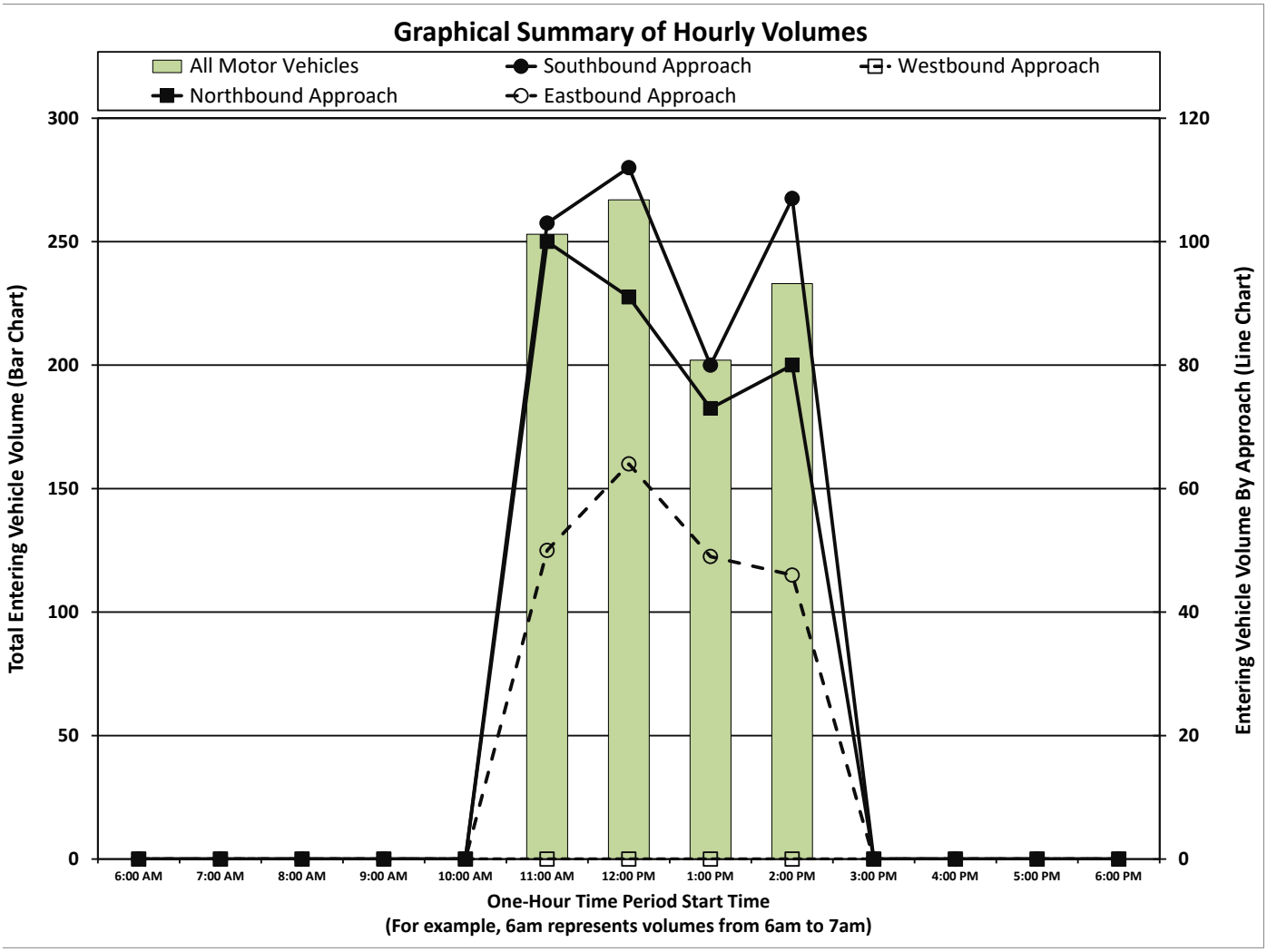
Count Basics			*Page 4 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

All Motor Vehicles

One-Hour Motor Vehicle Data

One-Hour Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Vehicle Volume	Directional Volume Totals E/W	N/S
AM	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
MD	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	15	88	0	0	103	0	0	0	0	0	0	98	2	0	100	2	0	48	0	50	253	50	203
	12:00 PM	18	94	0	0	112	0	0	0	0	0	0	90	1	0	91	6	0	58	0	64	267	64	203
	1:00 PM	7	73	0	0	80	0	0	0	0	0	0	73	0	0	73	4	0	45	0	49	202	49	153
PM	2:00 PM	14	92	0	1	107	0	0	0	0	0	0	78	2	0	80	4	0	42	0	46	233	46	187
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
Totals		54	347	0	1	402	0	0	0	0	0	0	339	5	0	344	16	0	193	0	209	955	209	746



Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Count Basics		*Page 5 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

All Motor Vehicles

15-Minute Motor Vehicle Data

15-Minute Time Period		↓ From North					← From East					↑ From South					→ From West							
		Maple Avenue										Maple Avenue					ALDI Driveway							
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum	PHF
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	1	17	0	0	18	0	0	0	0	0	0	20	0	0	20	0	0	14	0	14	52	253	0.85
	11:15 AM	7	23	0	0	30	0	0	0	0	0	0	19	1	0	20	0	0	15	0	15	65	263	0.89
	11:30 AM	4	18	0	0	22	0	0	0	0	0	0	25	1	0	26	1	0	13	0	14	62	271	0.92
	11:45 AM	3	30	0	0	33	0	0	0	0	0	0	34	0	0	34	1	0	6	0	7	74	273	0.92
	12:00 PM	3	24	0	0	27	0	0	0	0	0	0	22	0	0	22	1	0	12	0	13	62	267	0.91
	12:15 PM	5	26	0	0	31	0	0	0	0	0	0	25	0	0	25	2	0	15	0	17	73	264	0.90
	12:30 PM	6	22	0	0	28	0	0	0	0	0	0	16	1	0	17	2	0	17	0	19	64	241	0.89
	12:45 PM	4	22	0	0	26	0	0	0	0	0	0	27	0	0	27	1	0	14	0	15	68	223	0.82
	1:00 PM	2	20	0	0	22	0	0	0	0	0	0	22	0	0	22	1	0	14	0	15	59	202	0.86
	1:15 PM	3	20	0	0	23	0	0	0	0	0	0	18	0	0	18	1	0	8	0	9	50	203	0.85
	1:30 PM	1	17	0	0	18	0	0	0	0	0	0	17	0	0	17	1	0	10	0	11	46	202	0.84
	1:45 PM	1	16	0	0	17	0	0	0	0	0	0	16	0	0	16	1	0	13	0	14	47	229	0.78
PM Peak Period	2:00 PM	5	19	0	0	24	0	0	0	0	0	0	23	0	0	23	1	0	12	0	13	60	233	0.80
	2:15 PM	3	19	0	0	22	0	0	0	0	0	0	16	0	0	16	1	0	10	0	11	49		
	2:30 PM	2	32	0	1	35	0	0	0	0	0	0	22	2	0	24	1	0	13	0	14	73		
	2:45 PM	4	22	0	0	26	0	0	0	0	0	0	17	0	0	17	1	0	7	0	8	51		
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	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		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	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		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	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		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		54	347	0	1	402	0	0	0	0	0	0	339	5	0	344	16	0	193	0	209	955		

Peak Hour All Vehicle Volume Summary

Hourly Time Period		↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume	PHF
		Maple Avenue										Maple Avenue					ALDI Driveway						
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MD	11:15 AM	17	95	0	0	112	0	0	0	0	0	0	100	2	0	102	3	0	46	0	49	263	0.89
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics		*Page 6 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Automobiles (Cars, Light Trucks, & Motorcycles)

15-Minute Automobile Data

15-Minute Time Period		↓ From North					← From East					↑ From South					→ From West						
		Maple Avenue										Maple Avenue					ALDI Driveway						
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	1	17	0	0	18	0	0	0	0	0	0	20	0	0	20	0	0	14	0	14	52	249
	11:15 AM	7	21	0	0	28	0	0	0	0	0	0	19	1	0	20	0	0	15	0	15	63	257
	11:30 AM	4	18	0	0	22	0	0	0	0	0	0	23	1	0	24	1	0	13	0	14	60	267
	11:45 AM	3	30	0	0	33	0	0	0	0	0	0	34	0	0	34	1	0	6	0	7	74	270
	12:00 PM	3	23	0	0	26	0	0	0	0	0	0	21	0	0	21	1	0	12	0	13	60	259
	12:15 PM	5	26	0	0	31	0	0	0	0	0	0	25	0	0	25	2	0	15	0	17	73	255
	12:30 PM	6	22	0	0	28	0	0	0	0	0	0	16	0	0	16	2	0	17	0	19	63	230
	12:45 PM	3	22	0	0	25	0	0	0	0	0	0	25	0	0	25	1	0	12	0	13	63	213
	1:00 PM	2	19	0	0	21	0	0	0	0	0	0	20	0	0	20	1	0	14	0	15	56	197
	1:15 PM	3	20	0	0	23	0	0	0	0	0	0	16	0	0	16	1	0	8	0	9	48	198
	1:30 PM	1	17	0	0	18	0	0	0	0	0	0	17	0	0	17	1	0	10	0	11	46	198
	1:45 PM	1	16	0	0	17	0	0	0	0	0	0	16	0	0	16	1	0	13	0	14	47	223
PM Peak Period	2:00 PM	5	18	0	0	23	0	0	0	0	0	0	21	0	0	21	1	0	12	0	13	57	226
	2:15 PM	3	18	0	0	21	0	0	0	0	0	0	16	0	0	16	1	0	10	0	11	48	
	2:30 PM	2	30	0	1	33	0	0	0	0	0	0	22	2	0	24	1	0	13	0	14	71	
	2:45 PM	4	21	0	0	25	0	0	0	0	0	0	17	0	0	17	1	0	7	0	8	50	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		53	338	0	1	392	0	0	0	0	0	0	328	4	0	332	16	0	191	0	207	931	

Peak Hour Automobile Volume Summary

Hourly Time Period		↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
		Maple Avenue										Maple Avenue					ALDI Driveway					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	17	92	0	0	109	0	0	0	0	0	0	97	2	0	99	3	0	46	0	49	257
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Count Basics		*Page 7 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Single Unit (SU) Trucks & Buses

15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period		From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					15-Min Totals	Hourly Sum
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	4
	11:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	4
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	8
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	11
	12:45 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	5	10
	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	5
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
PM Peak Period	2:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	7
	2:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	2:45 PM	0	1	0	0	1	0	0	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	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		1	9	0	0	10	0	0	0	0	0	0	11	1	0	12	0	0	2	0	2	24	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

Hourly Time Period		From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					Total Hourly Volume
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Count Basics		*Page 8 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Semi-Trucks

15-Minute Semi-Truck Data

15-Minute Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	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
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	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
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM Peak Period	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
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time		From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		*Page 9 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Maple Avenue & ALDI Driveway

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Data

	15-Minute Time Period	From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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	4
	11:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	4
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	12:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2	8
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	11
	12:45 PM	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2	5	10
	1:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	5
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2	5
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
PM Peak Period	2:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	3	7
	2:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	2:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	2:45 PM	0	1	0	0	1	0	0	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	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		1	9	0	0	10	0	0	0	0	0	0	11	1	0	12	0	0	2	0	2	24	

Peak Hour Heavy Vehicle Volume Summary

	Hourly Time Period	From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	6
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Count Basics		*Page 10 of 13*
Start Date: Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4	Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

% Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

15-Minute Heavy Vehicle Percentages

	15-Minute Time Period	From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					Total Heavy Vehicle	Hourly Heavy Vehicle
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent	Percent
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Midday Peak Period	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
	11:15 AM	0.0	8.7	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	2.3
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	7.7	0.0	0.0	0.0	0.0	0.0	3.2	1.5
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
	12:00 PM	0.0	4.2	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	3.2	3.0
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	1.6	4.6
	12:45 PM	25.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	7.4	0.0	0.0	14.3	0.0	13.3	7.4	4.5
	1:00 PM	0.0	5.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	5.1	2.5
	1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	4.0	2.5
	1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
	1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
PM Peak Period	2:00 PM	0.0	5.3	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	5.0	3.0
	2:15 PM	0.0	5.3	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	2:30 PM	0.0	6.3	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	
	2:45 PM	0.0	4.5	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	3:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Totals		1.9	2.6	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	3.2	20.0	0.0	3.5	0.0	0.0	1.0	0.0	1.0	2.5	

Peak Hour Heavy Vehicle Percentages Summary

	Hourly Time Period	From North (Maple Avenue)					From East					From South (Maple Avenue)					From West (ALDI Driveway)					Hourly Heavy Vehicle
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent
AM	8:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MD	11:15 AM	0.0	3.2	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	2.3
PM	4:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			*Page 11 of 13*
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

Maple Avenue & ALDI Driveway

Pedestrians and Bicyclists

15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min	Hourly
		Maple Avenue						Maple Avenue			ALDI Driveway				
	Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	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
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:45 AM	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
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	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
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	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
PM Peak Period	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	1	0	1	1	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	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	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	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	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	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	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	

Special Pedestrians

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

Intersection Traffic Volume Report

Count Basics			Page 12 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Maple Avenue & ALDI Driveway

Adults & Children

15-Minute Adult & Children Pedestrian Data

15-Minute Time Period Start Time		Crossing North Approach (Maple Avenue)			Crossing East Approach			Crossing South Approach (Maple Avenue)			Crossing West Approach (ALDI Driveway)			15-Min Totals	Hourly Sum
		Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total		
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	0
	6:15 AM	0		0	0		0	0		0	0		0	0	0
	6:30 AM	0		0	0		0	0		0	0		0	0	0
	6:45 AM	0		0	0		0	0		0	0		0	0	0
	7:00 AM	0		0	0		0	0		0	0		0	0	0
	7:15 AM	0		0	0		0	0		0	0		0	0	0
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	0
	8:45 AM	0		0	0		0	0		0	0		0	0	0
	9:00 AM	0		0	0		0	0		0	0		0	0	0
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	0
	11:30 AM	0		0	0		0	0		0	0		0	0	0
	11:45 AM	0		0	0		0	0		0	0		0	0	0
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	1
	1:45 PM	0		0	0		0	0		0	0		0	0	1
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	1
	2:15 PM	0		0	0		0	0		0	1		1	1	1
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	0
	3:15 PM	0		0	0		0	0		0	0		0	0	0
	3:30 PM	0		0	0		0	0		0	0		0	0	0
	3:45 PM	0		0	0		0	0		0	0		0	0	0
	4:00 PM	0		0	0		0	0		0	0		0	0	0
	4:15 PM	0		0	0		0	0		0	0		0	0	0
	4:30 PM	0		0	0		0	0		0	0		0	0	0
	4:45 PM	0		0	0		0	0		0	0		0	0	0
	5:00 PM	0		0	0		0	0		0	0		0	0	0
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
	9:00 PM	0		0	0		0	0		0	0		0	0	0
	9:15 PM	0		0	0		0	0		0	0		0	0	0
	9:30 PM	0		0	0		0	0		0	0		0	0	0
	9:45 PM	0		0	0		0	0		0	0		0	0	0
Totals		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	

Intersection Traffic Volume Report

Count Basics			Page 13 of 13
Start Date:	Saturday, August 24, 2024	Weekend	Schools Not in Session
Total Number of Hours Counted: 4		Non-Holiday	No Special Events

15-Minute Bicycle Turning Movement Count (Manual Entry)

Maple Avenue & ALDI Driveway

Bicyclists

15-Minute Bicycle Data

	15-Minute Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	15-Min Totals	Hourly Sum
AM Peak Period	6:00 AM					0					0					0					0	0	0
	6:15 AM					0					0					0					0	0	0
	6:30 AM					0					0					0					0	0	0
	6:45 AM					0					0					0					0	0	0
	7:00 AM					0					0					0					0	0	0
	7:15 AM					0					0					0					0	0	0
	7:30 AM					0					0					0					0	0	0
	7:45 AM					0					0					0					0	0	0
	8:00 AM					0					0					0					0	0	0
	8:15 AM					0					0					0					0	0	0
	8:30 AM					0					0					0					0	0	0
	8:45 AM					0					0					0					0	0	0
	9:00 AM					0					0					0					0	0	0
	9:15 AM					0					0					0					0	0	0
	9:30 AM					0					0					0					0	0	0
	9:45 AM					0					0					0					0	0	0
Midday Peak Period	10:00 AM					0					0					0					0	0	0
	10:15 AM					0					0					0					0	0	0
	10:30 AM					0					0					0					0	0	0
	10:45 AM					0					0					0					0	0	0
	11:00 AM					0					0					0					0	0	0
	11:15 AM					0					0					0					0	0	0
	11:30 AM					0					0					0					0	0	0
	11:45 AM					0					0					0					0	0	0
	12:00 PM					0					0					0					0	0	0
	12:15 PM					0					0					0					0	0	0
	12:30 PM					0					0					0					0	0	0
	12:45 PM					0					0					0					0	0	0
	1:00 PM					0					0					0					0	0	0
	1:15 PM					0					0					0					0	0	0
	1:30 PM					0					0					0					0	0	0
	1:45 PM					0					0					0					0	0	0
PM Peak Period	2:00 PM					0					0					0					0	0	0
	2:15 PM					0					0					0					0	0	0
	2:30 PM					0					0					0					0	0	0
	2:45 PM					0					0					0					0	0	0
	3:00 PM					0					0					0					0	0	0
	3:15 PM					0					0					0					0	0	0
	3:30 PM					0					0					0					0	0	0
	3:45 PM					0					0					0					0	0	0
	4:00 PM					0					0					0					0	0	0
	4:15 PM					0					0					0					0	0	0
	4:30 PM					0					0					0					0	0	0
	4:45 PM					0					0					0					0	0	0
	5:00 PM					0					0					0					0	0	0
	5:15 PM					0					0					0					0	0	0
	5:30 PM					0					0					0					0	0	0
	5:45 PM					0					0					0					0	0	0
	6:00 PM					0					0					0					0	0	0
	6:15 PM					0					0					0					0	0	0
	6:30 PM					0					0					0					0	0	0
	6:45 PM					0					0					0					0	0	0
	7:00 PM					0					0					0					0	0	0
	7:15 PM					0					0					0					0	0	0
	7:30 PM					0					0					0					0	0	0
	7:45 PM					0					0					0					0	0	0
	8:00 PM					0					0					0					0	0	0
	8:15 PM					0					0					0					0	0	0
	8:30 PM					0					0					0					0	0	0
	8:45 PM					0					0					0					0	0	0
	9:00 PM					0					0					0					0	0	0
	9:15 PM					0					0					0					0	0	0
	9:30 PM					0					0					0					0	0	0
	9:45 PM					0					0					0					0	0	0
Totals		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Hour Bicycle Turning Movement Volume Summary

	Hourly Time Period Start Time	From North (Maple Avenue) Right	Thru	Left	U-Tn	Total	From East Right	Thru	Left	U-Tn	Total	From South (Maple Avenue) Right	Thru	Left	U-Tn	Total	From West (ALDI Driveway) Right	Thru	Left	U-Tn	Total	Total Hourly Volume
AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix B
Existing Traffic
Peak Hour Analysis Outputs

Existing Traffic

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	465	45	0	640
Future Volume (vph)	0	5	465	45	0	640
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor						
Frt		0.865	0.987			
Flt Protected						
Satd. Flow (prot)	0	1627	3493	0	0	3574
Flt Permitted						
Satd. Flow (perm)	0	1627	3493	0	0	3574
Link Speed (mph)	25		25			25
Link Distance (ft)	308		144			319
Travel Time (s)	8.4		3.9			8.7
Confl. Peds. (#/hr)	1	1		1	1	
Confl. Bikes (#/hr)		1		1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%
Adj. Flow (vph)	0	5	495	48	0	681
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	5	543	0	0	681
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	465	45	0	640
Future Vol, veh/h	0	5	465	45	0	640
Conflicting Peds, #/hr	1	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	1	2	2	1	1
Mvmt Flow	0	5	495	48	0	681

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	274	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	727	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	726	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	726	-
HCM Lane V/C Ratio	-	-	0.007	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	95	5	5	205	40	5
Future Volume (vph)	95	5	5	205	40	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.986	
Flt Protected				0.999	0.957	
Satd. Flow (prot)	3549	0	0	3468	1775	0
Flt Permitted				0.999	0.957	
Satd. Flow (perm)	3549	0	0	3468	1775	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	413			658	268	
Travel Time (s)	8.0			12.8	7.3	
Confl. Peds. (#/hr)		1	1		1	1
Confl. Bikes (#/hr)		1				1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	4%	4%	1%	1%
Adj. Flow (vph)	102	5	5	220	43	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	0	0	225	48	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	5	5	205	40	5
Future Vol, veh/h	95	5	5	205	40	5
Conflicting Peds, #/hr	0	1	1	0	1	1
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	93	93	93	93	93	93
Heavy Vehicles, %	1	1	4	4	1	1
Mvmt Flow	102	5	5	220	43	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	108	0	227	56
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	121	-
Critical Hdwy	-	-	4.18	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.24	-	3.51	3.31
Pot Cap-1 Maneuver	-	-	1466	-	744	1002
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	894	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1465	-	740	1000
Mov Cap-2 Maneuver	-	-	-	-	740	-
Stage 1	-	-	-	-	909	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	762	-	-	1465	-
HCM Lane V/C Ratio	0.064	-	-	0.004	-
HCM Control Delay (s)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	15	540	60	0	625
Future Volume (vph)	0	15	540	60	0	625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor						
Frt		0.865	0.985			
Flt Protected						
Satd. Flow (prot)	0	1627	3486	0	0	3505
Flt Permitted						
Satd. Flow (perm)	0	1627	3486	0	0	3505
Link Speed (mph)	25		25			25
Link Distance (ft)	308		144			319
Travel Time (s)	8.4		3.9			8.7
Confl. Peds. (#/hr)	1	1		1	1	
Confl. Bikes (#/hr)		1		1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Adj. Flow (vph)	0	16	568	63	0	658
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	631	0	0	658
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	15	540	60	0	625
Future Vol, veh/h	0	15	540	60	0	625
Conflicting Peds, #/hr	1	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	2	2	3	3
Mvmt Flow	0	16	568	63	0	658

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	318	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	681	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	680	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	680	-
HCM Lane V/C Ratio	-	-	0.023	-
HCM Control Delay (s)	-	-	10.4	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	95	15	1	100	45	5
Future Volume (vph)	95	15	1	100	45	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.986	
Flt Protected					0.957	
Satd. Flow (prot)	3431	0	0	3505	1775	0
Flt Permitted					0.957	
Satd. Flow (perm)	3431	0	0	3505	1775	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	413			658	268	
Travel Time (s)	8.0			12.8	7.3	
Confl. Peds. (#/hr)		1	1		1	1
Confl. Bikes (#/hr)		1				1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	3%	3%	1%	1%
Adj. Flow (vph)	107	17	1	112	51	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	124	0	0	113	57	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 14.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	15	1	100	45	5
Future Vol, veh/h	95	15	1	100	45	5
Conflicting Peds, #/hr	0	1	1	0	1	1
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	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	1	1
Mvmt Flow	107	17	1	112	51	6

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	125	0	176	64
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	-	-	4.16	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.23	-	3.51	3.31
Pot Cap-1 Maneuver	-	-	1452	-	800	990
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	959	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	798	988
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	897	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	814	-	-	1451	-
HCM Lane V/C Ratio	0.069	-	-	0.001	-
HCM Control Delay (s)	9.8	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Appendix C
Build Traffic
Peak Hour Analysis Outputs

Full Build Traffic

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	35	460	85	0	675
Future Volume (vph)	0	35	460	85	0	675
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor						
Frt		0.865	0.977			
Flt Protected						
Satd. Flow (prot)	0	1627	3458	0	0	3574
Flt Permitted						
Satd. Flow (perm)	0	1627	3458	0	0	3574
Link Speed (mph)	25		25			25
Link Distance (ft)	340		144			319
Travel Time (s)	9.3		3.9			8.7
Confl. Peds. (#/hr)	1	1		1	1	
Confl. Bikes (#/hr)		1		1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%
Adj. Flow (vph)	0	37	489	90	0	718
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	37	579	0	0	718
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	460	85	0	675
Future Vol, veh/h	0	35	460	85	0	675
Conflicting Peds, #/hr	1	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	1	1	2	2	1	1
Mvmt Flow	0	37	489	90	0	718

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	292	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	707	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	706	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	706	-
HCM Lane V/C Ratio	-	-	0.053	-
HCM Control Delay (s)	-	-	10.4	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	95	15	10	205	60	10
Future Volume (vph)	95	15	10	205	60	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.980				0.980	
Flt Protected				0.998	0.959	
Satd. Flow (prot)	3503	0	0	3464	1768	0
Flt Permitted				0.998	0.959	
Satd. Flow (perm)	3503	0	0	3464	1768	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	968			658	268	
Travel Time (s)	18.9			12.8	7.3	
Confl. Peds. (#/hr)		1	1		1	1
Confl. Bikes (#/hr)		1				1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	1%	1%	4%	4%	1%	1%
Adj. Flow (vph)	102	16	11	220	65	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	0	231	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	15	10	205	60	10
Future Vol, veh/h	95	15	10	205	60	10
Conflicting Peds, #/hr	0	1	1	0	1	1
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	93	93	93	93	93	93
Heavy Vehicles, %	1	1	4	4	1	1
Mvmt Flow	102	16	11	220	65	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	119	0	244	61
Stage 1	-	-	-	-	111	-
Stage 2	-	-	-	-	133	-
Critical Hdwy	-	-	4.18	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.24	-	3.51	3.31
Pot Cap-1 Maneuver	-	-	1452	-	726	995
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1451	-	718	993
Mov Cap-2 Maneuver	-	-	-	-	718	-
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	873	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	748	-	-	1451	-
HCM Lane V/C Ratio	0.101	-	-	0.007	-
HCM Control Delay (s)	10.4	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	45	535	100	0	660
Future Volume (vph)	0	45	535	100	0	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Ped Bike Factor						
Frt		0.865	0.976			
Flt Protected						
Satd. Flow (prot)	0	1627	3454	0	0	3505
Flt Permitted						
Satd. Flow (perm)	0	1627	3454	0	0	3505
Link Speed (mph)	25		25			25
Link Distance (ft)	340		144			319
Travel Time (s)	9.3		3.9			8.7
Confl. Peds. (#/hr)	1	1		1	1	
Confl. Bikes (#/hr)		1		1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Adj. Flow (vph)	0	47	563	105	0	695
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	47	668	0	0	695
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	45	535	100	0	660
Future Vol, veh/h	0	45	535	100	0	660
Conflicting Peds, #/hr	1	1	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	2	2	3	3
Mvmt Flow	0	47	563	105	0	695

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	336	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.92	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.31	-	-	-	-
Pot Cap-1 Maneuver	0	663	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	662	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	662	-
HCM Lane V/C Ratio	-	-	0.072	-
HCM Control Delay (s)	-	-	10.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.2	-

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	95	25	5	100	65	10
Future Volume (vph)	95	25	5	100	65	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.969				0.982	
Flt Protected				0.997	0.958	
Satd. Flow (prot)	3396	0	0	3494	1770	0
Flt Permitted				0.997	0.958	
Satd. Flow (perm)	3396	0	0	3494	1770	0
Link Speed (mph)	35			35	25	
Link Distance (ft)	968			658	268	
Travel Time (s)	18.9			12.8	7.3	
Confl. Peds. (#/hr)		1	1		1	1
Confl. Bikes (#/hr)		1				1
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	3%	3%	1%	1%
Adj. Flow (vph)	107	28	6	112	73	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	135	0	0	118	84	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	25	5	100	65	10
Future Vol, veh/h	95	25	5	100	65	10
Conflicting Peds, #/hr	0	1	1	0	1	1
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	89	89	89	89	89	89
Heavy Vehicles, %	3	3	3	3	1	1
Mvmt Flow	107	28	6	112	73	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	191	70
Stage 1	-	-	-	-	122	-
Stage 2	-	-	-	-	69	-
Critical Hdwy	-	-	4.16	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.23	-	3.51	3.31
Pot Cap-1 Maneuver	-	-	1439	-	783	982
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1438	-	778	980
Mov Cap-2 Maneuver	-	-	-	-	778	-
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	944	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	800	-	-	1438	-
HCM Lane V/C Ratio	0.105	-	-	0.004	-
HCM Control Delay (s)	10	-	-	7.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 2, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: Tsunami Car Wash – Site Plan & Architectural Review and Conditional Use

BASIC INFORMATION	
Project:	Tsunami Car Wash
Applicant:	The Redmond Company
Consulting Engineer:	Nielson, Madson & Barber, SC
Consulting Architect:	The Redmond Company
Request:	Site Plan & Architectural Review & Conditional Use
Staff Recommendation:	Approve with Conditions

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV2013995001
Acreage:	1.80 Acres
Current Use:	Vacant
Proposed Use:	Car Wash, Stand Alone
Reason for Request:	Development of new Car Wash Facility
Land Use Classification:	Business
Zoning Classification:	B-3 – Commercial Business District

Project Summary & Overview

Tsunami Car Wash is looking to construct a standalone car wash facility at the corner of Maple Avenue and E. Wolf Run. The car wash will feature a tunnel wash system with on-site vacuums for customers. This lot was previously zoned B-4 but was non-conforming and rezoned B-3 in March 2024 via Ordinance 1031. The rezoning allows for a car wash to develop on this site via a Conditional Use Permit.

During the review of the submitted documents, a revised site plan was sent to staff to adjust the turn radius from the pay stations into the car wash tunnel. This revision will cause minor modifications to other civil site plan documents and storm water management. The revised site plan is included with this agenda packet, however, the civil and building plans still show the original site plan. Staff does not believe this is a significant change to warrant the delay of the review of this project. Conditions are set forth in the

provided resolutions to ensure staff have the opportunity to review the revised minor details before the issuance of permits.

The site shares an access drive with the neighboring property via existing easements. Staff does not believe that access will be an issue for this property. Staff recommends signage be added on the shared access in case of overflow that cars cannot be stacked blocking a lane of traffic.

Conditional Use Request

Attached to this staff report is the justification questions for a Conditional Use Permit that have been answered by the applicant. The Planning Commission shall take these into consideration when making their decisions.

Conditional Use Process / Findings

The established review procedures are that the Plan Commission shall hold a public hearing and make a recommendation to the Village Board whom makes the final decision.

Following the close of the public hearing, the Plan Commission may recommend (1) approval, (2) approval with conditions, or (3) denial.

If approval is recommended, the Plan Commission can recommend conditions deemed necessary to protect public health, safety, and welfare. The Plan Commission, in passing on the matter, will need to make the following determinations consistent with Section 100-354 of Mukwonago's Zoning Regulations:

1. The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety or welfare of the Village.
2. The uses, values and enjoyment of other property in the surrounding neighborhood that are already permitted shall be, in no foreseeable manner, substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.
3. The establishment, maintenance or operation of the conditional use is compatible with surrounding properties, whether in the same or different zoning districts. In making this determination, the Plan Commission and Village Board must determine whether the petitioner has demonstrated there are no adverse effects on surrounding properties or that potentially adverse effects have been eliminated or reduced to an acceptable level. Approaches that could be employed to mitigate potentially adverse effects will depend on the particular circumstances but may include:
    a. Adjusting the location of the use, or parts thereof, on the subject property;
    b. Limiting hours of operation;
    c. Limiting the size or scope of the use, or parts thereof;
    d. Controlling how the use is managed on an ongoing basis;
    e. Providing additional landscaping;
    f. Providing additional screening; and
    g. Limiting operations conducted out-of-doors, if otherwise allowed
4. The establishment of the conditional use will not impede the normal and ordinary development and improvement of the surrounding property for uses permitted within the district and/or which are consistent with the standards in the Comprehensive Plan.
5. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the use.

6. Adequate measures have been taken or will be taken providing ingress and egress to minimize traffic congestion on public streets so as not to diminish the level of service of any intersection which is impacted by traffic arising from the conditional use.

In addition, the property owner / tenant has shown compliance with the requirements set forth in the Village's zoning regulations for specified use.

The Village Board will carefully review the recommendation of the Plan Commission and concurs with the Plan Commission's findings set forth above, provided the conditional use is operated pursuant to the conditions of approval set forth in this order.

These findings are incorporated into the draft conditional use order which is attached.

The Plan Commission shall approve a conditional use application if the terms and conditions of the zoning regulations are met. However, in the event the terms and conditions of the ordinance are not consented to and complied with by the applicant, the Commission may deny the application. In addition, the Commission may deny the application or place conditions on it if substantial evidence, as defined in §62.23(7) Wis. Stats. is presented. That evidence must demonstrate the inability of the applicant to comply with or meet the conditions of the zoning regulations or that the conditions to be applied by the Plan Commission are necessary to protect the public health, safety or welfare of the community based upon the presentation of substantial evidence. Potential motion for approval to Recommend to the Village Board approval of the project as a conditional use as set forth in the attached conditional use order as drafted, provided the Village Attorney approves the final form of the conditional use order.

Staff Review

Engineering:	Final SWMP and Civil will need to be stamped by PE. Erosion control plan is lacking a tracking pad to prevent tracking onto shared access drive. Revised plans submitted should not be scanned versions as it makes it difficult to read. Additional comments will be made upon resubmittal. Storm water maintenance agreement and letter of credit will be required prior to issuance of permits.
Public Works	Sidewalk will need to be extended along E. Wolf Run to Maple Avenue.
Utilities	Sampling manhole needs to be moved closer to the right-of-way line. All utilities, including the sampling manhole needs to meet the Village Standard Specifications.
Police	No comments at this time.
Fire:	Please provide turning template for WB-50. No other comments at this time.
Building Inspection	Signage must comply to Village's sign code. More comments may be forthcoming with submittal of more detailed site signage. Condition in resolution that signage will be reviewed at the time of sign permit application.

Planning Signage should be added along the shared access with Aldi to prevent vehicle stacking and blocking traffic in the extreme event of high usage that results in stacked vehicles out into the roadway.

Recommended Action

Conditional Use Permit
Staff recommends the Planning Commission recommend to the Village Board approval of a conditional use permit as set forth in the provided resolution.

To – Grant a Conditional Use Permit for a drive-thru facility with the following on-going conditions deemed necessary to protect the health, safety, and welfare:

1. Ongoing conditions of approval. The following conditions shall constitute an ongoing obligation:
    a. Any modifications to the site, buildings, site improvements, shall require the conditional use application being updated.
2. The following conditions are also true and are consistent with Section 100-354 of Mukwonago's zoning regulations:
    a. The establishment, maintenance or operation of the conditional use will not be detrimental to or endanger the public health, safety or welfare of the Village.
    b. The uses, values and enjoyment of other property in the surrounding neighborhood that are already permitted shall be, in no foreseeable manner, substantially impaired or diminished by the establishment, maintenance or operation of the conditional use.
    c. The establishment, maintenance or operation of the conditional use is compatible with surrounding properties, whether in the same or different zoning districts.
    d. The establishment of the conditional use will not impede the normal and ordinary development and improvement of the surrounding property for uses permitted within the district and/or which are consistent with the standards in the Comprehensive Plan.
    e. Adequate utilities, access roads, drainage and other necessary site improvements have been or are being made to accommodate the use.
    f. Adequate measures have been taken or will be taken providing ingress and egress to minimize traffic congestion on public streets so as not to diminish the level of service of any intersection which is impacted by traffic arising from the conditional use.

Site Plan and Architectural Review
Staff Recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution with the included conditions.

Attachments

1. Application and Development Information
2. Plans and Site Drawings

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PC RESOLUTION NO. 2024-10

A RESOLUTION FOR A SITE PLAN AND ARCHITECTURAL REVIEW FOR TSUNAMI CAR WASH, PARCEL MUKV2013995001

WHEREAS, pursuant to Section 100-601 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval of a new stand-alone car wash facility, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by The Redmond Company as the authorized agent, and

WHEREAS, the use is a conditional use within the B-3 Community Business District – in which the subject property is located, and

WHEREAS, the plan of operation and plans have been reviewed and recommended by the Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Plan Commission of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for the new stand-alone car wash facility to be constructed on E. Wolf Run, based upon the plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED the site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of site construction plans to the Village and receive approval of said plans prior to issuance of any building permits. Plans shall include but are not limited to grading, utilities, utility calculations, erosion control, landscaping, lighting, building architecture, building materials and other plans as required. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction. Construction shall comply with any conditions of approval issued by staff.
2. A final erosion control plan shall be submitted for review and approval.
3. All required regulatory agency permits shall be received and provided to the Village prior to the start of construction.
4. Prior to any land-disturbing activity, a pre-construction meeting must be held with the applicant's representatives and primary contractors, and Village department heads and representatives. The applicant representative shall coordinate such meeting.
5. The applicant must obtain all required land disturbance permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
6. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.

7. The Applicant shall establish an escrow in the value of $10,000 prior to the start of construction.
8. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
9. All work related to this project must comply with all project plans approved by the Village.
10. The developer must comply with all requirements related to impact fees imposed by the Village.
11. The developer shall comply with all parts of the Municipal Code as it relates to this project.
12. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Building Inspectors are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.
13. Trash enclosure shall be constructed per Village standards and plans submitted.
14. Refuse/Recycling Collection shall be contracted privately.
15. All lighting within the parking lot and building lighting shall be full cut off lighting and meet municipal standards. Building lighting shall not be direct light or the appearance of light towards adjoining properties. The Police Department or Zoning Administrator, after completion or any modification to the lighting in the future, may request adjustments. A photometric lighting plan must be submitted and approved prior to construction.
16. Landscaping shall be installed per Village standards and approved plans.
17. The applicant shall comply with the requirements of the Village Utility Department pertaining to sewer and water services.
18. Any future modification to the site such as modification of parking, lighting, grading, signage, fences, etc. may require Site Plan and Architectural Review.

Passed and adopted by the Village of Mukwonago Plan Commission this 8th day of October, 2024.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Shay Zerfas, Deputy Clerk-Treasurer

PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 1, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: Dunkin Donuts – Site Plan & Architectural Review-Amended

BASIC INFORMATION	
Project:	Dunkin Donuts
Applicant:	Kardo Rasha – Kardo Group, LLC
Consulting Engineer:	Mach IV Engineering & Surveying LLC
Consulting Architect:	KP+J Architects & Engineers
Request:	Amended Site Plan & Architectural Review
Staff Recommendation:	Approve with Conditions from Resolution

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV2014987
Acreage:	0.65 Acres
Current Use:	Vacant
Proposed Use:	Restaurant w/ Drive-Thru
Reason for Request:	Revised architectural drawings
Land Use Classification:	Business
Zoning Classification:	B-2 – General Business

Project Summary & Overview

Dunkin Donuts received approval at the June 11th Plan Commission Meeting for a Site Plan and Architectural Review (SPAR) application for a new restaurant and drive-thru facility on Bay View Road. Subsequently, the Village Board approved a Conditional Use permit to authorize this use within the B-2 zoning district. Site plans and architectural drawings were presented at the June 11th Plan Commission Meeting and were approved via PC Resolution 2024-07 with several conditions.

Upon further review with the Dunkin Donuts corporate office, the architects presented revised architectural drawings to staff that showed significant changes to the exterior architecture that was presented in June. Staff is bringing this development back to Plan Commission to review an amended SPAR application.

This amended SPAR review is strictly for the exterior design of the building. The Conditional Use Permit is not affected by this and the other items related to their site plan are not under review again with this application as they were approved with a previous resolution.

Staff Review

Engineering:	No Comments.
Public Works	No Comments.
Utilities	No Comments.
Police	No Comments.
Fire:	No Comments.
Building Inspection	No Comments.
Planning	No Comments.

Recommended Action

Staff Recommends the Planning Commission Approve a resolution for the amended Site Plan and Architectural Review, as set forth in the attached resolution.

Attachments

1. Amended Architectural Drawings

OLD DRAWINGS - JUNE

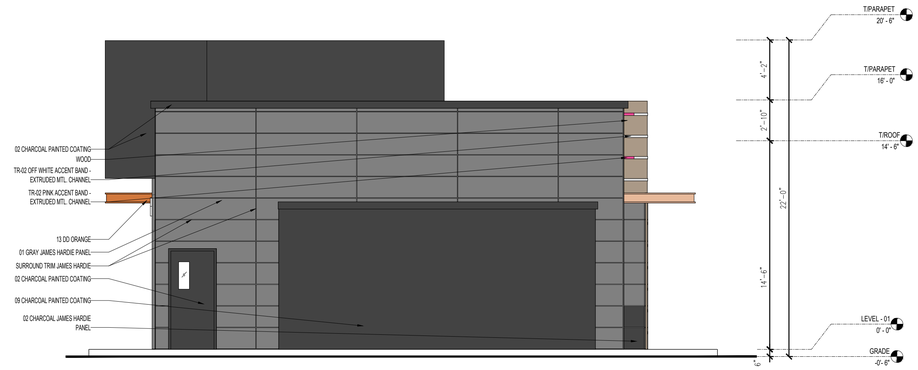
1 **SITE PLAN**
SCALE: 1/16" = 1'-0"

SITE AREA	30,582 SQ.FT
PROPOSED BUILDING AREA	2000 SQ.FT
REQUIRED PARKING	30
PROPOSED PARKING	21

KP+J ARCHITECTS ENGINEERS
960 RAND RD., SUITE 220
DES PLAINES, IL 60016
(224) 830-7206

PROPOSED CONCEPTUAL SITE PLAN
MUKWONAGO, WI

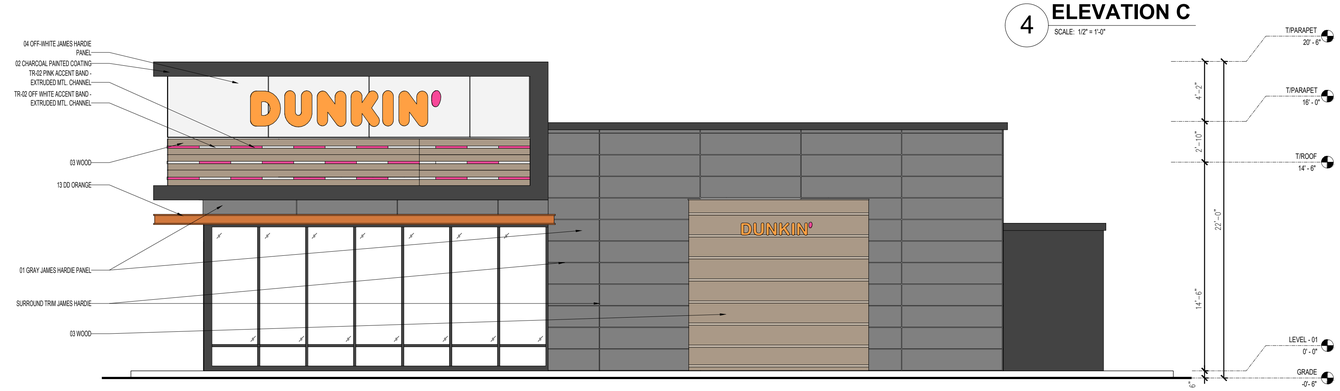
DATE : 05.09.2024



5 **ELEVATION D**
SCALE: 1/2" = 1'-0"

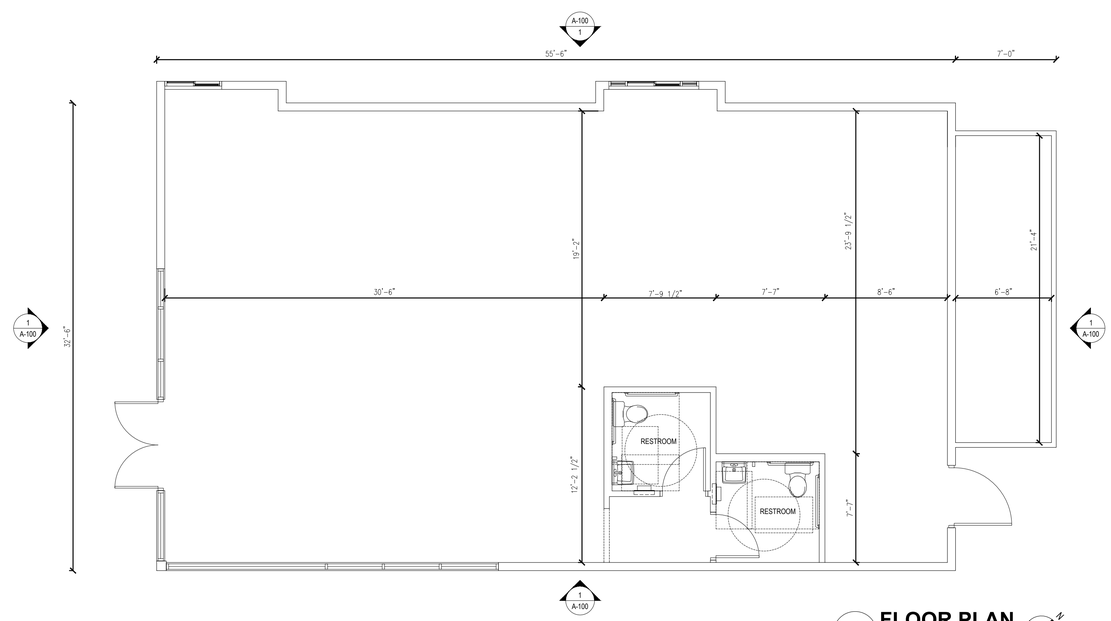
4 **ELEVATION C**
SCALE: 1/2" = 1'-0"

3 **ELEVATION B**
SCALE: 1/2" = 1'-0"



2 **ELEVATION A**
SCALE: 1/2" = 1'-0"

OLD DRAWINGS - JUNE



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

MATERIAL LEGEND

01 GRAY	09 CHARCOAL
02 CHARCOAL	12 DD PINK
03 WOOD PATTERN	12 DD ORANGE
04 OFF-WHITE FINISH	

MATERIAL SCHEDULE

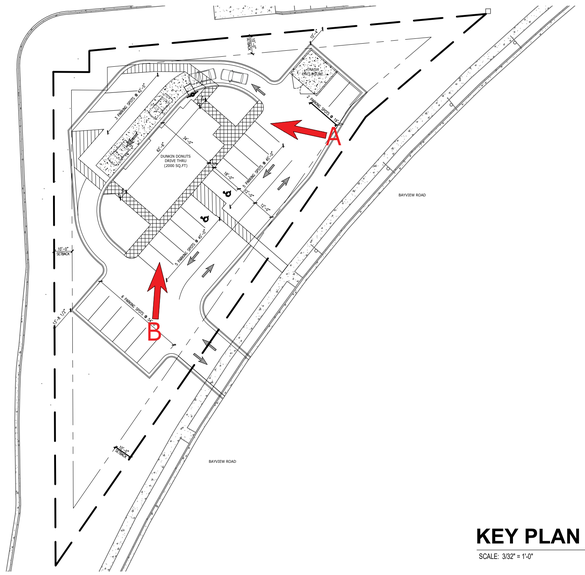
CODE	DESCRIPTION	MANUFACTURER	IMAGE
01	GRAY PATTERN	JAMES HARDIE PANEL	
02	CHARCOAL PATTERN	JAMES HARDIE 8" SIDING EXPOSURE OR PANEL	
03	WOOD PATTERN	WOOD TONE	
04	OFF-WHITE PATTERN	JAMES HARDIE PANEL	
09	WALK-IN BOX	PAINT SHERWIN WILLIAMS	
12	PINK BAND	PAINT SHERWIN WILLIAMS	
13	ORANGE BAND	PAINT SHERWIN WILLIAMS	
TR-04	PINK EXTRUDED METAL CHANNEL AT TOWER ELEMENT	TAMLYN	
TR-02	OFF EXTRUDED METAL CHANNEL AT TOWER ELEMENT	TAMLYN	

KP+J ARCHITECTS ENGINEERS
960 RAND RD., SUITE 220
DES PLAINES, IL 60016
(224) 830-7206

PROPOSED CONCEPTUAL FLOOR PLAN
MUKWONAGO, WI

DATE : 05.09.2024

OLD DRAWINGS - JUNE



KEY PLAN
SCALE: 3/32" = 1'-0"

2 VIEW B
NTS

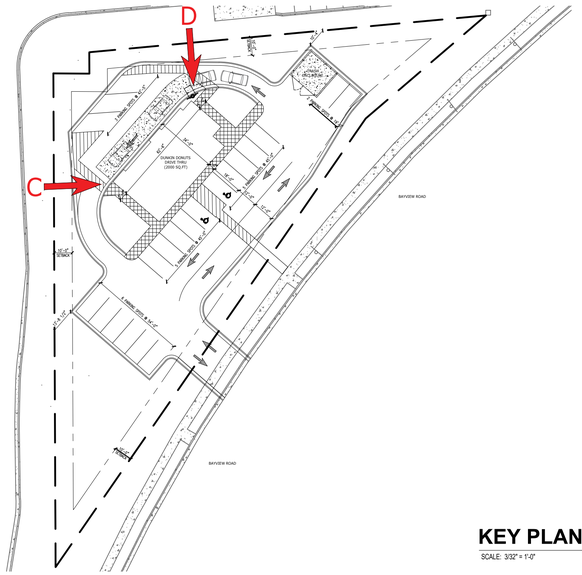
1 VIEW A
NTS

KP+J ARCHITECTS ENGINEERS
960 RAND RD., SUITE 220
DES PLAINES, IL 60016
(224) 830-7206

PROPOSED CONCEPTUAL RENDERS
MUKWONAGO, WI

DATE : 05.09.2024

OLD DRAWINGS - JUNE



KEY PLAN
SCALE: 3/32" = 1'-0"

2 **VIEW D**
NTS

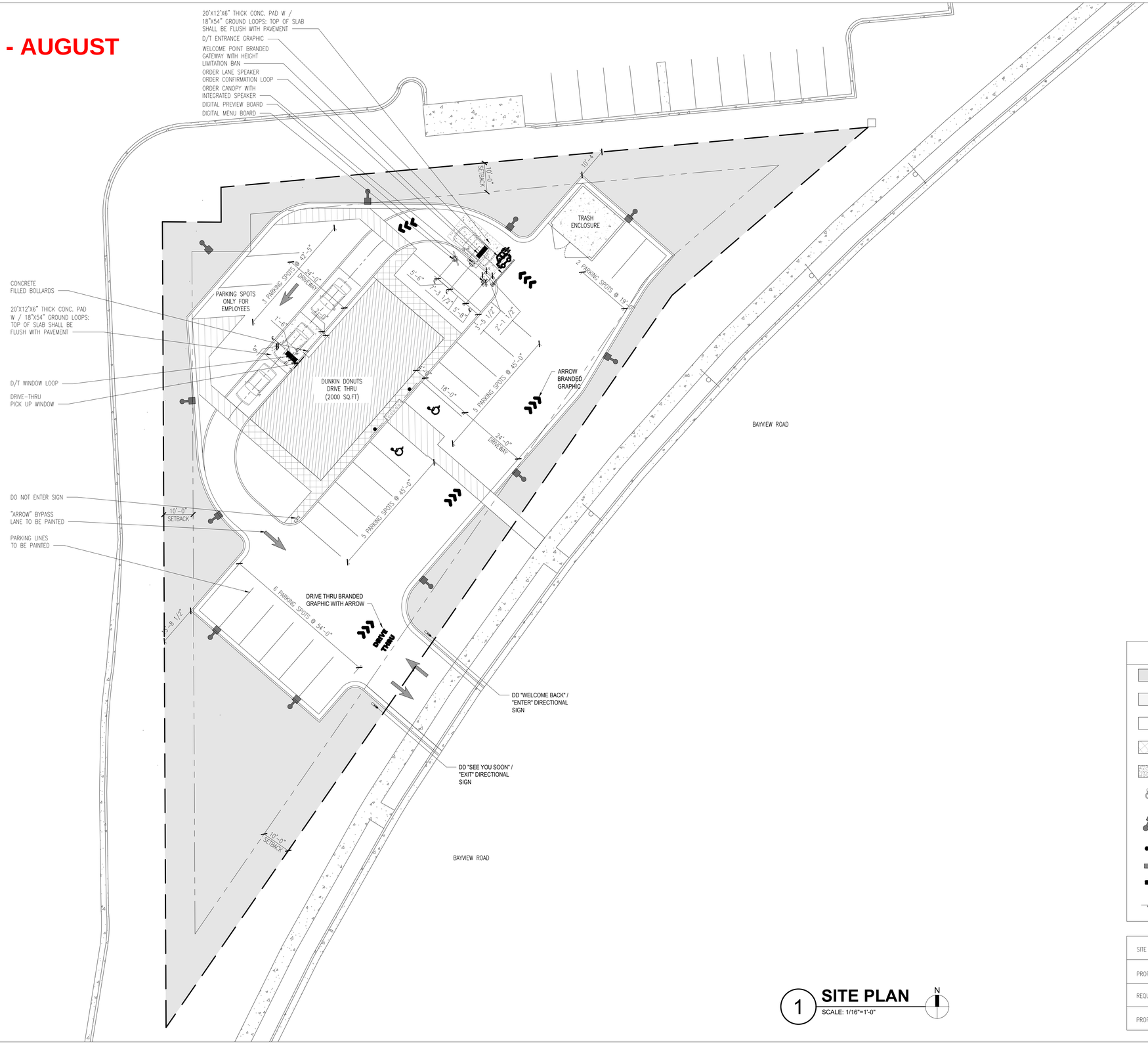
1 **VIEW C**
NTS

KP+J ARCHITECTS ENGINEERS
960 RAND RD., SUITE 220
DES PLAINES, IL 60016
(224) 830-7206

PROPOSED CONCEPTUAL RENDERS
MUKWONAGO, WI

DATE : 05.09.2024

NEW DRAWINGS - AUGUST



1 **SITE PLAN**
SCALE: 1/16"=1'-0"

N

SITE PLAN LEGEND	
	LANDSCAPE
	EXTERNAL ROAD
	INTERNAL ROAD
	WALKWAY
	CONCRETE
	HANDICAP PARKING
	LIGHT POLE
	BOLLARD
	INLET
	DOWNSPOUT
	SIGN

SITE AREA	30,582 SQ.FT
PROPOSED BUILDING AREA	2000 SQ.FT
REQUIRED PARKING	17
PROPOSED PARKING	21

SEAL

CLIENT

KARDO RASHA,
KARDO GROUP,
320 YORK RD, OAK BROOK, IL 60523
KARDO.RASHA@GMAIL.COM

KP+J ARCHITECTS ENGINEERS
960 RAND RD.,
SUITE 220
DES PLAINES, IL
847-497-8159
WISCONSIN DESIGN FIRM# 4640-0011

CONSULTANT

CONSULTANT

DUNKIN'

MUKWONAGO, WI-53066

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REV	REV DESCRIPTION	DATE
0	PROGRESS SET	08/26/2024

DESIGN PROFESSIONAL SEAL

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Drawn / Designed By:	PR/SM
Reviewed By:	JT
Project Number:	**KPJ-24-0068**

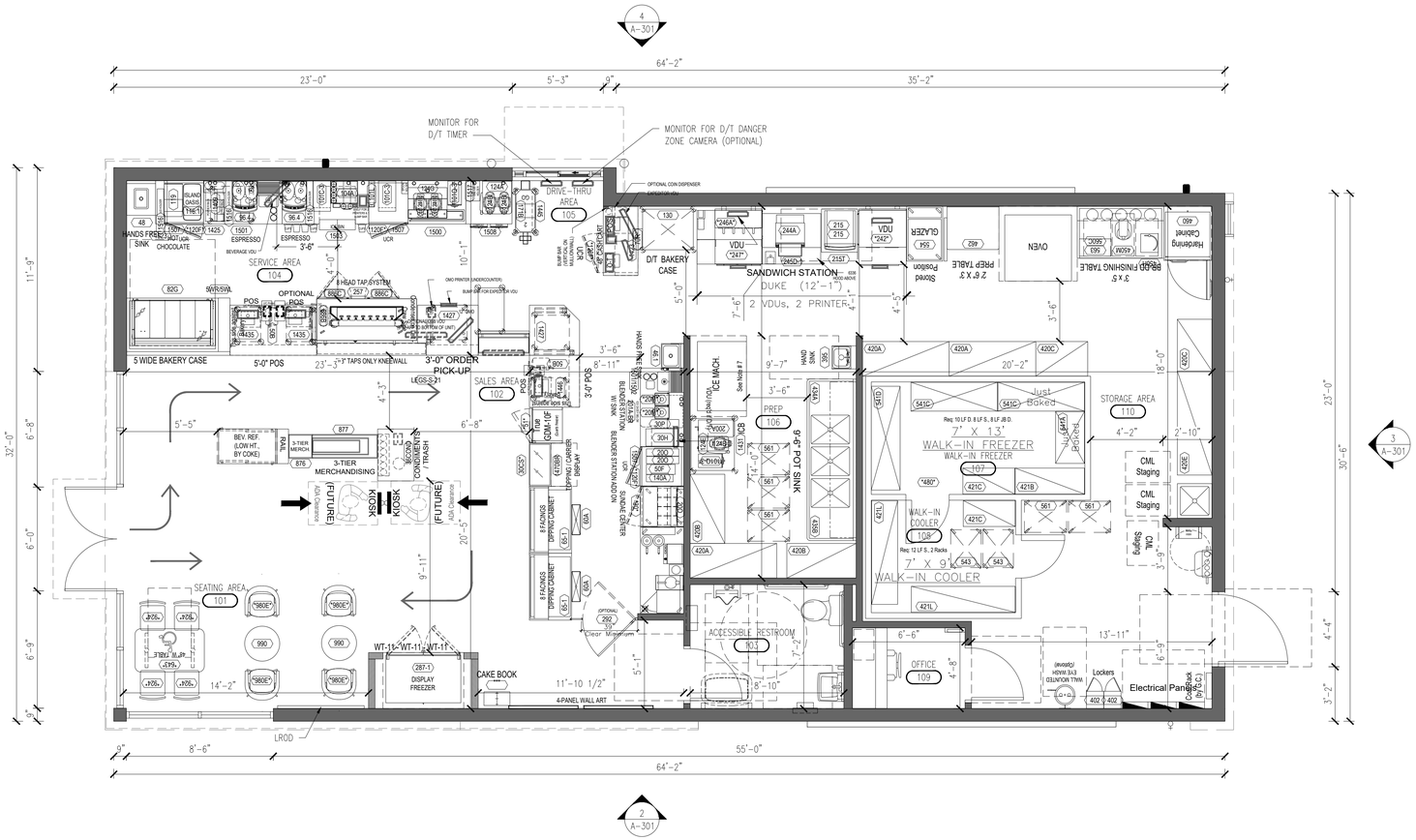
SHEET NAME:

SITE PLAN

SHEET NUMBER:

A-100

NEW DRAWINGS - AUGUST



1 **FLOOR PLAN**

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

N

SEAL

CLIENT

KARDO RASHA,
KARDO GROUP,
320 YORK RD, OAK BROOK, IL 60523
KARDO.RASHA@GMAIL.COM

960 RAND RD.,
SUITE 220
DES PLAINES, IL
847-497-8159

ARCHITECTS ENGINEERS

WISCONSIN DESIGN FIRM# 4640-0011

CONSULTANT

CONSULTANT

DUNKIN'

MUKWONAGO, WI-53066

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REV	REV DESCRIPTION	DATE
0	PROGRESS SET	08/26/2024

DESIGN PROFESSIONAL SEAL

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Drawn / Designed By: PR/SM
Reviewed By: JT
Project Number: KPJ-24-0068

SHEET NAME:

FLOOR PLAN

SHEET NUMBER:

A-201

NEW DRAWINGS - AUGUST

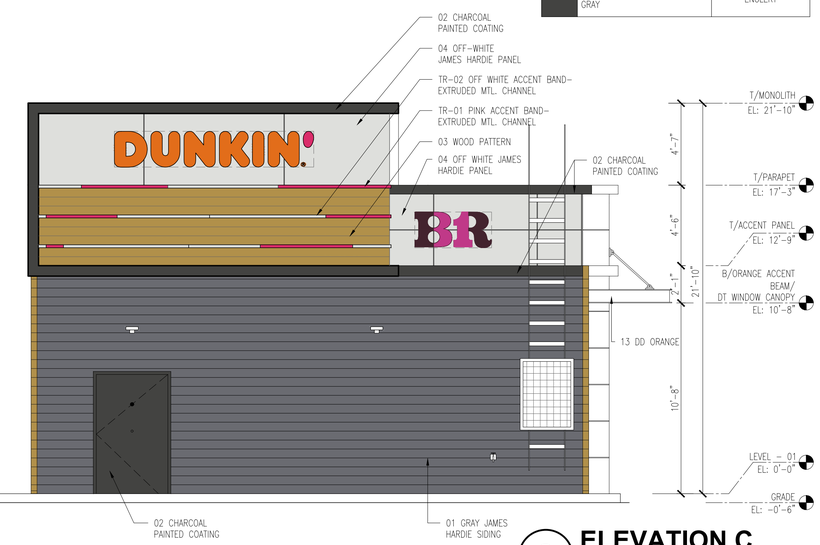
MATERIAL LEGEND

- 01 GRAY
- 02 CHARCOAL
- 03 WOOD PATTERN
- 04 OFF-WHITE FINISH
- 09 CHARCOAL
- 12 DD PINK
- 13 DD ORANGE
- BR PINK (FOR BR SIGNAGE ONLY)
- BR BROWN (FOR BR SIGNAGE ONLY)

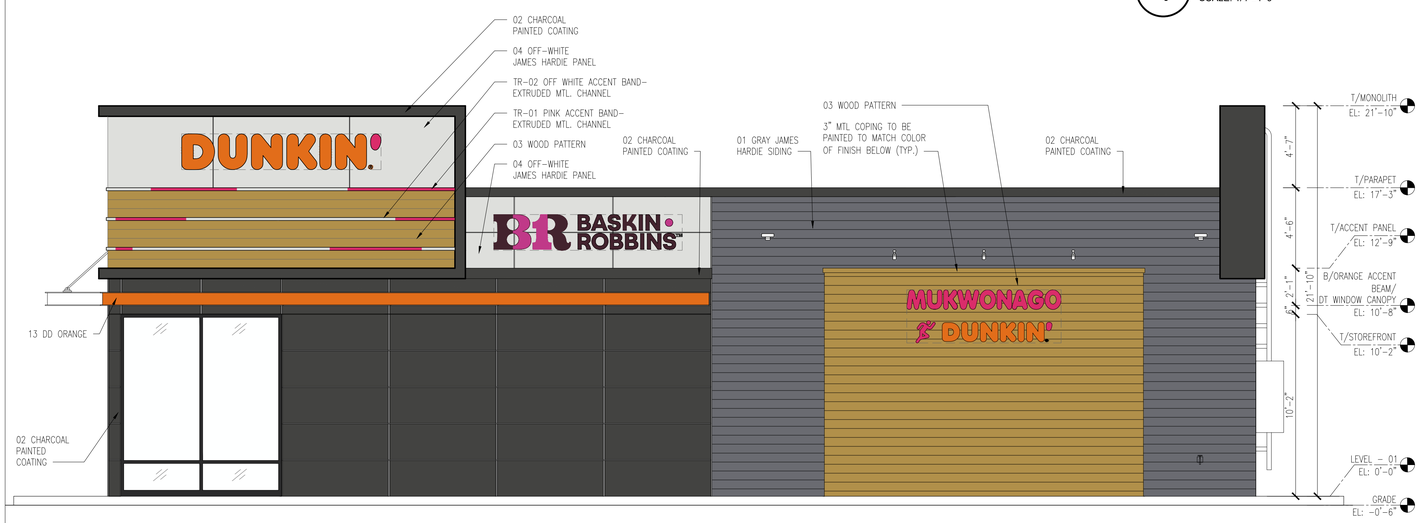
MATERIAL SCHEDULE

CODE	MATERIAL	BRAND
-01	GRAY PATTERN	JAMES HARDIE PANEL
-02	CHARCOAL PANEL	JAMES HARDIE PANEL 6" SIDING EXPOSURE OR PANEL
-03	WOOD PATTERN	WOODTONE
-04	OFF-WHITE PATTERN	JAMES HARDIE PANEL
-09	WALK IN BOX	PAINT SHERWIN WILLIAMS
-12	PINK BAND	PAINT SHERWIN WILLIAMS
-13	ORANGE BAND	PAINT SHERWIN WILLIAMS
TR-01	PINK EXTRUDED METAL CHANNEL AT TOWER ELEMENT	TAMLYN
TR-02	OFF WHITE EXTRUDED METAL CHANNEL AT TOWER ELEMENT	TAMLYN
	ALUMINIUM COPING CHARCOAL GRAY	ENGLERT

4 **ELEVATION D**
SCALE: 1/4"=1'-0"



3 **ELEVATION C**
SCALE: 1/4"=1'-0"



2 **ELEVATION B**
SCALE: 1/4"=1'-0"

1 **ELEVATION A**
SCALE: 1/4"=1'-0"

SEAL

CLIENT

KARDO RASHA,
KARDO GROUP,
320 YORK RD, OAK BROOK, IL 60523
KARDO.RASHA@GMAIL.COM

KP+J ARCHITECTS ENGINEERS
960 RAND RD.,
SUITE 220
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847-497-8159
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CONSULTANT

CONSULTANT

DUNKIN'

MUKWONAGO, WI-53066

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REV	REV DESCRIPTION	DATE
0	PROGRESS SET	08/26/2024

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Drawn / Designed By: PR/SM
Reviewed By: JT
Project Number: KPJ-24-0068

SHEET NAME:

ELEVATION

SHEET NUMBER:

A-301

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PC RESOLUTION NO. 2024-11

A RESOLUTION FOR AN AMENDED SITE PLAN AND ARCHITECTURAL REVIEW FOR DUNKIN DONUTS, PARCEL MUKV 2014987

WHEREAS, pursuant to Section 100-601 of the Zoning Code, an application for an amended site plan and architectural review has been filed for the approval of revised architectural drawings for a Dunkin Donuts Facility, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by Kardo Rasha of Kard Group, LLC (Owner), and

WHEREAS, the Plan Commission approved a site plan and architectural review application by the same applicant on June 11, 2024 via PC Resolution 2024-07, and

WHEREAS, the applicant is seeking approval of the revised architectural drawings for the new facility, and

WHEREAS, the revised architectural drawings do not affect the Conditional Use Permit approved for the site or other approvals granted on June 11, 2024.

NOW, THEREFORE, BE IT RESOLVED by the Plan Commission of the Village of Mukwonago, Wisconsin hereby approves the amended site plan and architectural review for the new Dunkin Donuts facility to be constructed on Bay View Road, based upon the plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED the site plan and architectural review approval shall be subject to all conditions enumerated in PC Resolution 2024-07 adopted by the Village of Mukwonago Plan Commission on June 11, 2024.

Passed and adopted by the Village of Mukwonago Plan Commission this 8th day of October, 2024.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Shay Zerfas, Deputy Clerk-Treasurer

PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 1, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: Semper-Fi Roofing & Exteriors Site Plan & Architectural Review

BASIC INFORMATION	
Project:	Semper-Fi Roofing & Exteriors
Applicant:	Semper-Fi Roofing & Exteriors
Consulting Engineer:	N/A
Request:	Site Plan & Architectural Review – Exterior Building Painting
Staff Recommendation:	Approve

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV1970987
Acreage:	6.614 Acres
Current Use:	Industrial
Proposed Use:	Industrial
Reason for Request:	Exterior Building Painting
Land Use Classification:	Industrial
Zoning Classification:	M-4 – Medium-Heavy Industrial

Project Summary & Overview

Semper-Fi Roofing and Exteriors plans to repaint the exterior of their building as shown in the application packet. No changes are being proposed except for the repainting of the exterior.

This change in exterior color warrants a review by the Plan Commission for approval of the exterior architectural change.

Staff have reviewed the application and have no comments or objections to the exterior pain color change.

Staff Review

Engineering:	No comments.
Public Works	No comments.
Utilities	No comments.
Police	No comments.
Fire:	No comments.
Building Inspection	No comments.
Planning	No comments.

Recommended Action

Staff recommends the Planning Commission approve the application as outlined in the attached resolution for the exterior painting of the existing building for Semper-Fi Roofing & Exteriors.

Attachments

1. Existing exterior photos.
2. Application w/ Proposed Paint Colors

Process Details: PZ24-0028

Property Address: 820 SWAN DR, Mukwonago, WI 53149 | Parcel: MUKV1970987

Property Owner: SEMPER FI ROOFING INC

Summary Information

> 18 Process Step(s) Found > 0 Inspection(s) Found

This Site Plan was created from an application. Click here to view the application.

Amount Due

Process - Site Plan	**$400.00**
Total	

Pay Now

Process Information

Filed As	Site Plan	**Application Date**	09/20/2024
Process Name	Site Plan	**Date Process Started**	*No Data to Display*
Process Number	PZ24-0028	**Date Completed**	*No Data to Display*
Status	Preprocess - Hold	**Last Status Change**	09/20/2024
Scope Of Work	Exterior painting of building, grey with existing red line top center.		
Conditions	*No Data to Display*		

Process Step Information

Step Number	Step Display Name	Status	Date Step Started	Date Step Completed	Date Step Due	
1	Review Application for Completeness	Not Started				View
2	Staff Review	Not Started				View
3	CIVIL DRAWINGS	Not Started				View
4	STORMWATER MGT PLAN	Not Started				View
5	LIGHTING PLAN	Not Started				View
6	LANDSCAPE PLAN	Not Started				View
7	EROSION CONTROL PLAN	Not Started				View
8	PRE CON ESCROW TO DEPUTY CLERK $5K	Not Started				View
9	Post PC Agenda	Not Started				View
10	PC Review and Decision	Not Started				View
11	VILLAGE BOARD NOTIFICATION ONLY	Not Started				View
12	Owner and Applicant Notified	Not Started				View
13	LETTER OF CREDIT - IF INFRASTRUCTURE VILLAGE RESPONSIBILITY	Not Started				View
14	STORM WATER MAINT AGMT	Not Started				View
15	DEVELOPER AGMT	Not Started				View
16	PRE CON MTG	Not Started				View
17	POST APPROVAL CONSTR ESCROW $10K	Not Started				View
		Not Started				View

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Document Summary

Document Title

CIVIL DRAWINGS

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	CIVIL DRAWINGS	Not Started			No Attachment

EROSION CONTROL PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	EROSION CONTROL PLAN	Not Started			No Attachment

Exterior Building Painting

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	Exterior Building Painting	Not Started	9/20/2024		View Document
1	Exterior Building Painting	Not Started	9/20/2024		View Document

LANDSCAPE PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	LANDSCAPE PLAN	Not Started			No Attachment

LIGHTING PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	LIGHTING PLAN	Not Started			No Attachment

SITE PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	SITE PLAN	Not Started			No Attachment

STORMWATER MGT PLAN

[Expand All]

Version	Document Title	Review Status	Received	Completed	
1	STORMWATER MGT PLAN	Not Started			No Attachment

SUBMITTAL ESCROW $5K

[Expand All]

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Document Title

Version	Document Title	Review Status	Received	Completed	
1	SUBMITTAL ESCROW $5K	Not Started			No Attachment

Review Comments/Concerns

Show All [Collapse All]

Title	Type	Comment Type	Corrected	Date Found	Date Corrected	Process Step	Review
No records to display.							

Inspection Information

Inspection Type	Inspector	Status	Scheduled Date	Completed Date	Result
No records to display.					

Fees & Payments

Date	Action	Qty	Description	Billed	Paid
9/20/2024	Invoice Item	1.00	PZE Fees: Site Plan - Minor (Invoice Number: 00005731)	$400.00	

Applicant Information

Address SEMPER FI ROOFING INC
820 SWAN DR
MUKWONAGO, WI 53149

Phone *No Data to Display* **Fax** *No Data to Display*
Mobile *No Data to Display* **Other Phone** *No Data to Display*

Parcel/Land Details

Notes 820 Swan Drive

Zoning/Rezoning and Usage

Dimensional Information

Notes n/a

Utility Details

Setback Details

Miscellaneous Fields

Parking Details

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VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PC RESOLUTION NO. 2024-09

A RESOLUTION FOR A SITE PLAN AND ARCHITECTURAL REVIEW FOR SEMPER-FI ROOFING & EXTERIORS AT 820 SWAN DRIVE, PARCEL NUMBER MUKV1970987

WHEREAS, pursuant to Section 100-601 and 100-206 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval for exterior repainting, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by Semper-Fi Roofing Inc., and

WHEREAS, the applicant desires to repaint the exterior of the existing building, and

WHEREAS, no other building modifications or site changes are proposed, and

WHEREAS, the use is permitted within the M-4 Medium/Heavy Industrial – in which the subject property is located, and

WHEREAS, the plans have been reviewed and recommended by the Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Plan Commission of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for the exterior painting at 820 Swan Drive, based upon the plans submitted to the Village.

Passed and adopted by the Village of Mukwonago Plan Commission this 8th day of October, 2024.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Shay Zerfas, Deputy Clerk-Treasurer

PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 3, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: L'Bri Pure n' Natural Site Plan & Architectural Review

BASIC INFORMATION	
Project:	L'Bri Pure n' Natural
Applicant:	L'Bri Pure n' Natural
Consulting Engineer:	Endpoint Solutions
Consulting Architect:	JA Knetter Architects, Inc.
Request:	Site Plan & Architectural Review
Staff Recommendation:	Approve with Conditions

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV1969996005 and MUKV1969996006
Acreage:	5.56 Acres (Both Lots)
Current Use:	Industrial
Proposed Use:	Industrial
Reason for Request:	New Building & Site Expansion
Land Use Classification:	Industrial
Zoning Classification:	M-4 – Medium-Heavy Industrial

Project Summary & Overview

L'Bri Pure n' Natural (L'Bri), located at 909 Perkins Drive is seeking approval for a site expansion to construct a new building on the parcel adjacent to their existing building as well as additional parking and storm water management. L'Bri presented a conceptual plan before the Plan Commission on May 14th, 2024. No major comments were brought forward at the time of conceptual review.

Since the concept review, they have worked to finalize their civil and architectural drawings. A complete application package is included with this agenda packet.

Conditions of approval are included with the attached resolution of approval.

Staff Review

Engineering:	Final plans and storm water will need to be stamped by a PE. Maintenance agreement and letter of credit will be required prior to issuance of permits.
Public Works	No comments at this time.
Utilities	Existing water and service laterals should be used – as-builts will be provided to applicant. Additional shutoff may not be necessary because one already exists. If required, it should be located near the right-of-way line. Sanitary sampling manhole will need to be located near the right-of-way line. Extra sanitary lateral near midblock manhole should be abandoned – as-built will be provided to applicant.
Police	No comments at this time.
Fire:	Site will need to meet all suppression and detection requirements. Further coordination with fire department will be needed during building plan review. Provide turning template for WB-50 and identify all hydrant locations for compliance with Village code.
Building Inspection	No comments at this time.
Planning	Applicant is seeking a reduction in parking due to actual need on-site for the use of the buildings and the employees per shift. The applicant will provide more details on their exemption request at the Plan Commission meeting. Possible addition of pervious access within the green space set-back on east side of building to facilitate access to side garage door. More details will be presented at Plan Commission meeting. This does not alter the layout of the site or significantly change the site plan.

Recommended Action

Staff recommends the Planning Commission approve with the conditions enumerated in the provided resolution for the application by L'Bri Pure n' Natural.

Attachments

1. Application Materials

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PC RESOLUTION NO. 2024-12

A RESOLUTION FOR A SITE PLAN AND ARCHITECTURAL REVIEW FOR L'BRI PURE N' NATURAL LOCATED AT 909 PERKINS DRIVE, PARCEL NUMBER MUKV1969996005 AND MUKV1969996006

WHEREAS, pursuant to Section 100-601 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval of a new building and site expansion, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by L'Bri Pure n' Natural (applicant and property owner), and

WHEREAS, the use is permitted within the M-4 Medium/Heavy Industrial – in which the subject property is located, and

WHEREAS, the plans have been reviewed and recommended by the Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Plan Commission of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for the addition at 909 Perkins Drive, based upon the plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED the site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of site construction plans to the Village and receive approval of said plans prior to issuance of any building permits. Plans shall include but are not limited to grading, utilities, utility calculations, erosion control, landscaping, lighting, building architecture, building materials and other plans as required. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, a pre-construction meeting must be held with the applicant's representatives and primary contractors, and Village department heads and representatives. The applicant representative shall coordinate such meeting.
3. The applicant must obtain all required land disturbance permits within six months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges.
5. The applicant shall establish an escrow in the value of $10,000 prior to the start of construction.
6. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
7. All work related to this project must comply with all project plans approved by the Village.
8. The developer must comply with all requirements related to impact fees imposed by the Village.
9. The developer shall comply with all parts of the Municipal Code as it relates to this project.

10. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Building Inspectors are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.
11. The applicant shall coordinate required fire safety comments with Fire Chief and Building Inspector.
12. All lighting within the parking lot and building lighting shall be full cut off lighting and meet municipal standards. Building lighting shall not be direct light or the appearance of light towards adjoining properties. The Police Department or Zoning Administrator, after completion or any modification to the lighting in the future, may request adjustments.
13. Landscaping shall be installed per Village standards and approved plans.
14. Justification for a parking reduction shall be submitted and approved prior to construction.
15. Any future modification to the site such as modification of parking, lighting, grading, signage, fences, etc. may require Site Plan and Architectural Review.
16. A storm water maintenance agreement shall be executed prior to construction.
17. A letter of credit for the storm water improvements shall be in place prior to construction.
18. In the event that one of the two parcels is sold to a different owner in the future, a shared parking agreement will be required, and parking will be reviewed again prior to change in occupancy.

Passed and adopted by the Village of Mukwonago Plan Commission this 8th day of October 2024.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Shay Zerfas, Deputy Clerk-Treasurer

PROJECT SUMMARY

Date:	September 3, 2024
Owner:	L' Bri Pure n' Natural
Project:	New Building Construction
Site Address:	909 Perkins Drive
	Mukwonago, WI 53149

Reason for Site Plan Application

The above site consists of two parcels of which the existing building occupies one, along with associated parking and loading areas. The property owner is planning to construct a new building on the eastern property and have shared parking and loading dock access areas between the two buildings. The proposed building is approximately 31,400 SF. The existing building is approximately 39,100 SF. The proposed expansion is in line with the intent of the eastern lot and the current zoning within the Village.

The proposed site work includes expanding the parking areas along the west and north sides of the proposed building footprint. Stormwater facilities would also be added along the south side of the proposed building area, as well as south of the existing building. Additional loading areas (both at grade and below grade) are also being added to the west building elevations.

The proposed building will be constructed of load-bearing precast concrete wall panels with punched windows at the floor line and vertical clerestory openings above for daylighting. The roof structure is comprised of structural steel joists and girders sloped to internal roof drains. The building is set up for future flexibility with (2) potential entrances that are covered with a cantilevered translucent glazing system. The current use of the building will be for L'Bri business expansion of warehousing and distribution of goods and will have a small office component for executive use.

Village of Mukwonago
440 River Crest Ct
Mukwonago, WI 53149
Phone: (262) 363-6420
Fax: (262) 363-6425
www.villageofmukwonago.com

VILLAGE OF MUKWONAGO
SITE PLAN, ARCHITECTURAL, AND PLANNED UNIT DEVELOPMENT (PUD) APPLICATION
Application Fee: Below

Date Submitted: September 3, 2024

FEES

(Please check one)

- ☐ Minor Site Plan (Buildings less than 600 sq. ft.): $135.00 plus $.02 per sq. ft.
- ☒ Site Plan and/or Architectural Review: $250.00 plus $.02 per sq. ft. (.02 x 31,400 = $628)
- ☐ Conceptual Site Plan and/or Architectural Review: $200.00 plus $.02 per sq. ft.
- ☐ Planned Unit Development (PUD) Review: $185.00 plus $25.00/unit
- ☐ Resubmittal of or Amendment to Site Plan and/or Architectural Review: $200.00

CONTACTS

Zoning and Planning Department
Contact:
Phone: (262) 363-6420 ex 2111
Fax: (262) 363-6425
Email: planner@villageofmukwonago.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Plan Commission and Village Board of the Village of Mukwonago. The application packet must be filed with the Village Clerk **at least 30 days prior to the meeting** of the Planning Commission at which action is desired. The Plan Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed below must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100 Article IX. Section 100-601(f) and other pertinent sections of Village ordinances, and, as necessary, to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Plan Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to:	Village Planner ATTN: Site Plan/Architectural Plan/Planned Unit Development 440 River Crest Ct Mukwonago, WI 53149
Deliver to:	Village Clerk's Office 440 River Crest Ct
Email to:	planner@villageofmukwonago.com

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: Brian Kaminski
Company: LiBi Pure n' Natural
Address: 909 Perkins Drive City: Mukwonago State: WI Zip: 53149
Daytime Phone: 262-363-9674 Fax:
E-Mail: brian@libi.com

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name:
Company:
Address: City: State: Zip:
Daytime Phone: Fax:
E-Mail:

ARCHITECT

Name: Jay Knetter
Company: JA Knetter Architects, Inc.
Address: N16 W33217 Stone Ridge Dr., Ste 300 City: Waukesha State: WI Zip: 53188
Daytime Phone: 262.513-9800 Fax:
E-Mail: jayK@jaknetter.com

PROFESSIONAL ENGINEER

Name: Jason Heinonen
Company: Endpoint Solutions
Address: 6871 South Lovers Lane City: Franklin State: WI Zip: 53132
Daytime Phone: 414 858-1920 Fax: 414-427-1259
E-Mail: jason@endpointcorporation.com

REGISTERED SURVEYOR

Name: Chris Kunkel
Company: Endpoint Solutions
Address: 6871 South Lovers Lane City: Franklin State: WI Zip: 53132
Daytime Phone: 414 427-1200 Fax: 414 427-1259
E-Mail: jason@endpointcorporation.com

CONTRACTOR

Name: Jay Campbell
Company: Campbell Construction
Address: 461 River Crest Court City: Mukwonago State: WI Zip: 53149
Daytime Phone: 262 436-4760 Fax:
E-Mail: jay@campbellconstructionbbg.com

PROPERTY INFORMATION

Property Owner (s) *(if different from applicant)*: _____

Address: _____ **City:** _____ **State:** _____ **Zip:** _____

Daytime Phone: _____ **Fax:** _____

E-Mail: _____

Present Zoning: M4 **Tax Key No(s).:** 1969 996 005 / 1969 996 006

Location/Address: 909 Perkins Drive

Present Use: industrial **Intended Use:** industrial

PROCEDURAL CHECKLIST FOR SITE PLAN/ARCHITECTURAL PLAN/PUD REVIEW AND APPROVAL

Submittals for review must include and be accompanied by the following:

Application:

- ☐ Completed application form including the procedural checklist.
- ☐ Application fee: See page 1.
- ☐ Agreement for Reimbursable Services (separate application).

Other Documents:

- ☐ Five(5) complete sets of Application and materials, in addition to the original, for Village of Mukwonago review.
- ☐ Project Summary: Please attach a statement detailing the reasons and background for this request including: details of proposal, services provided, wares sold, plans and hours of operation, number of employees, frequency of customer visits, frequency of deliveries to site, description of any interior/exterior modifications or additions to be made to property, any outside storage (dumpsters, trucks, materials…), number of parking stalls, screening/buffer type, any other information available. ***PLEASE EXPLAIN IN DETAIL.***
- ☐ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to planner@villageofmukwonago.com.
- ☐ Any additional information as determined by Village staff.

- **Upon receipt of a complete submittal, staff review will be conducted within ten business days.**
- **All Site Plan, Architectural, and Planned Unit Development review requests require Plan Commission review and Village Board approval.**

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signature[s] below. If more than one, all of the owners of the property must sign this Application).

Brian Kamnski

Signature - Property Owner

Brian Kamnski

Signature - Applicant

Brian Kaminski president

Name & Title (PRINT)

Brian Kamnski president

Name & Title (PRINT)

8-27-24

Date

8-27-24

Date

Signature - Property Owner

Signature – Applicant's Representative

Name & Title (PRINT)

Name & Title (PRINT)

Date

Date

FOR OFFICE USE ONLY	
Date Paid	**Receipt #**
Plan Commission Date(s)	**Village Board Date(s)**
Escrow Required? ☐ Yes ☐ No	**Escrow Amount**
Plan Commission Disposition	
Village Board Disposition	

VILLAGE OF MUKWONAGO
PLAN COMMISSION SUBMITTIAL FOR:
L'BRI PURE N' NATURAL

EAST BUILDING DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

JAK architecture + interior design
JAKnetter Architects
N16 W23217 STONE RIDGE DRIVE, SUITE 300
WAUKESHA, WI 53188 | www.jaknetter.com
office 262 513 9800 | fax 262 513 9815

PROJECT INFORMATION:

L'BRI PURE N' NATURAL
PROPOSED DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

VILLAGE OF MUKWONAGO
PLAN COMMISSION

REVISIONS

#	DATE	DESCRIPTION

ISSUANCE:

VILLAGE OF MUKWONAGO PLAN COMMISSION SUBMITTAL	3 SEPTEMBER 2024

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

COVER

TS100

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ABBREVIATIONS

A
A/C air condition
A/E Architect/Engineer
ACT acoustical ceiling tile
ADDL additional
ADD addendum
AFC above finished counter
AFF above finished floor
AFG above finished grade
AFS above finished slab
ALT alternate
ALUM aluminum
APPD approved
APT apartment
AP acoustic panel
ASC above suspended ceiling

B
BB baseboard
BB bulletin board
BLDG building
BL borrowed light
BLW below
BPL base plate
BO bottom of
BOS bottom of steel

C
CB catch basin
CB construction bulletin
CF/CI contractor furnished, contractor installed
CF/OI contractor furnished, owner installed
CF/VI contractor furnished, vendor installed
CG corner guard
CH BD chalkboard
CIP cast-in-place
CJ control joint
CNJ construction joint

C (continued)
CL centerline
CLG ceiling
CLR clear
CM construction management
CMU concrete masonry unit
CO cleanout
COL column
CONC concrete
CORR corridor
CONT continuous
CPT carpet
CSWK casework
CT ceramic tile
CTB ceramic tile base

D
DEMO demolition
DEPT department
DF drinking fountain
DFS door and frame schedule
DIA diameter
DP decorative panel
DR door
DR FR door frame
DTL detail
DS downspout
DW dishwasher
DWG drawing

E
E east
EIFS exterior insulation & finish system
EL elevation
EJ expansion joint
ELEC electric, electrical
ELEV elevator
EPS expanded polystyrene board
EQ equal
EW eyewash
EXIST existing
EXP expand, expansion
EXT exterior

F
F filler
FA fire alarm
FA fluid applied
FAB fabric
FC file cabinet
FD floor drain
FE back mtd fire extinguisher
FEC fire extinguisher cabinet
FHC fire hose cabinet
FLR floor
FM factory mutual
FO finished opening
FP fire protection
FPL fireplace
FT feet, foot
FTG footing

G
GA gauge
GALV galvanized
GB grab bar
GC general contractor
GL glass
GLU LAM glue laminated wood
GR grade, grading
GT grout
GYP BD gypsum board

H
HB hose bibb
HC hollow core
HCP handicapped
HM hollow metal
HORIZ horizontal
HSKP housekeeping
HGT height
HVAC heating,ventilating & air conditioning
HW hot water
HWY highway

I
ID inside diameter
INSUL insulation
INT interior

J
JA janitor sink

L
LAM laminate
LAV lavatory
LL live load
LVT luxury vinyl tile

M
MAX maximum
MC modular carpet tile
MECH mechanical
MFR manufacturer
MICRO microwave oven
MIN minimum
MIN minute
MISC miscellaneous
MO masonry opening
MS mop sink
MTD mounted
MTL metal

N
N north
NA not applicable
NIC not in contract
NO number
NM nominal
NTS not to scale

O
OC on center
OD outside diameter
OF/CI owner furnished, contractor installed
OF/OI owner furnished, owner installed
OF/VI owner furnished, vendor installed
OH DR overhead (coiling) door
OPH opposite hand
OPNG opening

P
PLYWD plywood
PNL panel
PREFAB prefabricated
PREFIN prefinished

P (continued)
PSI pounds per square inch
PT paint, painted
PTN partition

Q
QT quarry tile
QTB quarry tile base

R
RB rubber base
RCP reflected ceiling plan
RC roof conductor
RD roof drain
REBAR reinforcing steel bars
REC recess
REF reference
REF refrigerator
RF resilient flooring
REV revision
RFS room finish schedule
RO rough opening

S
S south
SAN sanitary
SC sealed concrete
SC solid core
SF square foot
SIM similar
SP spandrel
SS solid surface
SST stainless steel
ST stain
ST stair
STN stone
STNB stone base
STRUCT structure

T
T&M time & materials
TEMP temperature
TER terrazzo
TERB terrazzo base
TFF top of finish floor

T (continued)
TKBD tackboard
TO top of
TOB top of beam
TOC top of concrete
TOJ top of joist
TOPO topography
TOS top of slab
TOS top of steel
TP toilet partition
TV television
TYP typical

U
UNO unless noted otherwise

V
VCT vinyl composition tile
VEND vending machine
VERT vertical
VF/CI vendor furnished, contractor installed
VF/OI vendor furnished, owner installed
VF/VI vendor furnished, vendor installed
VNR veneer
VIF verify in field
VWC vinyl wall covering

W
W west
W/ with
W/O without
WC water closet
WC wall covering
WD wood
WDB wood base
WDV wood veneer
WH water heater
WM walk-off mat
WP wall protection
WP workpoint
WT window treatment

X
XPS extruded polystyrene board (insulated)

PROJECT TEAM

OWNER
L'BRI PURE N' NATURAL

909 PERKINS DRIVE
MUKWONAGO, WI 53149
PHONE: (800) 742-8828

PROJECT CONTACT: BRIAN KAMINSKI
DIRECT PHONE: (262) 363-9674
EMAIL ADDRESS: brian@lbri.com

GENERAL CONTRACTOR
CAMPBELL CONSTRUCTION JC INC.

461 RIVER CREST COURT
MUKWONAGO, WI 53149
PHONE: (262) 436-4760

PROJECT CONTACT: JAY CAMPBELL
DIRECT PHONE: (262) 436-4760 x201
EMAIL ADDRESS: jay@campbellconstructionbbg.com

CIVIL ENGINEERING
ENDPOINT SOLUTIONS CORP.

3871 SOUTH LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 858-1920

PROJECT CONTACT: JASON HEINONEN, P.E.
DIRECT PHONE: (414) 405-5779
EMAIL ADDRESS: jason@endpointcorporation.com

LANDSCAPE DESIGN
INSITE LANDSCAPE DESIGN

11525 W. NORTH AVENUE, SUITE 1B
WAUWATOSA, WI 53226
PHONE: (414) 476-1204

PROJECT CONTACT: MICHAEL DAVIS
DIRECT PHONE: (414) 476-1204
EMAIL ADDRESS: mdavis@insitedesigninc.com

ARCHITECTURAL
JAKnetter ARCHITECTS

N16 W23217 STONE RIDGE DRIVE, SUITE 300
WAUKESHA, WI 53218
PHONE: (262) 513-9800

PROJECT CONTACT: JAY KNETTER, AIA
DIRECT PHONE: (262) 278-4383
EMAIL ADDRESS: jayk@jaknetter.com

SITE PHOTOMETRICS
MLAZGAR ASSOCIATES

16350 WEST GLENDALE DRIVE
NEW BERLIN, WI 53151
PHONE: (414) 943-1915

PROJECT CONTACT: ELLICIA PLUEMER
DIRECT PHONE: (608) 577-8978
EMAIL ADDRESS: ellicia.pluemer@mlazgar.com

SHEET INDEX

SHEET INDEX		
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	TS101	INDEX
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	C3	PROPOSED SITE PLAN
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	C5	PROPOSED UTILITY PLAN
	C6	EROSION CONTROL NOTES & DETAILS
	C7	GENERAL CONSTRUCTION NOTES
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	LSP1.1	LANDSCAPE PLANTINGS
	LSP1.2	PLANTING DETAILS
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	AS100	ARCHITECTURAL SITE PLAN
06 ARCHITECTURAL		
	A100	GROUND LEVEL FLOOR PLAN
	A109	ROOF PLAN
	A200	BUILDING ELEVATIONS
	A240	PERSPECTIVE VIEWS
	A241	PERSPECTIVE VIEWS
	A242	PERSPECTIVE VIEWS
	A250	RENDERING
	A251	RENDERING
	A252	RENDERING
	A253	RENDERING
	A310	WALL SECTIONS
	A311	WALL SECTIONS
07 ELECTRICAL SITE		
	ES100	PHOTOMETRIC SITE PLAN
	ES200	LIGHT FIXTURE SPEC SHEETS

PROJECT DATA

PROJECT DATA	
OWNER	
	L'BRI PURE N' NATURAL
LOCATION	
MUNICIPALITY:	VILLAGE OF MUKWONAGO
COUNTY:	WAUKESHA
STATE:	WI
APPLICABLE BUILDING CODES	
BUILDING CODE:	2015 INTERNATIONAL EXISTING BUILDING CODE WITH WISCONSIN AMENDMENTS SPS 366
ACCESSIBILITY CODE:	2015 INTERNATIONAL BUILDING CODE WITH WISCONSIN AMENDMENTS SPS 362 / 2009 ICC/ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
MECHANICAL CODE:	2015 INTERNATIONAL MECHANICAL CODE WITH WISCONSIN AMENDMENTS SPS 364
PLUMBING CODE:	2015 WISCONSIN PLUMBING CODE SPS 381-387
ELECTRICAL CODE:	2017 NFPA 70 NATIONAL ELECTRICAL CODE WITH WISCONSIN AMENDMENTS SPS 316
ENERGY CODE:	2015 IECC INTERNATIONAL ENERGY CONSERVATION CODE WITH WISCONSIN AMENDMENTS SPS 363
FIRE CODE:	2015 INTERNATIONAL FIRE CODE ADOPTED PER MUKWONAGO CODE OF ORDINANCES
CONSTRUCTION CLASSIFICATION	
	IIB
	NFPA 13
OCCUPANCY GROUP	
	(B) BUSINESS & (S-2) LOW-HAZARD STORAGE
PROJECT TYPE	
	NEW CONSTRUCTION
NUMBER OF STORIES	
	1 (22 FT CLEAR)
BLDG GROSS AREA (SQ FT)	
	31,375 GSF
FIRE PROTECTION	
FIRE ALARM	COMPLETE
FIRE SUPRESSION:	COMPLETE
MONITORING TYPE	REMOTE SUPERVISION
NFPA STANDARD USED	13

BUILDING DESCRIPTION AND INFORMATION	
1.	THIS 31,375 GSF BUILDING HAS BEEN DESIGNED WITH THE INTENT OF SUPPORTING B AND S-2 OCCUPANCIES FOR L'BRI PURE N' NATURAL.
2.	ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODES. MAINTAIN CODE REQUIRED FIRE RESISTANCE RATINGS AND ENCLOSURES.
3.	ALL EGRESS DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF KEY OR SPECIAL KNOWLEDGE.
4.	THIS BUILDING IS COMPLETELY SPRINKLERED.
5.	ALL CONTRACTORS AND/OR TRADES TO REFER TO ALL SHEETS OF THE SET FOR INFORMATION TO COMPLETE THEIR WORK.
6.	ALL CONTRACTORS AND/OR TRADES MUST COORDINATE THEIR WORK AND LOCATION WITH OTHER CONTRACTORS AND/OR TRADES.
7.	ANY DISCREPENCIES OR UNUSUAL EXISTING CONDITIONS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF JAK ARCHITECTS FOR FURTHER DIRECTION. DO NOT SCALE DRAWINGS.
8.	THIS BUILDING WILL HAVE EXIT LIGHT SIGNAGE, EMERGENCY LIGHTING, SMOKE DETECTORS, FIRE ALARM, STROBES AND FIRE EXTINGUISHERS AS REQUIRED BY CODE.
9.	THIS PROJECT WILL HAVE DESIGN/BUILD MEP-FP DESIGN. EACH RESPECTIVE DESIGN/BUILD MEP-FP SUBCONTRACTOR WILL BE REQUIRED TO PROVIDE FINAL DESIGN DOCUMENTS FOR STATE REVIEW AND APPROVAL AND MEET ALL APPLICABLE CODES, AS THEY WILL BE CONSIDERED DESIGNER OF RECORD.

VICINITY MAP

JAK architecture + interior design
JAKnetter Architects
N16 W23217 STONE RIDGE DRIVE, SUITE 300
WAUKESHA, WI 53188 | www.jaknetter.com
office 262 513 9800 | fax 262 513 9815

PROJECT INFORMATION:

L'BRI PURE N' NATURAL
PROPOSED
DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

VILLAGE OF
MUKWONAGO PLAN
COMMISSION

REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

INDEX

TS101

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ISSUED FOR MUNICIPAL REVIEW

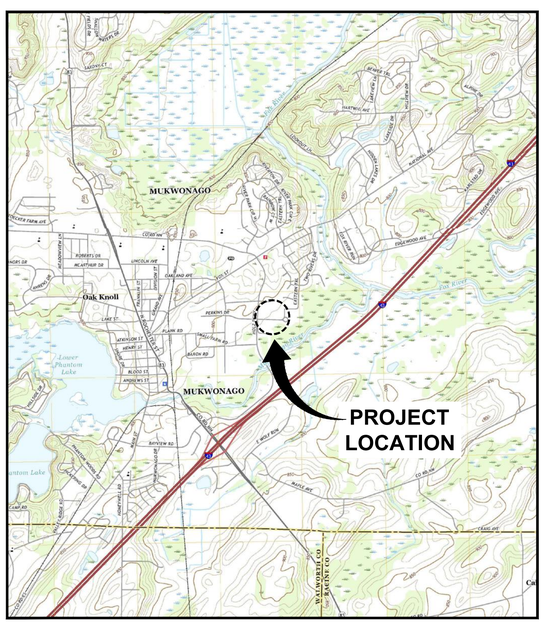
PROPOSED SITE IMPROVEMENTS

L'BRI PUR N' NATURAL
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

CALL OR CLICK 3 WORKING DAYS BEFORE YOU DIG

Help Us... Help You... Protect Your Facilities!

CALL 811 BEFORE YOU DIG — 811 — SAFE DIGGING PARTNER



LOCATION MAP
0 3000' 6000'
N

SITE MAP
0 1000' 2000'
N

DATE ISSUED
SEPTEMBER 3, 2024

Endpoint Solutions

CONTACTS

OWNER:
L'BRI PUR N' NATURAL
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN
CONTACT: BRIAN KAMINSKI
PHONE: 262-363-9674
EMAIL:BRIAN@LBRI.COM

ENGINEER:
ENDPOINT SOLUTIONS CORP.
6871 S. LOVERS LANE
FRANKLIN, WI 53132
CONTACT: JASON HEINONEN, P.E.
PHONE: 414-858-1920
EMAIL: JASON@ENDPOINTCORPORATION.COM

DRAWING SHEET INDEX

CS	COVER SHEET
C1	PRE-CONSTRUCTION CONDITIONS
C2	DEMOLITION PLAN
C3	PROPOSED SITE PLAN
C4	PROPOSED GRADING AND EROSION CONTROL PLAN
C5	PROPOSED UTILITY PLAN
C6	EROSION CONTROL DETAILS
C7	GENERAL CONSTRUCTION NOTES
C8	CONSTRUCTION DETAILS
C9	CONSTRUCTION DETAILS

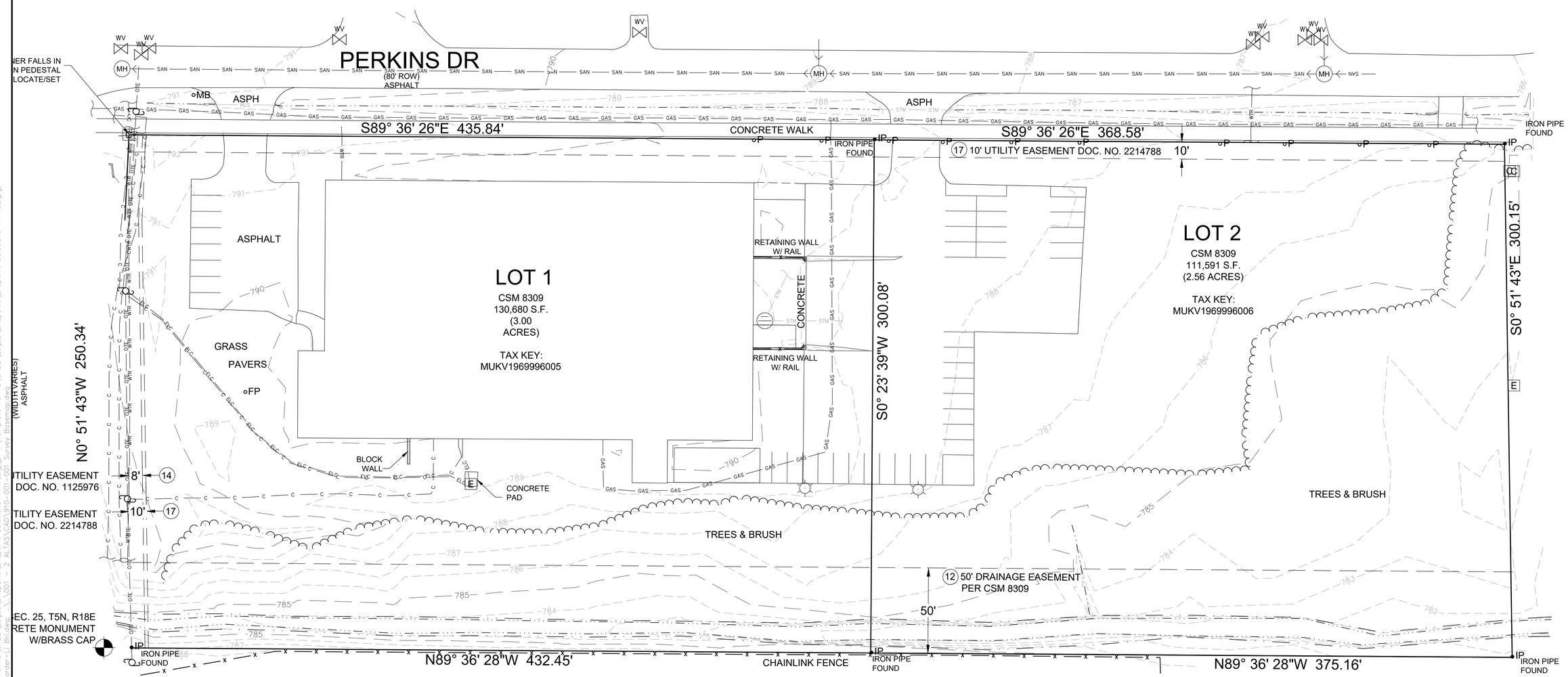
REVISION LOG

REVISION	ISSUE DATE	REVISED SHEETS	ISSUED FOR
0.0			
1.0			
2.0			
3.0			
4.0			

P:\L'BRI - 910\CAD\001-005 Civil Engineering_CS_910-001-005 Cover Sheet LBri.dwg

SOURCE: GOOGLE MAPS, USGS

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	



REV:	DATE:
6	
5	
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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PRE CONSTRUCTION CONDITIONS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	...	

PROJECT NO.
910-001-005

SHEET NO.
C1

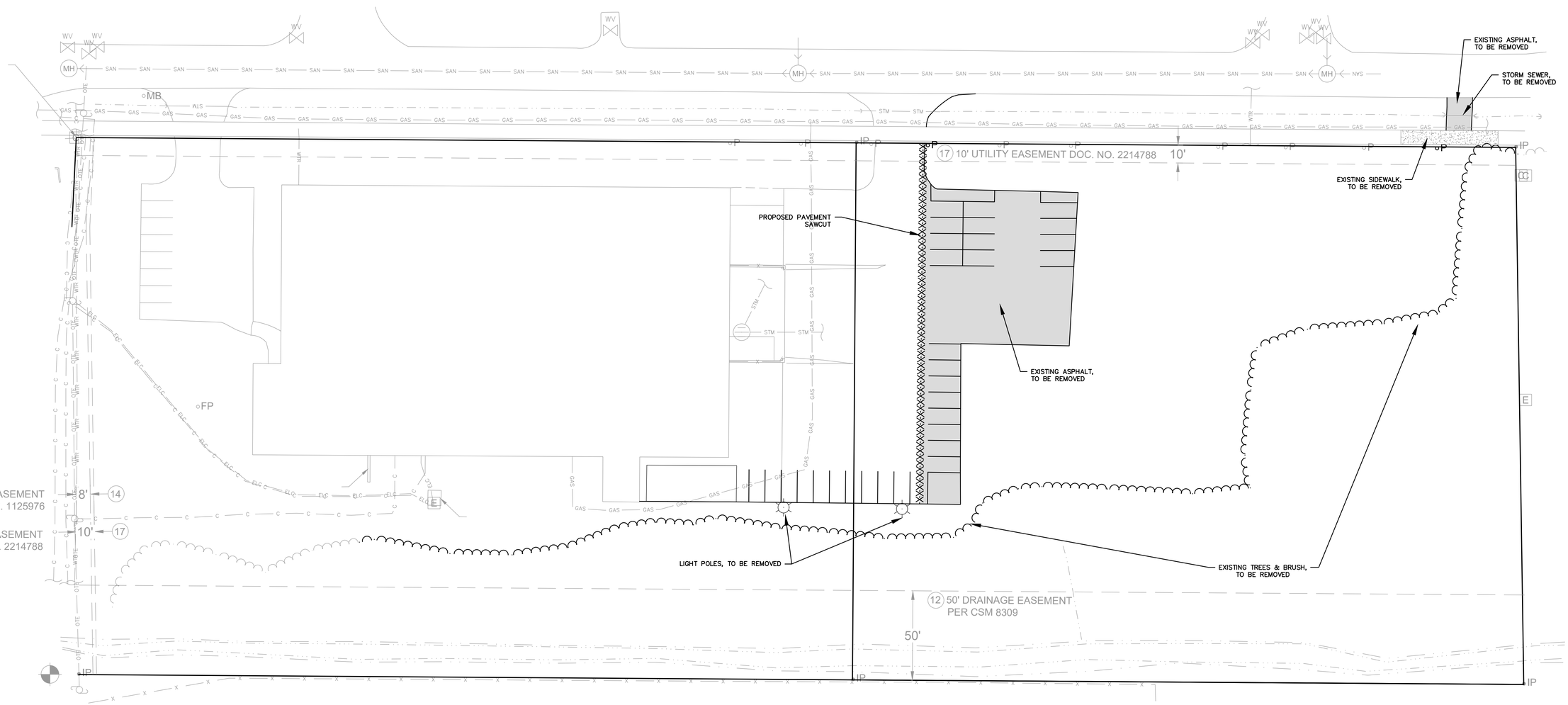
Sep 03, 2024 12:58pm PLOTTED BY: jheinonen SAVED BY: jheinonen
P:\L'BRI - 910\CAD\001-005 Civil Engineering\SHT C1_910-001-005 PRE CONSTRUCTION CONDITIONS.dwg Layout1
IMAGES: T:\Template Forms\CADD\Logos\Endpoint\Endpoint Solutions Hi-Res.jpg; T:\Template Forms\CADD\Logos\Endpoint\Endpoint Solutions Hi-Res.jpg;
XREFS: _Endpoint Border-Li Bri.dwg; _\001 - 2 ALTAS\CAD\910-001-001 Survey Basemap.dwg

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	

N

0 40 80

SCALE IN FEET



REV:	DATE:
6	
5	
4	
3	
2	
1	
0	

Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

DEMOLITION PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	___	

PROJECT NO.
910-001-005

SHEET NO.
C2

Sep 03, 2024 12:58pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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XREFS: \\Endpoint Border-LL Bri.dwg; \\001 - 2 ALTAS\CAD\910-001-001 Survey Basemap.dwg

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	

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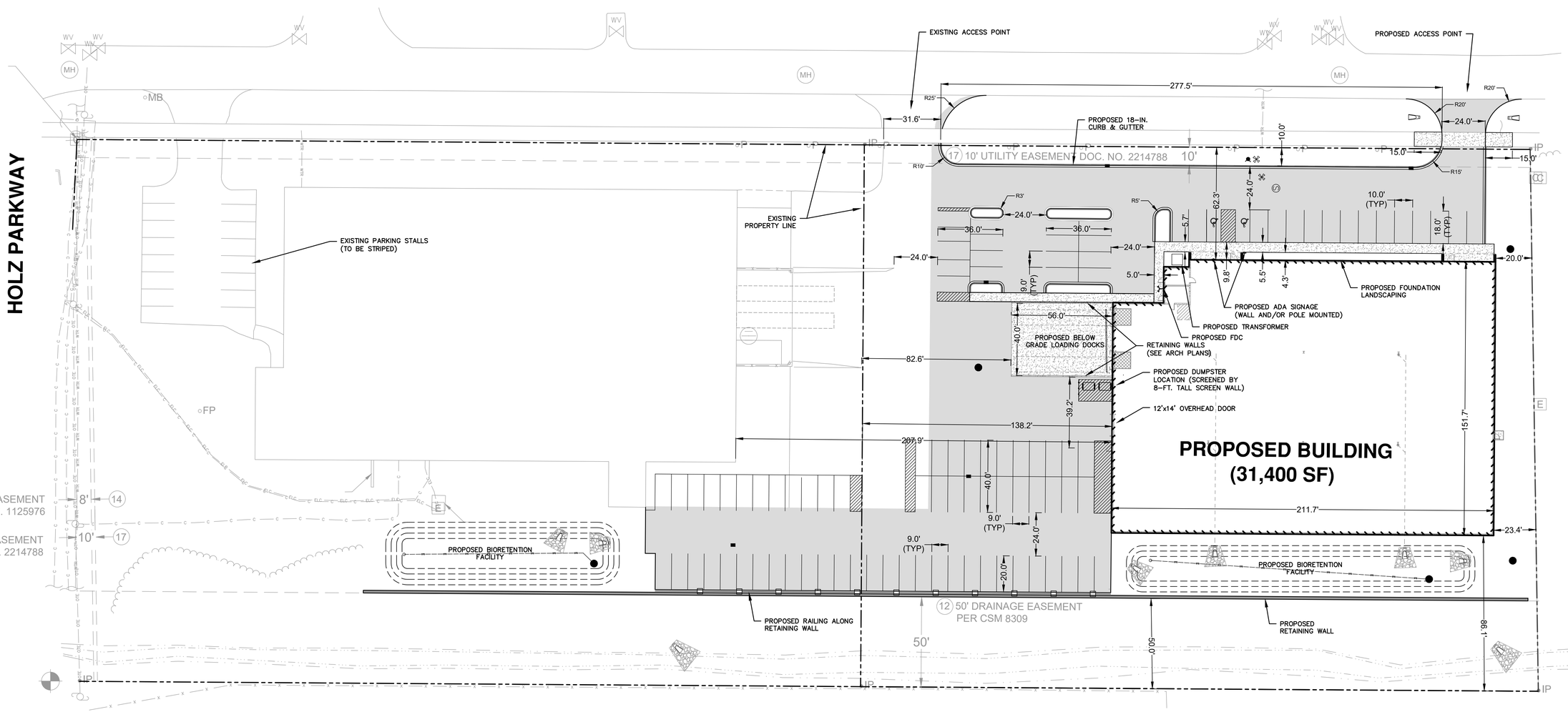
0 30 60

SCALE IN FEET

TOTAL PARKING = 112 STALLS



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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PROPOSED SITE PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE: 09/03/2024
CHECKED BY: JAH	
APPROVED BY: ___	

PROJECT NO.
910-001-005

SHEET NO.
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Sep 03, 2024 12:58pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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NOTE:
CONTRACTOR TO PROVIDE SUFFICIENT SIGNAGE, BARRICADES, ETC. TO VERIFY ALL CONSTRUCTION TRAFFIC USES THE MAIN ENTRANCE WITH PROPOSED TRACKING PAD

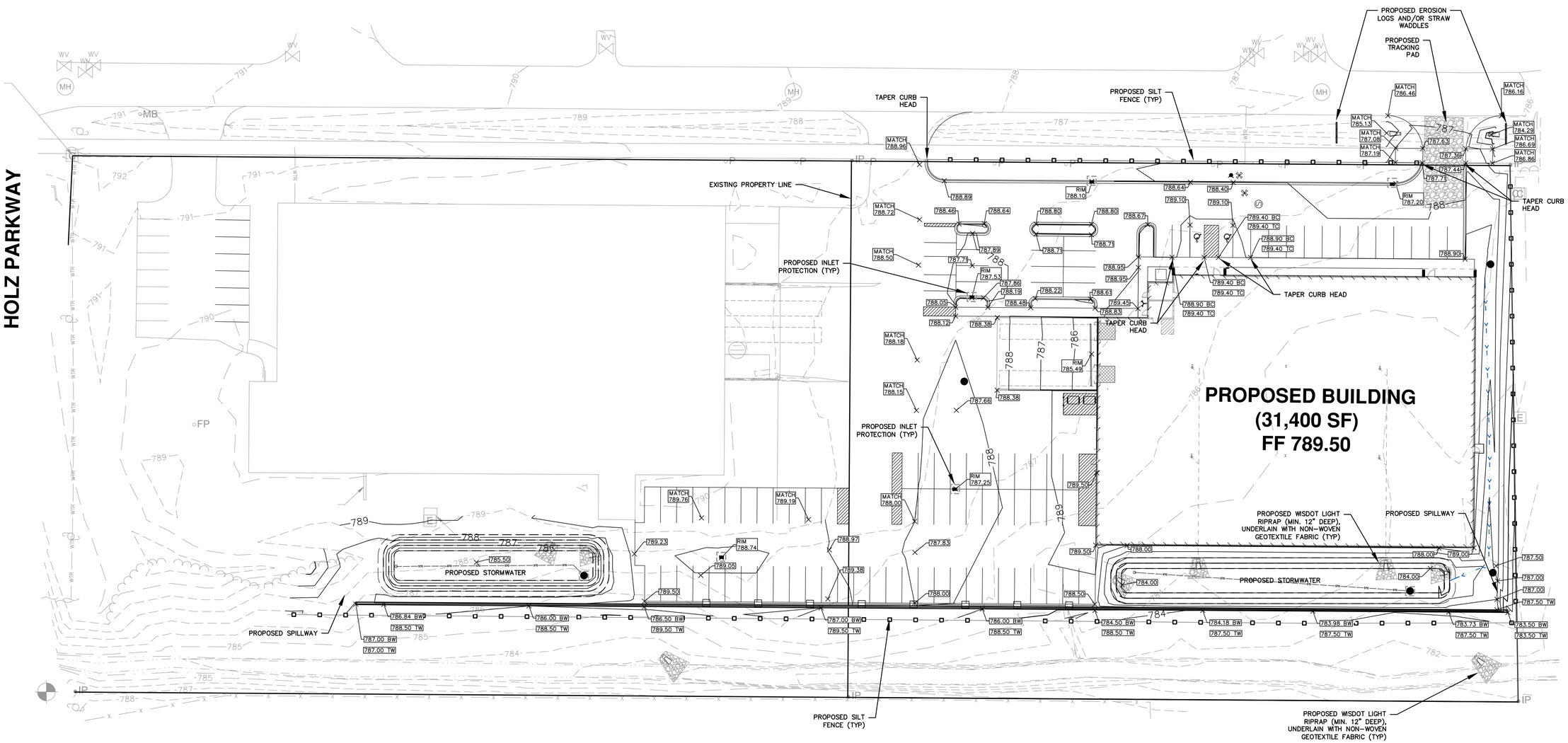
CONSTRUCTION SEQUENCE

1. INSTALL SILT FENCE AND EROSION CONTROL AS SHOWN ON PLAN. MAINTAIN AS NECESSARY DURING CONSTRUCTION. INSPECT FOLLOWING RAIN EVENTS.
2. INSTALL TRACKING PAD.
3. CLEAR AND GRUB SITE IN THE VICINITY OF THE PROPOSED BIORETENTION DEVICE. CONSTRUCT BIORETENTION AND COMPLETE LOCALIZED GRADING AS NEEDED.
4. CLEAR AND GRUB REMAINDER OF SITE AND STRIP TOPSOIL. TEMPORARILY STOCKPILE TOPSOIL ON SITE (EXCESS TO BE REMOVED FROM SITE ACCORDING TO GENERAL CONTRACTORS CONSTRUCTION PHASING PLAN).
5. GRADE SITE. CONSTRUCT IMPROVEMENTS.
6. STABILIZE DISTURBED GROUND WITH TEMPORARY SEED, FERTILIZER, AND MULCH.
7. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL BMPs WHEN DISTURBED AREAS ARE PERMANENTLY STABILIZED AND NO LONGER SUSCEPTIBLE TO EROSION.
8. FOLLOWING STABILIZATION, VERIFY SEDIMENT IS REMOVED FROM BIORETENTION DEVICE. RECONSTRUCT AS NECESSARY TO MEET DESIGN.

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	
PROPOSED MAJOR CONTOUR, (5' INTERVAL)	
PROPOSED MINOR CONTOUR, (1' INTERVAL)	
PROPOSED SPOT ELEVATION	
PROPOSED SPOT ELEVATION (MATCH EXISTING)	
PROPOSED SPOT ELEVATION (TOP OF CURB)	
PROPOSED SPOT ELEVATION (BOTTOM OF CURB)	

N

0 30 60
SCALE IN FEET



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PHONE: (414) 427-1200

L' BRI PURE N' NATURAL
PROPOSED GRADING AND EROSION CONTROL PLAN
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	---	

PROJECT NO.
910-001-005

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Sep 03, 2024 12:59pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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NOTE:
SANITARY AND WATER LATERALS TO BE INSTALLED ACCORDING TO VILLAGE SPECIFICATIONS.

STORM MANHOLE & INLET NOTES:

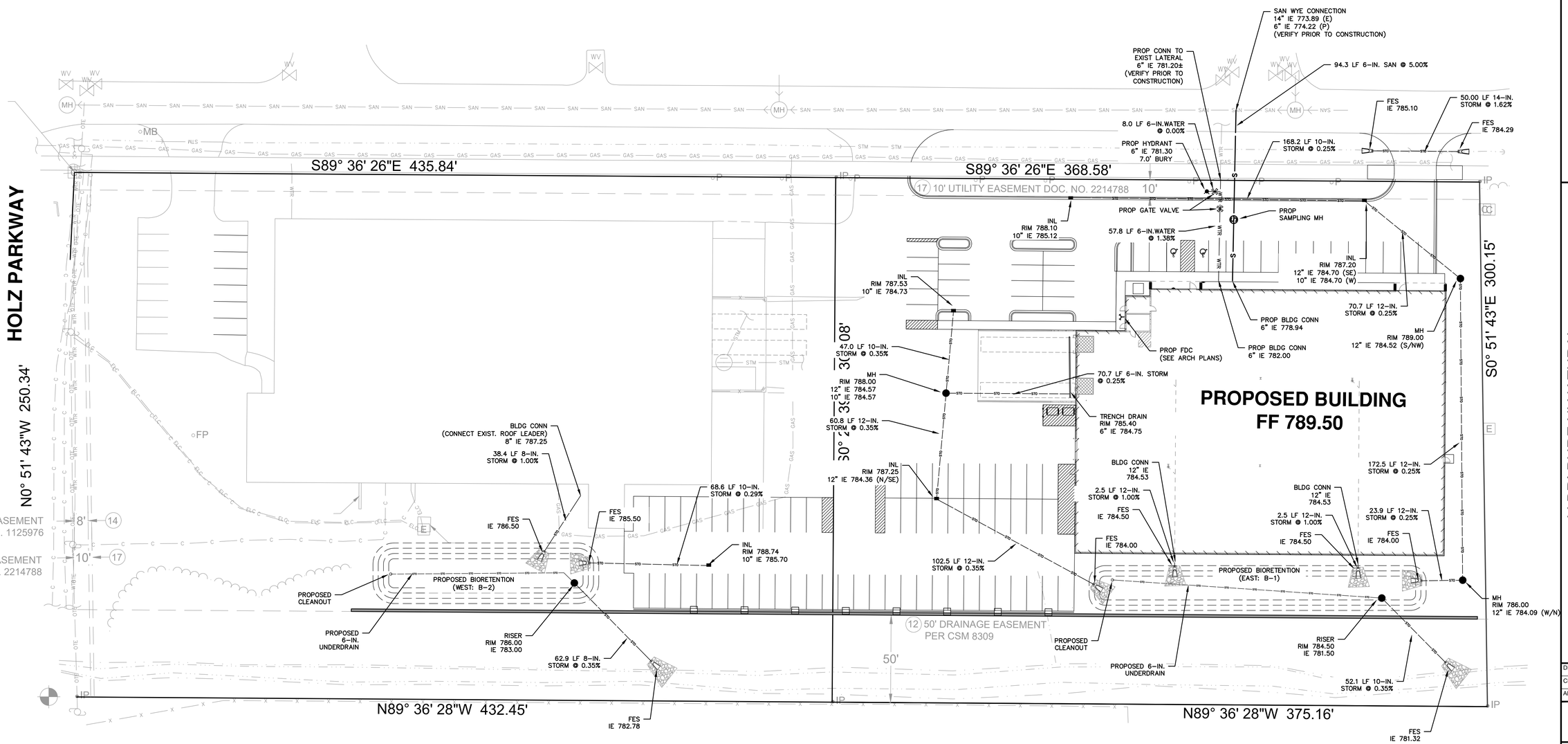
REFER TO FILE No. 25 (STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, EXCEPT:

A. USE CASTING AS INDICATED BELOW (UNLESS INDICATED OTHERWISE ON PLAN):
   1.) CB/INLET (CURB) – NEENAH R–3229–A W/ TYPE C GRATE
   2.) CB/INLET (NON–CURB) – NEENAH R–2501–G
   2.) CB/INLET (BIORETENTION OUTLET STRUCTURE) – NEENAH R–2561 BEEHIVE
B. USE 48" MINIMUM DIAMETER UNLESS INDICATED OTHERWISE ON PLAN
C. CONTRACTOR RESPONSIBLE FOR VERIFYING REQUIRED CASTING IS COMPATIBLE WITH STRUCTURE. IF NOT COMPATIBLE, CONTACT ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.

REFER TO FILE No. 12 (STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN) , EXCEPT:

A. USE CASTING AS INDICATED BELOW:
   ALL MANHOLES – NEENAH R–1642
B. USE 48" MINIMUM DIAMETER UNLESS INDICATED OTHERWISE ON PLAN
C. CONTRACTOR RESPONSIBLE FOR VERIFYING REQUIRED CASTING IS COMPATIBLE WITH STRUCTURE. IF NOT COMPATIBLE, CONTACT ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	



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FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PROPOSED UTILITY PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE:	
CHECKED BY: JAH	09/03/2024	
APPROVED BY: ...		

PROJECT NO.
910-001-005

SHEET NO.
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Sep 03, 2024 12:59pm PLOTTED BY: jheinonen SAVED BY: jheinonen Layout1
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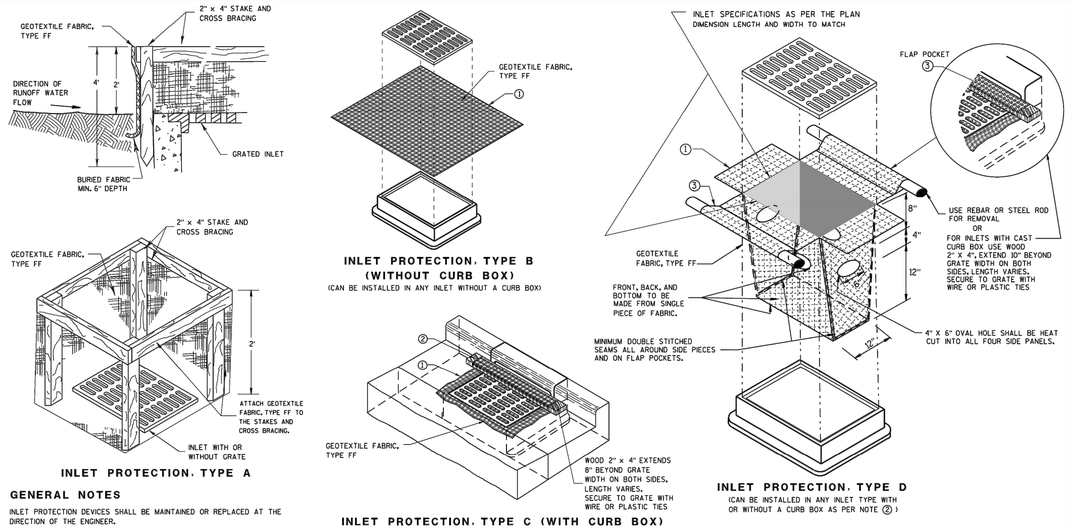
8E10: Inlet Protection Type A, B, C and D



GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

1. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
2. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
3. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

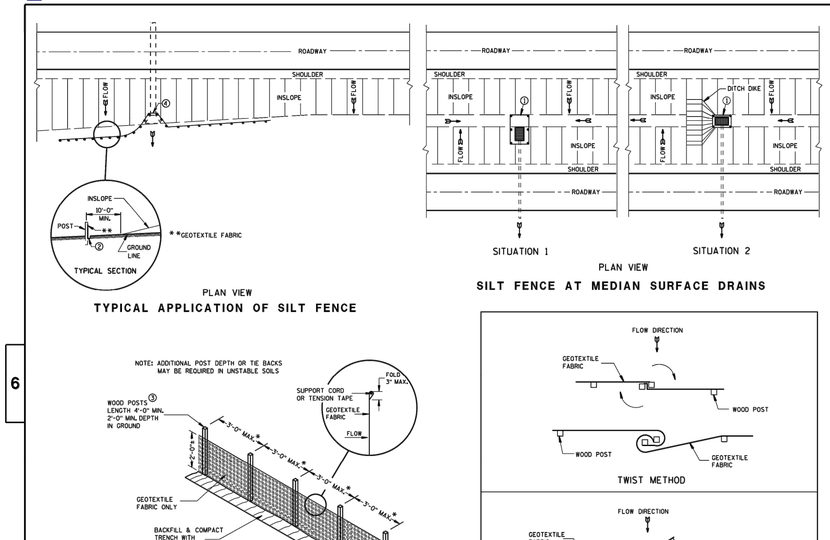
INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10-16-02 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 10-2

INLET PROTECTION

NOT TO SCALE

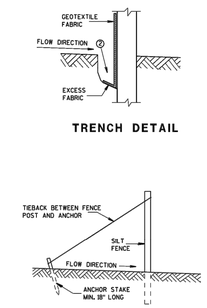
8E9: Silt Fence



GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL. IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



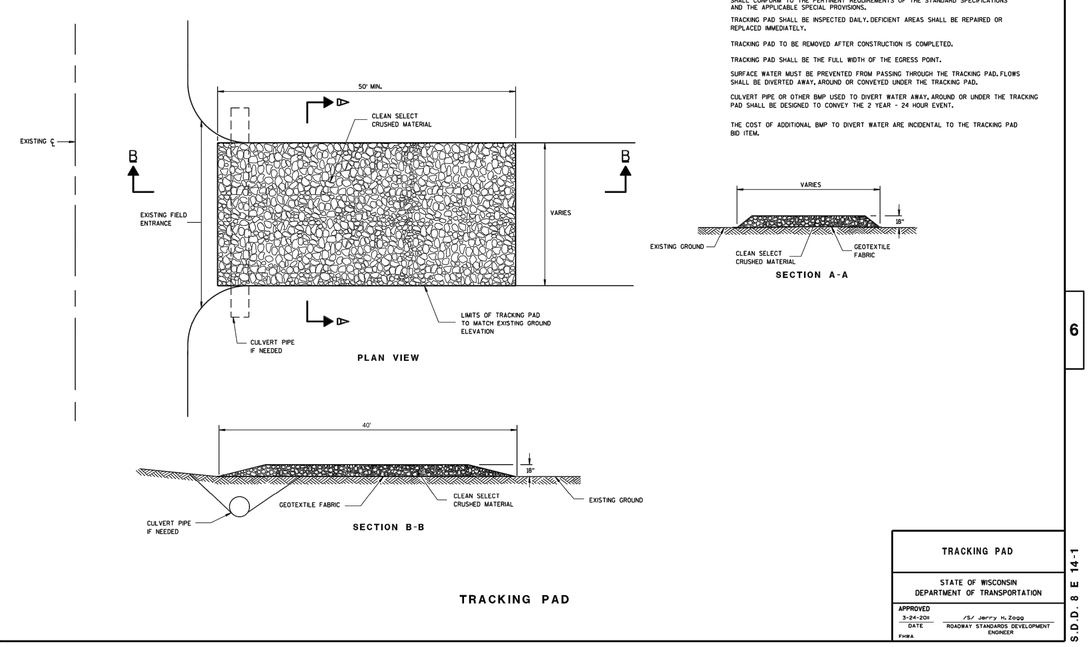
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 9-6

SILT FENCE

NOT TO SCALE

8E14: Tracking Pad



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3-24-201 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 14-1

TRACKING PAD

NOT TO SCALE

EROSION AND SEDIMENT CONTROL

1. CONSTRUCT AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) CHAPTERS NR 151 AND NR 216, WISCONSIN ADMINISTRATIVE CODE, AND APPROPRIATE WDNR TECHNICAL STANDARDS. EROSION AND SEDIMENT CONTROL PRODUCTS SHALL BE LISTED IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION PRODUCT ACCEPTABILITY LIST (WisDOT PAL). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF THESE STATE REQUIREMENTS, TECHNICAL STANDARDS, AND WisDOT PAL.
2. IMPLEMENT EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) PRIOR TO SOIL DISTURBING ACTIVITIES (E.G., CLEARING, GRUBBING, TOPSOIL STRIPING, EXCAVATION, MATERIAL STOCKPILING, ETC.). INSTALL EROSION CONTROL MEASURES AROUND STOCKPILE LOCATIONS.
3. MINIMIZE DISTURBED AREA BY PHASING OR SEQUENCING CONSTRUCTION AND PRESERVING EXISTING VEGETATION WHERE POSSIBLE.
4. DIVERT STORM WATER AWAY FROM DISTURBED OR EXPOSED AREAS WHEN POSSIBLE.
5. PROTECT ADJACENT PROPERTIES WITH SEDIMENT BALE BARRIERS OR SILT FENCE UNTIL CONSTRUCTION IS COMPLETE IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS 1055 OR 1056, RESPECTIVELY.
6. INSTALL A GRAVEL TRACKING PAD IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1057. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEPT AND/OR SCRAPED PERIODICALLY TO REMOVE SOIL, DIRT, AND/OR DUST. ADJACENT ROADS ARE TO CLEANED IMMEDIATELY IF ANY SEDIMENT TRANSFER AND TRACKING OCCURS.
6. PROTECT INLETS, CATCH BASINS, AND OTHER CONVEYANCE STRUCTURES WITH STRAW BALES, FILTER FABRIC, OR OTHER APPROPRIATE MEASURES IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1060. TYPE D INLET PROTECTION SHALL BE USED IN STORM STRUCTURES IN THE PUBLIC RIGHT-OF-WAY, WHENEVER POSSIBLE.
7. DURING DEWATERING ACTIVITIES, UTILIZE A COMPARTMENTED CONTAINER, SETTLING BASIN, FILTER, OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICE FOR TREATING SEDIMENT-LADEN WATER PRIOR TO DISCHARGE OFF-SITE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061.
8. INSPECT THE SITE REGULARLY AND PROPERLY MAINTAIN BMPS, ESPECIALLY AFTER RAINSTORMS. AT MINIMUM, INSPECTIONS OF CONSTRUCTION BMPS ARE REQUIRED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5 INCH OR MORE.
9. BMPS MUST BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION OR NOTIFICATION OF A PROBLEM.
10. KEEP THE CONSTRUCTION SITE CLEAN BY PUTTING TRASH IN TRASH CANS, KEEPING STORAGE BINS COVERED, AND PREVENTING OR REMOVING EXCESS SEDIMENT ON ROADS AND OTHER IMPERVIOUS SURFACES.
11. SITE RESTORATION AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF INACTIVITY.

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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

EROSION CONTROL NOTES & DETAILS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE: 09/03/2024
CHECKED BY: JAH	
APPROVED BY:	

PROJECT NO. 910-001-005

SHEET NO. C6

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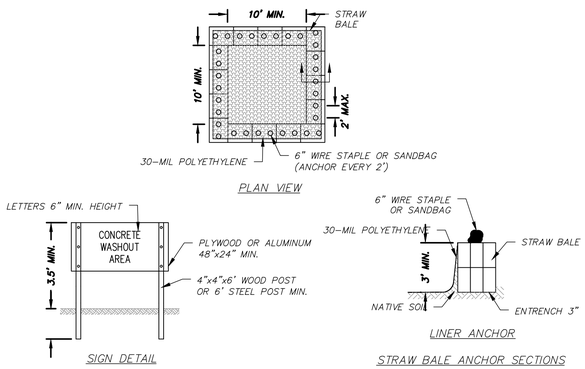
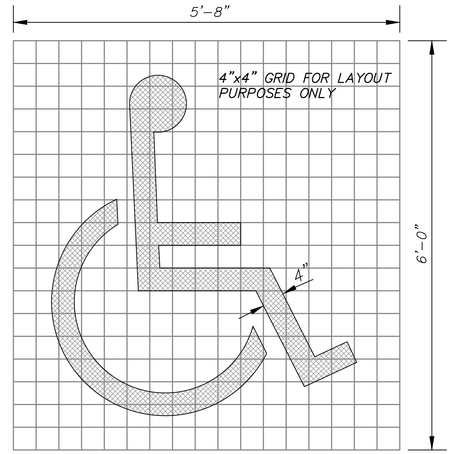


NOTES:
1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.
3. EACH STRAW BALE IS TO BE STAKED IN PLACE USING (2) 2"x2"x4' WOODEN STAKES.

TEMPORARY CONCRETE WASHOUT FACILITY - STRAW BALE

NOT TO SCALE



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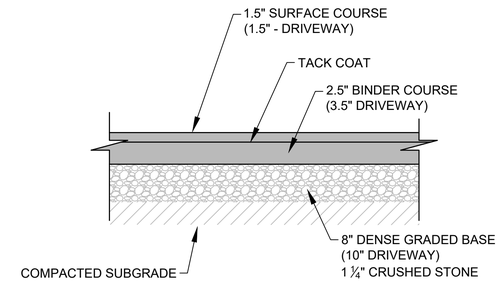
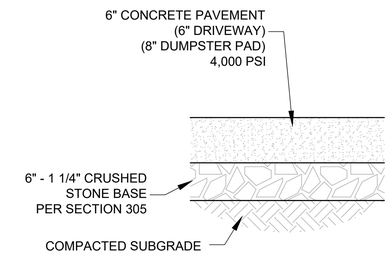


NOTES:

1. PAVEMENT TO BE INSTALLED PER GEOTECHNICAL REPORT OR OWNER RECOMMENDATIONS.

TYPICAL ASPHALT PAVEMENT

NOT TO SCALE



NOTES:

1. PAVEMENT TO BE INSTALLED PER GEOTECHNICAL REPORT OR OWNER RECOMMENDATIONS.

TYPICAL CONCRETE PAVEMENT

NOT TO SCALE

GENERAL GRADING NOTES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE D.O.T. STANDARD SPECIFICATIONS, LOCAL ORDINANCES AND SPECIFICATIONS, AND RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
2. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
3. GRADING SHALL CONSIST OF CLEARING AND GRUBBING EXISTING VEGETATION, STRIPPING TOPSOIL, REMOVAL OF EXISTING PAVEMENT OR FOUNDATIONS, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE AND ON-SITE EARTHWORK BALANCE, GRADING THE PROPOSED BUILDING PADS AND PAVEMENT AREAS, SCARIFYING AND FINAL COMPACTION OF THE PAVEMENT SUBGRADE, AND PLACEMENT OF TOPSOIL.
4. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION.
5. EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS PART OF THIS PROJECT. CONSTRUCTION ACTIVITIES MUST COMPLY WITH ALL PROVISIONS OF LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS THE SITE SPECIFIC SWPPP (IF APPLICABLE). ALL LAND DISTURBING ACTIVITIES MAY BE SUBJECT TO INSPECTION BY LOCAL AUTHORITIES AND THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
6. CONTRACTOR SHALL MINIMIZE CLEARING AND DISTURBANCE TO THE ENVIRONMENT TO THE EXTENT POSSIBLE. CONTRACTOR RESPONSIBLE FOR RESTORATION OF ALL DISTURBED AREAS.
7. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DISPOSED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE SITE THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE REMOVAL OF CONSTRUCTION WASTE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE SITE HAS STABILIZED.
9. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
10. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT
11. BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE SIZE, LOCATION AND ELEVATION OF ALL UTILITIES.
12. TEMPORARY EROSION CONTROL MATTING SHALL BE PLACED ON ALL SLOPES THAT ARE STEEPER THAT 4:1.
13. ALL PROPOSED CONTOURS REPRESENT FINAL FINISHED GRADE ELEVATIONS.

GENERAL NOTES

1. THE BIDDER WILL BE SOLELY RESPONSIBLE FOR QUANTITIES AND ESTIMATE OF WORK REQUIRED AND SHALL STATE SUCH QUANTITIES IN THEIR BID.
2. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC, FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT.
3. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. SOIL CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT IS AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT THEIR WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
6. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS.
7. CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES DURING CONSTRUCTION. ANY PROPERTY (PRIVATE OR PUBLIC) WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR. THE COST OF THE RESTORATION IS CONSIDERED INCIDENTAL, AND SHOULD BE INCLUDED IN THE BID PRICES.
8. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGER'S HOTLINE TO REQUEST FIELD STAKING OF EXISTING UTILITIES AND NOTIFY THE UTILITIES OF THE PROJECT COMPONENTS.
9. CONTRACTOR SHALL ENSURE ALL MUD AND DEBRIS IS NOT DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE AGENCY HAVING JURISDICTION ON THE ROADWAYS.
10. SUBMITTALS:
    A. SHOP DRAWINGS AND/OR MANUFACTURER'S PRODUCT DATA SUBMITTALS ARE REQUIRED ONLY IF THE PRODUCT OR METHOD OF CONSTRUCTION:
        a. IS DIFFERENT FROM THAT SPECIFIED OR
        b. IS PART OF THE WORK THAT WILL BE DEDICATED AS A PUBLIC UTILITY OR ROADWAY AT THE END OF THE PROJECT OR
        c. IF REQUIRED BY THE MUNICIPAL ENGINEER.
    B. FOR UTILITY OR ROAD WORK THAT WILL BE DEDICATED TO A MUNICIPALITY, CONTRACTOR MUST MAKE SUBMITTALS TO THE MUNICIPALITY AS WELL AS ENGINEER.

PRIVATE UTILITIES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO WISCONSIN ADMINISTRATIVE CODE, SECTION SPS 382-384, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. PROPOSED STORM SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
3. MATERIALS FOR PROPOSED STORM SEWER SHALL BE AS FOLLOWS:

STORM SEWER PIPE 30" OR LARGER SHALL BE EITHER:

A. REINFORCED CONCRETE, ASTM C-76, CLASS III OR GREATER, WITH ELASTOMERIC SEALS CONFORMING TO ASTM C-443.

B. HIGH DENSITY POLYETHYLENE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS, SUCH AS ADS N-12 WT. HDPE PIPE SHALL CONFORM TO ASTM F2648 AND F2306. JOINTS SHALL BE WATER TIGHT CONFORMING TO ASTM D3212 WITH ELASTOMERIC SEALS (GASKETS) CONFORMING TO ASTM F477.

STORM SEWER PIPE 24" OR LESS SHALL BE EITHER:

A. HIGH DENSITY POLYETHYLENE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS, SUCH AS ADS N-12 WT. HDPE PIPE SHALL CONFORM TO ASTM F2648 AND F2306. JOINTS SHALL BE WATER TIGHT CONFORMING TO ASTM D3212 WITH ELASTOMERIC SEALS (GASKETS) CONFORMING TO ASTM F477.

B. POLYVINYL CHLORIDE (PVC) PIPE, ASTM D-3034, SDR 35, WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D-3212.

C. REINFORCED CONCRETE, ASTM C-76, CLASS III OR GREATER, WITH ELASTOMERIC SEALS CONFORMING TO ASTM C-443.

TRENCH SECTION SHALL BE CLASS "C" FOR CONCRETE AND CLASS "B" FOR ALL OTHER MATERIALS.

4. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED. THE COST OF THIS GRANULAR MATERIAL AND ITS COMPACTION IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF THE PROPOSED UTILITY.
5. UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
7. TRACER WIRE SHALL BE INSTALLED ON ALL BURIED NON-METALLIC SANITARY SEWERS, PRIVATE SANITARY INTERCEPTOR MAIN SEWERS, STORM BUILDING SEWERS, AND PRIVATE STORM INTERCEPTOR MAIN SEWERS THAT DISCHARGE TO MUNICIPAL MAINS. TRACER WIRE SHALL ALSO BE INSTALLED ON ALL BURIED NON-METALLIC WATER SERVICES AND PRIVATE WATER MAINS CONNECTED TO MUNICIPAL SUPPLY SYSTEMS. TRACER WIRE SHALL BE IN ACCORDANCE WITH SPS 382.30(11)(h) AND SPS 382.36(7)(d)10.b.
8. MATERIALS FOR SANITARY SEWER SHALL BE AS FOLLOWS:

SANITARY SEWER PIPE SHALL BE PVC, ASTM D-3034, SDR-35 WITH RUBBER GASKETED JOINTS, CONFORMING TO ASTM D-3212.

TRENCH SECTION SHALL BE CLASS "B" BEDDING. CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. PREFABRICATED WYE CONNECTIONS ARE REQUIRED FOR SANITARY LATERALS

9. MATERIALS FOR WATER SERVICE SHALL BE AS FOLLOWS:

WATER SERVICE SHALL BE CLASS 55 DUCTILE IRON (DI), ASTM A-377, WITH ELASTOMERIC JOINTS (AWWA C-111), WITH A VALVE AT THE SUPPLY MAIN OR C900 PVC PRESSURE RATED FOR WATER.

TRENCH SECTION SHALL CONFORM TO SECTION 4.3.C, FILE NO. 38 OF THE STANDARD SPECIFICATIONS. SAND OR STONE CHIP BEDDING MATERIAL IS REQUIRED.

PAVING

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, AND THE LOCAL ORDINANCES AND SPECIFICATIONS, AND THE GEOTECHNICAL REPORT.
2. PAVING SHALL CONSIST OF FINE GRADING PAVEMENT AREAS, INSTALLATION OF CRUSHED STONE BASE, CONCRETE AND/OR BITUMINOUS PAVEMENT, PAVEMENT MARKING, AND CLEANUP. ALL MATERIALS SHALL BE PROVIDED BY THE CONTRACTOR.
3. AGGREGATES USED IN THE HMA SHALL BE IN ACCORDANCE WITH SUBSECTION 460.2.2.3 OF THE STANDARD SPECIFICATIONS.
4. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS: SECTION 415 FOR CONCRETE PAVEMENT AND SECTION 602 FOR CONCRETE SIDEWALKS.
5. RESTORATION OF PUBLIC SIDEWALK SHALL BE JOINT TO JOINT. RESTORATION OF W. LAYTON AVENUE PAVEMENT SHALL BE AT THE DISCRETION OF MILWAUKEE COUNTY. RESTORATION OF CURB AND GUTTER AND PAVEMENT IN S 68TH STREET SHALL BE JOINT TO JOINT OR FULL PANEL AT THE DISCRETION OF THE CITY OF GREENFIELD.
6. PAVEMENT MARKINGS SHALL BE PAINT IN ACCORDANCE WITH SECTION 646 OF THE STANDARD SPECIFICATIONS. THE FOLLOWING ITEMS SHALL BE PAINTED WITH COLORS NOTED BELOW:

PARKING STALLS: WHITE
PEDESTRIAN CROSSWALKS: WHITE
ADA SYMBOLS: BLUE OR PER LOCAL CODE
EXTERIOR SIDEWALK CURBED, LIGHTPOLE BASES, AND GUARD POSTS: YELLOW

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L' BRI PURE N' NATURAL

GENERAL CONSTRUCTION NOTES

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE: 09/03/2024
CHECKED BY: JAH	
APPROVED BY: ...	

PROJECT NO. 910-001-005

SHEET NO. C7

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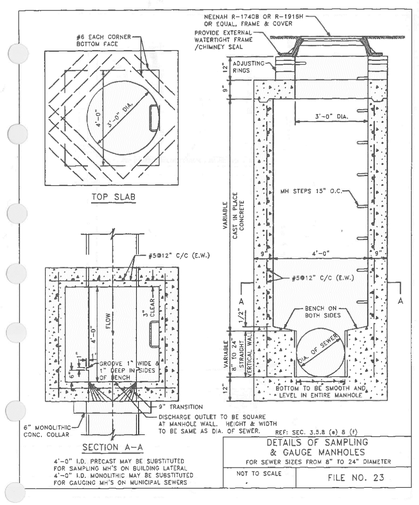

SANITARY SAMPLING MANHOLE

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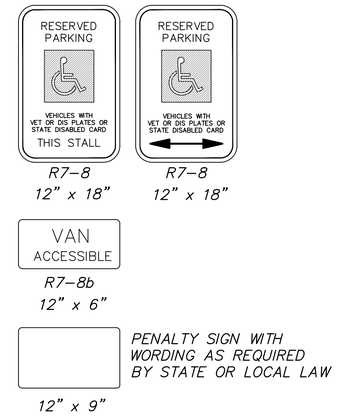

ACCESSIBLE PARKING SIGNS

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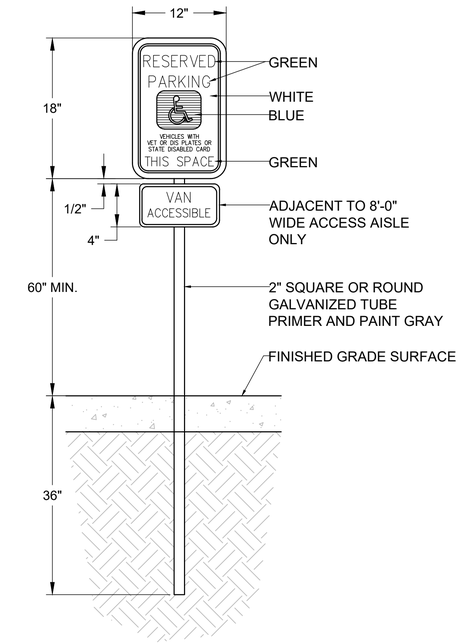

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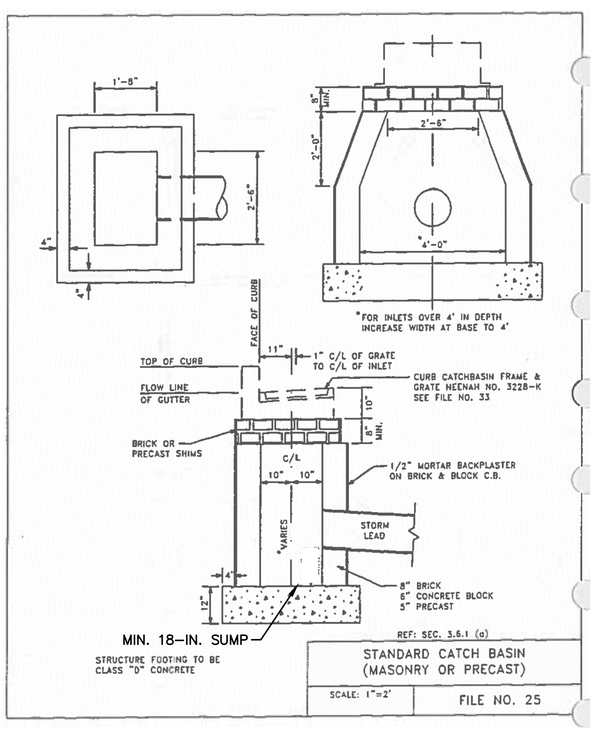

STANDARD CATCH BASIN DETAIL

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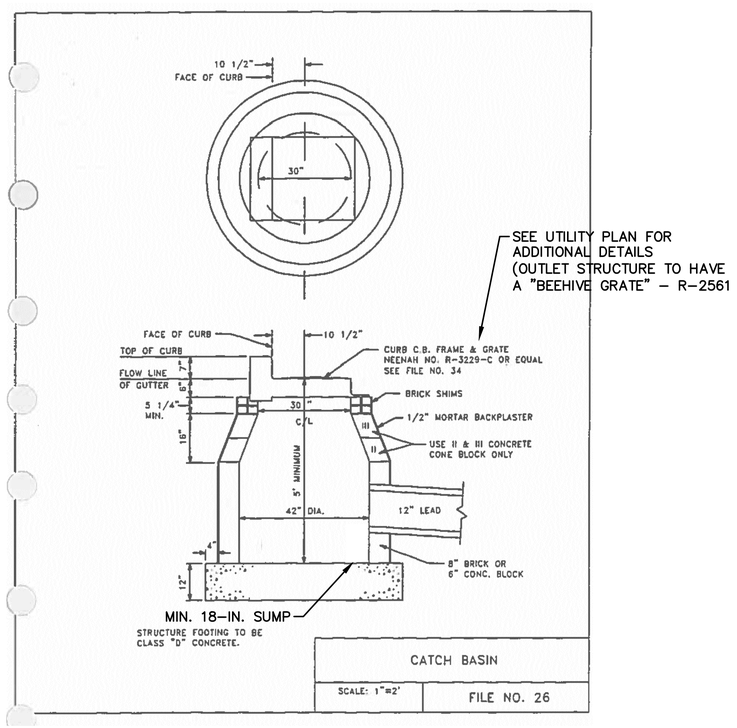

CATCH BASIN DETAIL

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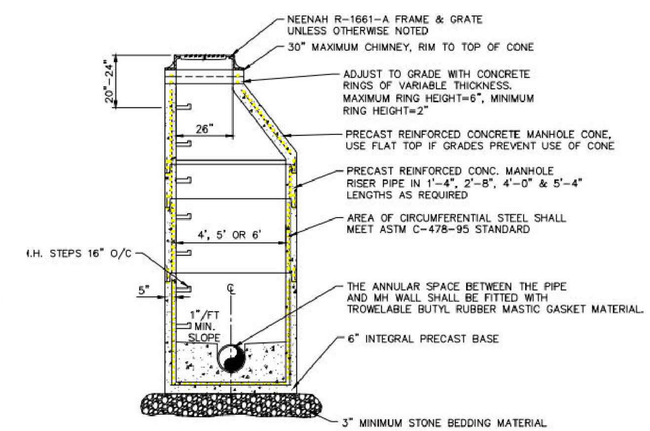

STORM MANHOLE NOTES:

1) PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.

2) CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

3) JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.

4) 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE AND BACKFILLED STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

5) SEE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION, FILE NO. 12 FOR PRECAST MANHOLE AND FILE NO. 13 FOR MANHOLE INVERTS, INCLUDING INVERTS OF LATERAL SEWERS THAT CONNECT DIRECTLY TO MANHOLES.

6) REPLACE CONE WITH FLAT TOP SECTION WHEN NECESSARY DUE TO LARGER DIAMETER OF STRUCTURE/VERTICAL RESTRICTIONS.

(7-5) STORM MANHOLE
N.T.S.

STORM MANHOLE DETAIL

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6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

CONSTRUCTION DETAILS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	...	

PROJECT NO.
910-001-005

SHEET NO.
C8

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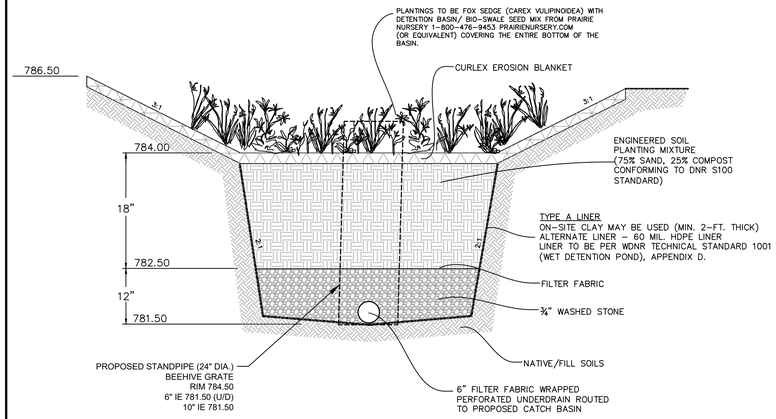
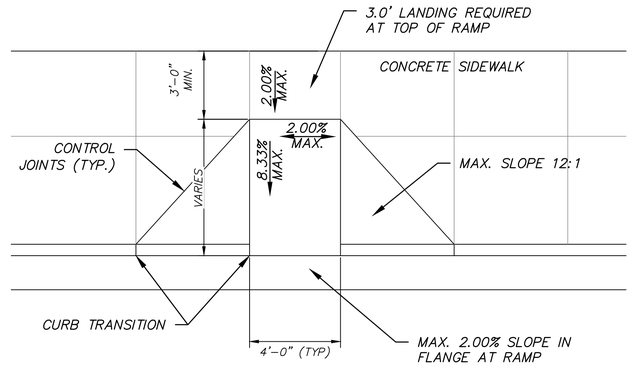


NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
2. IF USING SUPPLIER PROVIDED SOIL MIX, PRIOR TO CONSTRUCTION CONTRACTOR SHALL SUBMIT TO ENGINEER SUPPLIER CERTIFICATION THAT THE SOIL MIXTURE & COMPOST USED IN BIOSWALE MEET S100 AND 1004 REQUIREMENTS.
3. FOLLOWING SITE STABILIZATION, IF THERE ARE ANY CLOGGED/PONDING AREAS WITHIN THE BIOSWALE, THOSE AREAS SHALL HAVE THE TOP 1 FOOT OF MATERIAL REMOVED AND REPLACED WITH NEW ENGINEERED SOIL AND MULCH.

BIOSWALE DETAIL (EAST: B-1)

NOT TO SCALE



IN-LINE ADA RAMP

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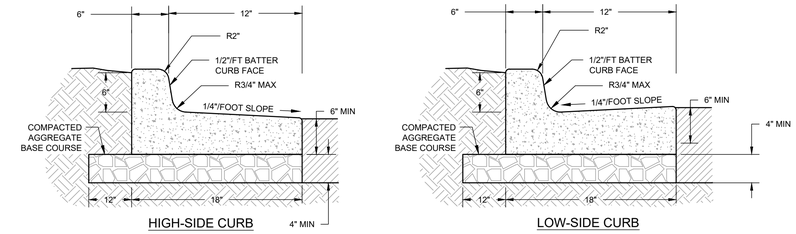
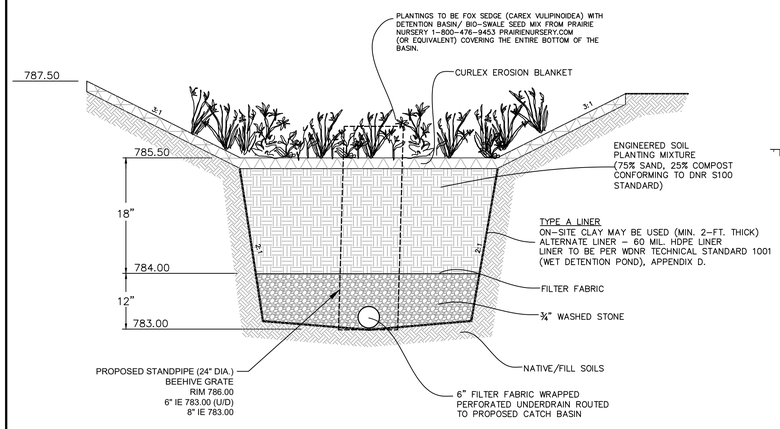


NOTES:
A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.
B) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SLOPE OF THE GUTTER PAN.
C) FOR DEPRESSED CURB HEAD SLOPE, USE THE SAME SLOPE AS ADJACENT SIDEWALK.
D) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDE MINIMUM 6" GUTTER THICKNESS MAINTAINED. TRANSVERSE CONTRACTION JOINTS SHALL BE CUT OR SAWED AT MAXIMUM 20 FOOT INTERVALS.
E) 1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED TRANSVERSELY IN THE CURB ABUTTING EXISTING CURB AND SIDEWALK, WALLS OR BUILDINGS, AND AT INTERVALS NOT TO EXCEED 300 FEET, WITH PREFERRED LOCATIONS BEING AT RADIUS POINTS OR ANGLE POINTS.

18-IN. CONCRETE CURB & GUTTER

NOT TO SCALE

NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WISDOT STANDARD SPECIFICATIONS.
4. CONCRETE SHALL BE GRADE A AIR ENTRAINED IN ACCORDANCE WITH WISDOT SECTION 501.
5. FINISH, CURE, AND PROTECT CURBING IN ACCORDANCE WITH WISDOT SECTION 601.
6. FINISHED CONCRETE SHALL BE COVERED WITH A LIQUID CURING COMPOUND CONFORMING TO AASHTO M 148, TYPE 2, IN ACCORDANCE WITH WISDOT SECTION 415.
7. AGGREGATE BASE COURSE SHALL BE IN ACCORDANCE WITH WISDOT SECTION 305.



NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
2. IF USING SUPPLIER PROVIDED SOIL MIX, PRIOR TO CONSTRUCTION CONTRACTOR SHALL SUBMIT TO ENGINEER SUPPLIER CERTIFICATION THAT THE SOIL MIXTURE & COMPOST USED IN BIOSWALE MEET S100 AND 1004 REQUIREMENTS.
3. FOLLOWING SITE STABILIZATION, IF THERE ARE ANY CLOGGED/PONDING AREAS WITHIN THE BIOSWALE, THOSE AREAS SHALL HAVE THE TOP 1 FOOT OF MATERIAL REMOVED AND REPLACED WITH NEW ENGINEERED SOIL AND MULCH.

BIOSWALE DETAIL (WEST: B-2)

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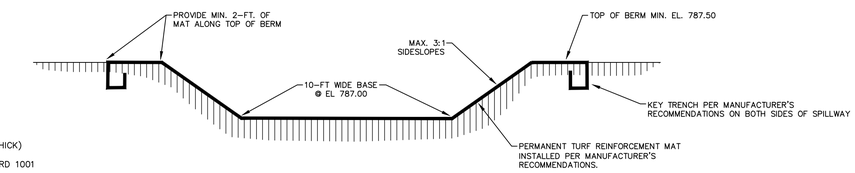
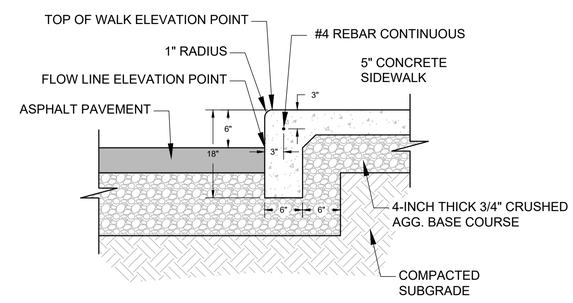


EMERGENCY SPILLWAY DETAIL

NOTE:
1. EXTEND TURF MAT TO PROPERTY LINE.
2. VERIFY BERM EL. MIN. AROUND ENTIRE BIOSWALE AREA.



CONCRETE WALK WITH THICKENED EDGE

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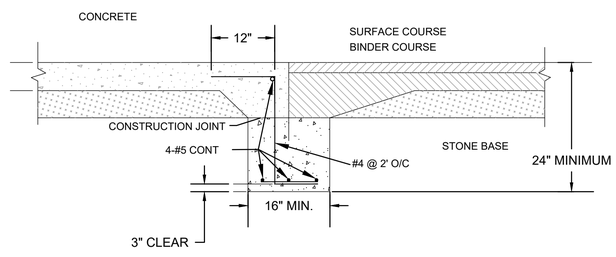

CONCRETE/ASPHALT JOINT DETAIL

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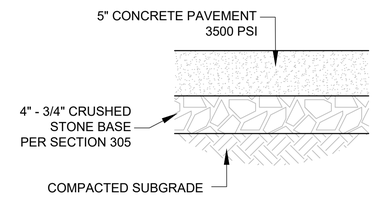

CONCRETE SIDEWALK DETAIL

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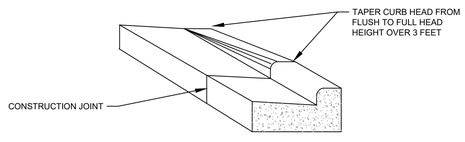

CURB & GUTTER TAPER

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FRANKLIN, WI 53132
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L' BRI PURE N' NATURAL
CONSTRUCTION DETAILS
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	---	

PROJECT NO. 910-001-005

SHEET NO. C9

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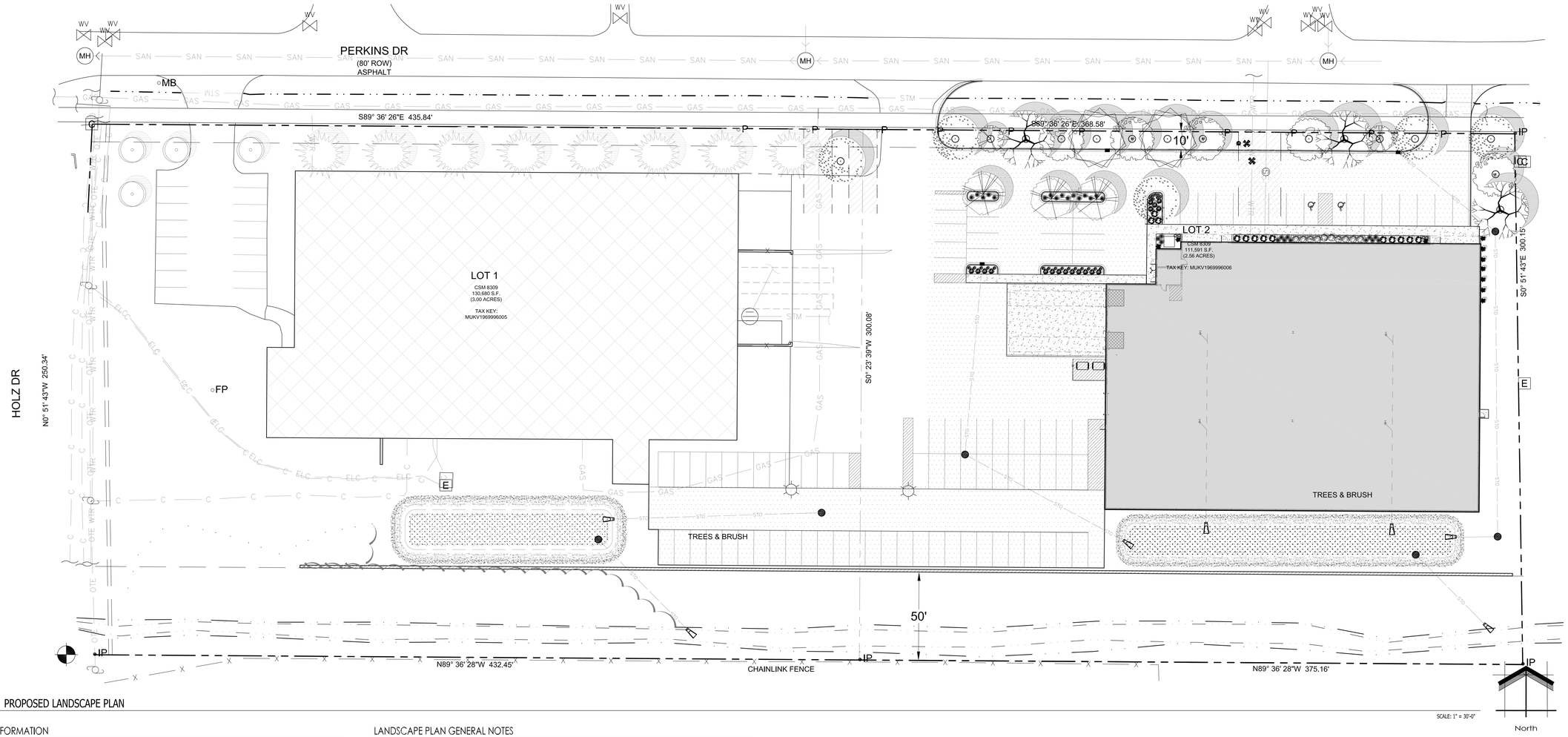

1 PROPOSED LANDSCAPE PLAN

SITE INFORMATION

USDA PLANT HARDINESS ZONE	5b [-15 to -10 °F/-26.1 to -23.3 °]	TOTAL IMPERVIOUS	
LOT ZONING	M-4 Medium/Heavy Industrial District	TOTAL GREENSPACE	
LOT AREA	242,269 SQ. FT. (5.56 Acres)	SITE LANDSCAPE PERCENTAGE	
EXISTING SITE BUILDING AREA	39,100 SQ. FT.	EXISTING PARKING STALLS	46 STALLS
PROPOSED SITE BUILDING AREA	27,900 SQ. FT.	PROPOSED PARKING STALLS	69 STALLS
		TOTAL PARKING STALLS	xxx STALLS

EXISTING CONDITIONS GENERAL NOTES

1. INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THESE LANDSCAPE DRAWINGS REPRESENTS TO THE BEST OF OUR KNOWLEDGE THE ACTUAL EXISTING FIELD CONDITIONS. INSITE LANDSCAPE DESIGN, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPERATIVE TO THEIR NEW WORK. REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND FIELD CONDITIONS TO THE LANDSCAPE ARCHITECT FOR REVIEW. ANY WORK PERFORMED PRIOR TO RESOLUTION OF DISCREPANCIES BY THE LANDSCAPE ARCHITECT IS SUBJECT TO REMOVAL AND REPLACEMENT AT NO ADDITIONAL COST TO THE CONTRACT.
2. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS PLAN ARE APPROXIMATE. THERE MAY BE UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA OF DISTURBANCE THAT ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES.
3. VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ALIGNMENT OF WALLS. BRING ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECTS ATTENTION PRIOR TO FABRICATION / CONSTRUCTION BEGINS.
4. VERIFY LOCATION OF ACCESS PANELS w/ MECHANICAL AND ELECTRICAL EQUIPMENT FOR ACCESSIBILITY OF MECHANICAL & ELECTRICAL ITEMS. VERIFY LOCATIONS OF ALL BURIED UTILITIES AND STRUCTURES AND LOCATIONS OF ALL OVERHEAD WIRES.
5. VERIFY LOCATION OF ALL EXISTING EASEMENTS.
6. INSITE LANDSCAPE DESIGN, INC, ASSUMES NO RESPONSIBILITY FOR DAMAGES, LIABILITY OR COSTS RESULTING FROM CHANGES OR ALTERATIONS MADE TO THIS PLAN WITHOUT THE EXPRESSED WRITTEN CONSENT OF INSITE LANDSCAPE DESIGN, INC.

DESIGN COMPLIANCE: THIS LANDSCAPE PLAN IS ACCURATE AND IN COMPLAINACE WITH THE VILLAGE OF MUWONAGO LANDSCAPE REQUIREMENTS SET FOR IN SECTION 100-916 SCREENING AND 100-206 M-4 Medium/Heavy Industrial District (I) Design standards.
(j) General development requirements.
(1) Landscaping. Landscaping plans are subject to economic development committee review and approval subject to the following minimum standards.
a. The minimum number of trees on a site shall be calculated based on the principal street frontage; one tree is required for each 20 feet. For lots with 100 feet or less of road frontage; a minimum of five trees shall be planted or retained. A minimum of two trees are to be planted or retained in each front yard and each street side yard.
b. Deciduous trees shall be a minimum of three-inch caliper and evergreens a minimum of six feet at time of planting.
c. Efforts to protect and retain existing trees should be noted in the landscaping plan.
d. It is expected that all landscaping shall be appropriately distributed on the site. Additional plantings of trees (deciduous and evergreen), ornamental trees and shrubs above the minimum required herein shall be planted consistent with the aesthetic style of the building.
e. Landscaping shall not obstruct fire department view of external fire alarms or access to the building.
f. Landscaping shall be used to screen unsightly site elements, such as refuse enclosures, utility boxes, building mechanical equipment and service doors and loading docks.

CONTRACTOR NOTE: THE LANDSCAPE CONTRACTOR/GENERAL CONTRACTOR ARE RESPONSIBLE TO INSTALL THE LANDSCAPE AS PER THE APPROVED PLAN. IF ANY CHANGES OR DEVIATIONS ARE MADE FROM THE THIS APPROVED PLAN, THE LANDSCAPE CONTRACTOR / GENERAL CONTRACTOR ARE RESPONSIBLE FOR UPDATING THE PLANS ACCORDINGLY AND SUBMITTING THOSE REVISED PLANS FOR APPROVAL AND "SIGN OFF" WITH THE VILLAGE OF MUWONAGO. THE LANDSCAPE CONTRACTOR / GENERAL CONTRACTOR ARE ALSO RESPONSIBLE FOR VERIFYING THAT ANY PLANT MATERIAL SUBSTITUTIONS OR MODIFICATIONS THAT ARE MADE TO THE APPROVED LANDSCAPE DESIGN DOCUMENTS WILL NOT CHANGE OR ALTER ANY OF THE REQUIRED SUPPORTING LANDSCAPE REQUIREMENT CALCULATIONS. UPON COMPLETION OF THE CONSTRUCTION PROJECT AND FILE THAT AFFIDAVIT WITH THE VILLAGE OF MUWONAGO.

LANDSCAPE PLAN GENERAL NOTES

PLANT MATERIAL SHOWN ON LANDSCAPE PLAN IS DEPICTED AT MATURE GROWTH.

1. AT LEAST SEVENTY-TWO HOURS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL VERIFY UTILITY LOCATIONS AS GIVEN BY THE ELECTRIC, GAS, TELEPHONE, WATER, SEWER, AND CABLE TELEVISION COMPANIES, UTILITIES OR ENTITIES. REVIEW WITH OWNER'S REPRESENTATIVE SITE MECHANICAL, SITE ELECTRICAL AND LIGHTING, SITE GRADING AND DRAINAGE, SITE IRRIGATION AND ALL OTHER DRAWINGS PERTAINING TO UNDERGROUND UTILITY LOCATIONS. RECORD SET OF INFORMATION THE SAME AS IN POSSESSION OF OWNER'S REPRESENTATIVE. ALSO REVIEW OWNER'S "MARK SETS" OF ALL OF THESE DRAWINGS IN POSSESSION OF THE CONTRACTOR OR OWNER. MARK ALL SUCH UTILITIES ON THE SITE PRIOR TO COMMENCING. COORDINATE WITH OWNER BEFORE AND DURING CONSTRUCTION. REPAIR ANY DAMAGE TO ANY SYSTEM THAT IS CAUSED BY LANDSCAPE CONTRACTOR AT NO COST TO OWNER.
2. ALL PLANTINGS SPECIFIED FOR THE xxxxxxxxxx PROJECT PLANTING TABLES SHALL COMPLY WITH STANDARDS AS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1 2014 AND ANSI STANDARDS FOR PLANTING 2012.
3. ALL DEVIATIONS FROM THE APPROVED xxxxxxxxxx PROJECT PLANS SHALL BE NOTED ON THE RECORD DRAWINGS BY THE CONTRACTOR AND MAY BE EXECUTED ONLY WITH PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE. VERBAL AGREEMENTS OR REVISIONS WITHOUT A CHANGE ORDER WILL NOT BE RECOGNIZED BY LANDSCAPE ARCHITECT AND OWNER.
4. ALL PLANTS MUST BE BID AND SELECTED PER THE SPECIES SPECIFIED ON THE PLANS. ANY SPECIES SUBSTITUTIONS MUST BE APPROVED IN WRITING BY LANDSCAPE ARCHITECT. THE SIZES OF PLANT MATERIAL LISTED HEREIN IS A MINIMUM ACCEPTABLE SIZE. ADDITIONALLY, IF EXCESSIVE PRUNING REDUCES THE CROWN THE PLANT SHALL BE REPLACED.
5. PROTECT PUBLIC FROM CONSTRUCTION WITH BARRIERS AND BARRICADES.
6. ALL AREAS THAT WERE DISTURBED DURING CONSTRUCTION AND AREAS NOT COVERED WITH PAVEMENT, BUILDING, PLANTING BEDS, OR TREE PITS ARE TO BE TOPSOILED 3" DEEP (MIN.) AND SHALL BE SODDED/SEEDED WITH SPECIFIED LAWN GRASS. LANDSCAPE CONTRACTOR SHALL INCLUDE COST PER SQUARE YARD FOR ADDITIONAL SEED OPERATIONS AS MAY BE POSSIBLY REQUIRED TO REESTABLISH ADJACENT TURF GRASS AREAS WHICH MAY BECOME DAMAGED DURING THE CONSTRUCTION PROCESS OR TO REPAIR DAMAGE DONE BY OTHERS.
7. CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL MATERIALS, TOOLS, EQUIPMENT, LABOR, AND PLANTS NECESSARY FOR PROPER PLANTING AND INSTALLATION OF ALL LANDSCAPE MATERIAL.
8. QUANTITIES ON PLANT MATERIALS LIST ARE FOR CONVENIENCE OF BIDDING ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON LANDSCAPE PLANS AND COVERAGE OF ALL AREAS DELINEATED. THE PLANS ARE TO SUPERSEDE THE PLANT LIST IN ALL CASES.
9. CONTRACTOR IS RESPONSIBLE FOR ALL ESTIMATING AND BIDDING, ALL AREAS, QUANTITIES MATERIALS SHOULD BE FIELD VERIFIED WITH SITE CONDITION.
10. WHERE DISCREPANCIES OCCUR BETWEEN THE LANDSCAPE PLANS AND/OR ARCHITECTURAL AND/OR THE CIVIL DRAWINGS (AND ANY OTHER SITE DRAWINGS) THE DISCREPANCIES MUST BE BROUGHT TO THE LANDSCAPE ARCHITECTS ATTENTION FOR COORDINATION AND RESOLUTION.
11. ALL DISEASED, NOXIOUS OR INAPPROPRIATE MATERIALS SHALL BE REMOVED FROM THE PROPOSED SITE PRIOR TO THE START OF CONSTRUCTION AND DURING THE MAINTENANCE PERIOD.
12. GENERAL CONTRACTOR SHALL LEAVE THE SITE FREE OF CONSTRUCTION DEBRIS.
13. ALL LAWN AND PLANTING AREAS SHALL SLOPE TO DRAIN A MINIMUM OF 2% UNLESS NOTED OTHERWISE AND REVIEWED WITH OWNER'S REPRESENTATIVE FOR FINAL APPROVAL.
14. FINISH GRADES FOR SHRUB AND GROUND COVER AREAS SHALL BE HELD 1" BELOW TOP OF ADJACENT PAVEMENTS AND CURBS, UNLESS NOTED OTHERWISE ON THE PLANS. REFER TO LSP1.2 FOR FURTHER INFORMATION.
15. ALL PERENNIAL, ANNUAL AND GROUND COVER AREAS TO RECEIVE A BLEND OF ORGANIC SOIL AMENDMENTS PRIOR TO PLANTING. TILL THE FOLLOWING MATERIALS INTO EXISTING TOPSOIL TO A DEPTH OF APPROXIMATELY 8". A DEPTH OF 12" IN TREE PITS. PROPORTIONS AND QUANTITIES MAY REQUIRE ADJUSTMENT DEPENDING ON THE CONDITION OF EXISTING SOIL. REFER TO LSP1.2 FOR FURTHER INFORMATION.
   PER EVERY 100 SQUARE FEET ADD: ONE - 2 CUBIC FOOT BALE OF PEAT MOSS, 2 POUNDS OF 5 -10 -5 GARDEN FERTILIZER, 1/4 CUBIC YARD OF COMPOSTED MANURE OR OTHER COMPOSTED, ORGANIC MATERIAL.
16. ALL SHRUBS TO BE POCKET PLANTED WITH A 50/50 MIX OF COMPOSTED, ORGANIC MATERIAL AND EXISTING SOIL. INSTALL TOPSOIL INTO ALL BEDS AS NEEDED TO ACHIEVE PROPER GRADE. REMOVE ALL EXCESSIVE GRAVEL, CLAY AND STONES. REFER TO LSP1.2 FOR FURTHER INFORMATION.
17. PLANT ALL TREES SLIGHTLY HIGHER THAN FINISHED GRADE AT ROOT FLARE. BACK FILL HOLE WITH 2/3 EXISTING TOPSOIL AND ORGANIC SOIL AMENDMENTS SPECIFIED IN NOTE 15. AVOID ANY AIR POCKETS. DISCARD ANY GRAVEL CLAY OR STONES. REFER TO LSP1.2 FOR FURTHER INFORMATION.
18. ALL TREES TO BE INSTALLED, STAKED AND GUYED ACCORDING TO DETAILS. REFER TO ANSI STANDARDS FOR PLANTING 2012 AND DETAILS ON LSP1.2 FOR FURTHER INFORMATION.
19. PROVIDE A 4'-0" - 5'-0" DIAMETER MULCH RING AT THE ROOT BALL FLARE OF ALL LAWN TREES.
20. ALL PLANTINGS TO BE WATERED AT THE TIME OF PLANTING, THROUGHOUT CONSTRUCTION AND UPON COMPLETION OF PROJECT AS REQUIRED.
21. WHERE SPECIFIED, ALL PLANT BEDS, PITS AND TREE RINGS ARE TO RECEIVE A MINIMUM OF 2" - 3" DRESSING OF SHREDDED HARDWOODM OAK BARK MULCH SHAVINGS FREE OF GROWTH, WEEDS, FOREIGN MATTER DETRIMENTAL TO PLANT LIFE OR GERMINATION INHIBITING INGREDIENTS. LANDSCAPE CONTRACTOR TO PROVIDE A SAMPLE TO OWNER FOR APPROVAL. CONTRACTOR TO TAKE CARE WITH INSTALLATION NOT TO DAMAGE OR COVER PLANTS. REFER TO LSP1.2 FOR FURTHER INFORMATION.
22. LAWN INSTALLATION: CONTRACTOR TO FURNISH AND PREPARE TOPSOIL (3" MIN) AND SEED BED (REMOVE ALL STONES 1" OR LARGER), APPLY STARTER FERTILIZER AND SEED UNIFORMLY. PROVIDE A MULCH COVERING SUITABLE TO GERMINATE AND ESTABLISH TURF. EROSION CONTROL MESH SHOULD BE USED IN SWALES AND STEEP GRADES WHERE APPLICABLE. METHODS OF INSTALLATION MAY VARY AT THE DISCRETION OF CONTRACTOR. IT IS HIS/HER RESPONSIBILITY TO ESTABLISH AND GUARANTEE A SMOOTH, UNIFORM, QUALITY TURF. IF STRAW MULCH IS USED AS A COVERING, A TACKIFIER MAY BE NECESSARY TO AVOID WIND DAMAGE.
23. **DELUXE 50 GRASS SEED MIX REINDER'S (800) 785-3301**
   20% KENTUCKY BLUE GRASS
   15% NEWPORT KENTUCKY BLUE GRASS
   15% SR 2100 Kentucky Bluegrass
   25% Creeping Red Fescue
   15% Replicator Perennial Ryegrass
   10% Fiesta 4 Perennial Ryegrass
   APPLY AT A RATE OF 200 POUNDS PER ACRE. REFER TO SUPPLIERS SPECIFICATIONS & INSTALLATION CUT SHEETS FOR FURTHER FORMATION
24. DURING THE INITIAL "30 DAY MAINTENANCE PERIOD" THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE AND ON-GOING PLEASANT VISUAL ENVIRONMENT WHEREAS ANY PLANT WHICH IS NOT RESPONDING TO TRANSPLANTING OR THRIVING SHALL IMMEDIATELY BE REPLACED. NEW LAWNS SHALL BE WATERED AND REPAIRED AND WEEDS MUST CONSTANTLY BE REMOVED, NO EXCEPTIONS WILL BE GRANTED.
   MAINTENANCE NOTE:
   MAINTENANCE IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN REQUIRED LANDSCAPING IN ACCORDANCE WITH THE MUNICIPALITY'S PROPERTY MAINTENANCE CODE AND AN APPROVED MAINTENANCE PLAN. THE MAINTENANCE MUST INCLUDE, AT A MINIMUM, METHODS FOR PROVIDING THE FOLLOWING:
   - NECESSARY IRRIGATION (If REQUIRED)
   - INTEGRATED PEST MANAGEMENT,
   - PROPER FERTILIZATION
   - TREE CARE AND PRUNING, SHRUB TIP CLIPPING AND SHAPING AS REQUIRED
   - REPLACEMENT OF LOST VEGETATION, AND ALL DISEASED, DAMAGED, OR DEAD MATERIAL WILL BE REPLACED BY THE END OF THE FOLLOWING PLANTING SEASON IN PERPETUITY.
   - WEED MANAGEMENT AND BED CARE.
25. ALL NEWLY PLANTED TREES AND SHRUBS ARE TO RECIEVE AN APPLICATION OF AN ANTI-TRANSPIRANT SPRAY THAT WILL EFFECTIVELY REDUCE THE WATER LOSS OF TRANSPIRATION OF PLANT MATERIAL AND REDUCE THE STRESS OF TRANSPLANTATION. IT IS RECOMENDED AS PART OF THE ONGOING MAINTENANCE THAT ANY BROADLEAF EVERGREEN AND CONIFEROUS TREE AND SHRUBS (EXCLUDING ARBORVITAE) RECIEVE AN APPLIATION OF AN ANTI-DESICANT SPRAY TO REDUCE THE LOSS OF MOISTURE DUE TO WINTER DESICCATION.
26. MAINTENANCE. THE OWNER SHALL TEND AND MAINTAIN ALL PLANT MATERIALS IN A HEALTHY GROWING CONDITION AS PER THE APPROVED PLAN. PLANTINGS SHALL BE REPLACED WHEN NECESSARY AND KEPT FREE FROM REFUSE & DEBRIS. ALL PLANTING MATERIAL WHICH IS DYING OR DAMAGED BEYOND RECOVERY SHALL BE REPLACED WITHIN SIX (6) MONTHS OR BY THE NEXT PLANTING SEASON, WHICHEVER COMES FIRST.
27. LANDSCAPE / SITE DEMOLITION CONTRACTOR TO VERIFY LOCATIONS OF EXISTING TREES AND SHRUBS TO BE SALVAGED AND CLEARLY TAG THEM WITH MARKING TAPE AND CONSTRUCTION FENCE.

TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

DIGGERS HOT LINE

WISCONSIN STATUTE 182.0175 (1974) REQUIRES A MINIMUM OF 3 DAYS NOTICE BEFORE YOU EXCAVATE
(NOT INCLUDING SATURDAY, SUNDAY OR LEGAL HOLIDAYS)

UNDERGROUND SEWER AND UTILITY INFORMATION AS SHOWN IS OBTAINED FROM THE RECORDS OF MUNICIPALITY AND LOCAL UTILITY COMPANIES. THE ACCURACY OF WHICH CAN NOT BE GUARANTEED OR CERTIFIED TO. THE LOCATIONS OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THIS SURVEY ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

TO OBTAIN LOCATION OF PARTICIPANT'S UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONIN CALL THE MILWAUKEE UTILITY ALERT NETWORK
www.Diggershotline.com
(800)-242-8511
OR

811 Know what's below. Call before you dig.

InSITE LANDSCAPE DESIGN
Landscape Consulting
& Master Planning Design Sevices
11525 W. North Avenue, Suite 1B
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Project:

L' BRI PUR N' NATURAL

909 Perkins Drive
Mukwonago, WI 53149

Issuance and Revisions:

Date	Number	Description
09/03/24		Plan Commission Submittal

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Sheet Title:

PROPOSED LANDSCAPE PLAN, GENERAL NOTES, AND PLANT MATERIAL TABLE

Date of Drawing:	09/03/24
Scale:	1" = 20'-0"
Drawn By:	MCD
Job Number:	L24-022
Sheet Number:	LSP1.0

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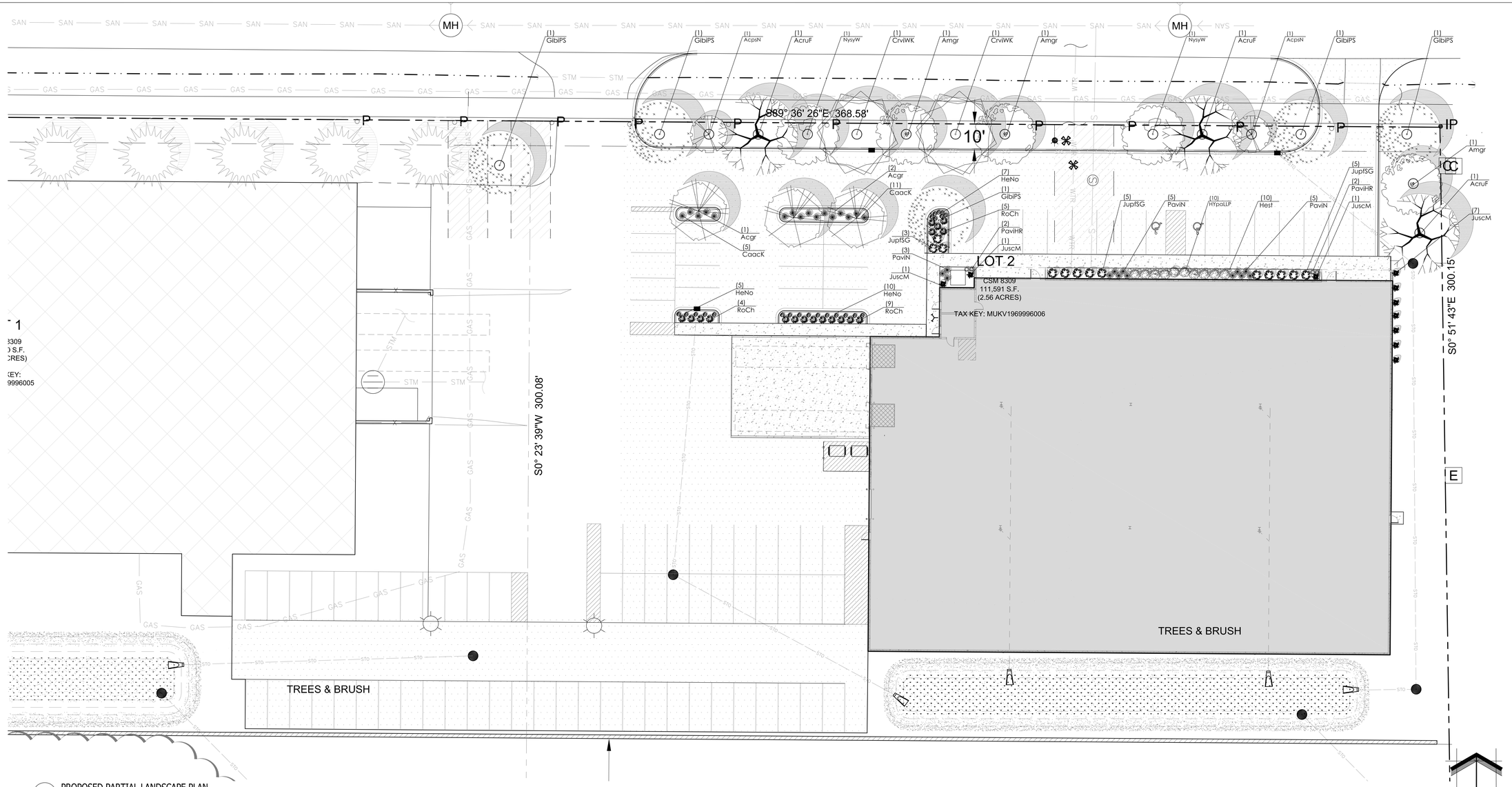

1 PROPOSED PARTIAL LANDSCAPE PLAN

SCALE: 1" = 20'-0"

North

Proposed Plant Material Table

Broadleaf Deciduous Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
3	Acgr		Acer griseum	Paperbark maple	3"-Cal	1
2	AcpsN		Acer pseudosieboldianum 'Northwind'	Northwind Korean Maple	3"-Cal	1
3	AcruF		Acer rubrum 'Franksred'	Red Sunset Maple	3"-Cal	1
3	Amgr		Amelanchier grandiflora	Autumn Brilliance Serviceberry	12' - 14' Clump - B&B	2
2	CrviWK		Crataegus viridis 'Winter King'	Winter King Green Hawthorn	3"-Cal	1
5	GibiPS		Ginko biloba 'Princeton Sentry'	Princeton Sentry Maidenhair Tree	3"-Cal	1, 8
2	NysyW		Nyssa sylvatica 'Wildfire'	Wildfire Black Gum	3"-Cal	1
-	Extg		Existing to Remain	Existing to Remain	Existing	3

Conifer Evergreen Tree

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
-	Extg		Existing to Remain	Existing to Remain	Existing	3

Broadleaf Deciduous Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
10	HYpaLLP		Hydrangea paniculata 'Little Lime Punch'	Little Lime PunchHydrangea	18" - 24"- Cont	6
18	RoCh		Rosa x 'Chewizard'	Oso Easy En Fuego Rose	18" - Cont	6

Conifer Evergreen Shrub

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
10	JuscM		Juniperus scopulorum 'Medora'	Medora Juniper	5' - 6' - B&B	5
13	JupfSG		Juniperus x pfizeriana 'MonSan'	Sea of Gold Juniper	18" - 24" - B&B	6

Perennial Grass

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
16	CaacK		Calamagrostis acutiflora 'Karl Forester'		1-Gal - Cont	7
4	PaviHR		Panicum virgatum 'Hot Rod'	Hot Rod Switch Grass	1-Gal - Cont	7
13	PaviN		Panicum virgatum 'Northwind'	Northwind Switch Grass	1-Gal - Cont	7

Perennial

Quantity	Code Name	Symbol	Scientific Name	Common Name	Planting Size	Comments
22	HeNo		Hemerocallis x 'Nosferatu'	Trophytaker Nosferatu Daylily	1-Gal - Cont	7
10	Hest		Hemerocallis x Stella D' Oro	Stella D' Oro Daylily	1-Gal - Cont	7

Comments

1. Straight central leader, full & even crown. Prune only after planting.
2. Well balanced, multi-stemmed tree with a minimum of (3) strong canes and full appearance.
3. Prune existing tree, remove any dead, diseased or hazardous limbs. Thin out as required and raise canopy for safety and viability for both pedestrians and motorists.
4. Remove tree in its entirety and grind stump to a minimum of 6" below adjacent grade. Remove grinding chips and fill hole with topsoil. Sow with specified turf grass seed as required.
5. Evenly shaped upright tree/shrub with full branching to the ground.
6. Full, well rooted plant, evenly shaped.
7. Full, well rooted plant.
8. Male only
9. Tree-form. Single Stem Specimen
10. At grade coverage points for this plant do not contribute to the 10% coverage area requirement.

Economy Prairie Seed Mix for Upper 1/3 of the Stormwater Management Bowl& Adjacent Areas from Agrecol

Quantity	Symbol	Supplier	Type
5,600 sq. ft. VERIFY		Agrecol	Economy Prairie Seed Mix - mixture contains 7 native permanent grass/ sedge species and 16 native forb species. Apply at a rate of 10 PLS LBS/Acre. Refer to cut sheets for mix specifics and installation instructions.

Stormwater/Bioinfiltration Seed Mix for lower 2/3's of the Stormwater Management Bowl from Agrecol

Quantity	Symbol	Supplier	Type
5,200 sq. ft. VERIFY		Agrecol	Stormwater/Bioinfiltration Seed Mix - mixture contains 13 native permanent grass/ sedge species and 19 native forb species. Apply at a rate of 6 PLS LBS/Acre. Refer to cut sheets for mix specifics and installation instructions.

INFILTRATION BASIN CONSTRUCTION & RESTORATION NOTES

1. THE PERMANENT INFILTRATION BASIN SHALL BE CONSTRUCTED AS PART OF THE INITIAL CONSTRUCTION PROJECT.
2. ONCE CONSTRUCTION OF A PERMANENT INFILTRATION BASIN BEGINS, THE INFILTRATION BASIN BOTTOM SHALL BE CORDONED OFF OR SOMEHOW DESIGNATED AS BEING PROTECTED FROM COMPACTION FROM HEAVY EQUIPMENT.
3. TOPSOIL & OVERBURDEN SHALL BE OVER-EXCAVATED AS NECESSARY TO EXPOSE SANDY SOILS SUITABLE FOR STORMWATER INFILTRATION, AS VERIFIED BY THE GEOTECHNICAL ENGINEER.
4. A POST CONSTRUCTION INFILTRATION TEST IS REQUIRED FOR EACH BAY OF THE INFILTRATION BASIN, WITH RESULTS PROVIDED TO TO THE DESIGN ENGINEER.
5. BASIN CONSTRUCTION SHALL BE SUSPENDED IN PERIODS OF RAINFALL AND SNOWMELT AND SHALL REMAIN SUSPENDED IF PONDED WATER IS PRESENT.
6. PROVIDE COMPOST MIXTURE PER PLAN TO THE IDENTIFIED BOTTOM INFILTRATION AREAS. THE COMPOST COMPONENT SHALL MEET THE REQUIREMENTS OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS S100 - COMPOST. EXISTING SOILS IN COMPOSTED AREAS SHALL BE HELD 3" LOW, 3" OF COMPOST SHALL BE ADDED BRINGING TO FINAL GRADE, AFTER PLACEMENT OF COMPOST PROVIDE 12" DEEP TILL.
7. REFER TO THE LANDSCAPE PLAN FOR FINAL SPECIFICATIONS AND INFORMATION FOR INFILTRATION BASIN PLANTINGS, STABILIZATION, ETC. ANY INFORMATION SHOWN ON THE SITE CIVIL PLANS RELATED TO PLANTINGS/EXPOSED SOILS/INFILTRATION ZONES/ETC. SHALL BE SUPERCEDED BY THE LANDSCAPE PLAN. ALL SIDE SLOPES 4:1 OR GREATER SHALL BE PROVIDED WITH CLASS I, TYPE A EROSION MATTING.
8. DURING CONSTRUCTION, INFILTRATION BASIN MAY REQUIRE PERIODIC REMOVAL OF SEDIMENT ACCUMULATED IN THE BOTTOM OF THE BASIN. THIS IS NECESSARY TO KEEP THE INFILTRATION BASINS INFILTRATING AT A HIGHER RATE; IMPORTANT TO THIS SITE THAT IS REQUIRED TO INFILTRATE 100% OF ALL RUNOFF. SEDIMENT REMOVED FROM BASIN BOTTOMS SHALL BE PLACED IN AN AREA UPSLOPE OF A WET FOREBAY.
9. REFER TO THE STORM WATER MANAGEMENT PRACTICE MAINTENANCE AGREEMENT FOR POST-CONSTRUCTION MAINTENANCE ACTIVITIES, INCLUDING MAINTENANCE OF THE INFILTRATION BASINS.

InSite Landscape Design

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& Master Planning Design Sevices

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Project:

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909 Perkins Drive
Mukwonago, WI 53149

Issuance and Revisions:

Date	Number	Description
09/03/24		Plan Commission Submittal

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Sheet Title:

PROPOSED LANDSCAPE PLAN,
GENERAL NOTES,
AND PLANT MATERIAL TABLE

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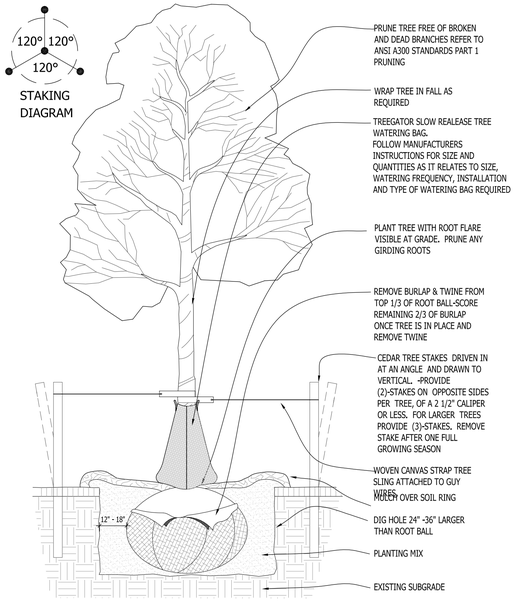
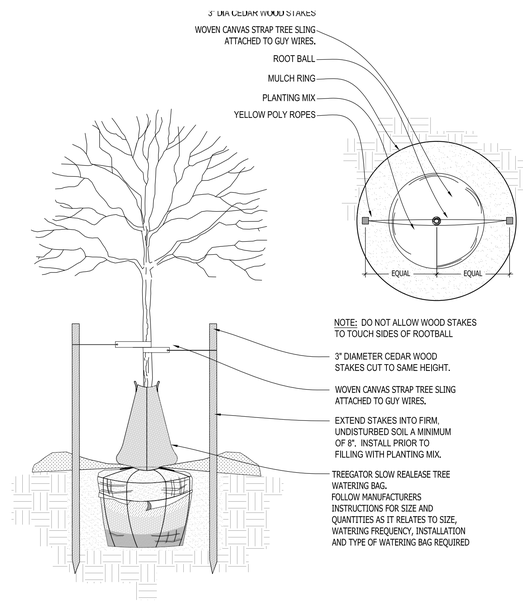
Drawn By:	MCD
Job Number:	L24-022
Sheet Number:	LSP1.1

L24-022 - L' BRI PUR N' NATURAL - 09/03/2024



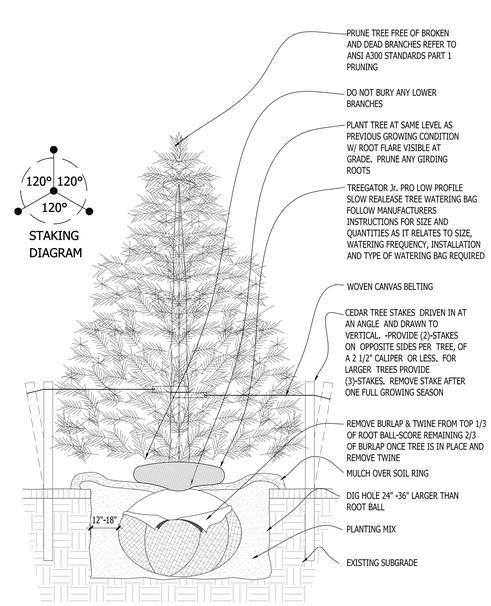
1 DECIDUOUS TREE PLANTING DETAIL

SCALE: NONE



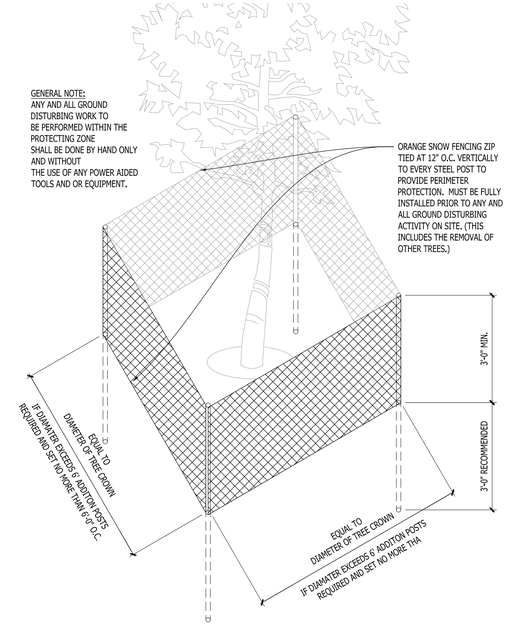
2 DECIDUOUS TREE STAKING PARKING ISLAND/RESTRICTED AREAS

SCALE: NONE



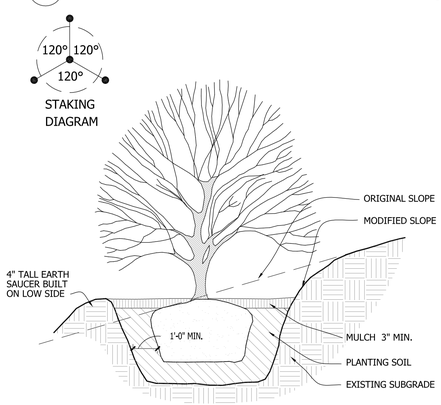
3 CONIFEROUS TREE PLANTING DETAIL

SCALE: NONE



4 EXISTING TREE PROTECTION DETAIL

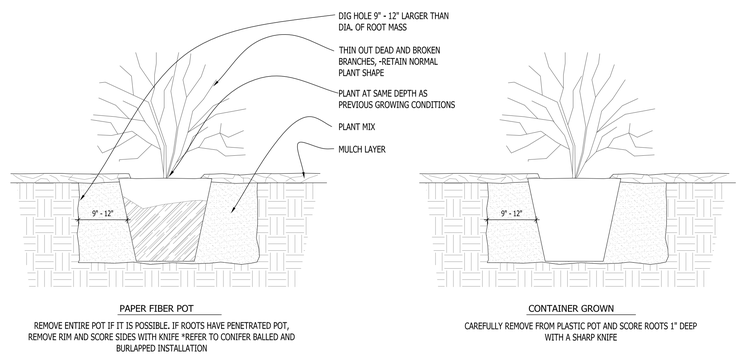
SCALE: NONE



5 SLOPE PLANTING DETAIL

SCALE: NONE

REFER TO TYPICAL DECIDUOUS TREE DETAIL FOR STAKING



6 DECIDUOUS SHRUB PLANTING DETAIL

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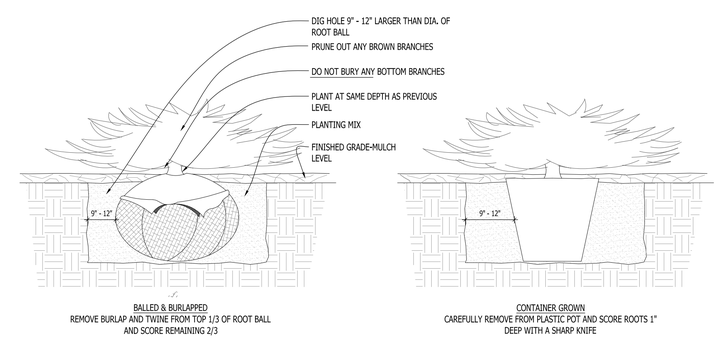

7 CONIFEROUS SHRUB PLANTING DETAIL

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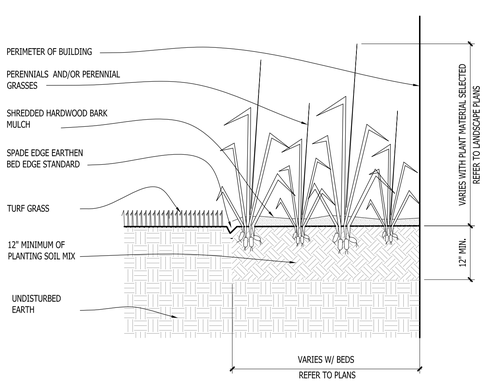
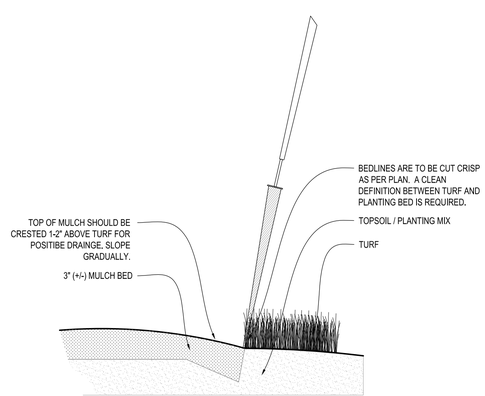


8 PERENNIAL BED PLANTING DETAIL

SCALE: NONE



9 SPADE EDGE PLANT BED EDGE DETAIL

SCALE: NONE

InSite LANDSCAPE DESIGN

Landscape Consulting
& Master Planning Design Sevices

11525 W. North Avenue, Suite 1B
Wauwatosa, WI 53226
Tel (414) 476-1204
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mdavis@insitedesigninc.com

Project:

L' BRI PUR N' NATURAL

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Issuance and Revisions:

Date	Number	Description
09/03/24		Plan Commission Submittal

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Sheet Title:

PROPOSED LANDSCAPE PLAN, PLANTING DETAILS

Date of Drawing:	09/03/24
Scale:	As Noted
Drawn By:	MCD
Job Number:	L24-022
Sheet Number:	LSP1.2

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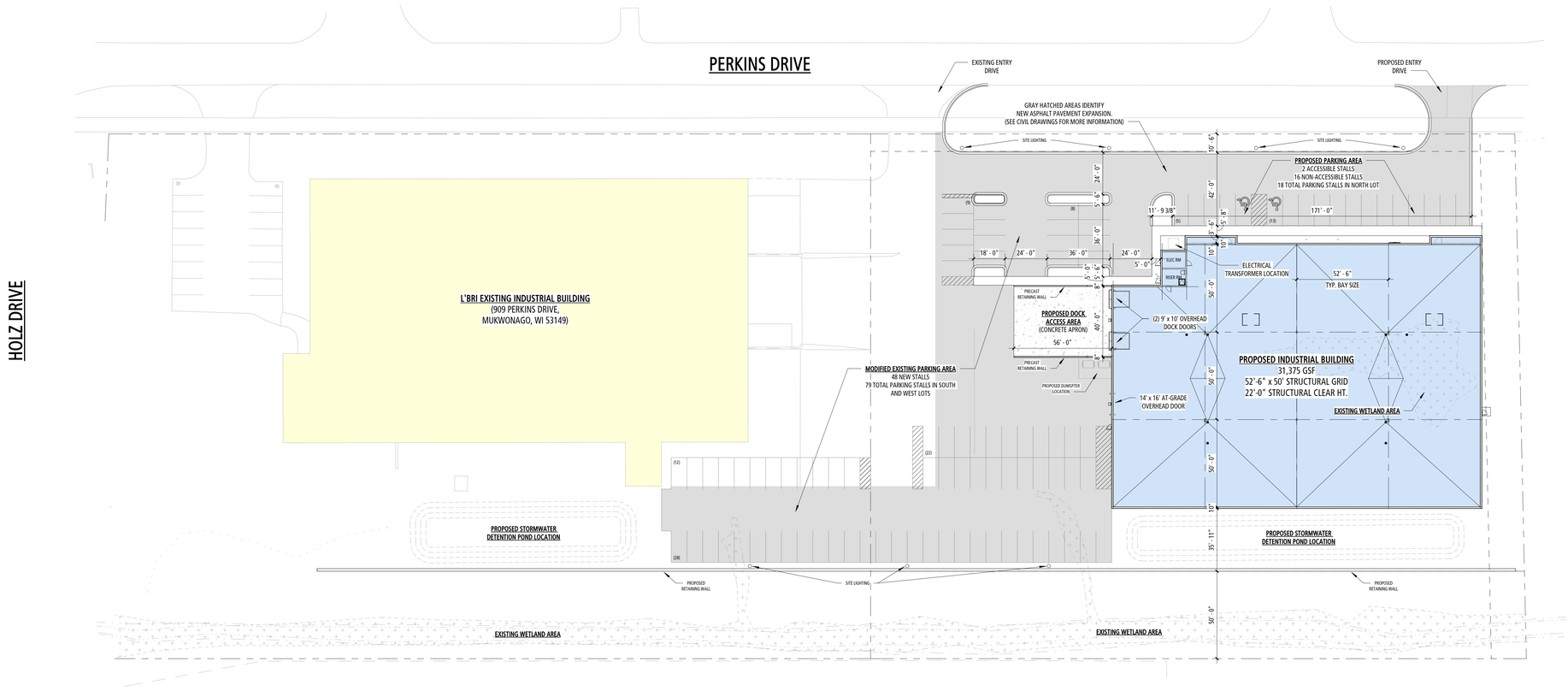

34 ARCHITECTURAL SITE PLAN
1" = 30'-0" 13 / A200

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PROJECT INFORMATION:

L'BRI PURE N' NATURAL
PROPOSED DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

VILLAGE OF MUKWONAGO
PLAN COMMISSION

REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
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ARCHITECTURAL SITE PLAN

AS100

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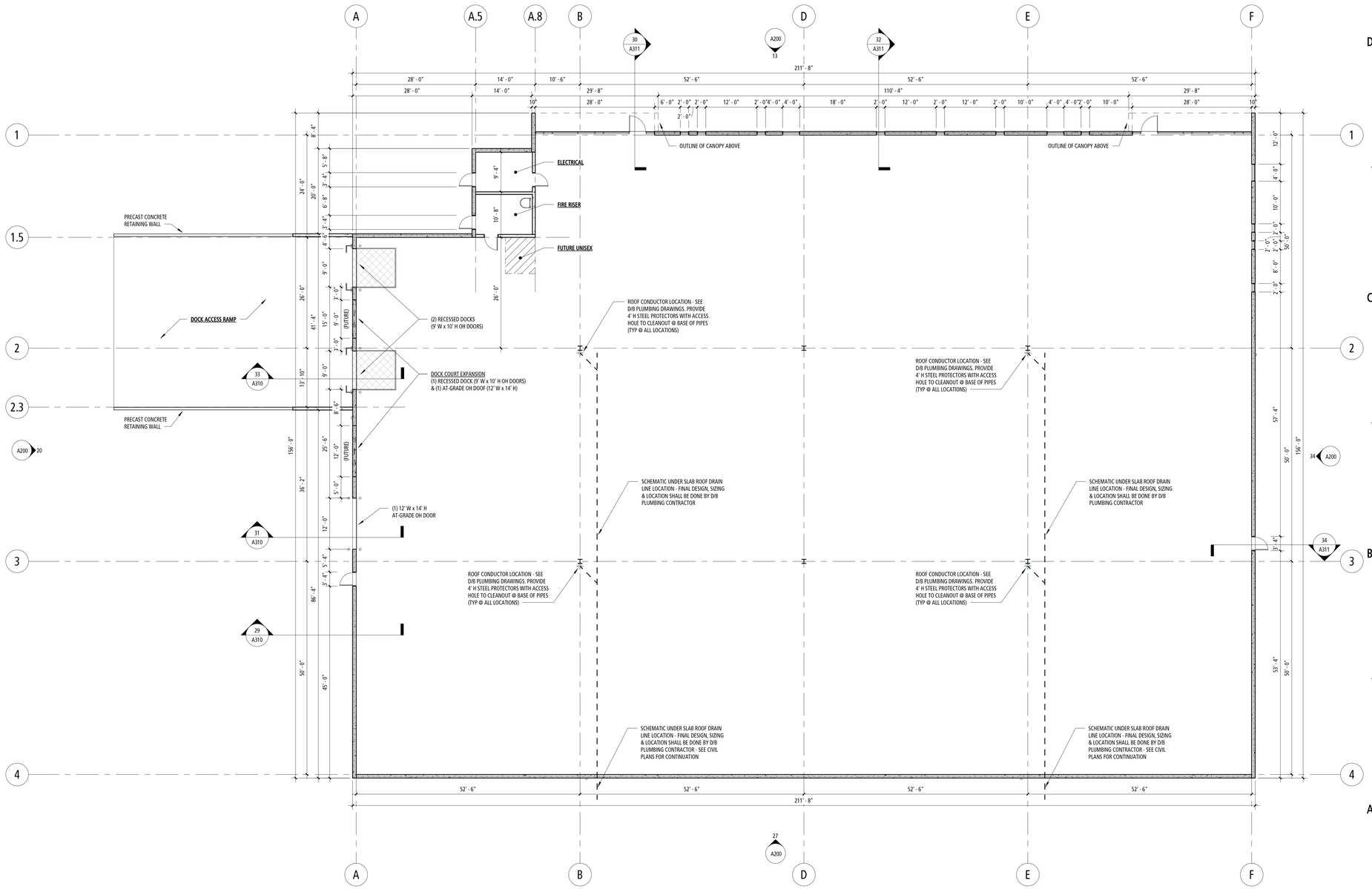
FLOOR PLAN LEGEND

	EXISTING WALL TO REMAIN
	NEW WALL CONSTRUCTION
	EXISTING DOOR TO REMAIN
	DOOR - NEW CONSTRUCTION
###	DOOR NUMBER - REFER TO DOOR SCHEDULE
#	WALL TYPE - REFER TO SHEET A000
F##	KEYNOTE - REFER TO KEYNOTE LEGEND
FE	FIRE EXTINGUISHER (WALL / COLUMN J-HOOK CONNECTION)
FEC	ACADEMY, CLEAR ALUMINUM. VERTICAL DUO, SEMI-RECESSED FIRE EXTINGUISHER CABINET BY SL INDUSTRIES OR EQUAL



34 GROUND LEVEL FLOOR PLAN
3/32" = 1'-0" 13 / A200

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GROUND LEVEL FLOOR PLAN

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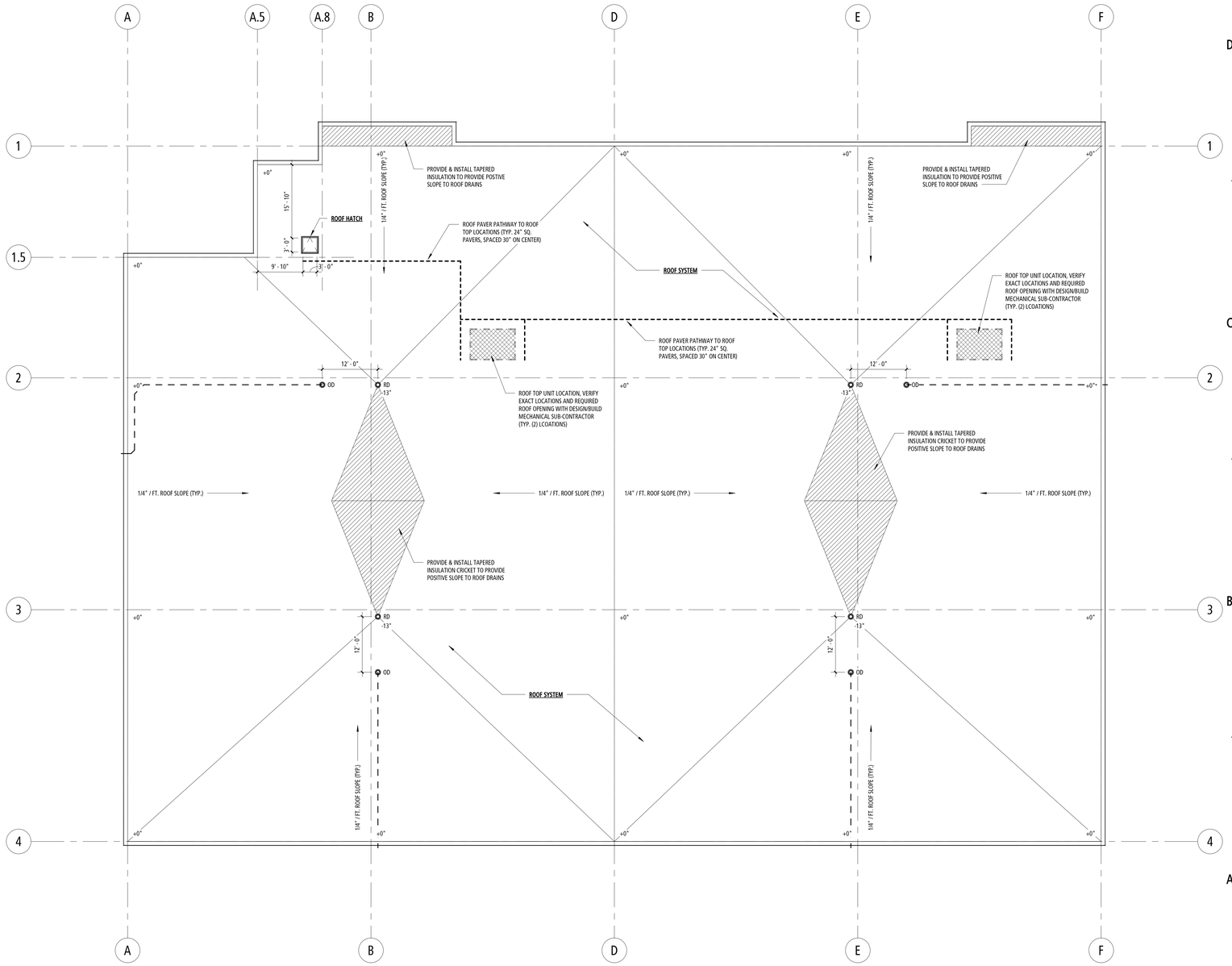

34 ROOF PLAN
3/32" = 1'-0"

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ROOF PLAN

A109

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EXTERIOR MATERIAL FINISH SCHEDULE

PRECAST INFORMATION		
COLOR 1:	LIGHT ACID ETCHED WHITE CEMENT COMPOSITE WET CAST PRECAST CONCRETE WALL PANEL; 10" THICK R-15 WITH 1-1/2" REVEALS	
COLOR 2:	ACID ETCHED - CHARCOAL GRAY WITH FORM LINER BY FITZGERALD TBD	
EXTERIOR ALUMINUM WINDOW / DOOR FINISH	BLACK ALUMINUM - THERMALLY BROKEN GLAZING SYSTEM W/ 1" INSULATED LOW-E GRAY ANNEALED TINTED GLASS	
GLASS	1" OPTIGRAY LOW-E GLASS BY PPG - REFER TO BUILDING ASSEMBLIES FOR MORE INFORMATION	
PREFINISHED METAL FLASHING, COPING, ETC.	PREFINISHED METAL COPING. PAC-CLAD OR EQUAL, COLOR: DARK GRAY TO BLACK TONE (STANDARD COLOR PAILLET)	
METAL TRIM/ CANOPY	PREFINISHED METAL PANEL. COLOR: LIGHT GRAY OR EQUAL TONE	
NOTES:	1. PROVIDE SEALANT COLOR SAMPLES TO ARCHITECT FOR APPROVAL. 2. PROVIDE COPING, BREAK METAL, PAINT DRAW DOWNS, ETC. SAMPLES TO ARCHITECT FOR APPROVAL.	

BUILDING ASSEMBLIES

FOUNDATION SYSTEM #1
2'-0" WIDE X 3'-0" HIGH, REINFORCED, PURD-IN-PLACE CONCRETE FOUNDATION WALL WITH SPREAD FOOTINGS WITH BANK POURED GRADE BEAM AT THE PERIMETER. PROVIDE 2" RIGID INSULATION (R-10 MIN.) 4'-0" HIGH MINIMUM, VERTICAL ON THE INTERIOR FACE OF THE FOUNDATION WALL AT ALL EXTERIOR WALLS, TOP OF FOOTING SHALL BE 1'-0" BELOW FINISH FLOOR LEVEL. ALT. BID.: PROVIDE AND INSTALL 2" RIGID INSULATION (R-10) 4'-0" HORIZONTALLY FROM INSIDE FOUNDATION WALL. HIGH DENSITY RIGID INSULATION TO BE USED HORIZONTALLY IN WAREHOUSE AREA. (SEE STRUCTURAL DRAWINGS FOR REINFORCING, CONTROL JOINTS LOCATIONS AND DETAILS).

FLOOR SYSTEM #1
POURED-IN-PLACE 7" THICK CONCRETE SLAB ON GRADE WITH STEEL REINFORCING AS SPECIFIED IN STRUCTURAL DRAWINGS. PROVIDE CONTINUOUS 10-MIL POLYETHYLENE VAPOR BARRIER OVER 6" COMPACTED STONE BASE PRIOR TO PLACING CONCRETE SLAB IN ENTIRE BUILDING. PROVIDE VERSA FLEX JOINT FILL OVER BOND BREAKER FILLER AT COLUMNS AND CONCRETE SLAB SAWCUT CONTROL JOINTS. (SEE STRUCTURAL DRAWINGS FOR FLOOR SLAB REINFORCING, CONTROL JOINT LOCATIONS AND SPECIFIC INFORMATION.)

STOOP SYSTEM #1
5" SLAB-ON-GRADE CONCRETE STOOP WITH POSITIVE SLOPE AWAY FROM THE DOOR OVER 48" DEEP, 5' X 5' FORMED-IN-PLACE FROST RESISTANT FOUNDATION WALL WITH STONE (5" - 6" ROCK) MATERIAL BACKFILL.

EXTERIOR WALL SYSTEM #1
10" ACTUAL OR PRECASTER ENGINEER PREFERENCE, INSULATED (3"/4"/3") R-14 MIN., LOAD-BEARING ARCHITECTURAL PRECAST CONCRETE PANELS WITH REVEALS AND FINISH AS DEPICTED IN EXTERIOR ELEVATIONS. EXTERIOR FACE OF PANELS TO BE LIGHT ACID ETCHED WHITE & GRAY CONCRETE (SEE EXTERIOR MATERIAL SCHEDULE). ALL DOOR AND WINDOW OPENINGS TO BE FORMED WITH INTEGRAL DRIP AT THE HEAD OF THE OPENING AND POSITIVE SLOPED SILL. PROVIDE SEALANT AND BACKER ROD AT ALL VERTICAL PANEL JOINTS (INTERIOR AND EXTERIOR). (SEE ELEVATIONS AND WALL SECTIONS FOR LOCATIONS OF REVEALS, PANEL ARTICULATIONS, AND WALL PANEL LAYOUT.) REFER TO EXTERIOR MATERIAL FINISH SCHEDULE FOR PAINT COLOR SELECTIONS.

GLAZING SYSTEM #1
VISION GLASS: 1" INSULATED LIGHT GRAY TINTED LOW-E GLASS. ALUMINUM GLAZING SYSTEM: "TRIFAB 451UT SYSTEM" BY KAWNEER OR EQUAL. THIS IS A CENTER GLAZED STOREFRONT SYSTEM - 2" WIDE x 4 1/2" DEEP IN CLEAR ANODIZED ALUMINUM FINISH. 1" INSULATED LOW-E, TINTED GLASS UNITS WITH THERMAL BREAK, SILL FLASHING, EXTERIOR METAL CLOSURES AND SHIMS ATTACHED TO EXTERIOR PRECAST WALL PANEL. 2" WIDE MULLION COVERS TYPICAL UNLESS NOTED OTHERWISE. ALL DOORS TO BE MEDIUM STILE FRAMES.

GLASS COMPOSITION
INSULATED GLASS: 1" GRAY TINTED INSULATED GLASS UNIT IN THERMALLY BROKEN BLACK ANODIZED ALUMINUM FRAME; 1/4" CLEAR, 1/2" AIR SPACE, 1/4" LOW-E COATING ON GRAY TINTED. PROVIDE SAMPLE TO ARCHITECT FOR APPROVAL.

ROOF SYSTEM #1
60-MIL SINGLE-PLY EPDM BALLASTED MEMBRANE ON ONE (1) LAYER OF 2.3" POLYISOCYANURATE INSULATION WITH INTEGRAL BARRIER AND ONE (1) LAYER OF 2.3" POLYISOCYANURATE INSULATION WITH STAGGERED JOINTS AND MINIMUM R-26 VALUE. PROVIDE TAPERING OF ROOF INSULATION AS REQUIRED FOR AND FLAT STRUCTURE AREAS TO ROOF DRAINS. 20 GA. MINIMUM METAL DECK OVER STRUCTURAL STEEL JOISTS. STRUCTURAL STEEL TO PITCH TO ROOF DRAINS - SEE STRUCTURAL DRAWINGS.

ROOF ACCESS LADDER #1
PROVIDE AND INSTALL CAGED INTERIOR STEEL ROOF ACCESS LADDER WITH INTERMEDIATE PLATFORM FOR ROOF ACCESS PER OSHA REQUIREMENTS INSIDE MECHANICAL ROOM. PRIME AND PAINT GRAY.

ROOF HATCH #1
PROVIDE TYPE "GS" SIZE 3'-0" WIDE x 3'-0" LONG ROOF ACCESS HATCH BY BILCO ON STRUCTURALLY FRAMED OPENING - SEE STRUCTURAL DRAWINGS. HATCH TO BE FINISH PAINTED.

WALL COPING / GRAVEL STOP SYSTEM #1
PREFINISHED 2-PIECE METAL WALL COPING WITH 6" FACE ON 2x WOOD ROOF BLOCKING, ANCHORED SECURELY TO TOP OF PRECAST WALL @ 4'-0" O.C. WITH 3/8" DIAMETER ANCHORS. EXTEND ROOF MEMBRANE OVER WALL AND TERMINATE UNDER COPING SYSTEM AT PARAPET WALL CONDITIONS. COLOR LIGHT GRAY. PROVIDE GRAVEL STOP ROOF COPING AT A MAJORITY OF ROOF AREA.

EXIT MAN DOOR #1
14 GA. GALVANIZED INSULATED LAMINATED CORE HOLLOW METAL DOOR (FLUSH), PRIMED AND PAINTED; COLOR TBD. INSULATED HOLLOW METAL FRAMES W/ THRESHOLD, WEATHERSTRIPPING AND DRIP CAP HEAD.

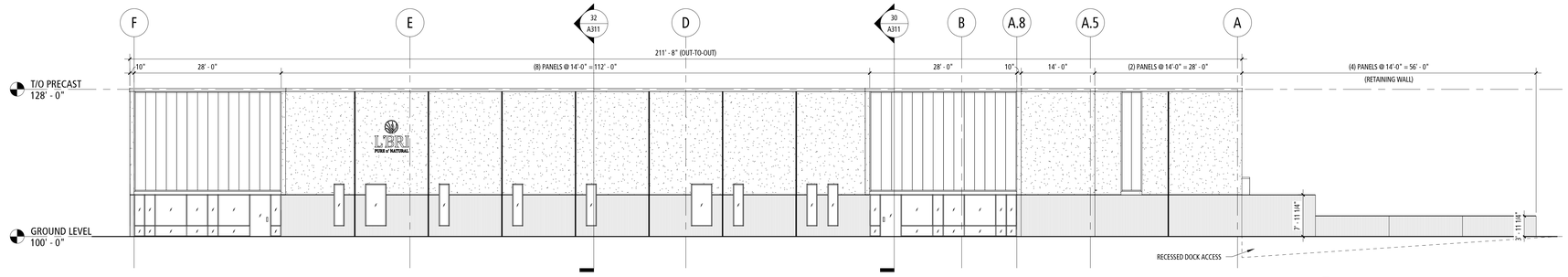
OVERHEAD DOOR #1
12'-0" x 14'-0" INSULATED (R10) PREFINISHED STEEL OVERHEAD DOOR WITH (2) VISION PANELS AND ELECTRIC OPERATOR. VERTICAL TRACK AND FRAME ASSEMBLY TO BE GALVANIZED STEEL. EXTERIOR FACE OF DOOR TO BE PREFINISHED WHITE.

OVERHEAD DOOR #2
9'-0" x 10'-0" HEAVY DUTY INSULATED (R10) PREFINISHED STEEL OVERHEAD DOOR WITH (2) VISION PANELS AND WEATHERSTRIPPING. VERTICAL TRACK ASSEMBLY AND FRAME TO HAVE GALVANIZED FINISH. ELECTRIC OPERATOR WITH 40" SWING ARM DOCK LIGHT. PROVIDE DOCK SEAL WITH 40 OZ. VINYL HYPALON ARMOR PLEATS WITH 8" EXPOSURE AND FULLY ADJUSTABLE HEAD CURTAINS. VERIFY SEAL AND OTHER REQUIREMENTS WITH MANUFACTURER. PROVIDE 7'X8', 35,000# MECHANICAL DOCK LEVELER (RITE-HITE OR EQUAL) AT RECESSED DOCK DOOR LOCATIONS-VERIFY PIT DIMENSIONS WITH DOCK LEVELER MFGR. PROVIDE WEATHER SEALS, RUBBER DOCK BUMPERS WITH ¾" DIA. GALVANIZED EXPANSION BOLTS FOR ANCHORING. EXTERIOR FACE OF DOOR TO BE PREFINISHED WHITE.

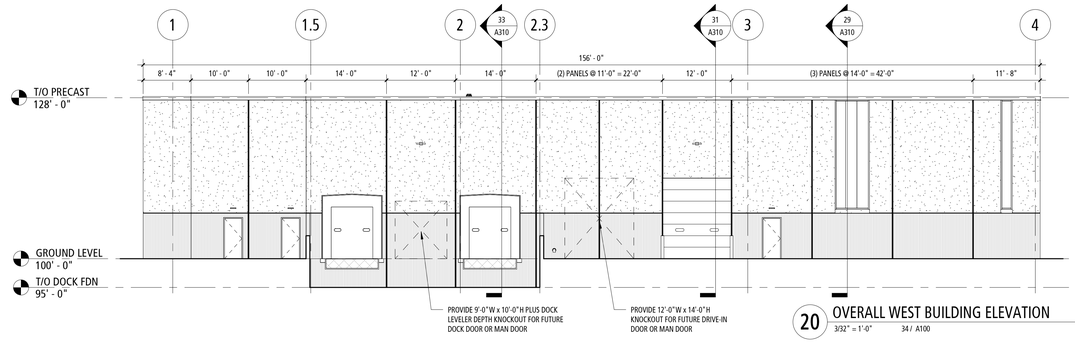
BOLLARD SYSTEM #1
6" DIAMETER, 4'-0" TALL CONCRETE FILLED PIPE BOLLARD, EXTEND DOWN 4'-0" BELOW SLAB. CROWN TOP OF CONCRETE. PAINT "SAFETY YELLOW."

BOLLARD SYSTEM #1 (INTERIOR ALT. - MECHANICAL MOUNT)
6" DIAMETER, 4'-0" TALL CONCRETE FILLED PIPE BOLLARD, MECHANICALLY MOUNTED TO FLOOR SLAB. CROWN TOP OF CONCRETE. PAINTED "SAFETY YELLOW."

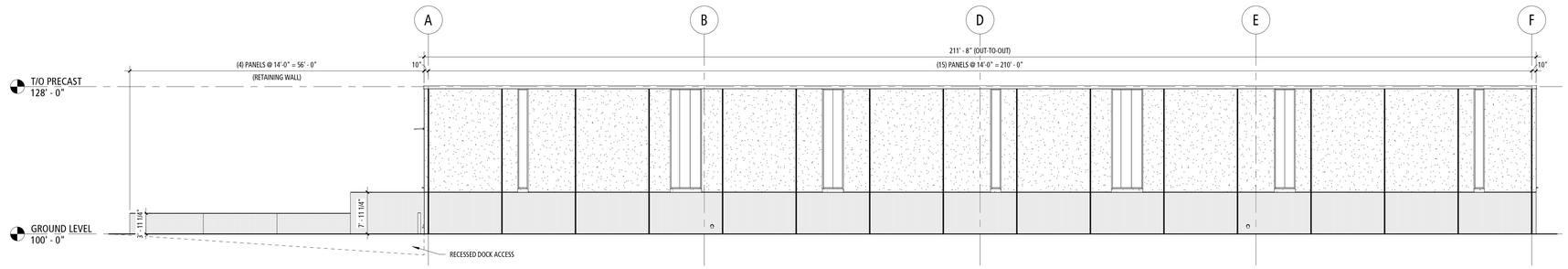
BOLLARD SYSTEM #2
4'-0" TALL RITE-HITE WARDEN SERIES DOOR GUARDS MECHANICALLY MOUNTED TO FLOOR SLAB AND EXTERIOR WALL SYSTEM. PAINT "SAFETY YELLOW."



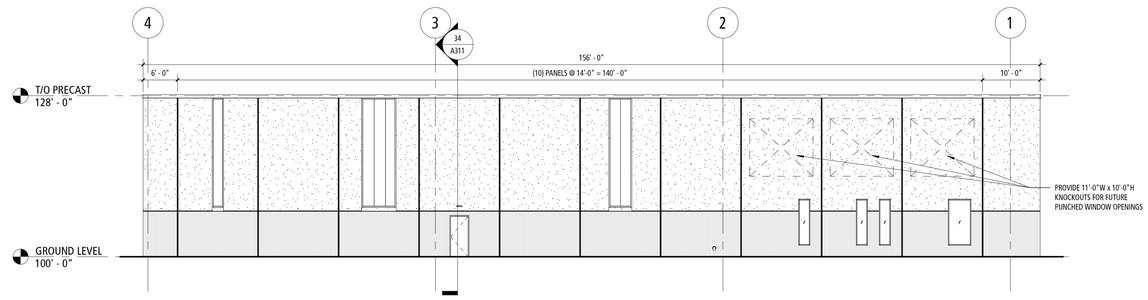
13 OVERALL NORTH ELEVATION
3/32" = 1'-0" 34 / A100



20 OVERALL WEST BUILDING ELEVATION
3/32" = 1'-0" 34 / A100



27 OVERALL SOUTH BUILDING ELEVATION
3/32" = 1'-0" 34 / A100



34 OVERALL EAST BUILDING ELEVATION
3/32" = 1'-0" 34 / A100

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PROJECT INFORMATION:

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PROPOSED DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

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BUILDING ELEVATIONS

A200

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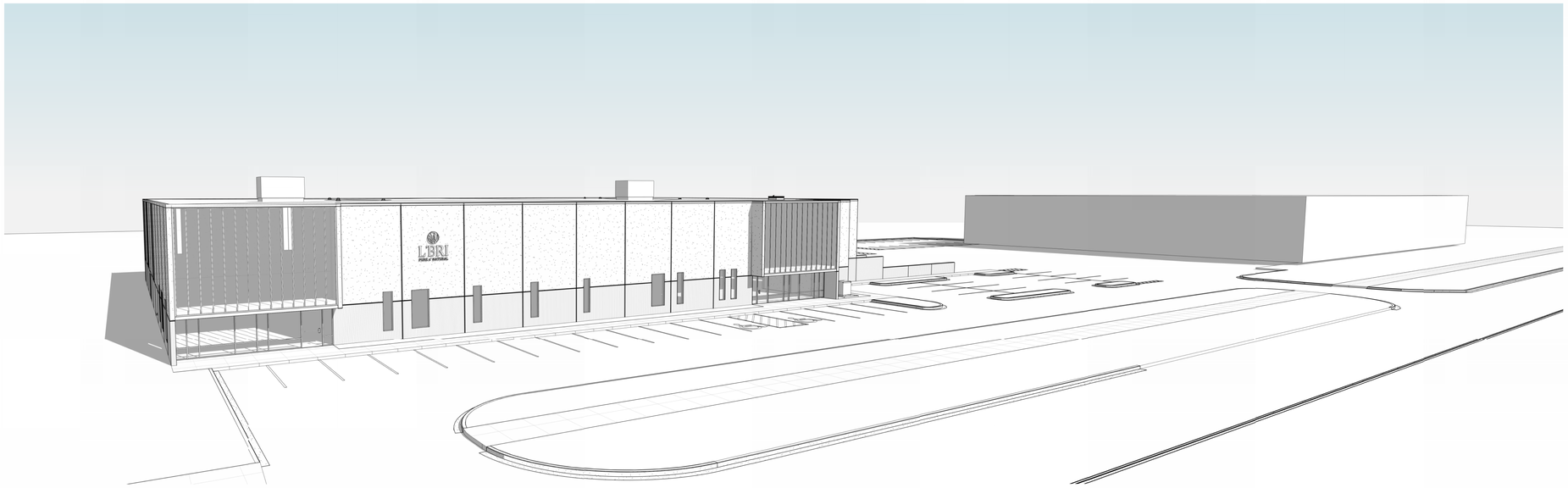
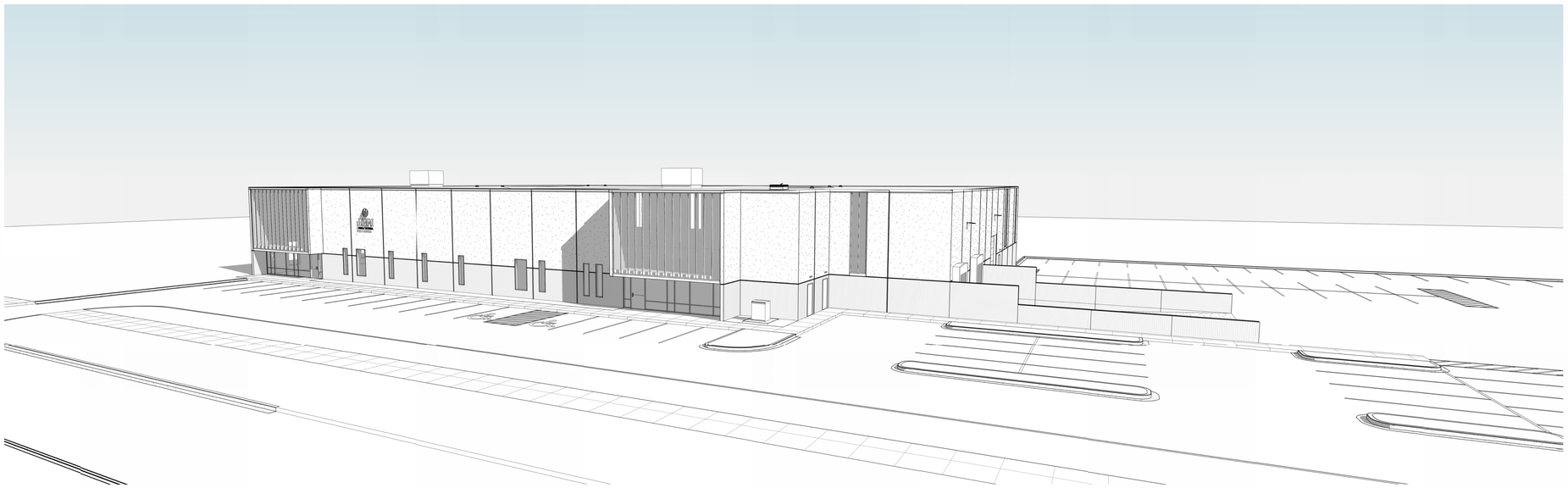


14 NORTHEAST CORNER HIGH PERSPECTIVE



35 NORTHWEST CORNER HIGH PERSPECTIVE

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PERSPECTIVE VIEWS

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14 NORTHWEST CORNER FAR PERSPECTIVE

35 NORTHWEST CORNER PERSPECTIVE

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PERSPECTIVE VIEWS

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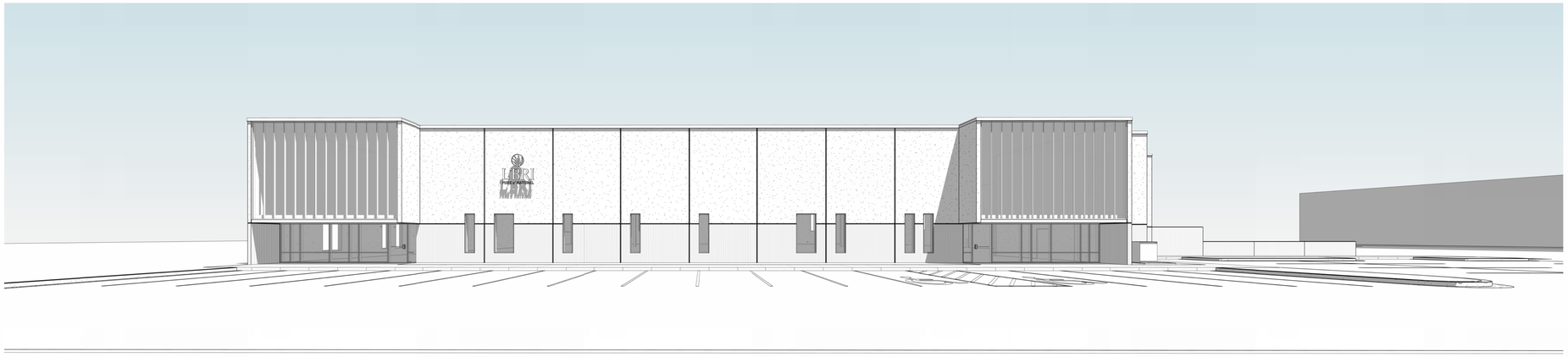

14 NORTH PERSPECTIVE

35 NORTHEAST CORNER PERSPECTIVE

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REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

RENDERING

A253

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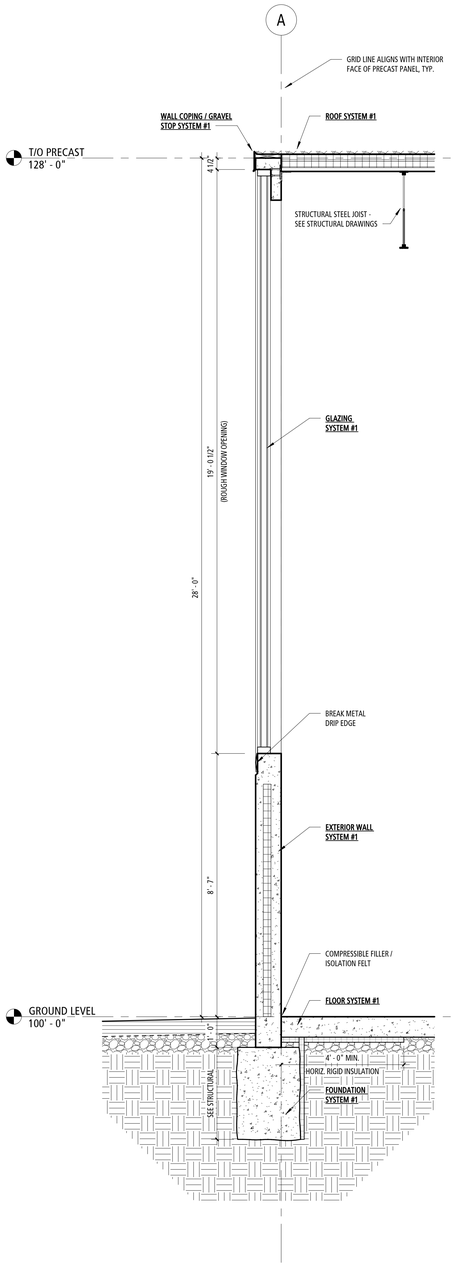
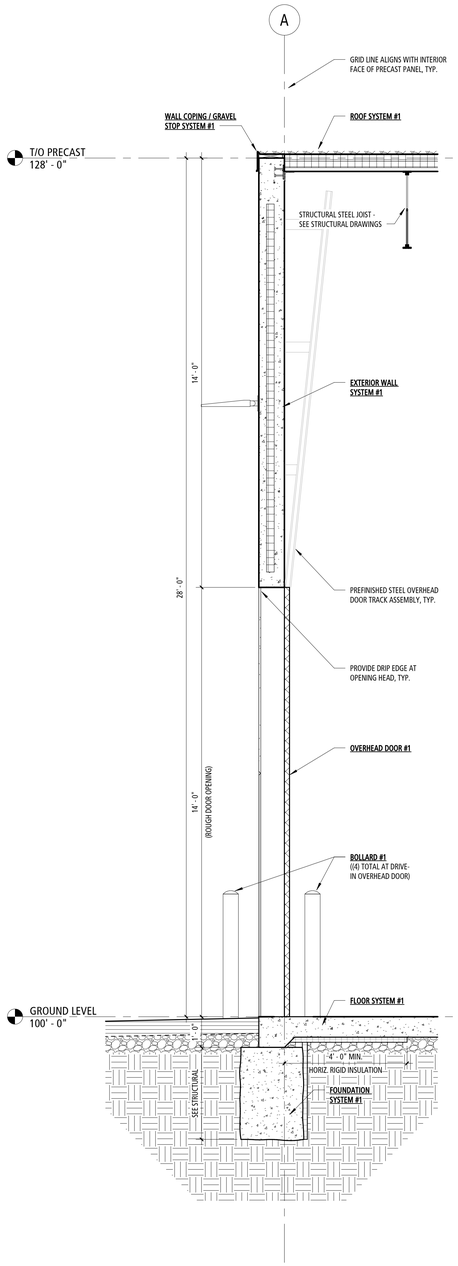
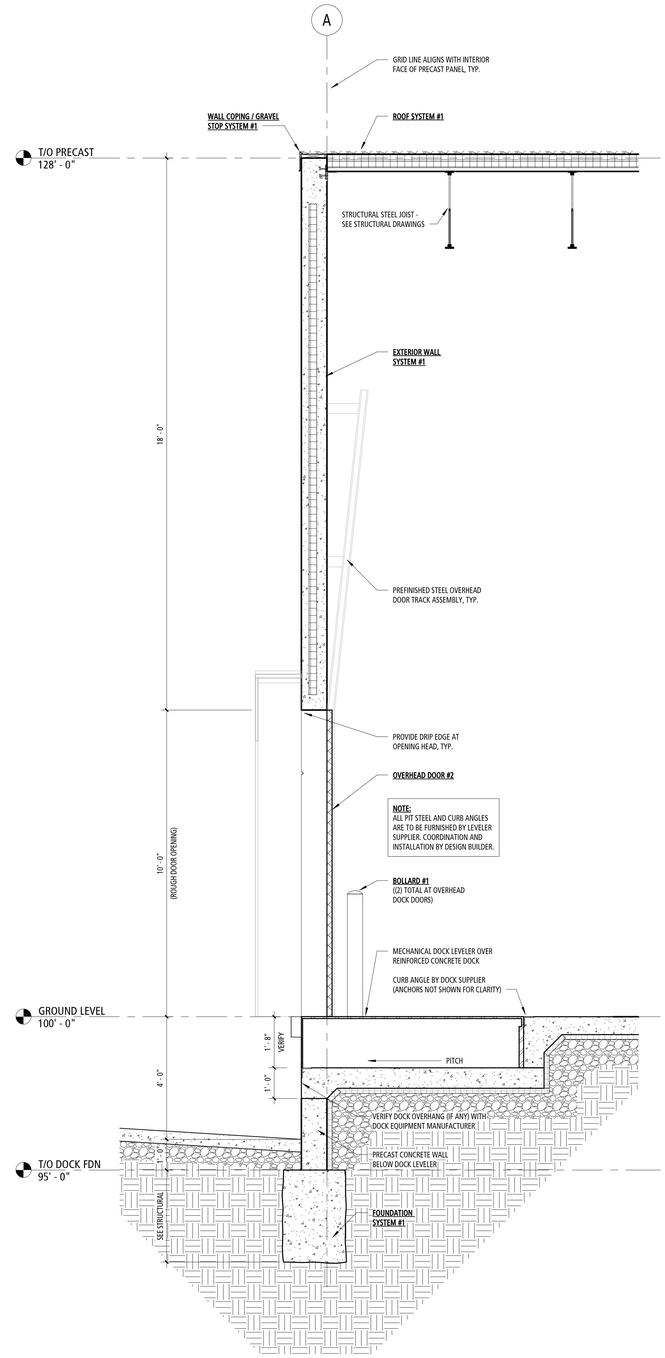


29 WALL SECTION
1/2" = 1'-0" 34 / A100



31 WALL SECTION
1/2" = 1'-0" 34 / A100



33 WALL SECTION
1/2" = 1'-0" 34 / A100

JAK architecture + interior design
JAKnetter Architects
N16 W23217 STONE RIDGE DRIVE, SUITE 300
WAUKESHA, WI 53188 | www.jaknetter.com
office 262 513 9800 | fax 262 513 9815

PROJECT INFORMATION:

L'BRI PURE N' NATURAL
PROPOSED DEVELOPMENT

909 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

VILLAGE OF MUKWONAGO
PLAN COMMISSION

REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

WALL SECTIONS

A310

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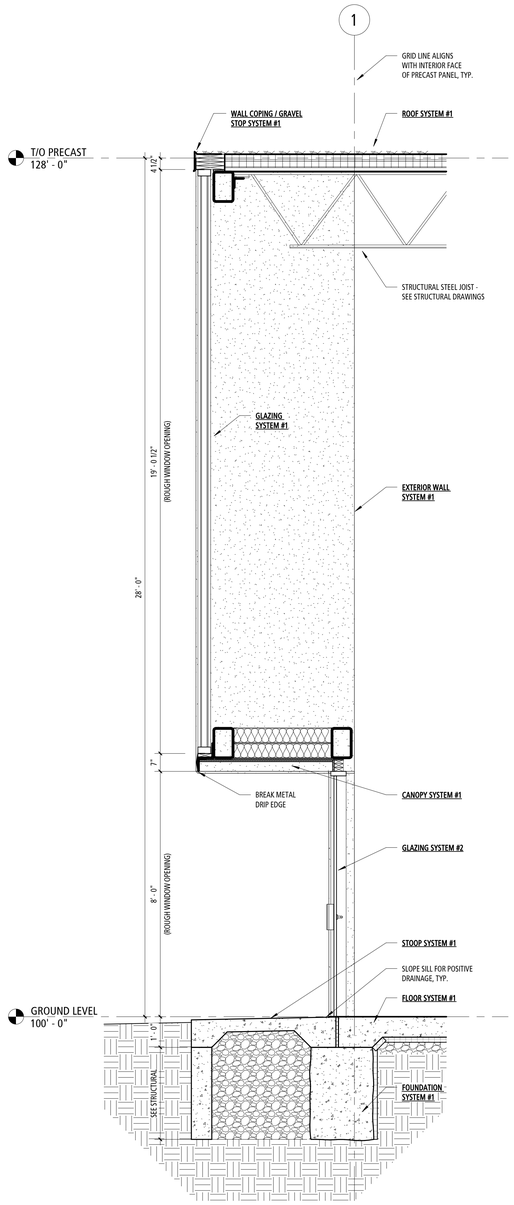
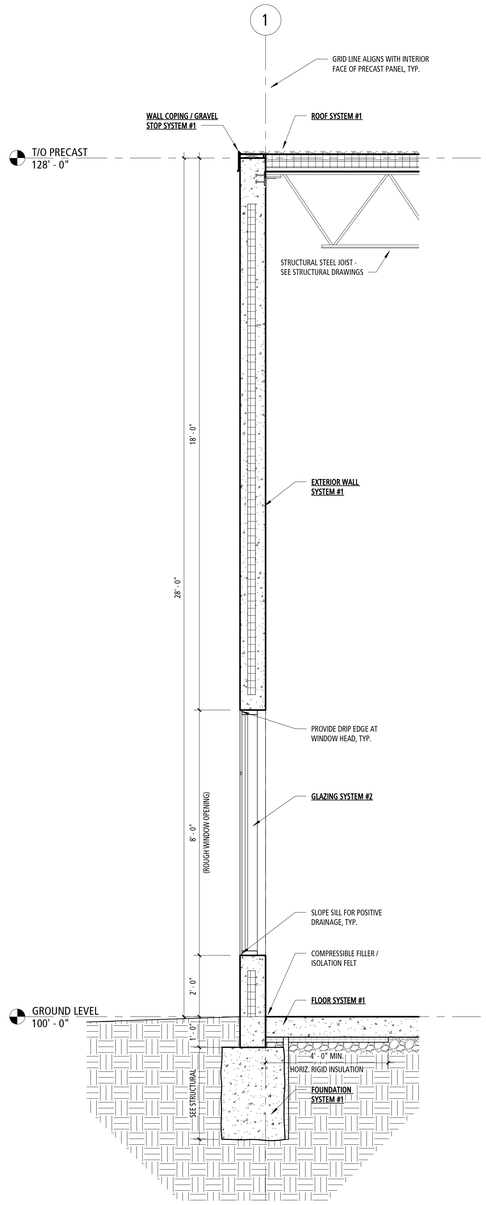
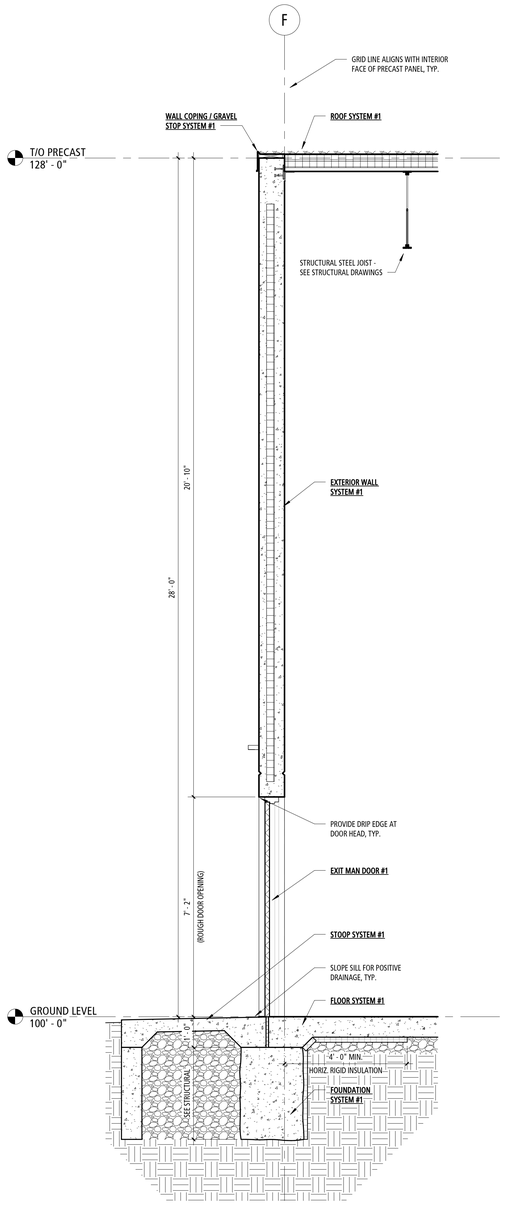


30 WALL SECTION
1/2" = 1'-0" 34 / A100



32 WALL SECTION
1/2" = 1'-0" 34 / A100



34 WALL SECTION
1/2" = 1'-0" 34 / A100

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PROPOSED DEVELOPMENT

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MUKWONAGO, WI 53149

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VILLAGE OF MUKWONAGO
PLAN COMMISSION

REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

WALL SECTIONS

A311

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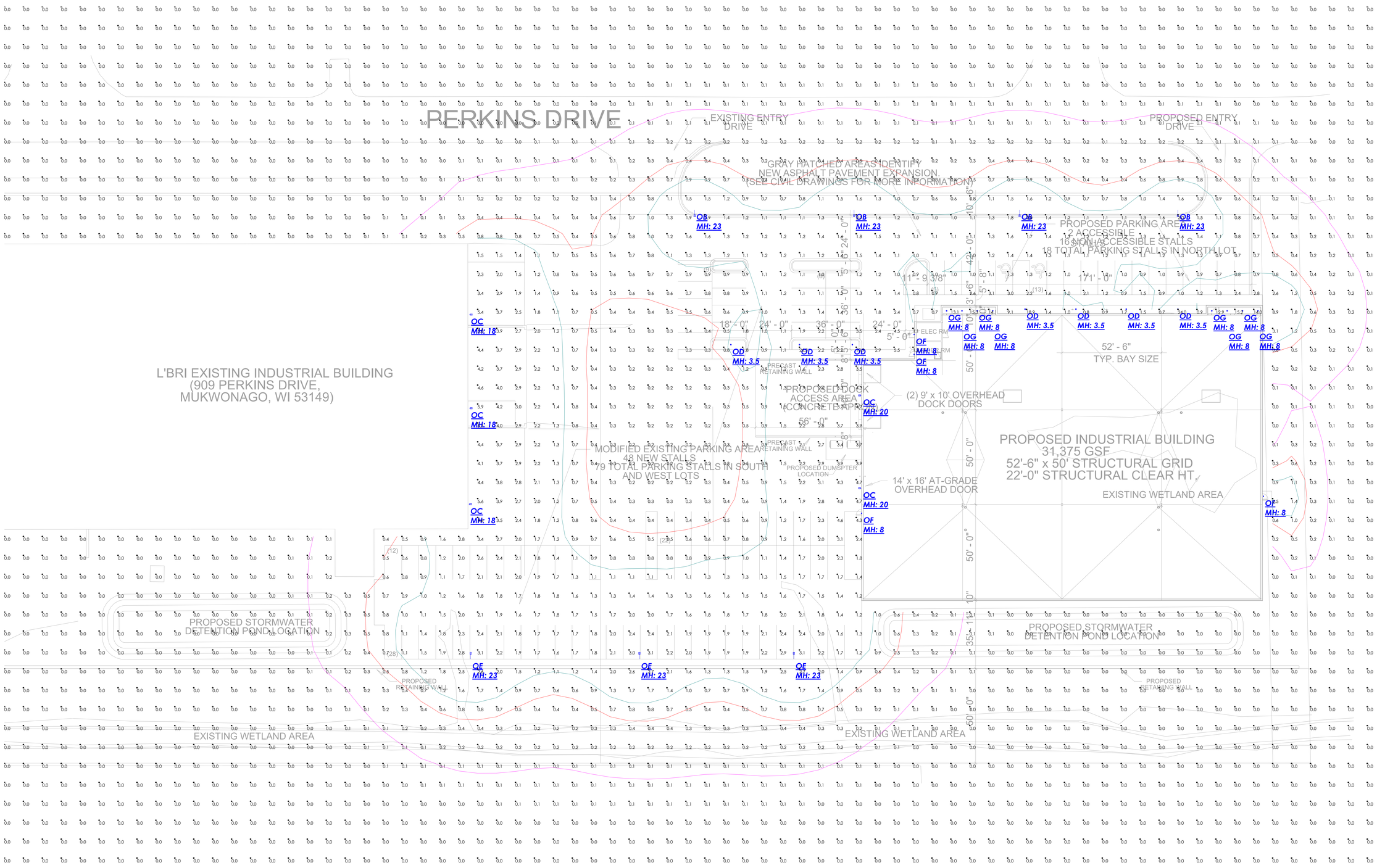


Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Illuminance	Fc	0.40	26.3	0.0	N.A.	N.A.

Luminaire Schedule								
Symbol	Qty	Label	Manufacturer	Description	Arrangement	Lum. Lumens	Lum. Watts	LLF
	4	OB	Visionaire Lighting LLC	VSX-II-T4L-10L-4K-UNV-AM-XX (20' POLE WITH 3' BASE)	Single	8888	70	0.900
	5	OC	Visionaire Lighting LLC	VSX-II-T4L-15L-4K-UNV-WM-(WH, SWH, GP, GY, SL)	Single	13949	101.7	0.900
	7	OD	Visionaire Lighting LLC	LSO-B-S41-T1-20LC-1-4K-UNV-AB-XX	Single	1500	13	0.900
	3	OE	Visionaire Lighting LLC	VSX-II-T4L-15L-4K-UNV-AM-XX (20' POLE WITH 3' BASE)	Single	13949	101.7	0.900
	4	OF	MULE LIGHTING, INC.	MERU-LED-ACEM-WH-IH	Single	1581	16.4	0.900
	8	OG	COOPER LIGHTING SOLUTIONS - HALO	LCR6-21-9FS-E0 XX - HL6RSMF	Single	2329	24.3	0.900

1. Standard Reflectance of 80/50/20 unless noted otherwise
2. Not a Construction Document, for Design purposes only
3. Standard indoor calc points @ 30" A.F.F. unless noted otherwise
4. Standard outdoor calc points @ Grade unless noted otherwise
5. Egress calc points @ 0" A.F.F.
6. Mlazgar Associates assumes no responsibility for installed light levels due to field conditions, etc.

MLAZGAR ASSOCIATES
16350 W. GLENDALE DR.
NEW BERLIN, WI 53151
(p) 414-943-1915
(f) 952-943-8088
www.mlazgar.com

#	Date	Comments

Revisions

RLMA Project #: 162875
Drawn By: EP
Date:8/29/2024
Scale: 1" = 20' 0"

PHOTOMETRIC SITE PLAN

L'BRI PUR N'NATURAL
MUKWONAGO, WI

ES100

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

*Universal Arm Mount (UAM) Version Shown.

Project Name:

Catalog Number:

Type: OB Fixture Type

The new VSX-II Array LED Series offers clean, functional styling that is defined by its sleek low profile design and rugged construction. It combines the latest LED Array technology, advanced LED thermal management and provides outdoor lighting that is both energy efficient and aesthetically pleasing.

The LED's performance and the driver's life are maximized by enclosing them in two separate die cast aluminum housings.

The VSX-II Array LED fixture is offered with lumen packages ranging from 5,000 - 25,000. Ten optical distribution patterns are available. Choose between 3000, 4000 or 5000 Kelvin temperature of the LEDs.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The VSX-II Array LED series is an exceptional choice for commercial parking lots, office complexes, architectural projects, and other general lighting projects.

Ordering Information

MODEL	OPTICS	LUMENS	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS	OPTIONS
VSX-II	T1 Type 1; T2 Type 2; T3 Type 3; T3L Type 3 Long; T4 Type 4; T4L Type 4 Long; T4A Type 4 Automotive; T5SR Type 5 Short Round; T5LR Type 5 Long Round; T5LS Type Long Square	5L; 10L; 15L; 20L; 25L	3K 3000K; 4K 4000K; 5K 5000K	UNV 120-277V; 8 347V; 5 480V	AM Arm Mount; SAM Straight Arm Mount W/ Terminal Block (New Construction); UAM Universal ArmW/ Terminal Block Mount (Retrofit); MAF Mast Arm Fitter; KM Knuckle Mount; WM Wall Mount *Requires BAWP; AWM Adjustable Wall Mount; *Round Pole Plate Adapters (RPP) are to be ordered separately. *BAWP to be ordered separately	BZ Bronze; BK Black; SBK Smooth Black; WH White; SWH Smooth White; GP Graphite; GY Grey; SL Silver Metallic; CC Custom Color	PCR-120; PCR-208; PCR-240; PCR-277; PCR-347; PCR-480 Photocell & Receptacle; PER; 5PINPER; 7PINPER 3, 5, or 7 Pin Photo Receptacle w/shorting cap Requires Dimming Driver; DIM 0-10v Dimming Driver; RPP-3"; RPP-4"; RPP-5" Round Pole Plate Adaptor; VWC Visionaire Wireless Controls *Consult Factory	WSC-8 Motion Sensor 8' Mounting Height; WSC-20 Motion Sensor 9-20' Mounting Height; WSC-40 Motion Sensor 21-40' Mounting Height *The WSC option will require (1) FSIR 100 remote for programing; UMAP Universal Mast arm fitter; ECLS Egg Crate Louver Shield; ADJLS Adjustable Louver Light Shield; BD Barn Door Shield	UPMA-S Universal Square Pole Mount Adaptor; UPMA-R Universal Round Pole Mount Adaptor; BAWP Cast Wall Plate; ROT-R Rotated Optics Right Side; ROT-L Rotated Optics Left Side; CLS Backside cutoff shield *Not to be used with KM; RCLS Rightside cutoff shield *Not to be used with KM; LCLS Leftside cutoff shield *Not to be used with KM; HS House shield

VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

*Universal Arm Mount (UAM) Version Shown.

Project Name:

Catalog Number:

Type: OC Fixture Type

The new VSX-II Array LED Series offers clean, functional styling that is defined by its sleek low profile design and rugged construction. It combines the latest LED Array technology, advanced LED thermal management and provides outdoor lighting that is both energy efficient and aesthetically pleasing.

The LED's performance and the driver's life are maximized by enclosing them in two separate die cast aluminum housings.

The VSX-II Array LED fixture is offered with lumen packages ranging from 5,000 - 25,000. Ten optical distribution patterns are available. Choose between 3000, 4000 or 5000 Kelvin temperature of the LEDs.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The VSX-II Array LED series is an exceptional choice for commercial parking lots, office complexes, architectural projects, and other general lighting projects.

Ordering Information

MODEL	OPTICS	LUMENS	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS	OPTIONS
VSX-II	T1 Type 1; T2 Type 2; T3 Type 3; T3L Type 3 Long; T4 Type 4; T4L Type 4 Long; T4A Type 4 Automotive; T5SR Type 5 Short Round; T5LR Type 5 Long Round; T5LS Type Long Square	5L; 10L; 15L; 20L; 25L	3K 3000K; 4K 4000K; 5K 5000K	UNV 120-277V; 8 347V; 5 480V	AM Arm Mount; SAM Straight Arm Mount W/ Terminal Block (New Construction); UAM Universal ArmW/ Terminal Block Mount (Retrofit); MAF Mast Arm Fitter; KM Knuckle Mount; WM Wall Mount *Requires BAWP; AWM Adjustable Wall Mount; *Round Pole Plate Adapters (RPP) are to be ordered separately. *BAWP to be ordered separately	BZ Bronze; BK Black; SBK Smooth Black; WH White; SWH Smooth White; GP Graphite; GY Grey; SL Silver Metallic; CC Custom Color	PCR-120; PCR-208; PCR-240; PCR-277; PCR-347; PCR-480 Photocell & Receptacle; PER; 5PINPER; 7PINPER 3, 5, or 7 Pin Photo Receptacle w/shorting cap Requires Dimming Driver; DIM 0-10v Dimming Driver; RPP-3"; RPP-4"; RPP-5" Round Pole Plate Adaptor; VWC Visionaire Wireless Controls *Consult Factory	WSC-8 Motion Sensor 8' Mounting Height; WSC-20 Motion Sensor 9-20' Mounting Height; WSC-40 Motion Sensor 21-40' Mounting Height *The WSC option will require (1) FSIR 100 remote for programing; UMAP Universal Mast arm fitter; ECLS Egg Crate Louver Shield; ADJLS Adjustable Louver Light Shield; BD Barn Door Shield	UPMA-S Universal Square Pole Mount Adaptor; UPMA-R Universal Round Pole Mount Adaptor; BAWP Cast Wall Plate; ROT-R Rotated Optics Right Side; ROT-L Rotated Optics Left Side; CLS Backside cutoff shield *Not to be used with KM; RCLS Rightside cutoff shield *Not to be used with KM; LCLS Leftside cutoff shield *Not to be used with KM; HS House shield

VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

LUSSO Bollard LED Specifications

Shown with Serenity Lens

Project Name:

Catalog Number:

Type: OD Fixture Type

The Lusso Bollard LED Series continues the unique contemporary design inspired by the sleek styling of the Lusso family. Separating the Driver(s) from the individual cast aluminum LED engines: optimize the life of the LEDs and the Driver(s); and maximizes the lumen output of the fixture.

Six optical distribution patterns are available. Choose between 3K, 4K or 5K Kelvin temperature of the LED's.

A durable polyester powdercoat finish is guaranteed for five years; and is available in standard or custom colors.

The Lusso Bollard LED Series is an exceptional choice for low level lighting applications.

Ordering Information

MODEL	HEIGHT	OPTICS	SOURCE	CURRENT	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS
LSO-B	S36 Straight 36"; S41 Straight 41"	T1 Type 1; T2 Type 2; T3 Type 3; T4 Type 4; T5 Type 5; T5W Type 5 Wide	20LC	1 175mA; 3 350mA; 5 530mA; 7 700mA	3K 3000K; 4K 4000K; 5K 5000K	UNV 120-277V	AB Anchor Base	BK Black; SBK Smooth Black; BZ Bronze; GP Graphite; GY Grey; SL Silver Metallic; WH White; SWH Smooth White; FG Forest Green; VD Verdigris Green; CC Custom Color	PC-120 Button Type Photocell; PC-208 Button Type Photocell; PC-240 Button Type Photocell; PC-277 Button Type Photocell; DIM 0-10v Dimming Driver; LDL Lightly Diffused Lens; HDL High Diffused Lens; GFI GFI Receptacle Standard location is 18" from base

VISIONAIRE LIGHTING

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

*Universal Arm Mount (UAM) Version Shown.

Project Name:

Catalog Number:

Type: OE Fixture Type

The new VSX-II Array LED Series offers clean, functional styling that is defined by its sleek low profile design and rugged construction. It combines the latest LED Array technology, advanced LED thermal management and provides outdoor lighting that is both energy efficient and aesthetically pleasing.

The LED's performance and the driver's life are maximized by enclosing them in two separate die cast aluminum housings.

The VSX-II Array LED fixture is offered with lumen packages ranging from 5,000 - 25,000. Ten optical distribution patterns are available. Choose between 3000, 4000 or 5000 Kelvin temperature of the LEDs.

A durable polyester powder coat finish is guaranteed for five years; and is available in standard or custom colors.

The VSX-II Array LED series is an exceptional choice for commercial parking lots, office complexes, architectural projects, and other general lighting projects.

Ordering Information

MODEL	OPTICS	LUMENS	KELVIN	VOLTAGE	MOUNTING	FINISH	OPTIONS	OPTIONS	OPTIONS
VSX-II	T1 Type 1; T2 Type 2; T3 Type 3; T3L Type 3 Long; T4 Type 4; T4L Type 4 Long; T4A Type 4 Automotive; T5SR Type 5 Short Round; T5LR Type 5 Long Round; T5LS Type Long Square	5L; 10L; 15L; 20L; 25L	3K 3000K; 4K 4000K; 5K 5000K	UNV 120-277V; 8 347V; 5 480V	AM Arm Mount; SAM Straight Arm Mount W/ Terminal Block (New Construction); UAM Universal ArmW/ Terminal Block Mount (Retrofit); MAF Mast Arm Filter; KM Knuckle Mount; WM Wall Mount *Requires BAWP; AWM Adjustable Wall Mount; *Round Pole Plate Adapters (RPP) are to be ordered separately. *BAWP to be ordered separately	BZ Bronze; BK Black; SBK Smooth Black; WH White; SWH Smooth White; GP Graphite; GY Grey; SL Silver Metallic; CC Custom Color	PCR-120; PCR-208; PCR-240; PCR-277; PCR-347; PCR-480 Photocell & Receptacle; PER; 5PINPER; 7PINPER 3, 5, or 7 Pin Photo Receptacle w/shorting cap Requires Dimming Driver; DIM 0-10v Dimming Driver; RPP-3"; RPP-4"; RPP-5" Round Pole Plate Adaptor; VWC Visionaire Wireless Controls *Consult Factory	WSC-8 Motion Sensor 8' Mounting Height; WSC-20 Motion Sensor 9-20' Mounting Height; WSC-40 Motion Sensor 21-40' Mounting Height *The WSC option will require (1) FSIR 100 remote for programing; UMAP Universal Mast arm fitter; ECLS Egg Crate Louver Shield; ADJLS Adjustable Louver Light Shield; BD Barn Door Shield	UPMA-S Universal Square Pole Mount Adaptor; UPMA-R Universal Round Pole Mount Adaptor; BAWP Cast Wall Plate; ROT-R Rotated Optics Right Side; ROT-L Rotated Optics Left Side; CLS Backside cutoff shield *Not to be used with KM; RCLS Rightside cutoff shield *Not to be used with KM; LCLS Leftside cutoff shield *Not to be used with KM; HS House shield

VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

MERU Series

LED GENERAL & EMERGENCY LIGHTING

PROJECT: FIXTURE TYPE: OF Fixture Type LOCATION: CONTACT/PHONE:

PRODUCT DESCRIPTION

The MERU Series is an architectural, low-profile outdoor light, offering "normally On" AC and emergency lighting with powerful LED illumination. The housing is fully sealed and gasketed, and has an IP65 rating. Designed for wall mounting with universal K/O pattern in back-plate for easy installation to most standard size junction boxes. Includes a single ½" NPT conduit entry in the top, center of the housing. Illumination provided by 8 high power LEDs which achieve 1,800 lumens in AC and 600 lumens in emergency. LED color at 4000K.

PRODUCT SPECIFICATIONS

CONSTRUCTION
Die cast aluminum housing with superior heat sink • Scratch resistant Polyester powder coat finish • UV resistant polycarbonate lens • Snap-fit housing and mounting plate are held together by four stainless steel clips • Universal mounting pattern molded into the back plate • 1/2" threaded top access for surface conduit installation • Silicone rubber seal with hollow center, shape adaptive design protects the electrical components • Junction box neoprene seal is attached to the back plate for a weather proof installation • Dark Bronze or White textured finish.

ELECTRICAL
Dual Voltage 120-277V 60Hz input • Solid state charging and switching • Battery low voltage disconnect • AC power indicator and test switch at the bottom of the unit • Standard with Self Diagnostics to monitor proper operation.

LAMPS
Supplied with eight (8) LG SMD 4000K LED'S • L70 > 72,000hours • 17 Watts total (32 Watts with IH option) • 1800 Lumens in AC mode, 600 Lumens in Emergency mode • Full cut-off optics for Dark Sky compliance

BATTERY
Maintenance-free, long-life rechargeable NiCad battery will operate fixture for a minimum of 90 minutes in the event of a power outage • 24 hour recharge after 90 minute discharge.

CODE COMPLIANCE
UL924 • Listed for wet location applications (0°C-50°C) • Optional "IH" cold weather package for (-40°C-50°C) • IP65 Rated • NFPA 101 Life Safety Code compliant • NFPA 70 • NEC and OSHA compliant • DLC Listed • RoHS Compliant

WARRANTY
5-year warranty. Product specifications subject to change without notice.

ACEM Model (NiCad Battery Backup)

Integral photocell: Unit operates as a dusk to dawn luminaire and in the event of a power failure as an emergency light.
Remote Switched: The integral photocell can be defeated to allow remote switching for normal operation. In the event of a power failure unit operates as an emergency light.

BUG Rating: B1-U1-G0

INSTALLATION

MOUNTING
Suitable for indoor or outdoor wall mounting on junction box, or with surface conduit using the supplied 1/2" threaded top access • Mounting plate has molded universal mounting pattern for simple mounting over junction box.

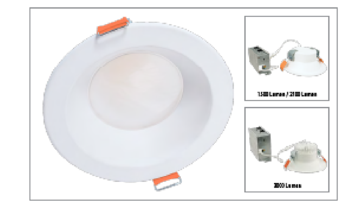
ORDERING INFORMATION

model	operation mode	housing color	options
MERU-LED	ACEM = General & Emergency Lighting	DB = Dark Bronze	Self-Diagnostics & Photocell (default standard)
	AC = General Lighting	WH = White	IH = Internal Heater
		BK = Black	
		NK = Nickel	

Ordering Example: MERU-ACEM-DB

Mule Lighting, Inc. 46 Baker Street Providence, RI 02905 800 556-7690 P 401 941-2929 F www.mulelighting.com

Project		Catalog #	OG Fixture Type	Type	
Prepared by		Notes		Date	



HALO

LCR6

6-Inch Round Canless LED Downlight and Wallwash

Typical Applications
Residential • Multi-family • Mixed-Use

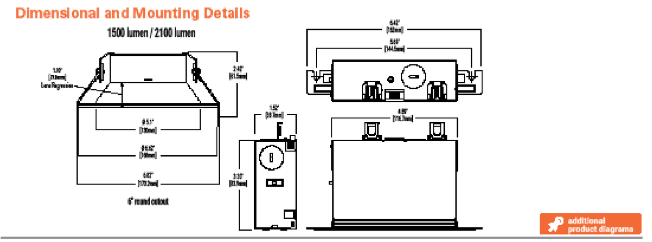
Interactive Menu
- Order Information page 2
- Product Specifications page 2
- Photometric Data page 3
- Energy & Performance Data page 3
- Product Warranty
- Dimming Guide

Product Certification

Product Features

Top Product Features
- Select from 6 CCTs via switch; 2700K, 3000K, 3500K, 4000K, 5000K, 6500K CCT; 90 CRI
- Up to 3000 Lumens; IC rated
- Canless - does not require recessed housing or junction box
- Dual Dim: 0-10V and Phase Cut, dimmable down to 5%
  - 0-10V dimmable down to 5% on 3000 Lumen model
- Wet location listed for showers and protected ceilings - Downlights only

Dimensional and Mounting Details



additional product diagrams

COOPER Lighting Solutions

PS51814723 page 1

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

Photometric Optical Summary

T1 Type 1 · T2 Type 2 · T3 Type 3 · T3L Type 3 Long · T4 Type 4 · T4L Type 4 Long · T4A Type 4 Automotive · T5SR Type 5 Short Round · T5LR Type 5 Long Round · T5LS Type 5 Long Square

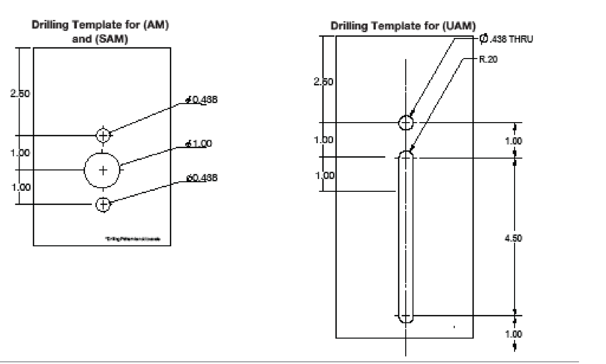
EPA Data	0.58	.92	1.16	1.45	1.40	1.48

VSX-II-KM EPA DATA

Degree of Tilt	0º	10º	20º	30	40º	50º	60º	70º	80º	90º
EPA	0.14	0.18	0.24	0.39	0.54	0.79	1.05	1.36	1.74	2.20

Dimensions

Width:	VSX-II 12.6"
Depth:	VSX-II 23"
Height:	VSX-II 4"
Overall Height:	VSX-II 8"
Weight:	26 LBS



VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

Photometric Optical Summary

T1 Type 1 · T2 Type 2 · T3 Type 3 · T3L Type 3 Long · T4 Type 4 · T4L Type 4 Long · T4A Type 4 Automotive · T5SR Type 5 Short Round · T5LR Type 5 Long Round · T5LS Type 5 Long Square

EPA Data	0.58	.92	1.16	1.45	1.40	1.48

VSX-II-KM EPA DATA

Degree of Tilt	0º	10º	20º	30	40º	50º	60º	70º	80º	90º
EPA	0.14	0.18	0.24	0.39	0.54	0.79	1.05	1.36	1.74	2.20

Dimensions

Width:	VSX-II 12.6"
Depth:	VSX-II 23"
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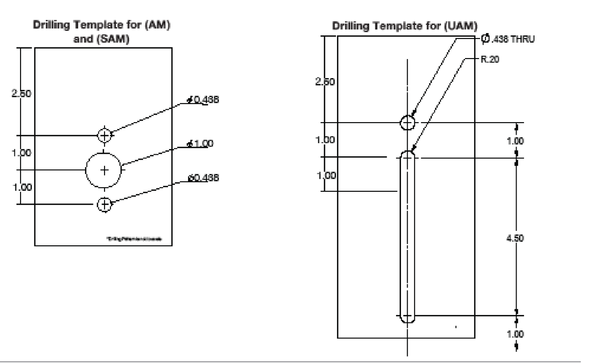


VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

Features & Specifications

LUSSO Bollard

Housing
The Lusso Bollard consists of a durable, cast aluminum housing and lens door frame.

Driver Compartment
The LED light engines are constructed of heavy-duty, cast aluminum. The extruded pole contains the driver(s), allowing for cooler operation and longer life. Silicone gasketing is utilized throughout the fixture for weather tight operation.

Thermal Management
· The Lusso Bollard Series provides excellent overall thermal management by maximizing the fixture's heat sink capabilities. This enables the Lusso Bollard Series to withstand higher ambient temperatures and drive currents without degrading LED life. The Lusso Bollard Series has a very low thermal resistance rating.
· The L70 test determines the point in an LEDs life when it reaches 70 percent of its initial output. The Lusso Bollard Series LEDs have been determined to last a minimum of 100,000+ hours in 25° C environments when driven at 700 mA.

Optical System
· Serenity Lens is offered in two different diffusion levels, high and lightly diffused.
· The highest lumen output LEDs are utilized. High performance acrylic optics feature industry-leading Type 1, 2, 3, 4, 5 and 5W optical distributions. LED light assemblies come in 20 LEDs.
· The optical system qualifies as IES full cutoff to restrict light trespass, glare and light pollution.
· CRI values are 70.

Quali-Guard® Finish
· The finish is a Quali-Guard® textured, chemically pretreated through a multiple-stage washer, electrostatically applied, thermoset polyester powder coat finish, with a minimum of 3-5 millimeters thickness. Finish is oven-baked at 400º F to promote maximum adherence and finish hardness.
· All finishes are available in standard and custom colors.
· Finish is guaranteed for five (5) years.

Mounting
The Lusso Bollard Luminaire is easily mounted with anchor bolt kit.

Electrical Assembly
· The Bollard Sconce is supplied with a choice of 175, 350, 530, 700 mA high-performance LED drivers, that accept 120v, 60 Hz to 60 Hz input.
· Power factor of 90%.
· Rated for -40° to 55° C operations.
· 10 kV surge protector supplied as standard.

Warranty
· Five (5) year Limited Warranty on electrical components.
· Five (5) year on finish.
For full warranty information, please visit visionairelighting.com.

Options
· Button Style Photocell
· 0-10v Dimming Driver
· Lightly Diffused Lens
· High Diffused Lens

Listings
· The Lusso Bollard is cUL Listed, suitable for wet locations.
· IP65 Rated
· Powder Coated Tough™
· IDA Certification

DesignLights Consortium (DLC) qualified Product. Some configurations of this product family may not be DesignLights Consortium (DLC) listed, please refer to the DLC qualified products list to confirm listed configurations. http://www.designlights.org/
3000K must be selected for IDA certification.
Fixed mount must be selected for IDA dark sky certification.

ELECTRICAL LOAD (A)

Ordering Nomenclature	System Watts	120	208	240	277	347	480
LSO-B-T5W-20LC-1	13	0.11	0.06	0.05	0.05	0.04	0.03
LSO-B-T5W-20LC-3	22	0.18	0.11	0.09	0.08	0.06	0.06
LSO-B-T5W-20LC-5	34	0.28	0.16	0.14	0.12	0.10	0.07
LSO-B-T5W-20LC-7	45	0.38	0.22	0.19	0.16	0.13	0.09

19645 Rancho Way • Rancho Dominguez, CA 90220 • Phone: 310 512 6480 Fax 310 512 6486
www.visionairelighting.com

13

Control Number: AREA-VSX-II-AR-08_19_2022

VSX-II Array LED Specifications

Photometric Optical Summary

T1 Type 1 · T2 Type 2 · T3 Type 3 · T3L Type 3 Long · T4 Type 4 · T4L Type 4 Long · T4A Type 4 Automotive · T5SR Type 5 Short Round · T5LR Type 5 Long Round · T5LS Type 5 Long Square

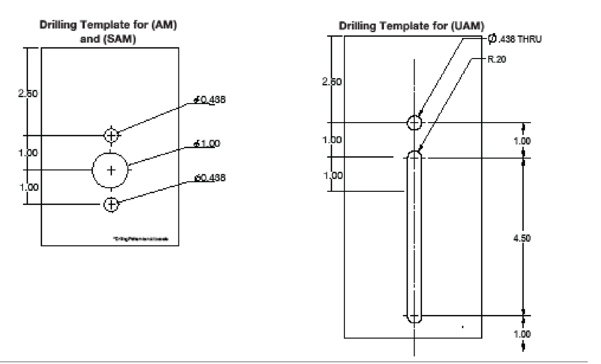
EPA Data	0.58	.92	1.16	1.45	1.40	1.48

VSX-II-KM EPA DATA

Degree of Tilt	0º	10º	20º	30	40º	50º	60º	70º	80º	90º
EPA	0.14	0.18	0.24	0.39	0.54	0.79	1.05	1.36	1.74	2.20

Dimensions

Width:	VSX-II 12.6"
Depth:	VSX-II 23"
Height:	VSX-II 4"
Overall Height:	VSX-II 8"
Weight:	26 LBS



VISIONAIRE LIGHTING

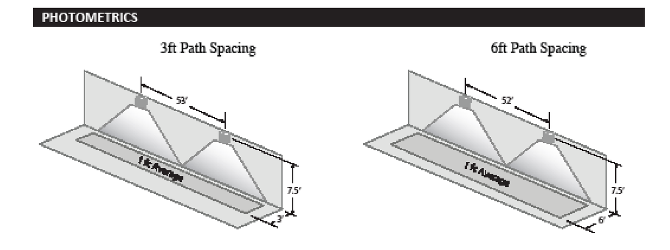
VL-PA-ING-001-F37 REV. 0 CRCABR22-03

MERU Series

LED GENERAL & EMERGENCY LIGHTING

PROJECT: FIXTURE TYPE: LOCATION: CONTACT/PHONE:

PHOTOMETRICS

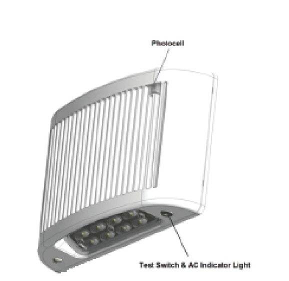


SELF DIAGNOSTICS

Included Self Diagnostic

Diagnostic Indicator / Test Switch

Manual Testing
Press button once - 1 minute test
Press button twice - 5 minute test
Press button 3 times - 30 minute test
Press button 4 times - 90 minute test



Mule Lighting, Inc. 46 Baker Street Providence, RI 02905 800 556-7690 P 401 941-2929 F www.mulelighting.com

HALO LCR6

Order Information

SAMPLE ORDER NUMBER: LCR615RD9FSE020

Product Specifications

Module
- Module construction includes LED Array, reflector, lens, housing and heat sink where applicable
- Integral aluminum heat sink provides passive thermal cooling achieving L70 at 50,000 hours in IC and non-IC applications
- LED module provides 1.10" lens regression

LED Array
- Mid power LED array provides a uniform source with high efficiency and no pixilation.
- 90 CRI minimum, R9 greater than 50
- Color Accuracy within 3 SDCM and 7 SDCM at the CCT endpoints and 4 SDCM in between the endpoints, provide color accuracy and uniformity.
- Correlated Color Temperature (CCT) has a selectable range from 2700K to 6500K (factory default 3000K)
- Use the switch to choose between 2700K, 3000K, 3500K, 4000K, 5000K and 6500K CCT

Optical Assembly
- Regressed flat lens provides uniformity, UGR ≤ 10
- Exceeds ENERGY STAR® color angular uniformity requirements

Remote Driver/Junction Box
- Metal driver/junction box with captive hinged junction box cover. Listed for (6) #12 AWG 90°C splice conductors, 2-in, 2-out plus (2) ground
- (4) 1/2" conduit pry-outs
- (2) Slide-N-Side™ non-metallic (NM) wire traps all accepts 14-2, 14-3, 12-2, 12-3 U.S and 14-2, 14-3, 12-2 Canadian NM cable
- (3) 4-port push wire nuts with clear caps for quick and reliable mains voltage connections
- Integral keyhole mounting slots facilitate direct mounting to building structure or new construction mounting frame

Driver
- Integral 120-277V, 50/60Hz constant current driver provides noise free operation
- Dual Dim with 0-10V and Phase Cut options for 100% to 5% dimming up to 2100 lumen
- 0-10V dimming for 3000 lumen
- Continuous, flicker-free dimmer from 100% to 5%
- Plenum rated inline electrical quick connect provides low voltage connection to fixture fitting

Installation
- Can be installed in 3/8" to 1-1/4" thick ceilings
- Cutout can utilize standard round hole saw sizes, cutout template provided
- Mousetrap springs hold fixture fitting securely in the ceiling eliminating light leaks
- Can be removed from below the ceiling for service or replacement

Mounting / Retention
- The LCR6 requires no housing or third party junction box
- The remote enclosure may be used in direct contact with insulation.
- Installer must cut template out of drywall and install into aperture with the clips compressed.
- When released, the mousetrap springs will rest on to the back side of the drywall
- Not for installation in recessed cans

Emergency Battery Backup
- Emergency battery backup only available in downlight versions, not available in wall wash versions
- Emergency battery backup up to 90 minutes
- Emergency battery backup light will be at 6500K CCT
- Emergency battery backup is a separate battery junction box provided with unit.

Compliance
- UL Certified for US and Canada, type IC suitable for direct contact with air permeable insulation
- Not for use in direct contact with spray foam insulation, reference NEMA LSD57-2013
- Wet location listed and IP44 ingress protection rated, covered ceiling only (downlights only)
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC 47CFR Part 15 consumer limits, CAN ICES-005(B)/NMB-005 (B)
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- Can be used for State of California Title 24 high efficacy LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2019 JA8 High Efficacy Lighting
- ENERGY STAR® certified, reference "Certified Light Fixtures" database (does not apply to EM versions)

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/warranty

COOPER Lighting Solutions

PS51814723 page 2

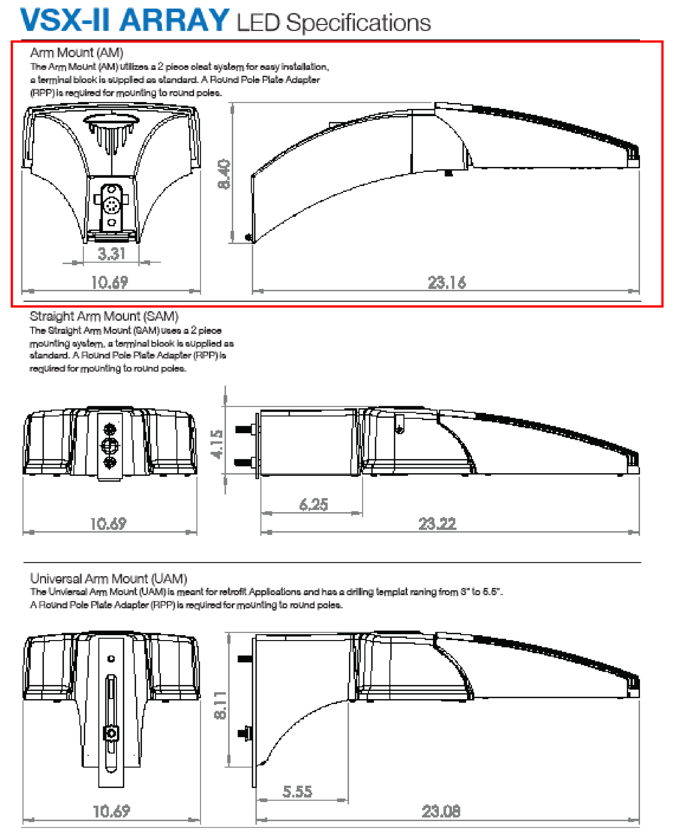
VSX-II ARRAY LED Specifications

Control Number: AREA-VSX-II-AR-08_19_2022

Arm Mount (AM)
The Arm Mount (AM) utilizes a 2 piece cleat system for easy installation, a terminal block is supplied as standard. A Round Pole Plate Adapter (RPP) is required for mounting to round poles.

Straight Arm Mount (SAM)
The Straight Arm Mount (SAM) uses a 2 piece mounting system, a terminal block is supplied as standard. A Round Pole Plate Adapter (RPP) is required for mounting to round poles.

Universal Arm Mount (UAM)
The Universal Arm Mount (UAM) is meant for retrofit Applications and has a drilling templat raning from 3" to 5.5". A Round Pole Plate Adapter (RPP) is required for mounting to round poles.



VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

VSX-II ARRAY LED Specifications

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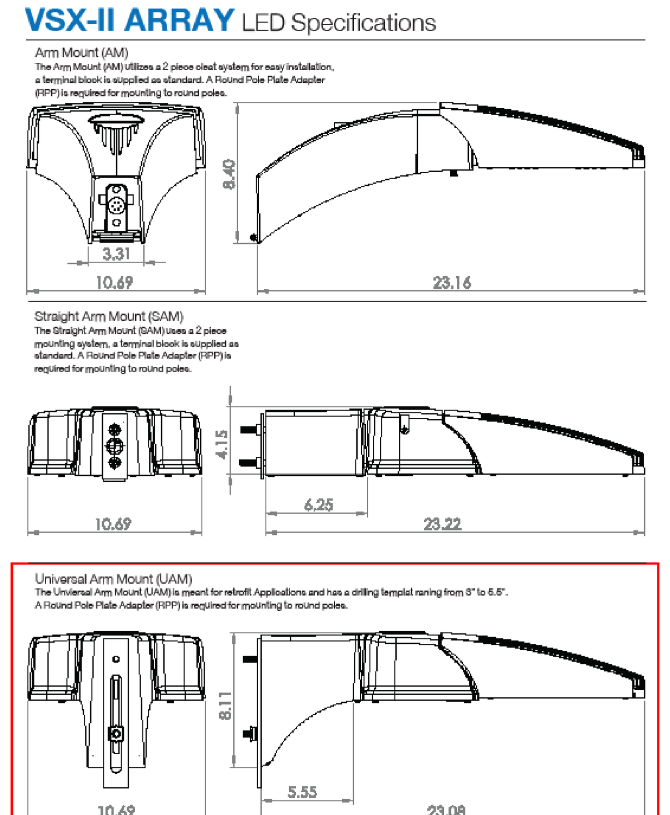


VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

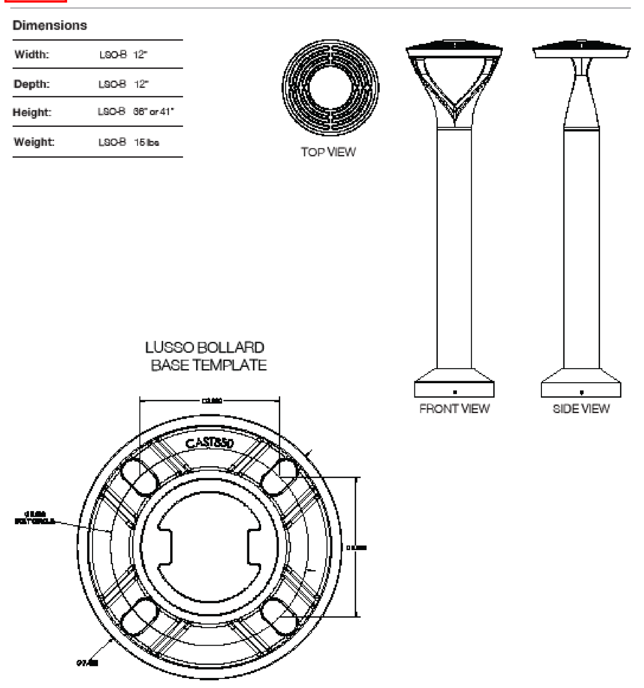
LUSSO Bollard LED Specifications

Photometric Optical Summary

T1 Type 1 · T2 Type 2 · T3 Type 3 · T4 Type 4 · T5 Type 5 · T5W Type 5 Wide

Dimensions

Width:	LSO-B 12"
Depth:	LSO-B 12"
Height:	LSO-B 36" or 41"
Weight:	LSO-B 15 lbs



VISIONAIRE LIGHTING

VSX-II ARRAY LED Specifications

Control Number: AREA-VSX-II-AR-08_19_2022

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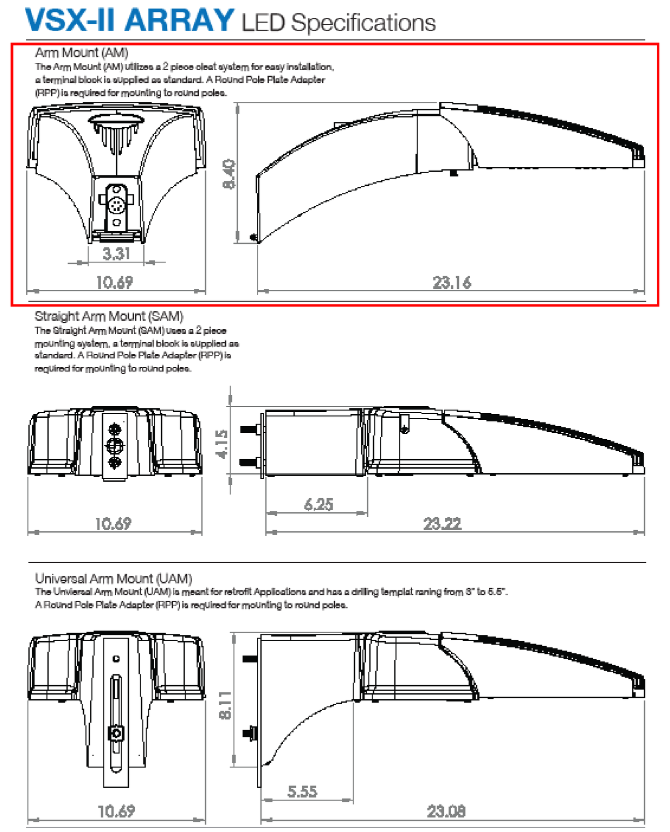
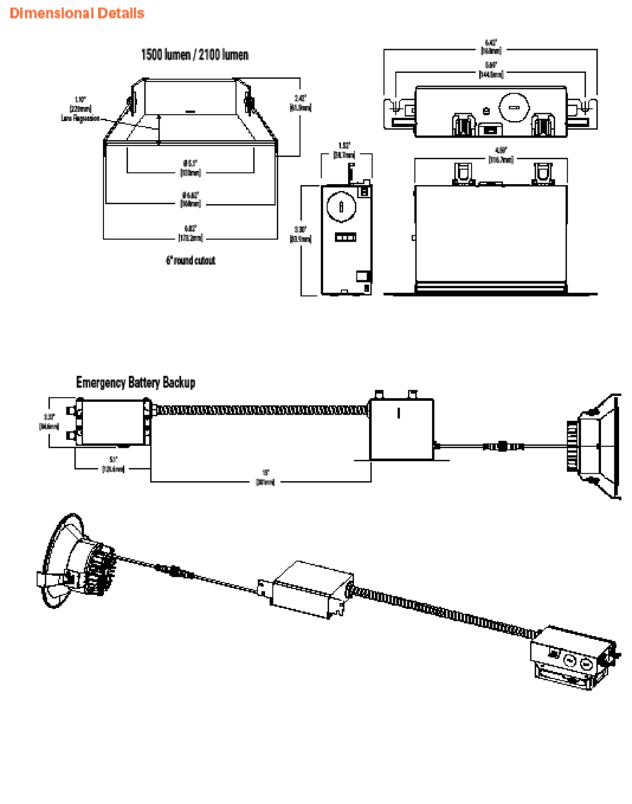


VISIONAIRE LIGHTING

VL-PA-ING-001-F37 REV. 0 CRCABR22-03

HALO LCR6

Dimensional Details



COOPER Lighting Solutions

PS51814723 page 6

JAK architecture + interior design
JAKnetter Architects
N16 W23217 STONE RIDGE DRIVE, SUITE 300
WAUKESHA, WI 53188 | www.jaknetter.com
office 262 513 9800 | fax 262 513 9815

PROJECT INFORMATION:

L'BRI PURE N' NATURAL PROPOSED DEVELOPMENT

927 PERKINS DRIVE
MUKWONAGO, WI 53149

DRAWING ISSUANCE:

VILLAGE OF MUKWONAGO PLAN COMMISSION

REVISIONS

#	DATE	DESCRIPTION

3 SEPTEMBER 2024

PROJECT NUMBER	PROJECT MANAGER
24002-00	JK

LIGHT FIXTURE SPEC SHEETS

ES200

© JAKnetter Architects

Stormwater Management Plan for

L’ Bri Pure n’ Natural

Mukwonago, Wisconsin

Project No. 910-001

September 3, 2024

Stormwater Management Plan for

L’ Bri Pure N’ Natural
909 Perkins Drive
Mukwonago, Wisconsin

Prepared by

Endpoint Solutions
6871 South Lovers Lane
Franklin, Wisconsin 53132

Prepared for

L’ Bri Pure n’ Natural
909 Perkins Drive
Mukwonago, WI 53149

EXECUTIVE SUMMARY

The intent of this document is to present the results of the stormwater management plan for the proposed L' Bri Pure N' Natural expansion, on Perkins Drive, in the Village of Mukwonago, Waukesha County, WI.

The results of this report provide the water quantity and water quality calculations required by the Village of Mukwonago and the State of Wisconsin.

- See Table 1 for water quantity summary
- See Table 2 for water quality summary

Table 1 – Water Quantity

		Total	
	Existing Total (cfs)	Required Total (cfs)	Proposed Total (cfs)
2-year, 24-hour Storm	7.77	7.77	5.99
10-year, 24-hour Storm	12.82	7.77	7.03
100-year, 24-hour Storm	24.20	12.82	9.65

Table 2 – Proposed SLAMM Output

	Total Suspended Solids	Percent Reduction
Proposed Site w/o Controls	**2,573 lbs.**	
Proposed Site with Controls	**795.0 lbs.**	**69.10 %**

	Total Phosphorus	Percent Reduction
Proposed Site w/o Controls	**5,671 lbs.**	
Proposed Site with Controls	**2,060 lbs.**	**63.67 %**

INTRODUCTION

Endpoint Solutions has been retained by L'Bri Pure N' Natural to prepare a stormwater management plan for the proposed building at 909 Perkins Drive, in the Village of Mukwonago, Waukesha County, Wisconsin. The existing property is approximately 5.6 acres. The property consists of two parcels with an existing building and parking areas along the western one and the western half of the eastern parcel. The eastern parcel is being developed with an industrial building and associated parking areas. Current plans for this property are included as Appendix E.

Stormwater management for this site is regulated by the Village of Mukwonago and the Wisconsin Department of Natural Resources (WDNR) NR 151, Wisconsin Administrative Code. The analysis presented in this report addresses water quality and water quantity.

METHOD OF ANALYSIS

Hydrologic analysis included in this report was performed using the HydroCAD hydrologic simulation computer model, version 10.00 by HydroCAD Software Solutions LLC. The discharges were generated using the SCS Dimensionless Unit Hydrograph Method for a 24-hour duration storm. Model parameters include drainage area, SCS runoff curve number, time of concentration and 24-hour precipitation with an MSE Type III distribution.

The runoff curve number is determined by the soils, vegetation cover and impervious cover to estimate runoff in the SCS Method. Higher curve numbers mean more potential runoff. Composite curve numbers were determined from the existing and proposed land cover types.

The time of concentration is the time required for water to flow from the most remote part of the drainage area to the point of discharge. The water moves through the watershed or subbasin as sheet flow, shallow concentrated flow, open channel flow or any combination of these aforementioned items.

Table 3 – Design Storm Events

Frequency (years)	Duration (hours)	Rainfall Depth (inches)
1	24	2.40
2	24	2.70
10	24	3.81
100	24	6.18

EXISTING SITE CONDITIONS

The site is currently developed with a single building and associated parking areas and drive lanes. The existing area to the east of the building contains a parking and loading

area. The site drains to the south and east, ultimately to a ditch along the south property line of the site and heads east. Slopes are generally flat with average slopes around 1.5 - 5 percent.

According to boring logs on the site, the surface soils on site belong to NRCS Hydrologic Soil Groups D.

The existing property is one watershed (see *Existing Hydrology Exhibit in Appendix D*) that drains to the ditch network along the south side of the property. The ditch network drains east to the Mukwonago River, which is approximately 0.25 miles from the site.

Existing conditions assumed "good hydrologic conditions" for appropriate land covers. Runoff Curve Numbers were determined based on the existing cover and the above proportionate areas, resulting in an existing area RCN of 82. Time of Concentration was determined to be 4.9 minutes, and is shown on Exhibit 1 in Appendix D.

Design storms for the existing hydrology model include the 1, 2, 10, and 100-year, 24-hour storm events. See Table 4 for an existing hydrology summary. A full summary of results is located in Appendix B of this report.

Table 4 – Existing Hydrology Summary

Watershed ID	Area (acres)	Composite RCN	Tc (minutes)	Peak Discharge (cfs)		
				2-year	10-year	100-year
E1	3.123	85	4.9	7.77	12.82	24.20

PROPOSED SITE CONDITIONS

Runoff generated by the developed site is divided into three watersheds (see *Proposed Hydrology Exhibit in Appendix D*). The drainage from the majority of the proposed development (P1) discharges to the proposed stormwater management facility along the southeast side of the property. Drainage from a portion of the new parking area and a portion of the existing buildings roof (P2) discharges to the proposed stormwater management facility along the southwest side of the property. The remainder of the site is undetained areas that drain to the north and east, through the same storm sewer network along the south edge of the property. The ultimate discharge for the entire development remains to the adjacent ditch, and on to the Mukwonago River.

WATER QUANTITY AND QUALITY DESIGN

Water quantity requirements (peak discharge rates) are regulated by The Wisconsin Department of Natural Resources NR151, Wisconsin Administrative Code and the Village of Mukwonago. Per the Village of Mukwonago rules, the site is considered a

new development, which requires the site to reduce the proposed 100 year storm to the existing 10 year, the proposed 10 year to the existing 2 year, and the proposed 2 year storm to the existing 2 year. WDNR rules are less stringent, so this report will focus on the Village requirements

Runoff curve numbers for all watersheds have been totaled according to the site plan. The watersheds were mainly impervious or small; therefore, a minimum time of concentration of 6 minutes was assigned to all drainage basins per Technical Release No. 55 recommendation.

See Table 5 for the proposed watersheds and resulting peak discharges which occur prior to detention.

Table 5 – Proposed Peak Discharge Rates (before detention)

Watershed Description	Area (acres)	CN	Tc (minutes)	Peak Discharge		
				2-year	10-year	100-year
P-1	2.187	96	6	7.78	11.30	18.65
P-2	0.746	91	6	2.29	3.48	6.07
U-1	0.190	80	6	0.36	0.65	1.32

Two bioretention facilities (B-1 and B-2) were utilized to provide the required detention. The bioretention facilities also provides the required water quality. The bioretention facilities have a single outlet pipe which drains directly to the ditch network to the south. The outlet restricts the runoff discharge rate within allowable levels of the governing authorities. The facility has an emergency overflow spillway which will provide a controlled release point in the event the primary outflow device's capacity is exceeded. The spillway discharges to a swale along the south property line, and then to the east, in accordance with existing conditions.

See Tables 6, 7 & 8 for proposed peak discharge rates and routed water surface elevations after detention.

Table 6 – Bioretention Facility B-1 (East)

Detention	Storm Event	Discharge (cfs)	Maximum Elevation	Storage (cu. ft.)
Bioretention (Top EL:787.50) (Spillway EL: 787.00) (Base EL: 784.00) (Invert EL: 781.50)	1-yr	4.53	784.71	3,749
	2-yr	4.57	784.88	4,229
	10-yr	5.10	785.54	6,358
	100-yr	6.11	787.02	12,132

Table 7 – Bioretention Facility B-2 (West)

Detention	Storm Event	Discharge (cfs)	Maximum Elevation	Storage (cu. ft.)
Bioretention (Top EL:788.00) (Spillway EL: 787.00) (Base EL: 785.50) (Invert EL: 783.00)	1-yr	1.07	784.53	846
	2-yr	1.18	784.82	1,002
	10-yr	1.47	785.67	1,714
	100-yr	2.58	786.37	3,297

Table 8 – Discharge Rates Summary (after detention)

TOTAL SITE

Storm Event	Existing	Required	Proposed
2-yr	7.85	7.85	5.99
10-yr	12.84	7.85	7.03
100-yr	24.02	12.84	9.65

Water quality requirements are regulated by WDNR NR151, Wisconsin Administrative Code and the Village of Mukwonago Municipal Code. The Village code requires best management practices to be designed to reduce the total suspended solids load of new developments by 80% and 40% for redevelopments, based on an average annual rainfall, as compared to no runoff management controls. This site is largely considered a new development by the Village; however, a portion of the site is redevelopment (existing drive aisle and parking areas), so a prorated required removal percentage was calculated to be 67.4% (Exhibit 4 in Appendix D shows where these areas were delineated).

An analysis using the approved WINSLAMM model to verify TSS removal rates has been conducted. The model utilized the bioretention facility to provide all of the treatment, and also took into account the undetained areas. For detailed calculations, see *WINSLAMM Calculations* in Appendix C.

Table 9 below summarizes the SLAMM output data.

Table 9 – Proposed SLAMM Output

	Total Suspended Solids	Percent Reduction
Proposed Site w/o Controls	**2,573 lbs.**	
Proposed Site with Controls	**795.0 lbs.**	**69.10%**

	Total Phosphorus	Percent Reduction
Proposed Site w/o Controls	**5.671 lbs.**	
Proposed Site with Controls	**2,060 lbs.**	**63.67 %**

INFILTRATION REQUIREMENTS

Stormwater infiltration requirements are regulated by WDNR NR151, Wisconsin Administrative Code and the Village of Mukwonago. These codes exempt redevelopments and infill areas from infiltration. The soils at the location (within five feet of the bottom) of the bioretention system has a least permeable soil of clay (CL), which is also an exempting condition. A Soil and Site Evaluation form is included with the Geotechnical Report found in Appendix A for additional information.

APPENDICES

Appendix A – Geotechnical Report
Appendix B – Storm Water Quantity Calculations - HydroCAD
Appendix C – Storm Water Quality Calculations – WinSLAMM
Appendix D – Hydrology Exhibits
- EX 1 – Existing Hydrology Exhibit
- EX 2 – Proposed Hydrology Exhibit
- EX 3 - WinSLAMM Exhibit
- EX 4 – WinSLAMM Prorated Area Exhibit

Appendix E – Civil Drawings
- CS – Cover Sheet
- C1 – Pre-Construction Conditions
- C2 – Demolition Plan
- C3 – Proposed Site Plan
- C4 – Proposed Grading and Erosion Control Plan
- C5 – Proposed Utility Plan
- C6 – Erosion Control Notes & Details
- C7 – General Construction Notes
- C8 – Construction Details
- C9 – Construction Details

Appendix A – Geotechnical Report

2135 South 116th Street
West Allis, WI 53227

May 3, 2024

Jason Heinonen
Endpoint Solutions Corp.
6871 South Lovers Lane
Franklin, WI 53132

Subject: Geotechnical Consulting Services
L'Bri Pure n' Natural Development
Lot 2, Perkins Drive, Mukwonago, Wisconsin

Dear Mr. Heinonen:

GeoTest, Inc. (GeoTest) has prepared this geotechnical engineering report related to the above-referenced project. This report describes the subsurface exploration and laboratory testing programs and presents recommendations regarding civil and structural engineering design aspects of the project, as well as other construction considerations.

Project Description

Endpoint Solutions is assisting with the design of a new manufacturing building located at between 909 and 941 Perkins Drive (Lot 2) in Mukwonago, Wisconsin. The location of the project is illustrated on Figure 1 in Appendix A.

The proposed development will consist of a 27,900-sf single-story, slab-on-grade building, asphalt parking and drive areas, and two stormwater management fixtures. The proposed development is illustrated on Figure 2 in Appendix A.

The property is currently undeveloped. The ground surface is mostly covered with grass, with trees on the eastern and southern portions. The ground surface is relatively flat, sloping downward from the northwest to the southeast with an elevation difference of about 7 feet. The southern portion of the property also contains defined wetlands.

Structural loads have not been provided but were estimated to not exceed 300 kips for columns and 6 kips per linear foot (klf) for walls. The finished floor elevation for the building was not provided but assumed to be about 787 feet. The proposed site grades are assumed to require about 2 to 3 feet of fills. The stormwater fixtures are proposed to have bottom elevations of 781.5 feet (east fixture) and 783 feet (west fixture).

Scope of Work

Geotechnical Subsurface Exploration

The geotechnical exploration program consisted of seven borings: three (B-2, B-3, B-5 and B-6) drilled to depths of 20 feet below the existing ground surface in building area, two (B-1 and B-4) drilled to depths of 10 feet in the parking and drive areas, and one (B-

7) drilled to a depth of 20 feet in the west stormwater fixture area. Borings could not be drilled in the southeast corner of the proposed building footprint and in the east stormwater fixture area due to inaccessibility from trees. The boring locations are identified on the Boring Location Diagram (Figure 2) in Appendix A. The ground surface elevations at the boring locations were surveyed by Endpoint Solutions Corp.

The borings were drilled using conventional hollow-stem augers. Soil samples were obtained at 2.5-foot intervals to a depth of 10 to 15 feet and 5-foot intervals thereafter. The soil samples were obtained by split-barrel sampling procedures, in general accordance with ASTM D1586. Representative portions of the samples were sealed in glass jars and returned to GeoTest for laboratory testing and classification.

Descriptive logs for each boring, which describe the method of borehole advancement, sample types, sample depths, and observations regarding soil and groundwater conditions, were prepared at the time of drilling. These logs were utilized by a GeoTest geotechnical engineer as an aid to prepare the final boring logs and cross-section included in Appendix B.

Water level information, if encountered, was noted during drilling.

All drilling and sampling procedures are described in Appendix C.

Laboratory Testing

A GeoTest geotechnical engineer examined and visually classified each sample, based on texture and plasticity, in accordance with the Unified Soil Classification System (USCS) and the US Department of Agriculture (USDA) soil classification system. The engineer grouped like soil samples into strata that are illustrated on the soil boring logs and completed the *Soil Evaluation – Stormwater Infiltration* form (SBD 10793) for B-6 and B-7. The notes included on the boring logs and SBD 10793 form and charts describing these systems of classification are included in Appendix B.

The laboratory testing program consisted of the following:

- Water content testing on all samples.
- Calibrated hand penetrometer testing (Q_p) on all cohesive (clay) samples.
- Percent passing the #200 sieve (P200) on two samples in the stormwater fixture areas.

The laboratory test results are presented on the final boring logs included in Appendix B. All laboratory procedures are described in Appendix C.

The recovered soil samples will be retained for 60 days after the date of this report. Unless other instructions as to their disposition are received, they will be discarded at that point.

Soil and Groundwater Conditions

The following narrative is a generalization of the subsurface conditions encountered at the borings. Soil conditions can vary in areas between the boring locations. For a more-detailed description of the subsurface conditions encountered at each boring location, please refer to the attached boring logs and cross-section in Appendix B.

General Soil Conditions

The general soil profile, below 2 to 18 inches of topsoil, was highly variable (illustrated on the *Cross Section* in Appendix B), consisting of mixed clayey and sandy fills to depths of 2.5 to 6 feet overlying stratified layers of native clays, silts, and sands (mostly clays). Both the fills and native sandy soils varied in their clay, silt, and gravel content.

Fill Materials - The relative density of the granular (sandy) fill samples was loose to medium dense, with N-values ranging from 7 to 10 and an average of 9. Of the five samples, one (20%) was below 10 (loose).

The consistency of the two cohesive (clay) fill samples was very stiff, with Q_p values of 4,000 pounds per square foot (psf).

Typically, moisture contents are considered high if they are above 15% in sands and 20% in clays. The moisture contents in the sandy fill samples ranged from 10.7% to 20.8%. Two (40%) samples were above 15%. The moisture content in the clayey fill samples were 16.6% and 22.4%.

Native Soils - The native cohesive samples exhibited stiff to hard consistencies, with Q_p values ranging from 2,000 psf to greater than 9,000 psf and having an average of 3,500 psf. Of the nineteen samples, fourteen (73%) were below 4,000 psf and two (11%) were above 8,000 psf.

The relative density of the native silt and granular samples was loose to dense, with N-values ranging from 8 to 64. Excluding two dense samples from B-7, the average was 12. Of the twelve samples, two (17%) were below 10 (loose) and two (17%) were above 30 (dense).

The moisture contents in the native sand samples ranged from 9.9% to 23.0%. Only one (8%) sample was below 15%.

The moisture contents in the native clay samples ranged from 17.5% to 30.7%. Of the nineteen samples, eleven (58%) were above 20%. One shallow sample from B-6 had a moisture content of 30.7%, indicative of organic content.

Groundwater Conditions

Free groundwater was encountered at all borings during drilling at depths of 2.5 to 7 feet. These elevations were about 779 feet to 782 feet.

Fluctuations in the groundwater table elevation should be expected with variations in precipitation, evapotranspiration, surface runoff, etc. Also, shallow perched groundwater conditions should be expected where relatively permeable granular soils are underlain by relatively impermeable cohesive soils, especially following precipitation events.

Analysis and Recommendations

There are seven primary issues that should be considered when planning this project.

- Fill materials exist on the property. Typically, fills are a concern for structural support because they could have been placed inconsistently and not sufficiently compacted, potentially causing excessive total and/or differential settlements for foundations. Therefore, soil improvement will be required for the building footings. Undocumented fills can also cause grading and support challenges for floor slabs and pavements.
- The bearing soils at the assumed footing elevations will be variable, including native clay and existing fills, and probably engineered (compacted) fills. It will be important to include sufficient quality-control measures during construction to ensure the bearing soils are suitable for supporting building footings.
- Occasional clean, fine sandy soils were encountered on the property that will pose excavating challenges, especially related to trench stability.
- Clayey soils were present on the property, which are sensitive to construction activity, and actions to stabilize the subgrade during construction should be planned.
- Although not encountered in the borings, it's possible that buried organic soils could exist, given the proximity to adjacent wetlands.
- The shallow soils exhibited high moisture contents that can cause grading challenges.
- Shallow groundwater was encountered that could impact site grading and foundation and utility excavations.

Foundation Support

Based on the subsurface conditions encountered at the borings, the proposed building can be supported on shallow spread footings that bear on either suitable native soils or engineered fill. With assumed bottom-of-footing elevations that range from 783 feet (exterior footings) to 785 feet (interior footings), some of the bearing soils will likely be existing, undocumented fills (see the cross-section in Appendix B). These soils are not suitable for foundation support. Therefore, some form of soil improvement is recommended. Due to the relatively shallow depth of the unsuitable soils, the most viable option would be over-excavation and replacement. It is estimated that the footing excavations would need to be extended up to 4 feet (an average of about 1.6 feet).

The foundations can be designed using an allowable bearing capacity value of 4,000 psf. Based on the subsurface conditions, properly designed and constructed footings should experience total and differential settlements of less than 1 inch and ¾ inch, respectively.

Traditionally, perimeter footings and interior footings in unheated areas should bear at a depth of at least 48 inches below the final exterior grade to provide adequate frost protection. If desired, exterior footings can bear at shallower depths by following ASCE 32-01 (American Society of Civil Engineers, Design and Construction of Frost-Protected Shallow Foundations, 2001). Interior footings not subject to frost can bear directly beneath the floor slab.

Seismic Design

The soil conditions present at a site are utilized in determining the Seismic Design Category (SDC) for structures. Part of selecting the SDC is determining the Site Class for the soils, which categorizes common soil conditions into broad classes, where typical ground motion attenuation and amplification effects are assigned. Site Class is determined based on the average properties of the soil within 100 feet of the ground surface. Geotechnical engineers use a variety of parameters to characterize the engineering properties of these soils, including general soil classifications (e.g., hard rock, soft clay, etc.), N-values, and laboratory testing.

Site Class A includes hard rock that is typically found only in the eastern United States. The types of rock typically found in the western states include various volcanic deposits, sandstones, shales, and granites that commonly have the characteristic appropriate to either Site Class B or C. Sites with very dense sands and gravels or very stiff to hard clay deposits also may qualify as Site Class C. Sites with relatively stiff cohesive or medium dense non-cohesive soils, including mixtures of clays, silts, and sands, are categorized as Site Class D. Site Class D is the most common site class throughout the United States. Sites along rivers or other waterways underlain by deep soft clay deposits are categorized as Site Class E. Sites where soils are subject to liquefaction or other ground instabilities are categorized as Site Class F and site-specific analyses are required.

Based on the types of soils present at the boring locations at this property, and their apparent engineering properties, Site Class D is assigned to the site, as defined in the International Building Code (2015) Section 1613.

Floor Slab Support

The existing soils within the proposed building footprint are suitable for support of the concrete floor slab. However, due to the presence of variable fills, the floor slab area should be proof-rolled and soft areas removed or improved prior to the placement of base course materials. An average subgrade modulus value of 150 pounds per cubic inch (pci) is appropriate.

Pavement Design

The variable fill materials and high moisture contents on the property are anticipated to provide questionable and inconsistent support of conventional pavement materials and sections. Therefore, greater than normal distress, faster deterioration, overall reduced service life, and increased maintenance is anticipated. To reduce the potential for localized settlements and provide more consistent subgrade support, a geotextile fabric (e.g., Geotex 315ST) should be placed below all base course materials.

Even with the use of a geotextile fabric, an aggressive long-term maintenance program should be developed and followed to maximize the performance and life of the pavements.

The Wisconsin Asphalt Pavement Association (WAPA) Design Guide should be utilized to design the new asphalt surface parking areas. It has been assumed that Traffic Class I is suitable for parking areas that are mainly used by light passenger vehicles and Traffic Class II for medium-loaded drive areas.

Based on the soil conditions encountered at the boring locations, the minimum pavement section should consist of the following:

Material	Traffic Class I	Traffic Class II	WisDOT Specification
Asphalt Surface Course	2 inches	2 inches	Section 460
Asphalt Binder Course	2.5 inches	3 inches	Section 460
Dense Graded Base Course	8 inches	10 inches	Section 305

The pavement sections above are not intended to support on-going construction traffic. Also, the pavement sections presented above should not be used for areas that experience heavy truck traffic, equipment or truck parking areas, entrances and exit aprons, or trash-dumpster loading zones. In these areas, a Portland Cement Concrete (PCC) pavement should be used. The PCC layer thickness is recommended to be at least 7 inches with a minimum of 6-inch-thick crushed stone base course. The reinforcement details for PCC layers and final pavement sections should be designed by the project design engineer.

These recommendations assume the subgrade is prepared as described in this report. Additional corrective action may be warranted at the time of construction, depending on the site conditions.

Hot Mix Asphalt (HMA) and base course materials should be placed and compacted following the project requirements and guidelines of WisDOT Standard Specifications for Highway and Structure Construction, section 460.3.

All pavements require regular maintenance and repair to maintain the serviceability of the pavement. However, after 20 years of service, a normal pavement structure is likely to deteriorate to a point where pavement rehabilitation may be required to maintain the serviceability.

Engineered Fill, Wall, and Utility Trench Backfill

All engineered fill, wall, and utility trench backfill should consist of inorganic materials, free of debris, not exceed 3 inches in size, and should be placed in 8 to 10-inch loose lifts compacted to a minimum of 95 percent of the maximum dry density (Modified Proctor). The fill should be moisture conditioned to be within 3± percent of the optimum moisture content.

The on-site soils can be reused as engineered fill, assuming they do not include deleterious materials (organic soils, wet soils, etc.). However, due to the moisture sensitive nature of clays, their use could pose construction challenges regarding achieving the required compaction requirements. The grading contractor may choose to use a granular soil that can be more easily compacted and would be less sensitive to moisture levels.

Stormwater Management

Based on the USDA soil descriptions for the samples collected in the proposed stormwater fixture areas (B-6 and B-7), the prevailing soils at the bottom pond elevations were classified as “Clay” and “Sandy Loam”. The estimated static infiltration rates based on the Standard 1002 – Table 2 would be 0.07 inches per hour (in/hr) and 0.50 in/hr, respectively. The Wisconsin Department of Safety and Professional Services (DSPS) “Soil Evaluation – Stormwater Infiltration” form (SBD 10793) is included in Appendix B.

However, due to the presence of shallow groundwater, the fixtures would be exempt from the Wisconsin Department of Natural Resources (WDNR) infiltration requirements.

Construction Considerations

All loose, wet, disturbed, or otherwise unsuitable surface soils should be stripped from structural and engineered fill areas prior to any construction activities. The exposed subgrade soils and all engineered fills should be observed, tested, and documented by a representative of the geotechnical engineer. Large structural areas, such as building, engineered fill, and pavement areas, should be proof-rolled to identify low-strength or disturbed areas that need to be removed or improved.

Footing excavations and all structural subgrade soils should be evaluated to confirm the bearing materials are consistent with those identified in this report and anticipated by the structural engineer. If unanticipated conditions are encountered, the geotechnical and structural engineers should be notified immediately. All footing pads must bear upon suitable native soils or engineered fill soils that have been confirmed in the field by a representative of the geotechnical engineer. Where unsuitable bearing soils, such as fill,

organic, disturbed, wet, frozen, or low-strength (less than the design bearing capacity) soils are encountered, the excavation should be extended to competent bearing soil. If extended, the footing pads can be constructed at the base of the excavations, or the excavations can be backfilled with clean, crushed stone or lean concrete.

The soils on-site will be sensitive to disturbances from construction activity and increases in moisture content due to their clay and silt content. Increases in the moisture content of these soils can cause significant reduction in soil strength and support capabilities. In addition, moisture sensitive soils that become wet will likely impact grading and compaction schedules. Care should be taken during construction to protect these soils from moisture or disturbance from equipment. Placing a working subbase layer of 3-inch crushed stone or utilizing a cement stabilization program in areas subjected to construction traffic could be beneficial and reduce the potential need to strip disturbed soils.

It is likely that excavations will encounter shallow groundwater. Filtered sump pumps and drawing water from sump pits may not be adequate to remove water that collects in excavations. Therefore, the civil design should consider establishing site grades that result in excavations being above the estimated groundwater table. Sump pits should be lined with a geotextile and filled with open-graded, free- draining aggregate. Additional design features, such as vapor barriers and under-floor drainage systems, should also be contemplated.

Surface water should not be allowed to collect in excavations or on prepared subgrades during or after construction. Areas should be sloped to facilitate removal of collected surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of structures and within pavement areas.

Excavation walls may need to be sloped or braced for stability and safety reasons. The Owner and Contractor should be aware of, and become familiar with, applicable local, state, and federal safety regulations, including current OSHA Excavation and Trench Safety Standards. Construction-site safety generally is the responsibility of the Contractor, who should also be responsible for the means, methods, and sequencing of construction operations.

The Contractor should be aware that slope height, slope inclination, or excavation depths should in no case exceed those specified in local, state, or federal safety regulations, (e.g., OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926), or successor regulations. The shallow soils encountered in the borings are variable (Type A, B, and C), when applying the OSHA regulations. Such regulations are strictly enforced, and if they are not followed, the Owner, Contractor, and/or earthwork Subcontractor(s) could be liable for substantial penalties.

2135 South 116th Street
West Allis, WI 53227

General Qualifications

The services provided by GeoTest on this project were performed with the degree of skill and care typically performed by other members of the geotechnical engineering profession, practicing in this locale, at this time. No other warranty, expressed or implied, is given.

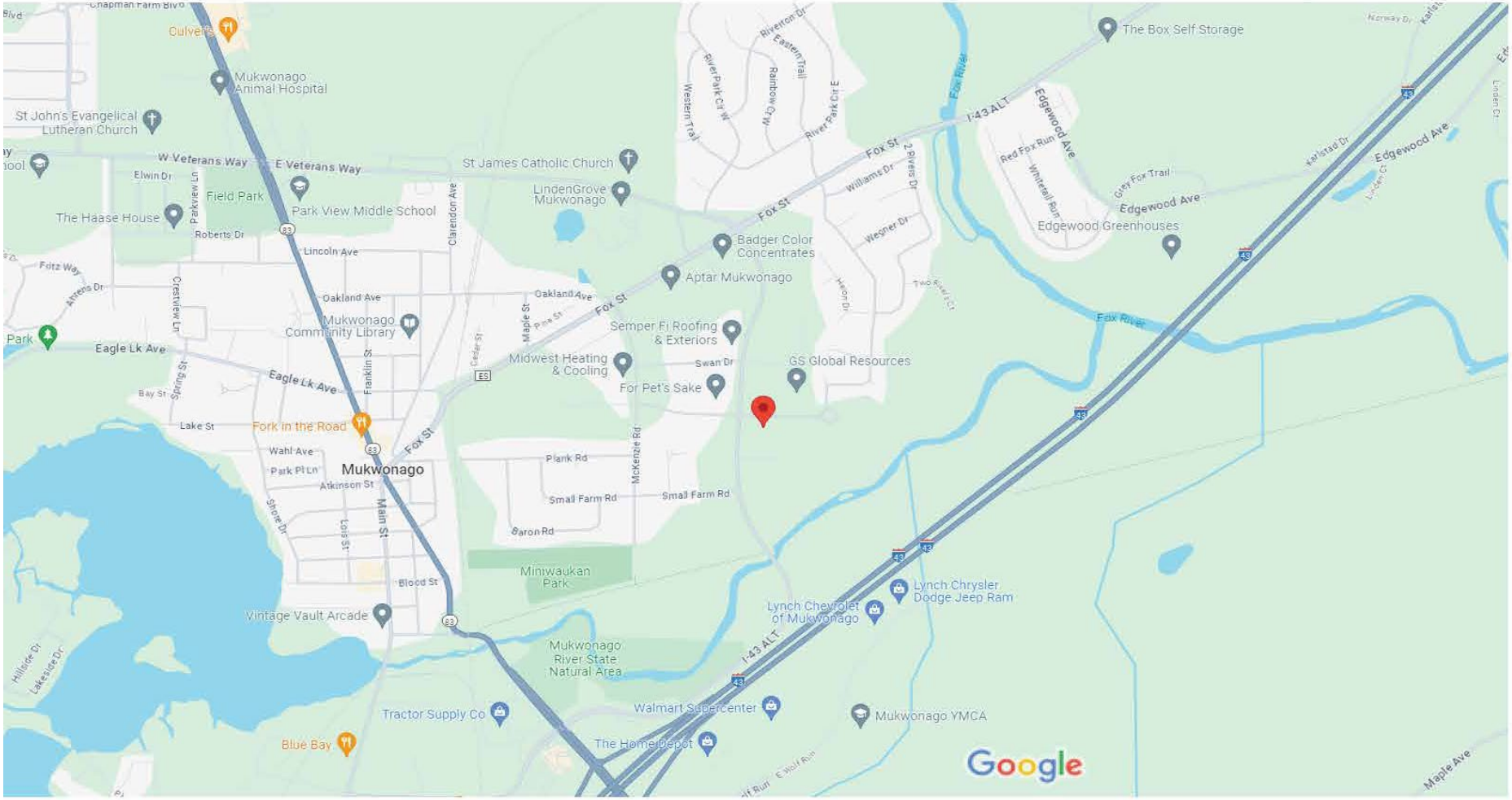
We appreciate the opportunity to provide geotechnical engineering services. If you have any questions, or require any further assistance, please feel free to contact us.

Sincerely,

Michael D. Frede, P.E.
Technical Director/Senior Engineer

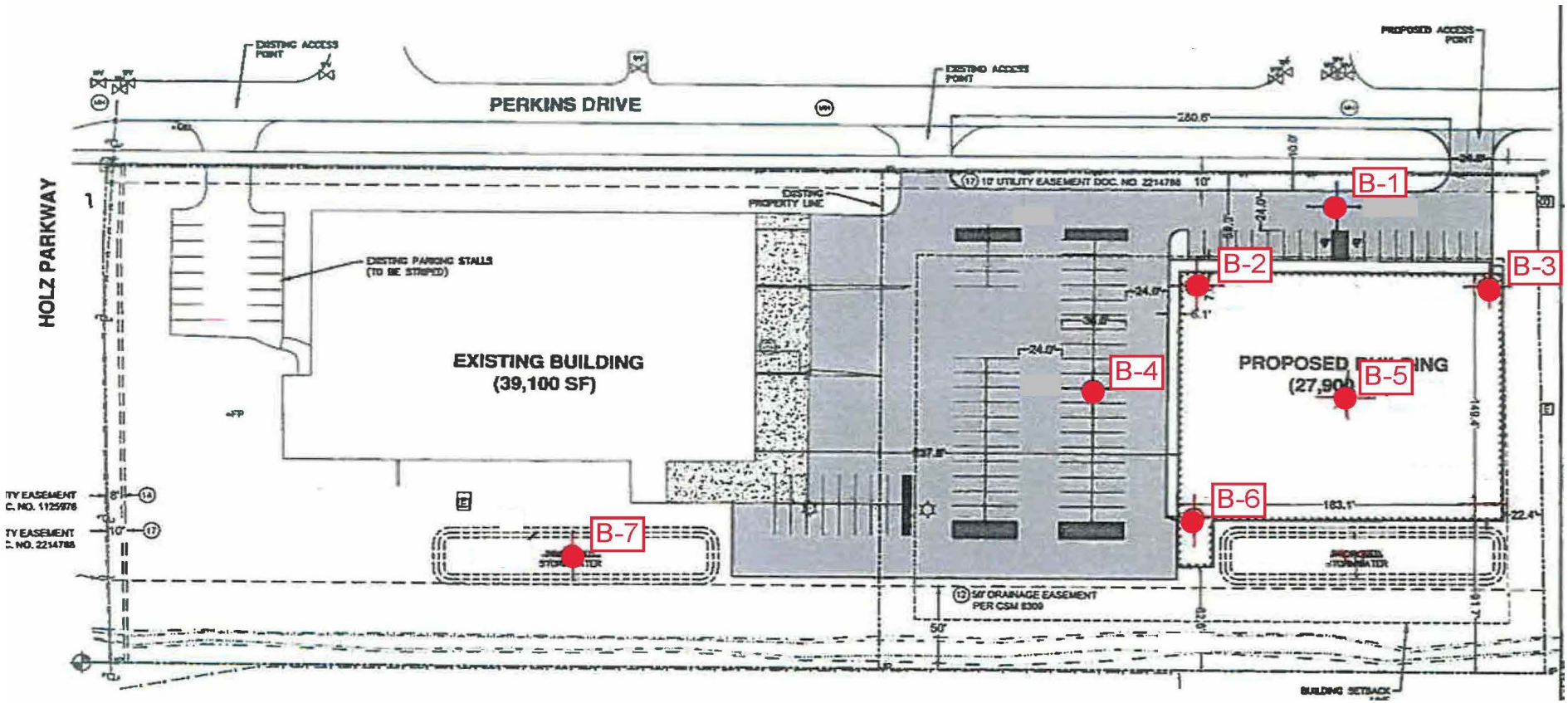
Appendix A

- Figure 1 – Site Location Diagram
- Figure 2 – Boring Location Diagram



Map data ©2024 Google 1000 ft

GEOTEST	**Project Name:** L'Bri Pure n' Natural **Project Location:** Lot 2, Perkins Drive Mukwonago, Wisconsin Waukesha County	**Project No.:** 8143 **Date:** 4/16/24 **Drawn By:** MDF **Scale:** NTS	**FIGURE 1** **Site Location Diagram**



GEOTEST	**Project Name:** L'Bri Pure n' Natural **Project Location:** Lot 2, Perkins Drive Mukwonago, Wisconsin Waukesha County	**Project No.:** 8143 **Date:** 4/16/24 **Drawn By:** MDF **Scale:** NTS	**FIGURE 2** **Boring Location Diagram**

Appendix B

- General Notes
- Boring Logs
  - B-1 through B-7
- Legend
- Cross-section
- Unified Soil Classification System (USCS)
- Soil Evaluation – Stormwater Infiltration Form (SBD 10793)
  - B-6
  - B-7
- United States Department of Agriculture (USDA) Soil Classification System

Drilling and Sampling Abbreviations:

AD	Solid-Stem Auger	**OS**	Osterberg Sampler, 3-inch-O.D. Shelby Tube
AS	Auger Sample	**PMT**	Pressuremeter Test (In Situ)
BS	Bulk Sample	**RD**	Rotary Drilling
DD	Diamond Core Drilling	**SS**	Split-Spoon Sampler, 1.375-inch-I.D., 2-inch-O.D. (Unless otherwise noted)
FT	Fish Tail	**ST**	Shelby Tube Sampler, 2-inch-O.D. (Unless otherwise noted)
GP	Geoprobe	**VS**	Vane Shear
GS	Giddings Sampler	**WOH**	Weight of Hammer
HA	Hand-Auger Drilling	**WS**	Wash Sample
HS	Hollow-Stem Auger		

Standard Penetration ("N"): Blows per foot of a 140-pound hammer falling 30 inches on a 2-inch-O.D. split-spoon sampler, except where otherwise noted.

Water Level Measurement Abbreviations:

AAR	After Auger Removal	**BCR**	Before Casing Removal	**WS**	While Sampling
AB	After Boring	**DCI**	Dry Cave In		
ACR	After Casing Removal	**WCI**	Wet Cave In		
BAR	Before Auger Removal	**WD**	While Drilling		
BCI	Before Casing Installation	**WL**	Water Level		

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In relatively pervious soils, the observed water levels are considered a reliable indicator of groundwater positions. In relatively impervious soils, the accurate determination of groundwater elevations may not be possible, even after several days of observations. In this case, other indicators of groundwater position, such as sealed observation wells or piezometers, may be required.

Gradation Description and Terminology:

Coarse-grained granular soils have more than 50% of their dry weight retained on a #200 sieve (0.074 mm); they include boulders, cobbles, gravel, sand, and combinations thereof. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve. Fine-grained granular soils are non-cohesive, and include silt; fine-grained cohesive soils include silty clay, and clay.

Major Component of Sample	Size Range	Description of Components Present in Sample	Percent of Dry Weight
Boulders	Over 8" (200 mm)	Trace	<5
Cobbles	8" to 3" (200 to 75 mm)	Few	5 - 10
Gravel	3" to #4 sieve (75 to 4.76 mm)	Little	15 - 25
Sand	#4 to #200 sieve (4.76 to 0.074 mm)	Some	30 - 45
Silt	Passing #200 sieve (0.074 to 0.005 mm)		
Clay	Smaller than 0.005 mm		

Consistency of Cohesive Soils

Unconfined Compressive Strength, Qu, tsf	Consistency
<0.25	Very Soft
0.25 - 0.49	Soft
0.50 - 0.99	Firm
1.00 - 1.99	Stiff
2.00 - 3.99	Very Stiff
>4.00	Hard

Relative Density of Granular Soils

N, Blows per 12 inches	Relative Density
0 - 3	Very Loose
4 - 9	Loose
10 - 29	Medium Dense
30 - 49	Dense
50 - 80	Very Dense
>80	Extremely Dense

GEOTEST	**Client:** Endpoint Solutions **Project:** L'Bri Pure n' Natural, #8143 **Address:** Lot 2, Perkins Drive, Mukwonago, WI	**BORING LOG** **Boring No.** B-1 **Page:** 1 of 1

Drilling Start Date:	**3/21/24**	Boring Depth (ft):	**10**
Drilling End Date:	**3/21/24**	Boring Diameter (in):	**6.0**
Drilling Company:	**J&J Soil Testing**	Sampling Method(s):	**Split Spoon**
Drilling Method:	**Hollow Stem Auger**	DTW During Drilling (ft):	**5.5**
Drilling Equipment:	**CME-45**	DTW After Drilling (ft):	**N/A**
Driller:	**Jeff Peschel**	Ground Surface Elev. (ft):	**787.2**
Logged By:	**Michael Frede**	Location (Lat, Long):	**42.86485, -88.31333**

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	COLLECT: Blow Counts	COLLECT: Recovery (ft)	COLLECT: N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0			SS	4 6 6	0.60	12	(0.00') Topsoil: 18 inches of Clayey Topsoil									
							(1.50') Fill: Lean CLAY (CL); trace fine-coarse gravel, few fine-coarse sand, some silt, mostly clay, medium plasticity, very stiff, moist, brown	22.4						2		785
			SS	6 7 12	1.50	19	(3.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, hard, moist, brown with gray mottling	23.5						4		
5		▽														
			SS	7 8 8	1.20	16	(5.50') Poorly graded SAND with silt (SP-SM); mostly fine grained sand, trace fine gravel, few silt, medium dense, saturated, brown	20								780
			SS	5 6 6	1.50	12	(7.00') Sandy SILT (ML); some fine sand, mostly silt, stiff, wet, gray, occasional clay, silt, and fine sand seams	18.8								
10							(10.00') Boring terminated									
																775
15																
																770
20																
																765
25																

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-2
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/26/24	Boring Depth (ft):	20
Drilling End Date:	3/26/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	5.5
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	787.1
Logged By:	Michael Frede	Location (Lat, Long):	42.86475, -88.31376

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	Blow Counts	Recovery (ft)	N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 5 inches of Clayey Topsoil									
			SS	6 4 5	0.80	9	(0.50') Fill: Poorly graded SAND with silt (SP-SM); mostly fine-medium grained sand, trace fine gravel, few silt, loose, moist, black	16.6						2		785
			SS	3 5 6	1.50	11	(1.00') Fill: Lean CLAY (CL); trace fine-coarse gravel, few fine-coarse sand, some silt, mostly clay, medium plasticity, very stiff, moist, dark brown									
5		▽					(3.50') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, very stiff, moist, brown with gray mottling	24.7						2.25		
			SS	6 7 8	1.50	15	(5.50') Sandy SILT (ML); some fine sand, mostly silt, stiff, wet, gray	19								780
			SS	3 7 5	1.50	12	(8.00') Well-graded SAND with silt (SW-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, few silt, medium dense, saturated, gray	16.1								
10																
							(11.00') Silty CLAY (CL-ML); trace fine sand, mostly silt, some clay, low plasticity, stiff, moist, gray, occasional clay, silt, and fine sand seams									775
			SS	3 4 5	1.50	9		21						1.25		
15																
							(17.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, moist, gray									770
			SS	2 3 4	1.50	7		20.2						1.5		
20																
																765
25																

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-3
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/21/24	Boring Depth (ft):	20
Drilling End Date:	3/21/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	5.5
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	785
Logged By:	Michael Frede	Location (Lat, Long):	42.86475, -88.31315

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	Blow Counts	Recovery (ft)	N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 3 inches of Clayey Topsoil									785
			SS	4 5 5	0.70	10	(0.50') Fill: Mixed SAND with silt (SP-SM); mostly fine-medium grained sand, trace fine gravel, few silt, medium dense, moist, black and brown mixed	13.4								
			SS	4 6 8	1.50	14	(4.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, very stiff, moist, brown with gray mottling	21.7						4.5		
5		▽														780
			SS	9 8 8	1.50	16	(5.50') Well-graded SAND with silt (SW-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, few silt, medium dense, saturated, brown	15								
			SS	6 6 6	1.50	12	(7.50') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, moist, gray, occasional silt seams	18.2						1		
10																775
							(12.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, moist, gray									
			SS	5 5 6	1.50	11		19.6						1.5		
15																770
			SS	4 5 5	1.50	10		19.1						1.25		
20																765
25																

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-4
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/26/24	Boring Depth (ft):	10
Drilling End Date:	3/26/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	5.5
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	787.2
Logged By:	Michael Frede	Location (Lat, Long):	42.86457, -88.31394

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	Blow Counts	Recovery (ft)	N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 4 inches of Clayey Topsoil									
			SS	4 5 5	0.60	10	(0.50') Fill: Silty, Clayey SAND (SC-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, little silt, little clay, medium dense, moist, black and dark brown mixed	10.7								785
			SS	5 6 8	1.00	14	(2.50') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, very stiff, moist, brown with gray mottling	23.4						2.5		
5			SS	7 7 5	1.50	12	(5.50') Well-graded SAND with silt (SW-SM); mostly fine-coarse grained sand, trace fine gravel, few silt, medium dense, saturated, brown	23								780
			SS	3 4 4	1.50	8	(7.00') Silty SAND (SM); mostly fine grained sand, some silt, medium dense, saturated, gray (8.50') Sandy SILT (ML); some fine sand, mostly silt, few clay, low plasticity, stiff, wet, gray, occasional clay seams	21.9								
10							(10.00') Boring terminated									
																775
15																
																770
20																
																765
25																

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-5
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/21/24	Boring Depth (ft):	20
Drilling End Date:	3/21/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	2.5
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	784.5
Logged By:	Michael Frede	Location (Lat, Long):	42.86458, -88.31345

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	Blow Counts	Recovery (ft)	N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 5 inches of Clayey Topsoil									
			SS	3 3 4	1.50	7	(0.50') Fill: Silty, Clayey SAND (SC-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, little silt, little clay, loose, moist, dark brown	17								
			SS	4 7 11	1.50	18	(2.50') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, very stiff, moist, brown with gray mottling	26.5						2.5		780
5			SS	6 5 5	1.50	10	(5.00') Poorly graded SAND with silt (SP-SM); mostly fine grained sand, few silt, medium dense, saturated, gray brown	17.8								
			SS	5 5 5	1.50	10	(7.00') Well-graded SAND with silt (SW-SM); mostly fine-coarse grained sand, trace fine gravel, few silt, medium dense, saturated, gray									
10							(9.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, moist, gray	20.3						1.5		775
			SS	4 5 6	1.50	11		19						1		770
15																
			SS	4 5 5	1.50	10		19.2						1		765
20							(20.00') Boring terminated									
																760
25																

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-6
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/21/24	Boring Depth (ft):	20
Drilling End Date:	3/21/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	5.5
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	784.8
Logged By:	Michael Frede	Location (Lat, Long):	42.86443, -88.31375

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	COLLECT: Blow Counts	COLLECT: Recovery (ft)	COLLECT: N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 2 inches of Clayey Topsoil (10YR 2/1)									
			SS	4 5 5	1.10	10	(0.50') Fill: CLAY (CL) and SAND (SC-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, little silt, little clay, loose, moist, black and brown (10YR 2/1 & 10YR 5/4))	20.8								
			SS	3 3 5	1.50	8	(2.50') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, wet, brown (10YR 5/3)	30.7					99.1	1.75		780
5																
			SS	7 9 10	1.50	19	(5.50') Well-graded SAND with silt (SW-SM); mostly fine-coarse grained sand, trace fine gravel, few silt, medium dense, saturated, brown (10YR 5/3)	17.3								
			SS	4 4 4	1.20	8	(7.50') Silty CLAY (CL-ML); trace fine sand, mostly silt, some clay, low plasticity, stiff, wet, grayish brown (10YR 5/2), occasional clay, silt, and fine sand seams	22.4						1		775
10																
			SS	3 4 4	1.50	8	(12.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, moist, light brownish gray (10YR 6/2)	19.9						1.25		770
15																
			SS	2 2 3	1.50	5		19.1						1		765
20							(20.00') Boring terminated									
25																760

NOTES:

GEOTEST	Client: Endpoint Solutions	BORING LOG
	Project: L'Bri Pure n' Natural, #8143	Boring No. B-7
	Address: Lot 2, Perkins Drive, Mukwonago, WI	Page: 1 of 1

Drilling Start Date:	3/21/24	Boring Depth (ft):	20
Drilling End Date:	3/21/24	Boring Diameter (in):	6.0
Drilling Company:	J&J Soil Testing	Sampling Method(s):	Split Spoon
Drilling Method:	Hollow Stem Auger	DTW During Drilling (ft):	7
Drilling Equipment:	CME-45	DTW After Drilling (ft):	N/A
Driller:	Jeff Peschel	Ground Surface Elev. (ft):	787.4
Logged By:	Michael Frede	Location (Lat, Long):	42.86436, -88.31500

DEPTH (ft)	LITHOLOGY	WATER LEVEL	COLLECT: Sample Type	Blow Counts	Recovery (ft)	N Value RQD%	SOIL/ROCK VISUAL DESCRIPTION	Moisture Content (%)	Dry Density (pcf)	Liquid Limit	Plastic Limit	Plasticity Index (PI)	#200 Sieve (%)	Pocket Penetrometer (tsf)	Unconfined Compressive Strength (tsf)	ELEVATION (ft)
0							(0.00') Topsoil: 12 inches of Clayey Topsoil (10YR 2/1)									
			SS	5 5 5	0.80	10	(1.00') Fill: Silty, Clayey SAND (SC-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, little silt, little clay, medium dense, moist, yellowish brown (10YR 5/6)	13.9								785
			SS	4 4 5	1.30	9	(2.50') Silty, Clayey SAND (SC-SM); mostly fine-coarse grained sand, trace fine-coarse gravel, little silt, little clay, medium dense, moist, pale brown (10YR 6/3)	15.7								
5			SS	5 5 7	1.50	12	(7.00') Lean CLAY (CL); trace fine sand, some silt, mostly clay, medium plasticity, stiff, wet, grayish brown (10YR 5/2)	20					98.1	1		780
			SS	4 5 6	1.50	11		17.5						1.5		
10																775
			SS	20 28 36	0.80	64	(13.00') Well-graded SAND with silt and gravel (SW-SM); mostly fine-coarse grained sand, little fine-coarse gravel, few silt, dense, saturated, light gray (10YR 7/2)	14.7								
15																770
			SS	38 29 33	1.30	62		9.9								
20							(20.00') Boring terminated									765
25																

NOTES:

GEOTEST

BORING AND WELL LOG LEGEND

SURFACE
ASPHALT
CONCRETE
FILL
TOPSOIL
AIR
ICE

USCS
Well-graded GRAVEL (GW)
Poorly graded GRAVEL (GP)
Silty GRAVEL (GM)
Clayey GRAVEL (GC)
Silty, Clayey GRAVEL (GC-GM)
Well-graded GRAVEL with silt (GW-GM)
Poorly graded GRAVEL with silt (GP-GM)
Well-graded GRAVEL with clay (GW-GC)
Poorly graded GRAVEL with clay (GP-GC)
Well-graded SAND (SW)
Poorly graded SAND (SP)
Silty SAND (SM)
Clayey SAND (SC)
Silty, Clayey SAND (SC-SM)
Well-graded SAND with silt (SW-SM)
Poorly graded SAND with silt (SP-SM)
Well-graded SAND with clay (SW-SC)
Poorly graded SAND with clay (SP-SC)
SILT (ML)
Lean CLAY (CL)
Silty CLAY (CL-ML)
Organic SOIL (OL)
Elastic SILT (MH)
Fat CLAY (CH)
Organic SOIL (OH)
Organic SOIL (OL/OH)
PEAT (PT)
BEDROCK
IGNEOUS Rock
METAMORPHIC Rock
SEDIMENTARY Rock
WATER

Non-USCS
Gravel
Sand
Silt
Clayey Silt
Silt & Clay
Clay & Silt
Silty Clay
Clay
Boulders
Cobbles
Peastone
Glacial Till
Iron Ore
Wood
Peat
Saprolite
Ash
Waste

Volume Descriptors
Trace = <5%
Few = 5-10%
Little = 15-25%
Some = 30-45%
Mostly = >=50%

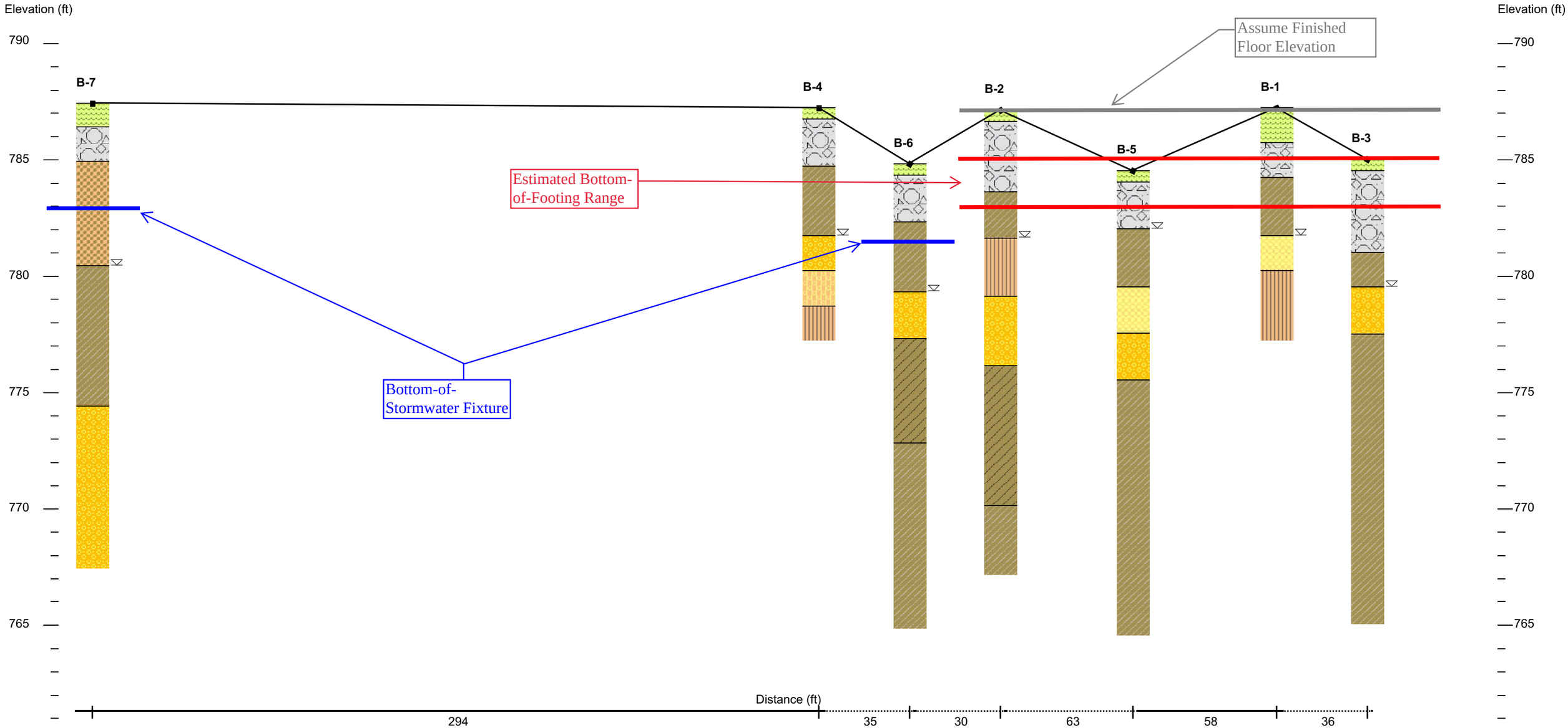
Water Levels
Water Level During Drilling
Water Level at End of Drilling/in Completed Well

Well/Boring Completion
Cap
Riser
Screen
End Plug
Annular Seal
Sanitary Seal (Bentonite Slurry/Chips/Pellets/Powder, Other)
Filter Pack (Sand, Gravel, Other)
Backfill

Sample Type
GR Grab
EN Encore
SS Split Spoon
SH Shelby Tube
CO Core Barrel
DP Direct Push
ID Lab Sample and ID

Soil/Rock Contact Lines
Inferred
Abrupt
Gradational

NOTES:
- The boring was backfilled with soils cuttings and bentonite chips upon completion.
- The stratification lines represent approximate boundaries between soil types
- The elevations are considered accurate to 1/2 foot.

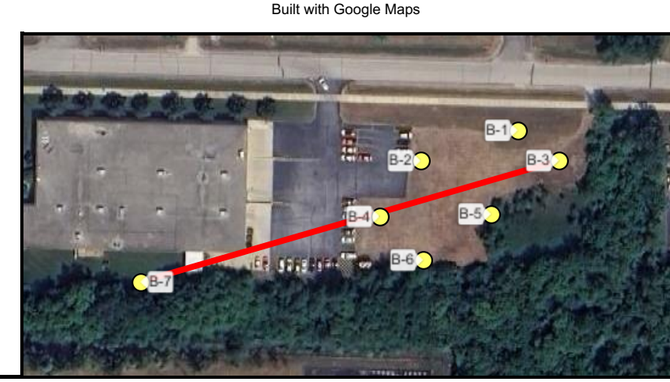


Horizontal scale: 10 feet
Vertical scale: 5 feet

Legend

- Topsoil
- FILL
- Silty Clayey, SAND (SC-SM)
- Lean CLAY (CL)
- Well-graded SAND with silt (SW-SM)
- Poorly graded SAND with silt (SP-SM)
- SILT (ML)
- Silty CLAY (CL-ML)
- Silty SAND (SM)
- Water Level During Drilling
- Water Level at End of Drilling
- Cap
- Screen
- Annular Seal
- Sanitary Seal
- Filter Pack
- Backfill

Built with Google Maps



GEOTEST

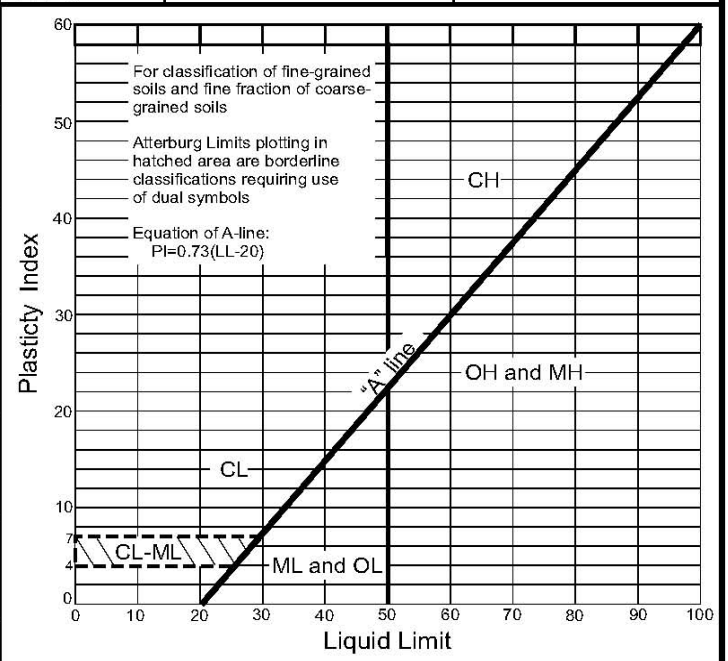
GEOLOGIC CROSS SECTION

Endpoint Solutions
L'Bri Pure n' Natural
#8143
Lot 2, Perkins Drive
Mukwonago, Wisconsin

338

Unified Soil Classification System (USCS)

Major Divisions			Group symbols	Typical Names	Laboratory classification criteria		
Coarse-grained soils (More than half of material is larger than No. 200 sieve size)	Gravels (More than half of coarse fraction is larger than No. 4 sieve size)	Clean gravels (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines	Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows: Less than 5 percent . . . . . GW, GP, SW, SP; More than 12 percent . . . . . GM, GC, SM, SC; 5 to 12 percent . . . . . Borderline cases requiring dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		Not meeting all gradation requirements for GW	
		Gravels with fines (Appreciable amount of fines)	GM d u	Silty gravels, gravel-sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. Between 4 and 7 are borderline cases requiring use of dual symbols
			GC	Clayey gravels, gravel-sand-clay mixtures		Atterberg limits above "A" line or P.I. greater than 7	
	Sands (More than half of coarse fraction is smaller than No. 4 sieve size)	Clean sands (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines		$C_u = \frac{D_{60}}{D_{10}}$ greater than 6; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3	
			SP	Poorly graded sands, gravelly sands, little or no fines		Note meeting all gradation requirements for SW	
		Sands with fines (Appreciable amount of fines)	SM d u	Silty sand, sand-silt mixtures		Atterberg limits below "A" line or P.I. less than 4	Limits plotting in hatched zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		Atterberg limits above "A" line or P.I. greater than 7	
Fine-grained soils (More than half of material is smaller than No. 200 sieve size)	Silts and clays (Liquid limit less than 50)		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity			
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silt clays, lean clays			
			OL	Organic silts and organic silty clays of low plasticity			
	Silts and clays (Liquid limit greater than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soil, elastic silts			
			CH	Inorganic clays of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity, organic silts			
	Highly organic soils		Pt	Peat and other highly organic soils			



Plasticity Chart

Wisconsin Department of Safety and Professional Services
Division of Industry Services
4822 Madison Yards Way
PO Box 7302
Madison, WI 53707

Phone: 608-266-2112
Web: http://dsps.wi.gov
Email: dsps@wisconsin.gov

Program: Plumbing
Web: https://dsps.wi.gov/Pages/Programs/Plumbing

Soil and Site Evaluation – Stormwater Infiltration

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Attach a complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must include, but is not limited to: vertical and horizontal reference point (BM); direction and percent of slope; scale or dimensions; north arrow; and BM referenced to nearest road.

PLEASE PRINT ALL INFORMATION

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m)]

County: Waukesha
Parcel I.D.: 1969 988 006
Reviewed By:
Reviewed Date:

Property Owner: BLAK Enterprises, LLC
Property Owner's Mailing Address: Lot 2, Perkins Drive

City	State	Zip Code	Phone Number
Mukwonago	WI	53149	

PROPERTY LOCATION
Govt. Lot ____ ¼ ____ ¼ ____ S ____ T ____ N ____ R ____ E (or) W
Lot #, Block #, Subd. Name or CSM #: Lot 2, CSM 8309
Municipality: Mukwonago ☐ City ■ Village ☐ Town
Nearest Road: Holz Parkway

Drainage area_____ ☐sq. ft ☐acres

Test site suitable for (check all that apply):

☐Site not suitable ☐Bioretention ☐Subsurface Dispersal System

☐Reuse ☐Irrigation ☐Other _____

HYDRAULIC APPLICATION TEST METHOD
■ Morphological Evaluation
☐ Double Ring Infiltrometer
☐ Other: (specify)
_____

SOIL MOISTURE
Date of soil borings: 3/21/24
USDA-NRCS WETS Value:
☐ Dry = 1
■ Normal = 2
☐ Wet = 3

B-6 #OBS. ☐ Pit ■ Boring Ground Surface Elevation 784.8 ft. Elevation of Limiting Factor 782.3 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
A	2	10YR 2/1		Topsoil						
Fill	30	10YR 2/1 & 10YR 5/4		SICL/SL	CDY	FI		0-5	30-50	0.50
B	66	10YR 5/3		C	MA	FI		0-5	95-100	0.07
C	90	10YR 5/3		COS	MA	FI		0-5	0-5	3.60
C	144	10YR 5/2		SIC	MA	FI		0-5	95-100	0.07
C	240	10Y 6/2		C	MA	FI		0-5	95-100	0.07

Comments:

B-7 #OBS. ☐ Pit ■ Boring Ground Surface Elevation 787.4 ft. Elevation of Limiting Factor 780.4 ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
A	12	10YR 2/1		Topsoil						
Fill	30	10YR 5/6		SL	CDY	FI		0-5	30-50	0.50
C	84	10YR 6/3		SL	MA	FI		0-5	30-50	0.50
C	156	10YR 5/2		C	MA	FI		0-5	95-100	0.07
C	240	10YR 7/2		COS	MA	VFI		15-25	5-10	3.60

Comments:

____ #OBS. ☐ Pit ☐ Boring Ground Surface Elevation _____ ft. Elevation of Limiting Factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

____ #OBS. ☐ Pit ☐ Boring Ground Surface Elevation _____ ft. Elevation of Limiting Factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

____ #OBS. ☐ Pit ☐ Boring Ground Surface Elevation _____ ft. Elevation of Limiting Factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

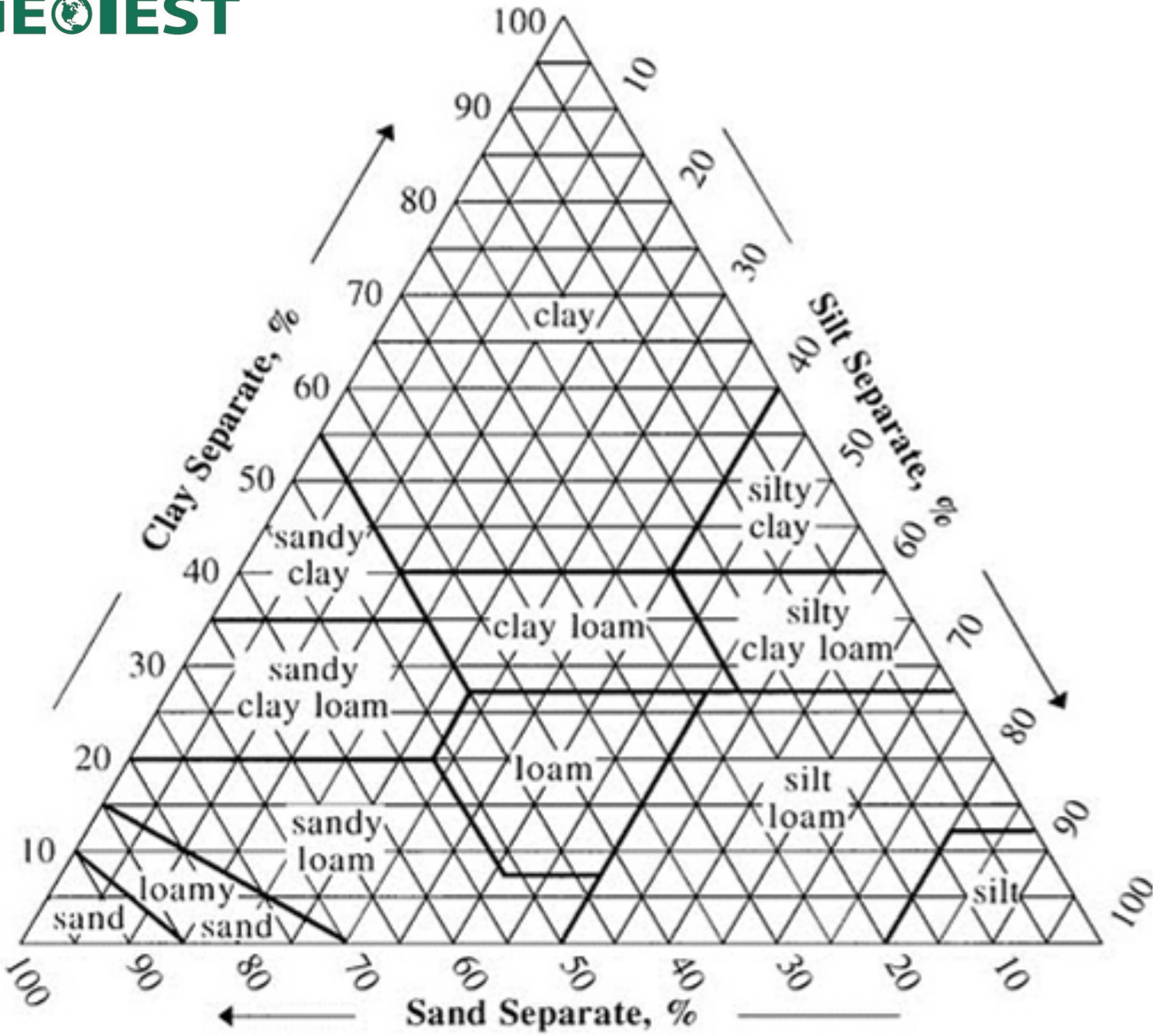
____ #OBS. ☐ Pit ☐ Boring Ground Surface Elevation _____ ft. Elevation of Limiting Factor _____ ft.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

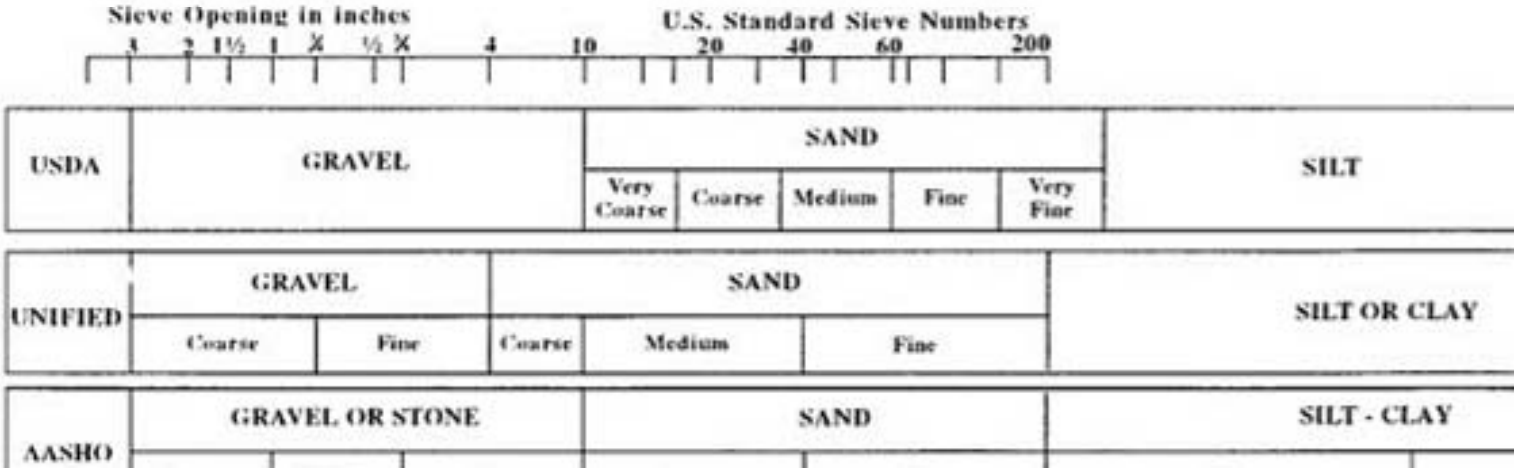
Comments:

Overall Site Comments:

Michael Frede, P.E.	Michael Frede	25897-6
Name (Please Print)	Signature	Credential Number
2135 S. 116th Street, West Allis, WI 53227	3/21/24	414-321-8378
Address	Date Evaluation Conducted	Phone Number



COMPARISON OF PARTICLE SIZE SCALES



United States Department of Agriculture (USDA) Classification Systen

Appendix C

- Drilling Procedures
- Sampling Procedures
- Laboratory Procedures

Hand-Auger Drilling (HA)

A sampling device is driven into the soil to the desired sample depth by a sledge hammer. After extracting the sample, the hole is advanced by a hand auger until the next sampling depth is reached. The manual driving of the sampler, especially into cohesive soils, may result in some sample disturbance. However, there are some situations where this method is the only viable option.

Solid-Stem Auger Drilling (AD)

Continuous flight augers are turned and hydraulically advanced by a truck- or track-mounted unit to create a borehole. In solid-stem auger drilling, casing and drilling mud are not typically used to maintain an open borehole.

Hollow-Stem Auger Drilling (HS)

Continuous flight augers having open stems are used to advance the borehole. The open stem allows the sampling tool to be used without removing the augers from the borehole. Hollow-stem augers maintain an open borehole during the sampling operations. This sampling method is not appropriate for geotechnical investigation beneath the water table, especially in granular soils.

Rotary Drilling (RD)

Various cutting bits, in conjunction with circulating drilling fluid, are used to advance the borehole. Surface casing is used to maintain sidewall stability in the top several meters of the borehole, and to facilitate the circulation of the drilling fluid into the mud tank.

Diamond Core Drilling (DD)

A double-tube or triple-tube core barrel with a diamond bit cuts an annular space around a cylinder of rock or cemented material. When the coring has proceeded to the desired core run length, the core is broken off and the sample is retained by a core catcher just above the diamond bit. Samples recovered by this procedure are placed in sturdy core boxes in sequential order.

Auger Sampling (AS)

Soil samples are obtained as cuttings from the auger flights as they are lifted from the borehole. Auger samples provide a general indication of subsurface conditions; however, they do not provide undisturbed samples, nor do they provide samples from specific depths. Due to the possible loss of soil components, or the mixing of soil components from various elevations, auger samples may not be representative of in-situ soil conditions.

Split-Barrel Sampling (SS) - ASTM Standard D-1586-84

A 2-inch-O.D. split-barrel sampler is driven into the soil a distance of 18 inches by a 140-pound hammer free-falling 30 inches. The first 6 inches of penetration is usually considered a seating drive. The Standard Penetration Resistance value is the number of blows of the hammer over the final 12 inches of driving. This value provides an indication of the in-place relative density of granular soils. The indication should be considered qualitative, since many variables such as drill crews, drill rigs, drilling procedures, and hammer-rod-sampler assemblies can significantly affect the Standard Penetration Resistance value. A representative portion of the soil sample is recovered from the split-barrel sampler, placed in a sample jar, and delivered to our laboratory for further examination and possible testing.

Shelby Tube Sampling Procedure (ST) - ASTM Standard D-1587-83

A 2- or 3-inch-diameter thin-walled seamless steel tube having a sharp cutting edge is hydraulically pushed into the soil to obtain a relatively undisturbed sample. This procedure is generally used for cohesive soils. The Shelby tubes are carefully handled to minimize sample disturbance, and delivered to a laboratory where the soil is extruded from the tube, examined, and tested.

American Society for Testing and Materials

ASTM 1586
Standard Method for Penetration Test and Split-Barrel Sampling of Soils[1]

This standard is issued under the fixed designation D 1586; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of the last revision. A number in parentheses indicates the year of the last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

This method has been approved for use by agencies of the Department of Defense and for listing in the DOD Index of Specifications and Standards.

1. Scope

1.1 This method describes the procedure, generally known as the Standard Penetration (SPT), for driving a split-barrel sampler to obtain a representative soil sample and a measure of the resistance of the soil to penetration of the sampler.

1.2 This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of whoever uses this standard to consult and establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. For a specific precautionary statement, see 5.4.1.

1.3 The values stated in inch-pound units are to be regarded as the standard.

2. Applicable Documents

2.1 ASTM Standards:

D2487 Test Method for Classification of Soils for Engineering Purposes[2]

D2488 Practice for Description and Identification of Soils (Visual-Manual Procedure)[2]

D4220 Practice for Preserving and Transporting Soil Samples[2]

3. Descriptions of Terms Specific to This Standard

3.1 anvil--that portion of the drive-weight assembly while the hammer strikes and through which the hammer energy passes into the drill rods.

3.2 cathead--the rotating drum or windlass in the rope-cathead lift system around which the operator wraps a rope to lift and drop the hammer by successively tightening and loosening the rope turns around the drum

3.3 drill rods--rods used to transmit downward force and torque to the drill bit while drilling a borehole.

3.4 drive-weight assembly--a device consisting of the hammer, hammer fall guide, the anvil, any hammer drop system.

3.5 hammer--that portion of the drive-weight assembly consisting of the 140 ± 2 lb (63.5 ± 1 kg) impact weight which is successfully lifted and dropped to provide the energy that accomplishes the sampling and penetration.

3.6 hammer drop system--that portion of the drive-weight assembly by which the operator accomplishes the lifting and dropping of the hammer to produce the blow.

3.7 hammer fall guide--that part of the drive-weight assembly used to guide the fall of the hammer.

3.8 N-value--the blowcount representation of the penetration resistance of the soil. The N-value, reported in blows per foot, equals the sum of the number of blows required to drive the sampler over the depth interval of 6 to 18 in. (150 to 450 mm) (see 7.3).

3.9 ΔN--the number of blows obtained from each of the 6-in. (150-mm) intervals os sampler penetration (see 7.3).

3.10 number of rope turns--the total contact angle between the rope and the cathead at the beginning of the operator's rope slackening to drop the hammer; divided by 360° (see Fig. 1).

3.11 sampling rods--rods that connect the drive-weight assembly to the sampler. Drill rods are often used for this purpose.

3.12 SPT--abbreviation for Standard Penetration Test, a term by which engineers commonly refer to this method.

4. Significance and Use

4.1 This method provides a soil sample for identification purposes and for laboratory tests appropriate for soil obtained from a sampler that may produce large shear strain disturbance in the sample.

4.2 This method is used extensively in a great variety of geotechnical exploration projects. Many local correlations and widely published correlations which relate SPT blowcount, or N-value, and the engineering behavior of earthworks and foundation are available.

5. Apparatus

5.1 Drilling Equipment--Any drilling equipment that provides at the time of sampling a suitably clean open hole before insertion of the sampler and ensures that the penetration test is performed on undistributed soil shall be acceptable. The following pieces of equipment have proven to be suitable for advancing a borehole in some subsurface conditions.

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[1]This method is under the jurisdiction of ASTM Committee D-18 on Soil and Rock and is the direct responsibility of subcommittee D18.02 on Sampling and Related Field Testing for Soil Investigations.

Current edition approved Sept. 11, 1984. Published November 1984. Originally published as D1586-58T. Last previous edition D1586-67 (1974).

[2]Annual Book of ASTM Standards, Vol 04.08.

5.1.1 Drag, Chopping and Fishtail Bits, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used in conjunction with open-hole rotary drilling or casing-advancement drilling methods. To avoid disturbance of the underlying soil, bottom discharge bits are not permitted; only side discharging bits are permitted.

5.1.2 Roller-Cone Bits, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used in conjunction with open-hole rotary drilling or casing-advancement drilling methods if the drilling fluid discharge is deflected.

5.1.3 Hollow-Stem Continuous Flight Augers, with or without a center bit assembly, may be used to drill the boring. The inside diameter of the hollow-stem augers shall be less than 6.5 in. (162 mm) and greater that 2.2 in. (56 mm).

5.1.4 Solid, Continuous Flight, Bucket and Hand Augers, less than 6.5 in. (162 mm) and greater than 2.2 in. (56 mm) in diameter may be used if the soil on the side of the boring does not cave into the sampler or sampling rods during the sampling.

5.2 Sampling Rods--Flush-joint steel drill rods shall be used to connect the split-barrel sampler to the drive-weight assembly. The sampling rod shall have a stiffness (moment of inertia) equal to or greater than that of a parallel wall "A" rod (a steel rod which has an outside diameter of 1 5/8 in. (41.2 mm) and an inside diameter of 1 1/8 in. (28.5 mm).

NOTE 1--Recent research and comparative testing indicates the type rod used, with stiffness ranging from "A" size rod to "N" size rod, will usually have a negligible effect on the N-values to depths of at least 100 ft. (30 m).

5.3 Split-Barrel Sampler--The sampler shall be constructed with the dimensions indicated in Fig. 2. The driving shoe shall be hardened steel and shall be replaced or repaired when it becomes dented or distorted. The use of liners to produce a constant inside diameter of 1 3/8 in. (35 mm) is permitted, but shall be noted on the penetration record if used. The use of a sampler retainer basket is permitted, and should also be noted on the penetration record if used.

NOTE 2--Both theory and available test datas suggest that N-values may increase 10 to 30% when liners are used.

5.4 Drive-Weight Assembly:

5.4.1 Hammer and Anvil--The hammer shall weigh 140 ± 2 lb (63.5 ± 1 kg) and shall be a solid rigid metallic mass. The hammer shall strike the anvil and make steel on steel contact when it is dropped. A hammer fall guide permitting a free fall shall be used. Hammers used with the cathead and rope method shall have an unimpeded overlift capacity of at least 4 in. (100 mm). For safety reasons, the use of hammer assembly with an internal anvil is encouraged.

NOTE 3--It is suggested that the hammer fall guide be permanently marked to enable the operator or inspector to judge the hammer drop height.

5.4.2 Hammer Drop System--Rope-cathead, trip, semi-automatic, or automatic hammer drop systems may be used, providing the lifting apparatus will not cause penetration of the sampler while re-engaging and lifting the hammer.

5.5 Accessory Equipment--Accessories such as labeled, sample containers, data sheets, and groundwater level measuring devices shall be provided in accordance with the requirements of the project and other ASTM standards.

6. Drilling Procedure

6.1 The boring shall be advanced incrementally to permit intermittent or continuous sampling. Test intervals and locations are normally stipulated by the project engineer or geologist. Typically, the intervals selected are 5 ft. (1.5 m) or less in homogeneous strata with test and sampling locations at every change of strata.

6.2 Any drilling procedure that provides a suitably clean and stable hole before insertion of the sampler and assures that the penetration test is performed on essentially undisturbed soil shall be acceptable. Each of the following procedures have proven to be acceptable for some subsurface conditions. The subsurface conditions anticipated should be considered when selecting the drilling method to be used.

6.2.1 Open-hole rotary drilling method.

6.2.2 Continuous flight hollow-stem auger method.

6.2.3 Wash boring method.

6.2.4 Continuous flight solid auger method.

6.3 Several drilling methods produce unacceptable borings. The process of jetting through an open tube sampler and then sampling when the desired depth is reached shall not be permitted. The continuous flight solid auger method shall not be used for advancing the boring below a water table or below the upper confining bed of a confined non-cohesive stratum that is under artesian pressure. Casing may not be advanced below the sampling elevation prior to sampling. Advancing a boring with bottom discharge bits is not permissible. It is not permissible to advance the boring for subsequent insertion of the sampler solely by means of previous sampling with the SPT sampler.

6.4 The drilling fluid within the boring or hollow-stem augers shall be maintained at or above the in situ groundwater level at all times during drilling, removal of drill rods, and sampling.

7. Sampling and Testing Procedure

7.1 After the boring has been advanced to the desired sampling elevation and excessive cuttings have been removed, prepare for the test with the following sequence of operations.

7.1.1 Attach the split-barrel sampler to the sampling rods and lower into borehole. Do not allow the sampler to drop onto the soil to be sampled.

7.1.2 Position the hammer above and attach the anvil to the top of the sampling rods. This may be done before the sampling rods and sampler are lowered into the borehole.

7.1.3 Rest the dead weight of the sampler, rods, anvil, and drive weight on the bottom of the boring and apply a seating blow. If excessive cuttings are encountered at the bottom of the boring, remove the sampler and sampling rods from the boring and remove the cuttings.

7.1.4 Mark the drill rods in three successive 6-in. (0.15-m) increments so that the advance of the sampler under the impact of the hammer can be easily observed for each 6-in. (0.15-m) increment.

7.2 Drive the sampler with blows from the 140-lb (63.5-kg) hammer and count the number of blows applied in

each 6-in. (0.15-m) increment until one of the following occurs:

7.2.1 A total of 50 blows have been applied during any one of the three 6-in. (0.15-m) increments described in 7.1.4.

7.2.2 A total of 100 blows have been applied.

7.2.3 There is no observed advance of the sampler during the application of 10 successive blows of the hammer.

7.2.4 The sampler is advanced the complete 18 in. (0.45 m) without the limiting blow counts occurring as described in 7.2.1, 7.2.2, or 7.2.3.

7.3 Record the number of blows required to effect each 6 in. (0.15 m) of penetration or fraction thereof. The first 6 in. is considered to be a seating drive. The sum of the number of blows required for the second and third 6 in. of penetration is termed the "standard penetration resistance", or the "N-value". If the sampler is driven less than 18 in. (0.45 m), as permitted in 7.2.1, 7.2.2, or 7.2.3, the number of blows per each complete 6 in. (0.15-m) increment and per each partial increment shall be recorded on the boring log. For partial increments, the depth of penetration shall be reported to the nearest 1 in. (25 mm), in addition to the number of blows. If the sampler advances below the bottom of the boring under the static weight of the hammer, this information should be noted on the boring log.

7.4 The raising and dropping of the 140-lb (63.5-kg) hammer shall be accomplished using either the following two methods:

7.4.1 By using a trip, automatic, or semi-automatic hammer drop system which lifts the 140-lb (63.5 kg) hammer and allows it to drop 30 ± 1.0 in. (0.76 m ± 25 mm) unimpeded.

7.4.2 By using a cathead to pull a rope attached to the hammer. When the cathead and rope method is used the system and operation shall conform to the following:

7.4.2.1 The cathead shall be essentially free of rust, oil, or grease and have a diameter in the range of 6 to 10 in. (150 to 250 mm).

7.4.2.2 The cathead should be operated at a minimum speed of rotation of 100 RPM, or the approximate speed of rotation shall be reported on the boring log.

7.4.2.3 No more than 2 1/4 rope turns on the cathead may be used during the performance of the penetration test, as shown in Fig. 1.

NOTE 4--The operator should generally use either 1 3/4 of 2 1/4 rope turns, depending upon whether or not the rope comes off the top (1 3/4 turns) or the bottom (2 1/4 turns) of the cathead. It is generally known and accepted that 2 3/4 or more rope turns considerably impedes the fall of the hammer and should not be used to perform the test. The cathead rope should be maintained in a relatively dry, clean, and unfrayed condition.

7.4.2.4 For each hammer blow, a 30-in. (0.76 m) lift and drop shall be employed by the operator. The operation of pulling and throwing the rope shall be performed rhythmically without holding the rope at the top of the stroke.

7.5 Bring the sampler to the surface and open. Record the percent recovery or length of sample recovered. Describe the soil samples recovered as to composition, color, stratification, and condition, then place one or more representative portions of the sample into sealable moisture-proof containers (jars) without ramming or distorting any apparent stratification. Seal each container to prevent evaporation of soil moisture. Affix labels to the containers bearing job designation, boring number, sample depth, and the blow count per 6-in. (0.15 m) increment. Protect the samples against extreme temperature changes. If there is a soil change within the jar for each stratum and note its location in the sampler barrel.

8. Report

8.1 Drilling information shall be recorded in the filed and shall include the following:

8.1.1 Name and location of job,

8.1.2 Names of crew,

8.1.3 Type and make of drilling machine,

8.1.4 Weather conditions,

8.1.5 Date and time of start and finish of boring,

8.1.6 Boring number and location (station and coordinates, if available and applicable),

8.1.7 Surface evaluation, if applicable

8.1.8 Method of advancing and cleaning the boring,

8.1.9 Method of keeping boring open,

8.1.10 Depth of water surface and drilling depth at time of a noted loss of drilling fluid, and time and date when reading or notation was made,

8.1.11 Location of strata changes,

8.1.12 Size of casing, depth of cased portion of boring,

8.1.13 Equipment and method of driving sampler,

8.1.14 Type of sampler and length and inside diameter of barrel (note use of liners),

8.1.15 Size, type and section length of the sampling rods, and

8.1.16 Remarks.

8.2 Data obtained for each sample shall be recorded in the field and shall include the following:

8.2.1 Sample depth and, if utilized, the sample number,

8.2.2 Description of soil,

8.2.3 Strata changes within sample,

8.2.4 Sampler penetration and recovery lengths, and

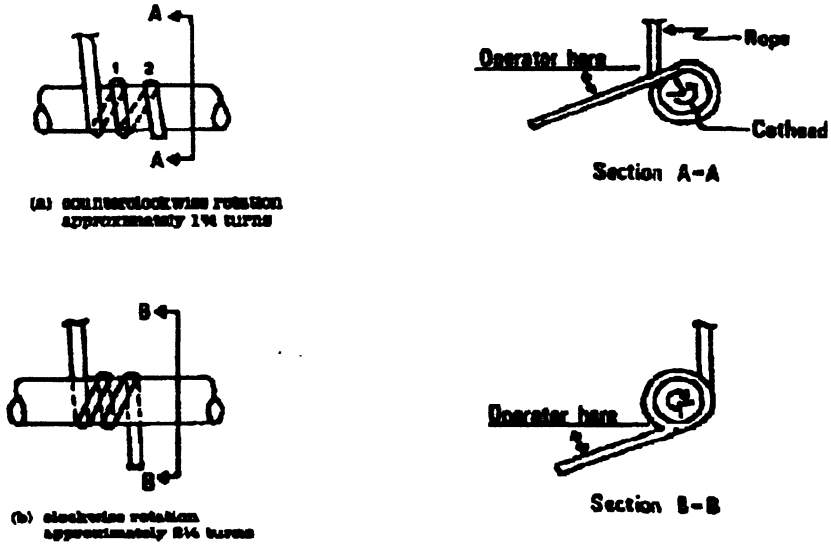
8.2.5 Number of blows per 6-in. (0.15 m) or partial increment.

9. Precision and Bias

9.1 Variations in N-values of 100% or more have been observed when using different standard penetration test apparatus and drillers for adjacent borings in the same soil formation. Current opinion, based on field experience, indicates that when using the same apparatus and driller N-values in the same soil can be reproduced with coefficient or variation of about 10%.

9.2 The use of faulty equipment, such as extremely massive or damaged anvil, a rusty cathead, a low speed cathead, an old, oily rope, or massive or poorly lubricated rope sheaves can significantly contribute to differences in N-values obtained between operator-drill rig systems.

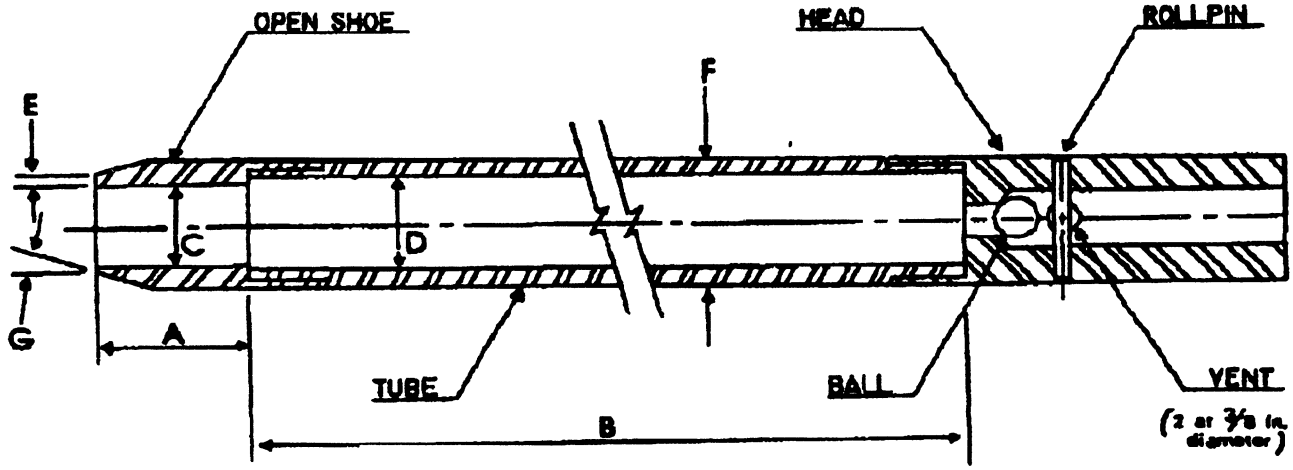
9.3 The variability in N-values produced by different drill rigs and operators may be reduced by measuring the part of the hammer energy delivered into the drilling rods from the sampler and adjusting N on the basis of comparative energies. A method for energy measurement and N-value adjustment is currently under development.



(a) counterclockwise rotation approximately 1¼ turns

(b) clockwise rotation approximately 2¼ turns

FIG. 1 Definitions of the number of rope turns and the angle for (a) counterclockwise rotation and (b) clockwise rotation of the cathead



A = 1.0 to 2.0 in. (25 to 50 mm)
B = 18.0 to 30.0 in. (0.457 to 0.762 m)
C = 1.375 ± 0.005 in. (34.93 ± 0.13 mm)
D = 1.50 ± 0.05 - 0.00 in. (38.1 ± 1.3 - 0.0 mm)
E = 0.10 ± 0.02 in. (2.54 ± 0.25 mm)
F = 2.00 ± 0.05 - 0.00 in. (50.8 ± 1.3 - 0.0 mm)
G = 16.0° to 23.0°

The 1 1/2 in. (38 mm) inside diamter split barrel may be used with a 16-gage wall thickness split liner. The penetrating end of the drive shoe may be slightly rounded. Metal or plastic retainers may be used to retain soil samples.

FIG. 2 Split-Barrel Sampler

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This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 1916 Race St., Philadelphia, PA 19103.

Water Content (W_c)

The water content of a soil is determined by weighing a moist soil sample, drying it in an oven for approximately 24 hours, and reweighing the sample to determine the moisture loss. The water content is the ratio of the weight of water in the soil to the weight of the dry soil. Water content is typically expressed as a percentage.

Calibrated Hand Penetrometer (Q_p)

In the calibrated hand penetrometer test, the unconfined compressive strength of a soil is estimated to a maximum value of 4.5 tons per square foot (tsf) by measuring the resistance of the soil sample to penetration by a spring-calibrated plunger. The hand penetrometer test device has been carefully calibrated by its manufacturer with the results of numerous unconfined compressive strength tests. This test provides a quick, simple, and low-cost testing procedure from which soil strength can be estimated.

Unconfined Compression Test (Q_u)

In the unconfined compression strength test, an undisturbed cylinder of soil is loaded axially until the soil fails to carry additional load, or until 20% strain has been reached, whichever occurs first. The undrained shear strength of a cohesive soil is usually considered to equal half of the unconfined compressive strength.

Dry Density (γ_d)

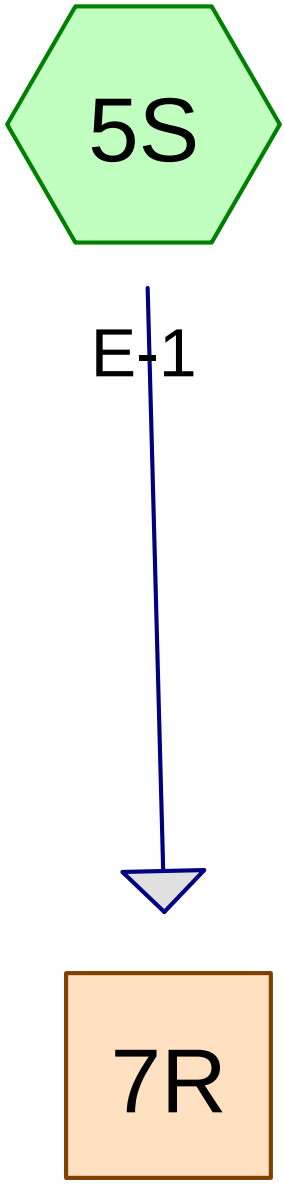
The dry density of a soil is the weight of dry soil in a unit volume. The soil's total unit weight is typically calculated by weighing a cylinder of soil, and dividing the weight by the cylinder's volume as calculated by measuring the cylinder's height and diameter at several locations. The soil's dry density is then determined by correcting the cylinder's weight to account for its water content measured as described above. Use of this value is often made when estimating the degree of compaction of a soil.

Classification of Samples

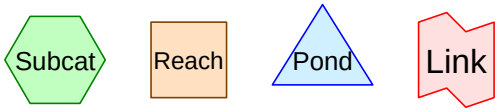
Soil samples are classified on the basis of their texture and plasticity in accordance with the Unified Soil Classification System (USCS). The two-letter designator in parentheses following each soil description on the boring logs represents the applicable unified classification. If the designator is capitalized, the classification has been confirmed by the appropriate index testing. If the designator is lower-case, the classification has been visually estimated.

Appendix B -

Storm Water Quantity Calculations - HydroCAD



Existing Outfall



Routing Diagram for L' Bri_Hydrology - Existing
Prepared by Endpoint Solutions, Printed 8/29/2024
HydroCAD® 10.00-26 s/n 11055 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.229	80	>75% Grass cover, Good, HSG D (5S)
0.606	98	Paved parking, HSG D (5S)
0.288	98	Roofs, HSG D (5S)
3.123	**85**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: E-1 Runoff Area=136,041 sf 28.63% Impervious Runoff Depth=1.21"
Flow Length=480' Tc=4.9 min CN=WQ Runoff=6.47 cfs 0.314 af

Reach 7R: Existing Outfall Inflow=6.47 cfs 0.314 af
Outflow=6.47 cfs 0.314 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.314 af Average Runoff Depth = 1.21"
71.37% Pervious = 2.229 ac 28.63% Impervious = 0.894 ac

Summary for Subcatchment 5S: E-1

[49] Hint: Tc<2dt may require smaller dt

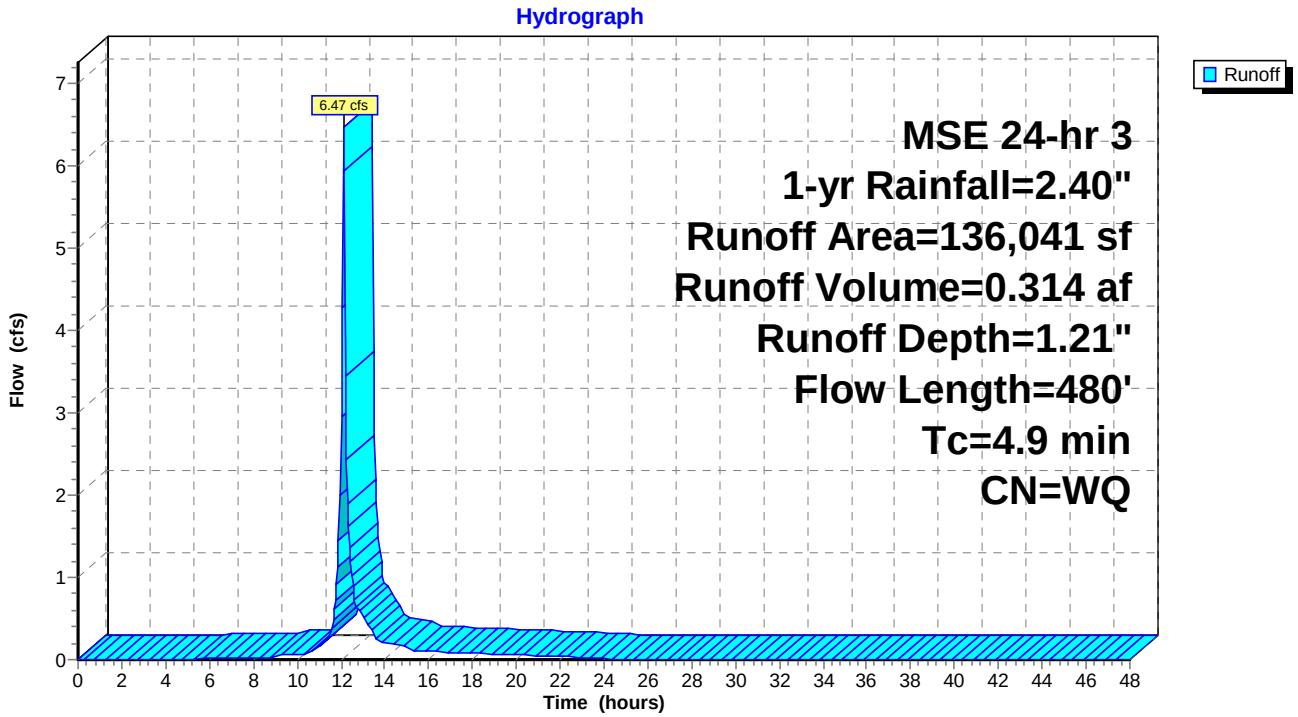
Runoff = 6.47 cfs @ 12.12 hrs, Volume= 0.314 af, Depth= 1.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

Area (sf)	CN	Description
97,096	80	>75% Grass cover, Good, HSG D
26,394	98	Paved parking, HSG D
12,551	98	Roofs, HSG D
136,041		Weighted Average
97,096		71.37% Pervious Area
38,945		28.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	150	0.0133	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.70"
2.8	330	0.0151	1.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.9	480	Total			

Subcatchment 5S: E-1



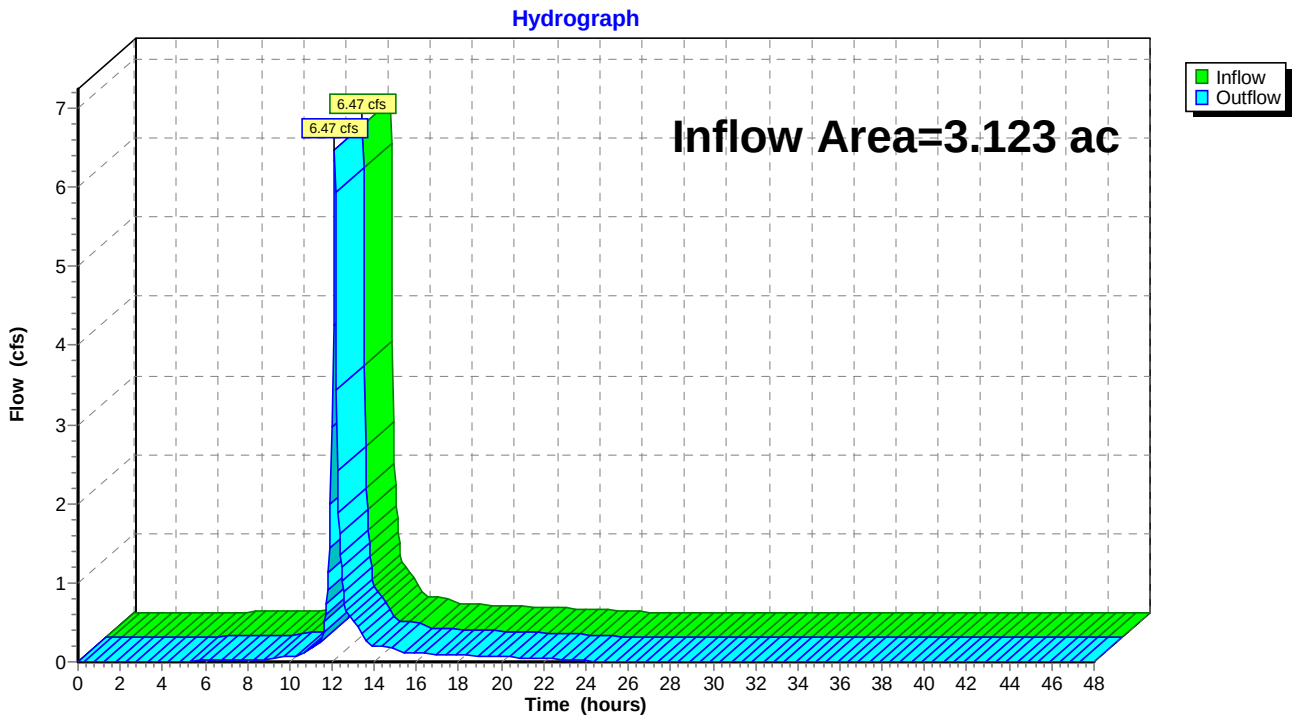
Summary for Reach 7R: Existing Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 28.63% Impervious, Inflow Depth = 1.21" for 1-yr event
Inflow = 6.47 cfs @ 12.12 hrs, Volume= 0.314 af
Outflow = 6.47 cfs @ 12.12 hrs, Volume= 0.314 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 7R: Existing Outfall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: E-1 Runoff Area=136,041 sf 28.63% Impervious Runoff Depth=1.44"
Flow Length=480' Tc=4.9 min CN=WQ Runoff=7.77 cfs 0.375 af

Reach 7R: Existing Outfall Inflow=7.77 cfs 0.375 af
Outflow=7.77 cfs 0.375 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.375 af Average Runoff Depth = 1.44"
71.37% Pervious = 2.229 ac 28.63% Impervious = 0.894 ac

Summary for Subcatchment 5S: E-1

[49] Hint: Tc<2dt may require smaller dt

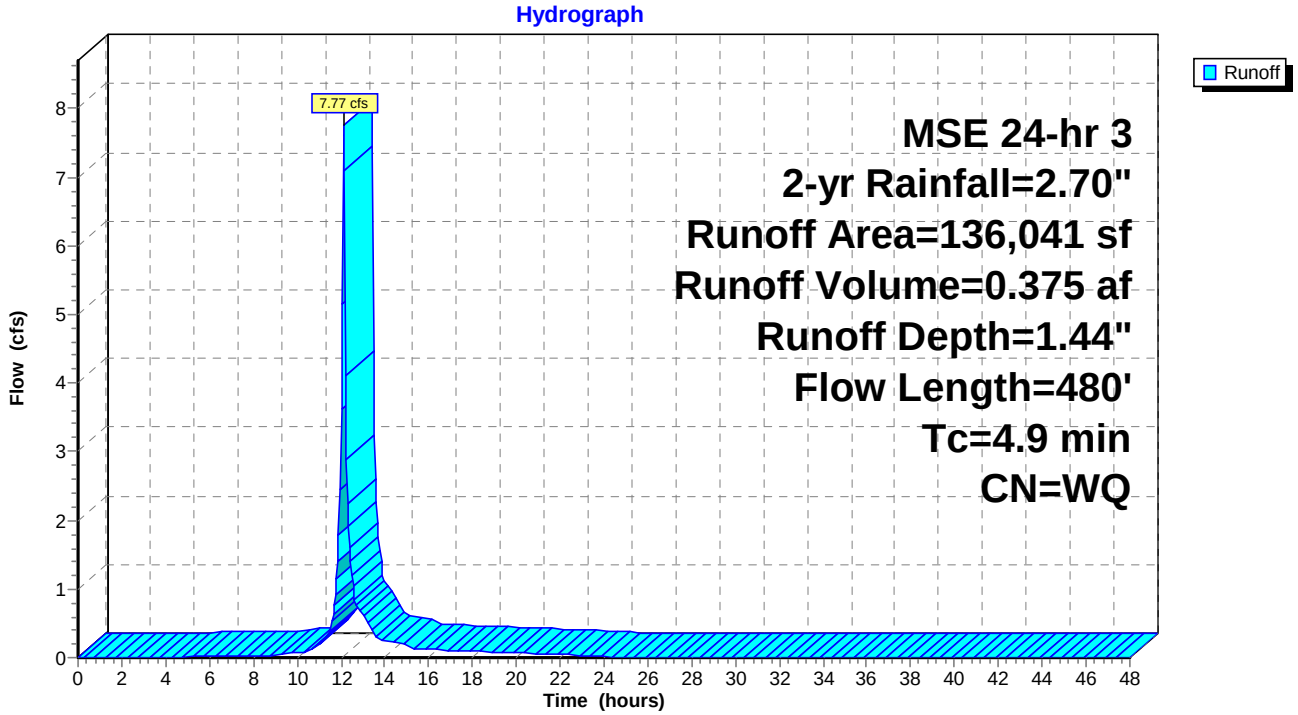
Runoff = 7.77 cfs @ 12.12 hrs, Volume= 0.375 af, Depth= 1.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

Area (sf)	CN	Description
97,096	80	>75% Grass cover, Good, HSG D
26,394	98	Paved parking, HSG D
12,551	98	Roofs, HSG D
136,041		Weighted Average
97,096		71.37% Pervious Area
38,945		28.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	150	0.0133	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.70"
2.8	330	0.0151	1.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.9	480	Total			

Subcatchment 5S: E-1



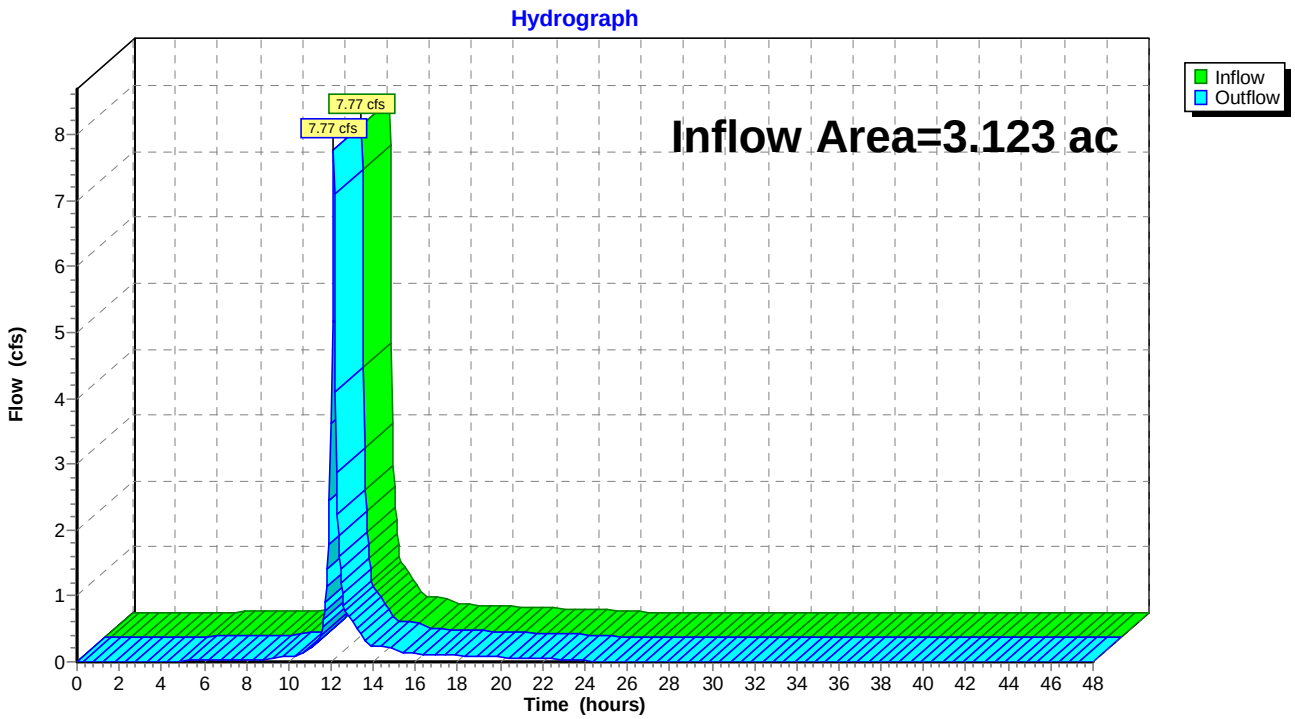
Summary for Reach 7R: Existing Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 28.63% Impervious, Inflow Depth = 1.44" for 2-yr event
Inflow = 7.77 cfs @ 12.12 hrs, Volume= 0.375 af
Outflow = 7.77 cfs @ 12.12 hrs, Volume= 0.375 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 7R: Existing Outfall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: E-1 Runoff Area=136,041 sf 28.63% Impervious Runoff Depth=2.37"
Flow Length=480' Tc=4.9 min CN=WQ Runoff=12.82 cfs 0.617 af

Reach 7R: Existing Outfall Inflow=12.82 cfs 0.617 af
Outflow=12.82 cfs 0.617 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.617 af Average Runoff Depth = 2.37"
71.37% Pervious = 2.229 ac 28.63% Impervious = 0.894 ac

Summary for Subcatchment 5S: E-1

[49] Hint: Tc<2dt may require smaller dt

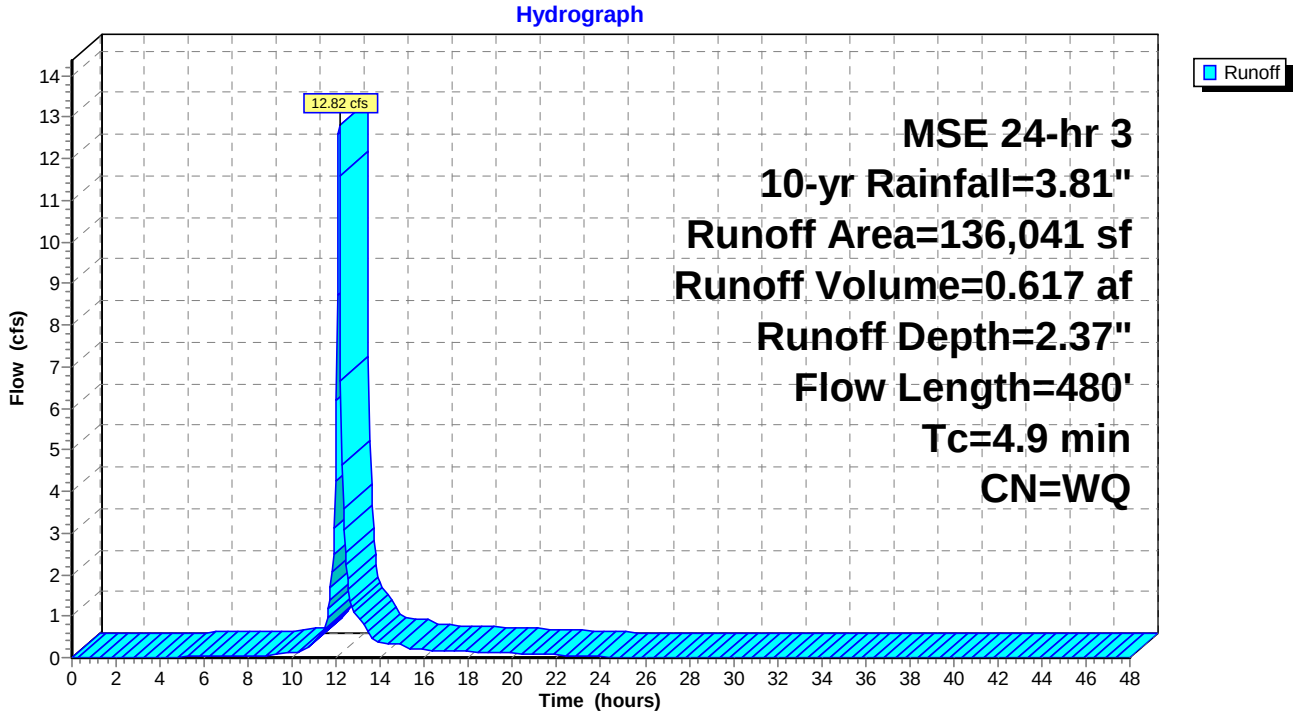
Runoff = 12.82 cfs @ 12.11 hrs, Volume= 0.617 af, Depth= 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

Area (sf)	CN	Description
97,096	80	>75% Grass cover, Good, HSG D
26,394	98	Paved parking, HSG D
12,551	98	Roofs, HSG D
136,041		Weighted Average
97,096		71.37% Pervious Area
38,945		28.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	150	0.0133	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.70"
2.8	330	0.0151	1.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.9	480	Total			

Subcatchment 5S: E-1



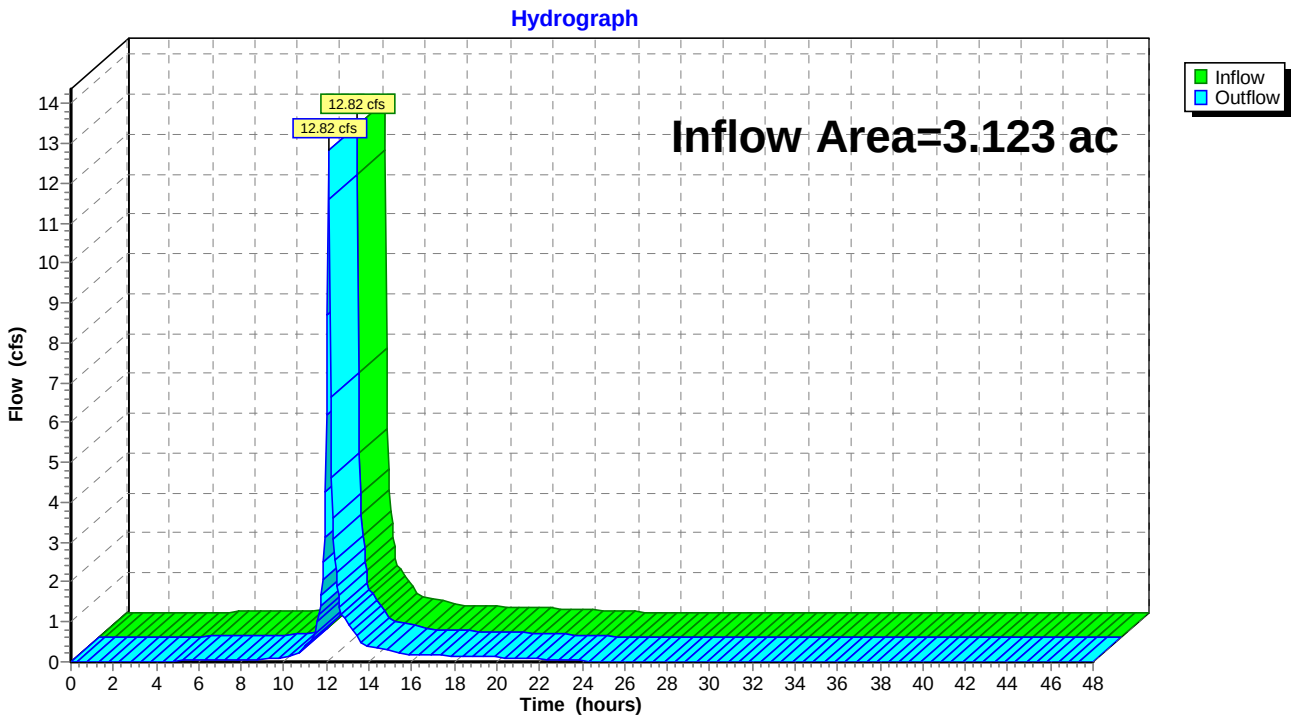
Summary for Reach 7R: Existing Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 28.63% Impervious, Inflow Depth = 2.37" for 10-yr event
Inflow = 12.82 cfs @ 12.11 hrs, Volume= 0.617 af
Outflow = 12.82 cfs @ 12.11 hrs, Volume= 0.617 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 7R: Existing Outfall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: E-1 Runoff Area=136,041 sf 28.63% Impervious Runoff Depth=4.52"
Flow Length=480' Tc=4.9 min CN=WQ Runoff=24.20 cfs 1.175 af

Reach 7R: Existing Outfall Inflow=24.20 cfs 1.175 af
Outflow=24.20 cfs 1.175 af

Total Runoff Area = 3.123 ac Runoff Volume = 1.175 af Average Runoff Depth = 4.52"
71.37% Pervious = 2.229 ac 28.63% Impervious = 0.894 ac

Summary for Subcatchment 5S: E-1

[49] Hint: Tc<2dt may require smaller dt

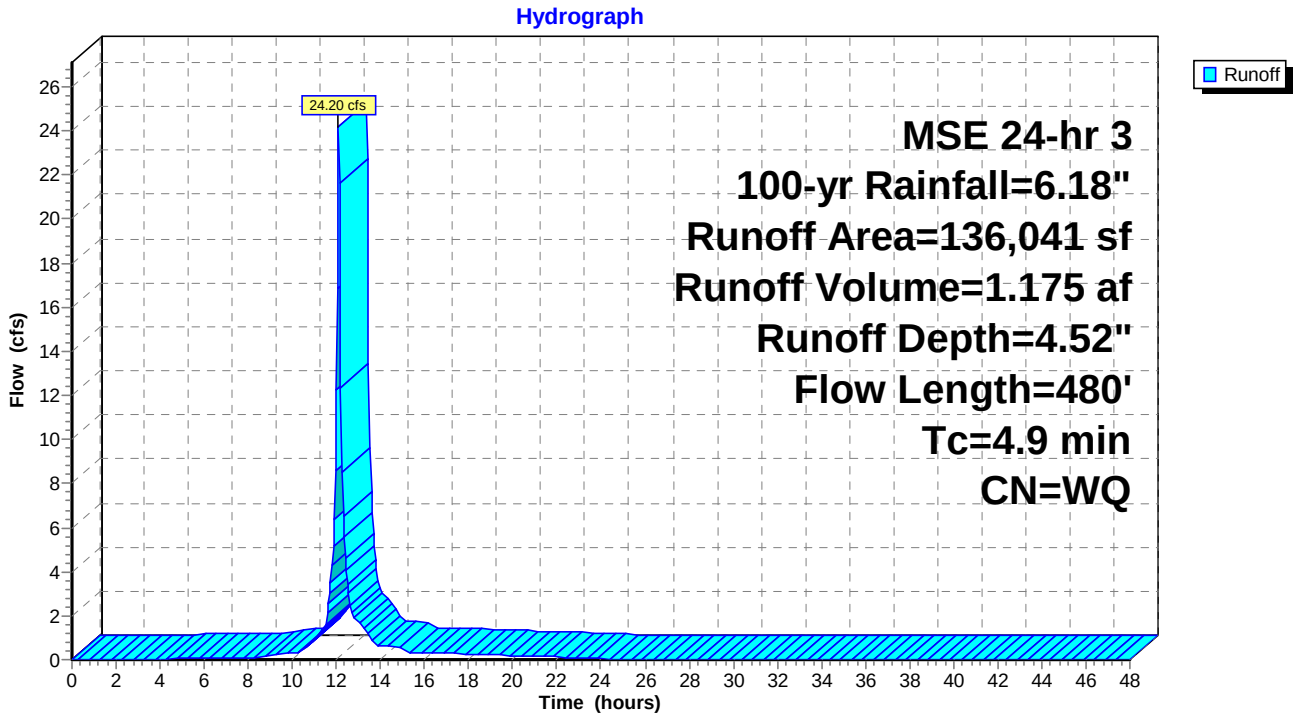
Runoff = 24.20 cfs @ 12.11 hrs, Volume= 1.175 af, Depth= 4.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

Area (sf)	CN	Description
97,096	80	>75% Grass cover, Good, HSG D
26,394	98	Paved parking, HSG D
12,551	98	Roofs, HSG D
136,041		Weighted Average
97,096		71.37% Pervious Area
38,945		28.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.1	150	0.0133	1.16		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.70"
2.8	330	0.0151	1.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.9	480	Total			

Subcatchment 5S: E-1



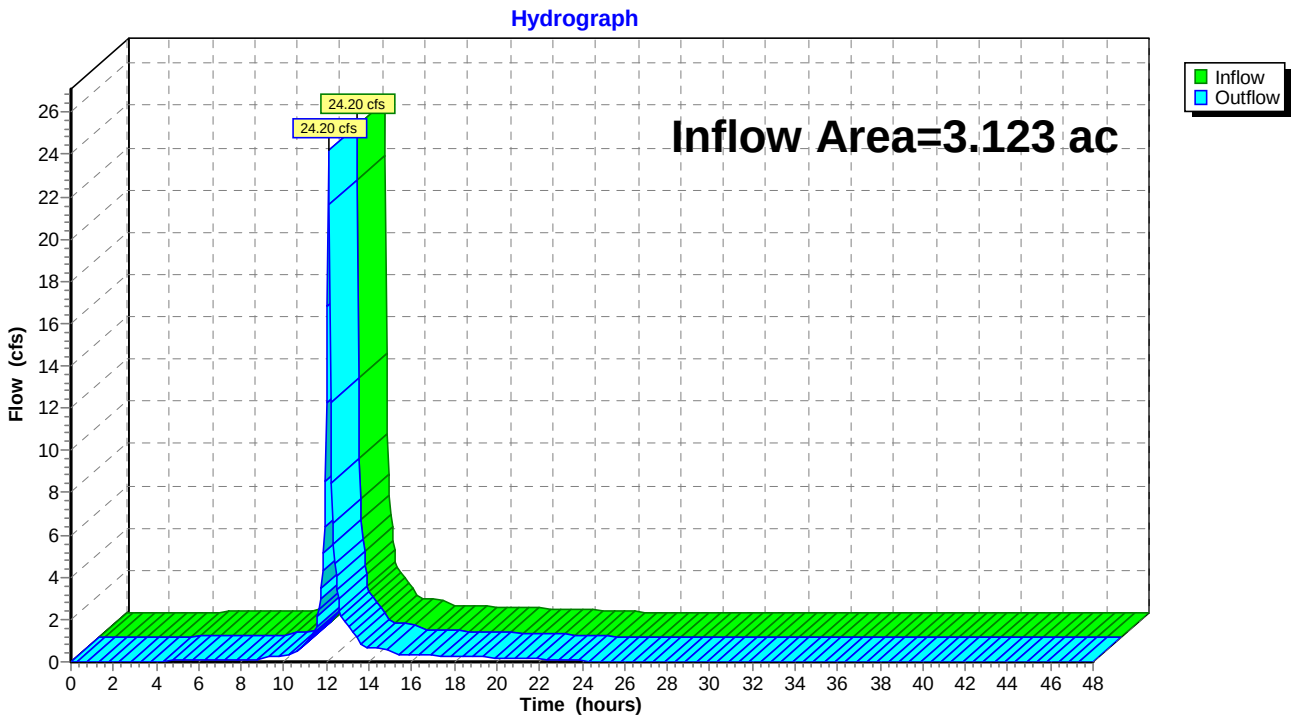
Summary for Reach 7R: Existing Outfall

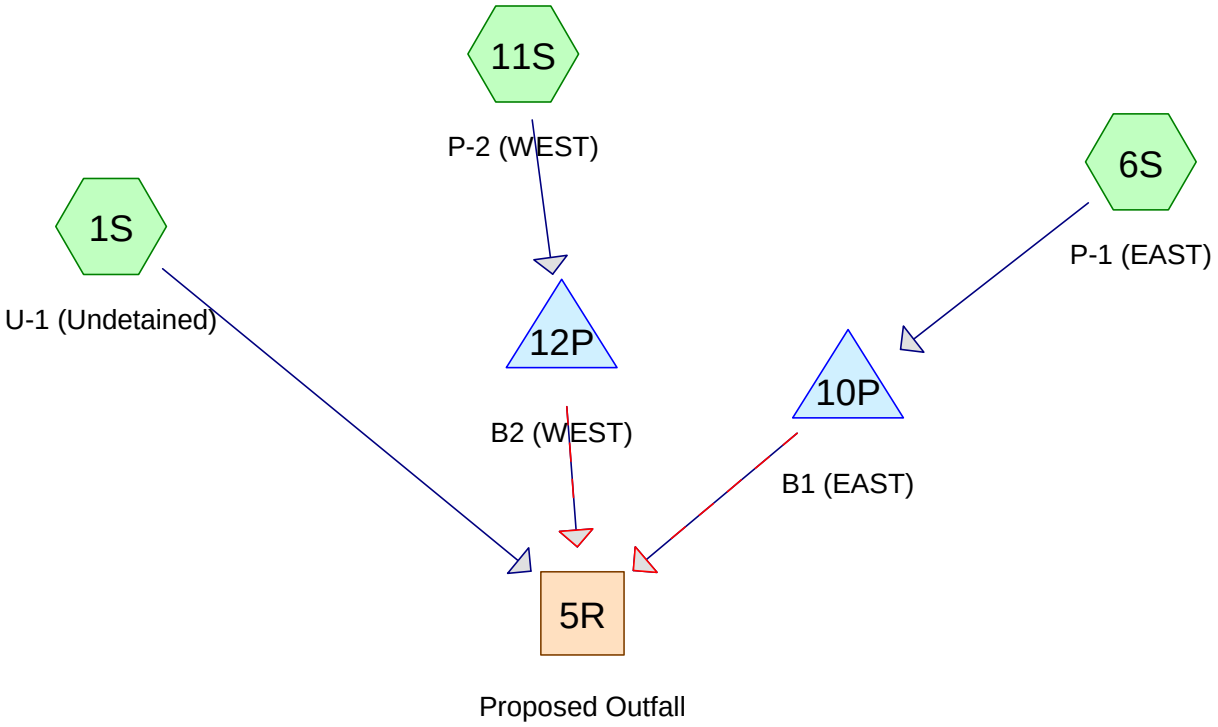
[40] Hint: Not Described (Outflow=Inflow)

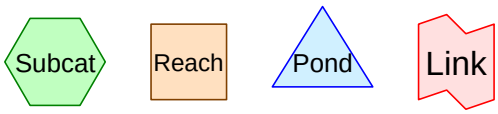
Inflow Area = 3.123 ac, 28.63% Impervious, Inflow Depth = 4.52" for 100-yr event
Inflow = 24.20 cfs @ 12.11 hrs, Volume= 1.175 af
Outflow = 24.20 cfs @ 12.11 hrs, Volume= 1.175 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 7R: Existing Outfall







Routing Diagram for L' Bri_Hydrology - Proposed
Prepared by Endpoint Solutions, Printed 8/29/2024
HydroCAD® 10.00-26 s/n 11055 © 2020 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.763	80	>75% Grass cover, Good, HSG D (1S, 6S, 11S)
1.351	98	Paved parking, HSG D (1S, 6S, 11S)
1.009	98	Roofs, HSG D (6S, 11S)
3.123	**94**	**TOTAL AREA**

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	10P	781.50	781.30	55.4	0.0036	0.010	10.0	0.0	0.0
2	12P	783.00	782.75	71.7	0.0035	0.010	8.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: U-1 (Undetained) Runoff Area=8,283 sf 2.43% Impervious Runoff Depth=0.85"
Tc=6.0 min CN=WQ Runoff=0.29 cfs 0.014 af

Subcatchment 6S: P-1 (EAST) Runoff Area=95,284 sf 86.43% Impervious Runoff Depth=1.99"
Tc=6.0 min CN=WQ Runoff=6.84 cfs 0.362 af

Subcatchment 11S: P-2 (WEST) Runoff Area=32,474 sf 62.31% Impervious Runoff Depth=1.66"
Tc=6.0 min CN=WQ Runoff=1.98 cfs 0.103 af

Reach 5R: Proposed Outfall Inflow=5.77 cfs 0.479 af
Outflow=5.77 cfs 0.479 af

Pond 10P: B1 (EAST) Peak Elev=784.71' Storage=3,749 cf Inflow=6.84 cfs 0.362 af
Primary=4.53 cfs 0.362 af Secondary=0.00 cfs 0.000 af Outflow=4.53 cfs 0.362 af

Pond 12P: B2 (WEST) Peak Elev=784.53' Storage=846 cf Inflow=1.98 cfs 0.103 af
Primary=1.07 cfs 0.103 af Secondary=0.00 cfs 0.000 af Outflow=1.07 cfs 0.103 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.479 af Average Runoff Depth = 1.84"
24.44% Pervious = 0.763 ac 75.56% Impervious = 2.360 ac

Summary for Subcatchment 1S: U-1 (Undetained)

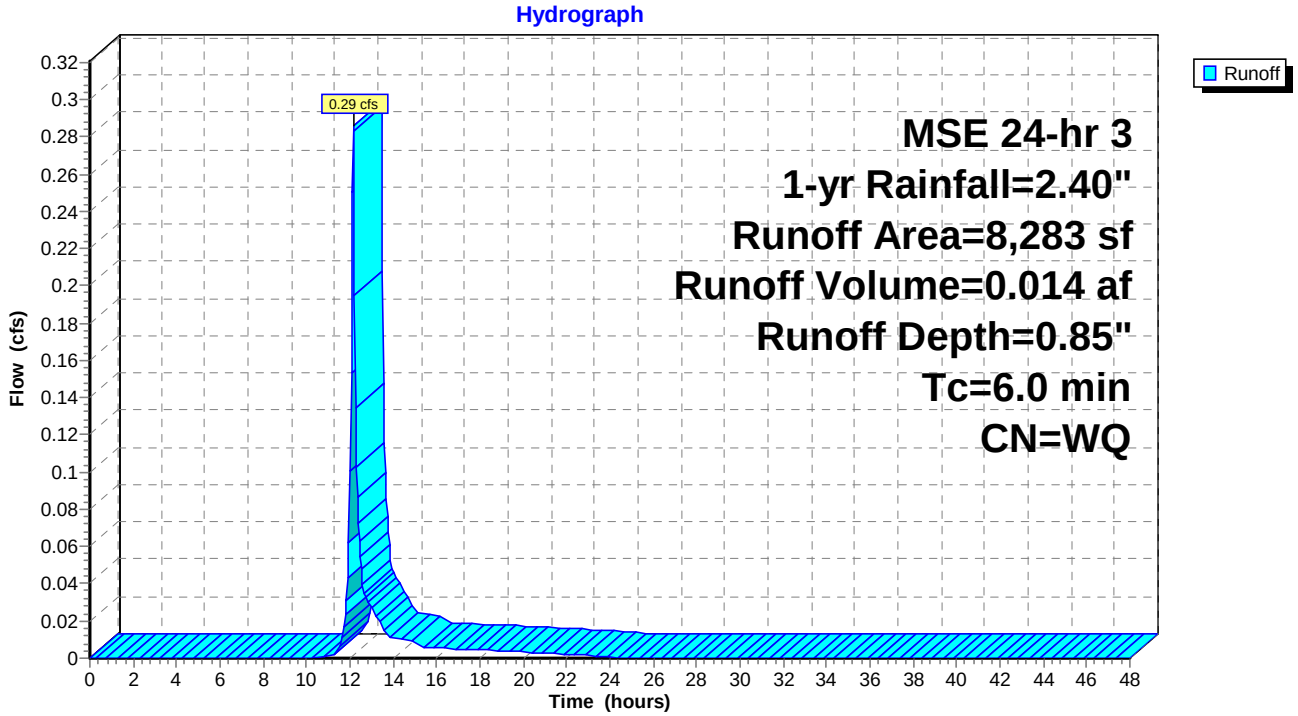
Runoff = 0.29 cfs @ 12.14 hrs, Volume= 0.014 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

Area (sf)	CN	Description
8,082	80	>75% Grass cover, Good, HSG D
201	98	Paved parking, HSG D
8,283		Weighted Average
8,082		97.57% Pervious Area
201		2.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: U-1 (Undetained)



Summary for Subcatchment 6S: P-1 (EAST)

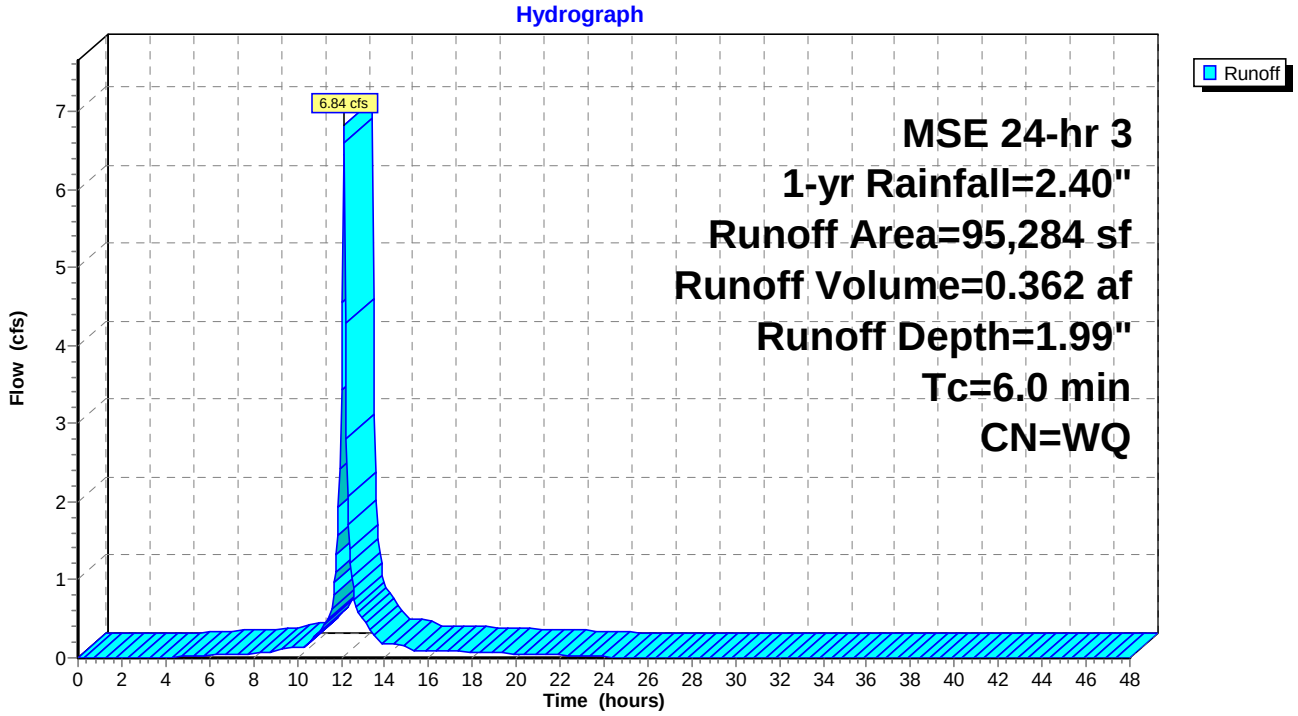
Runoff = 6.84 cfs @ 12.13 hrs, Volume= 0.362 af, Depth= 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

Area (sf)	CN	Description
50,950	98	Paved parking, HSG D
12,934	80	>75% Grass cover, Good, HSG D
31,400	98	Roofs, HSG D
95,284		Weighted Average
12,934		13.57% Pervious Area
82,350		86.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6S: P-1 (EAST)



Summary for Subcatchment 11S: P-2 (WEST)

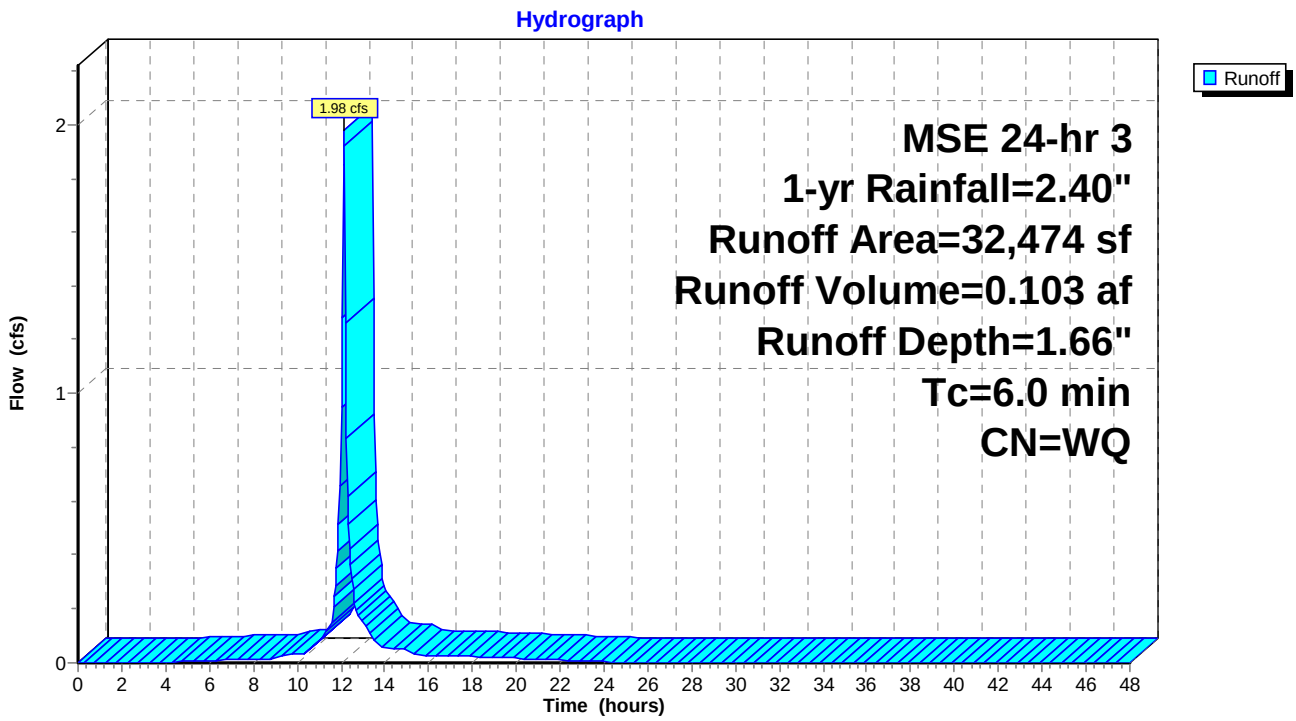
Runoff = 1.98 cfs @ 12.13 hrs, Volume= 0.103 af, Depth= 1.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-yr Rainfall=2.40"

Area (sf)	CN	Description
7,685	98	Paved parking, HSG D
12,238	80	>75% Grass cover, Good, HSG D
12,551	98	Roofs, HSG D
32,474		Weighted Average
12,238		37.69% Pervious Area
20,236		62.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: P-2 (WEST)



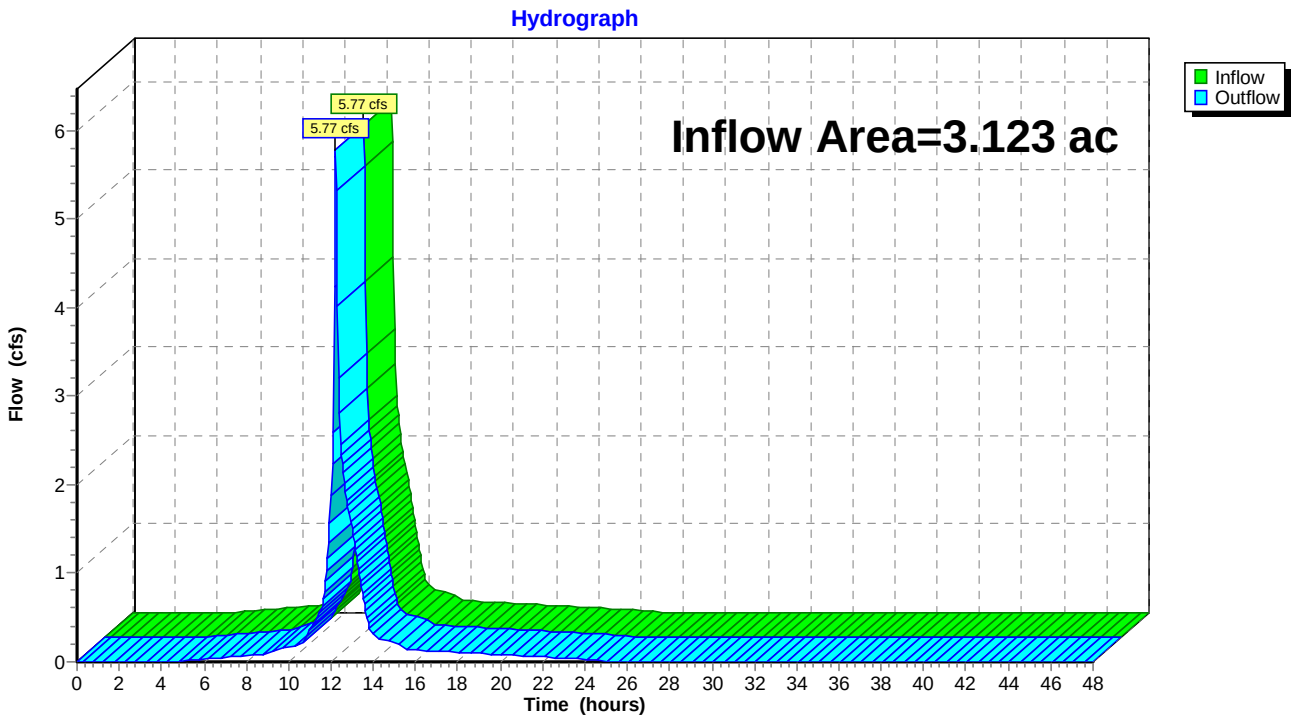
Summary for Reach 5R: Proposed Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 75.56% Impervious, Inflow Depth = 1.84" for 1-yr event
Inflow = 5.77 cfs @ 12.22 hrs, Volume= 0.479 af
Outflow = 5.77 cfs @ 12.22 hrs, Volume= 0.479 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Outfall



Summary for Pond 10P: B1 (EAST)

Inflow Area = 2.187 ac, 86.43% Impervious, Inflow Depth = 1.99" for 1-yr event
Inflow = 6.84 cfs @ 12.13 hrs, Volume= 0.362 af
Outflow = 4.53 cfs @ 12.22 hrs, Volume= 0.362 af, Atten= 34%, Lag= 5.3 min
Primary = 4.53 cfs @ 12.22 hrs, Volume= 0.362 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 784.71' @ 12.21 hrs Surf.Area= 5,352 sf Storage= 3,749 cf

Plug-Flow detention time= 22.4 min calculated for 0.362 af (100% of inflow)
Center-of-Mass det. time= 21.7 min (782.5 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	12,455 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	781.50'	1,838 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			6,125 cf Overall x 30.0% Voids
		14,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	2,450	0	0
787.50	4,667	12,455	12,455

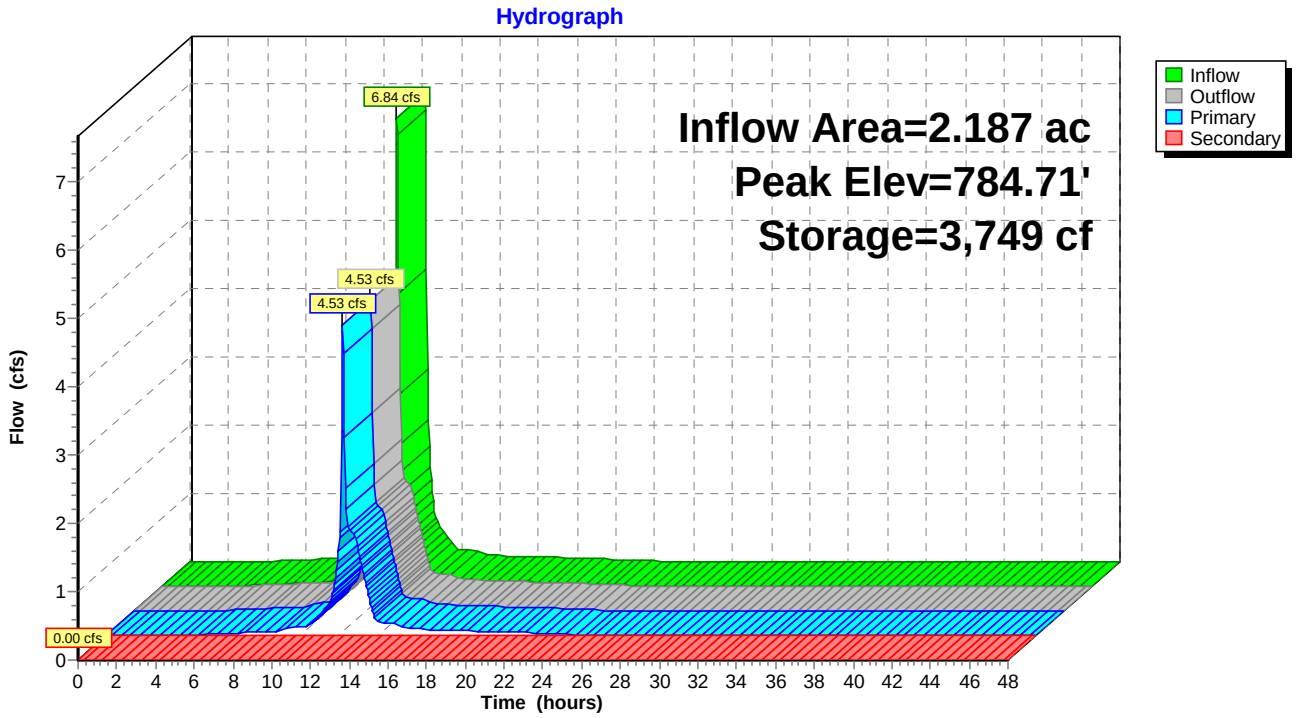
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
781.50	2,450	0	0
784.00	2,450	6,125	6,125

Device	Routing	Invert	Outlet Devices
#1	Primary	781.50'	**10.0" Round Outlet Pipe**
			L= 55.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 781.50' / 781.30' S= 0.0036 '/' Cc= 0.900
			n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	781.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	784.50'	**48.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.00'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.42 cfs @ 12.22 hrs HW=784.70' (Free Discharge)
└─**1=Outlet Pipe** (Barrel Controls 4.42 cfs @ 8.10 fps)
  ├─**2=Orifice/Grate** (Passes < 1.62 cfs potential flow)
  └─**3=Riser** (Passes < 3.56 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=781.50' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: B1 (EAST)



Summary for Pond 12P: B2 (WEST)

Inflow Area = 0.746 ac, 62.31% Impervious, Inflow Depth = 1.66" for 1-yr event
Inflow = 1.98 cfs @ 12.13 hrs, Volume= 0.103 af
Outflow = 1.07 cfs @ 12.22 hrs, Volume= 0.103 af, Atten= 46%, Lag= 5.6 min
Primary = 1.07 cfs @ 12.22 hrs, Volume= 0.103 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 784.53' @ 12.22 hrs Surf.Area= 1,840 sf Storage= 846 cf

Plug-Flow detention time= 19.4 min calculated for 0.103 af (100% of inflow)
Center-of-Mass det. time= 19.6 min (789.3 - 769.7)

Volume	Invert	Avail.Storage	Storage Description
#1	785.50'	9,285 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	783.00'	1,380 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			4,600 cf Overall x 30.0% Voids
		10,665 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.50	1,840	0	0
788.50	4,350	9,285	9,285

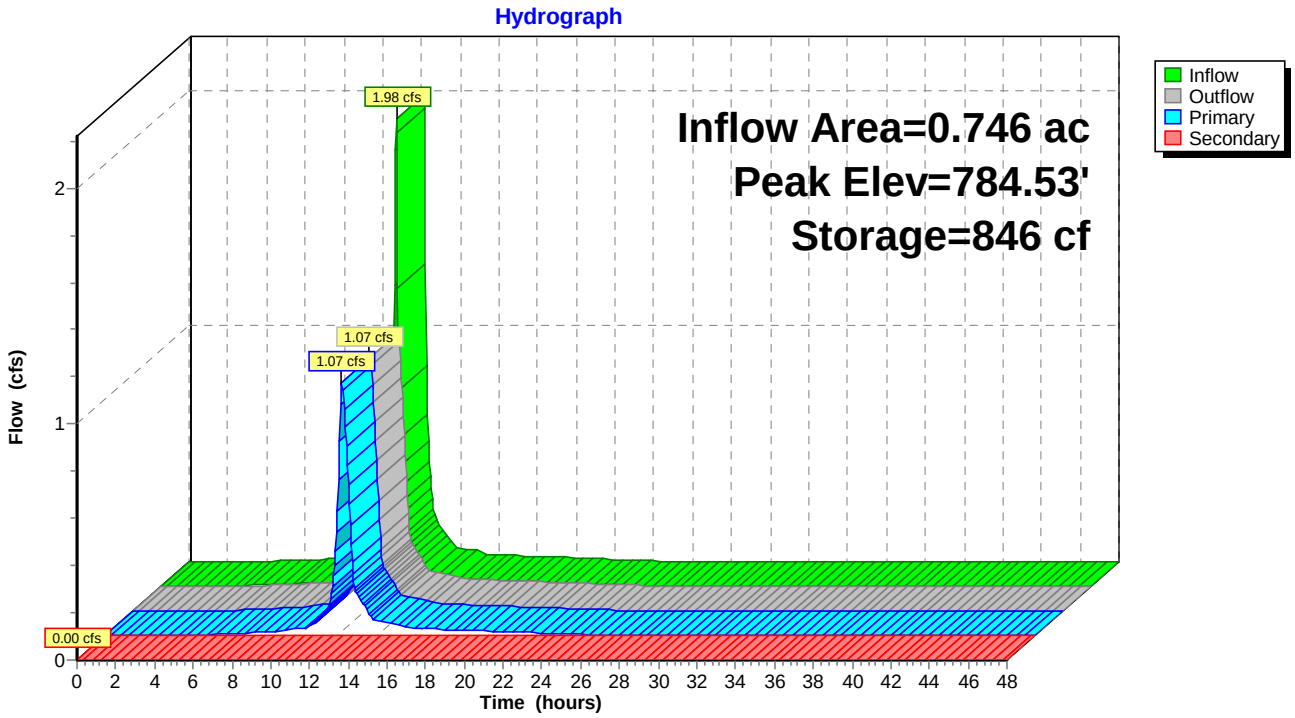
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
783.00	1,840	0	0
785.50	1,840	4,600	4,600

Device	Routing	Invert	Outlet Devices
#1	Primary	783.00'	**8.0" Round Outlet Pipe** L= 71.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 783.00' / 782.75' S= 0.0035 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	783.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	786.00'	**24.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.50'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.06 cfs @ 12.22 hrs HW=784.51' (Free Discharge)
└─**1=Outlet Pipe** (Passes 1.06 cfs of 1.57 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.06 cfs @ 5.40 fps)
  └─**3=Riser** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=783.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: B2 (WEST)



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: U-1 (Undetained) Runoff Area=8,283 sf 2.43% Impervious Runoff Depth=1.06"
Tc=6.0 min CN=WQ Runoff=0.36 cfs 0.017 af

Subcatchment 6S: P-1 (EAST) Runoff Area=95,284 sf 86.43% Impervious Runoff Depth=2.27"
Tc=6.0 min CN=WQ Runoff=7.78 cfs 0.415 af

Subcatchment 11S: P-2 (WEST) Runoff Area=32,474 sf 62.31% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=WQ Runoff=2.29 cfs 0.120 af

Reach 5R: Proposed Outfall Inflow=5.99 cfs 0.551 af
Outflow=5.99 cfs 0.551 af

Pond 10P: B1 (EAST) Peak Elev=784.88' Storage=4,229 cf Inflow=7.78 cfs 0.415 af
Primary=4.57 cfs 0.415 af Secondary=0.00 cfs 0.000 af Outflow=4.57 cfs 0.415 af

Pond 12P: B2 (WEST) Peak Elev=784.82' Storage=1,002 cf Inflow=2.29 cfs 0.120 af
Primary=1.18 cfs 0.120 af Secondary=0.00 cfs 0.000 af Outflow=1.18 cfs 0.120 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.551 af Average Runoff Depth = 2.12"
24.44% Pervious = 0.763 ac 75.56% Impervious = 2.360 ac

Summary for Subcatchment 1S: U-1 (Undetained)

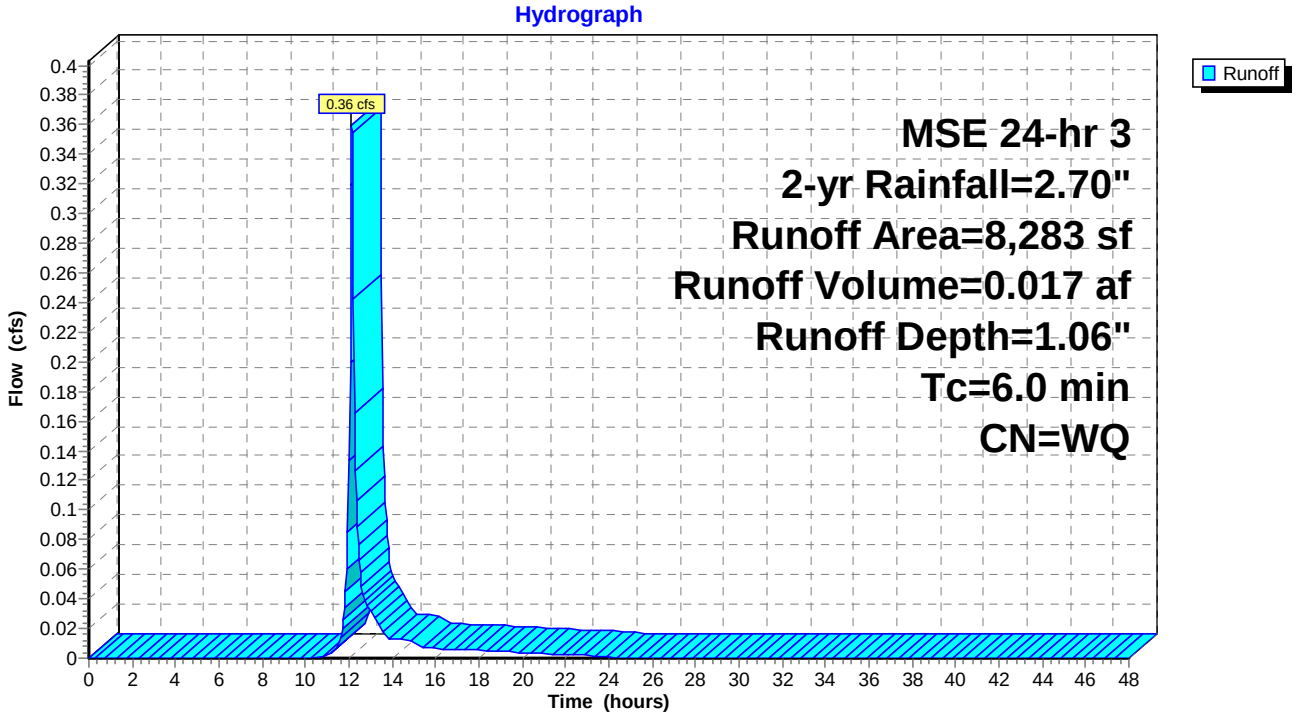
Runoff = 0.36 cfs @ 12.14 hrs, Volume= 0.017 af, Depth= 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

Area (sf)	CN	Description
8,082	80	>75% Grass cover, Good, HSG D
201	98	Paved parking, HSG D
8,283		Weighted Average
8,082		97.57% Pervious Area
201		2.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: U-1 (Undetained)



Summary for Subcatchment 6S: P-1 (EAST)

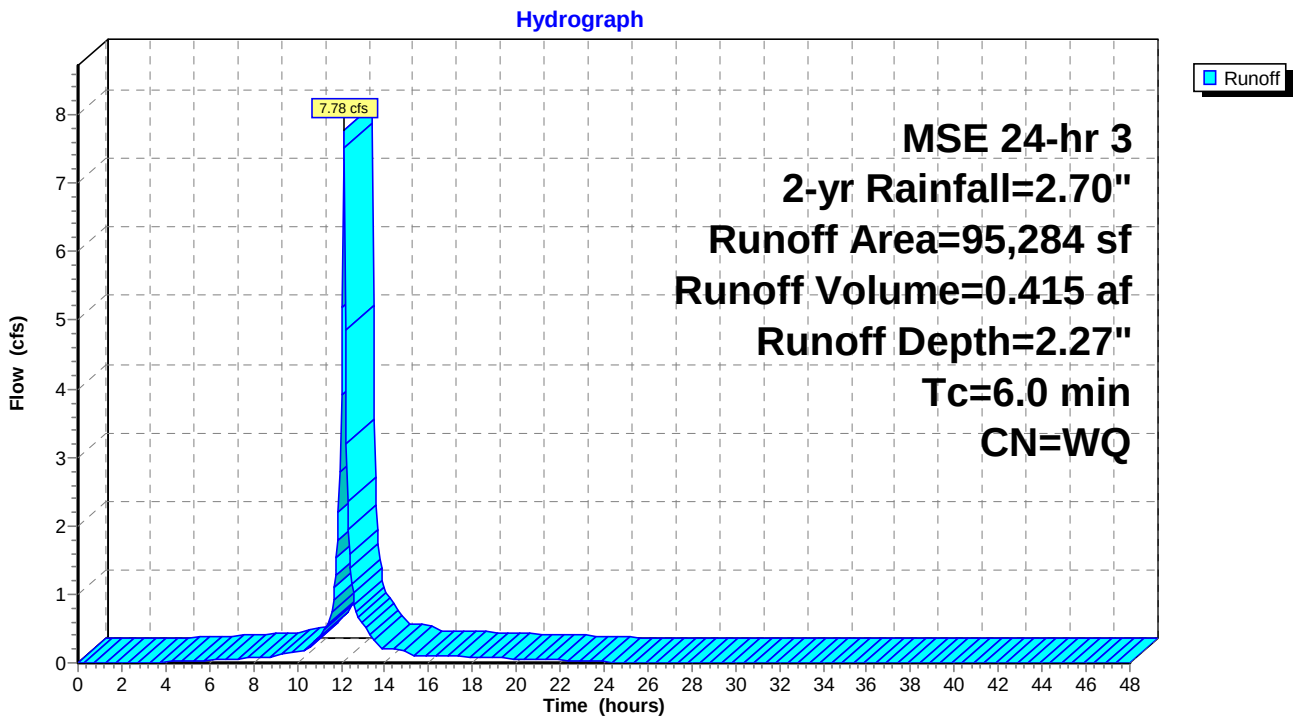
Runoff = 7.78 cfs @ 12.13 hrs, Volume= 0.415 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

Area (sf)	CN	Description
50,950	98	Paved parking, HSG D
12,934	80	>75% Grass cover, Good, HSG D
31,400	98	Roofs, HSG D
95,284		Weighted Average
12,934		13.57% Pervious Area
82,350		86.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6S: P-1 (EAST)



Summary for Subcatchment 11S: P-2 (WEST)

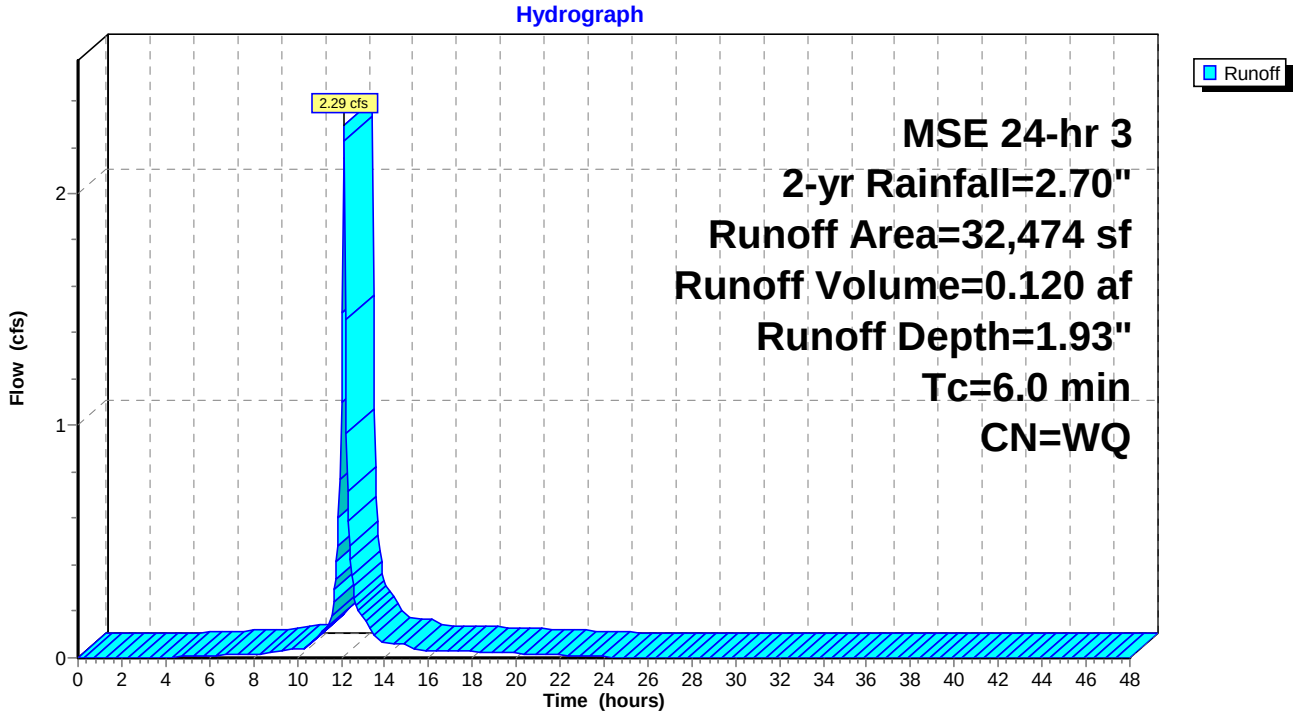
Runoff = 2.29 cfs @ 12.13 hrs, Volume= 0.120 af, Depth= 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-yr Rainfall=2.70"

Area (sf)	CN	Description
7,685	98	Paved parking, HSG D
12,238	80	>75% Grass cover, Good, HSG D
12,551	98	Roofs, HSG D
32,474		Weighted Average
12,238		37.69% Pervious Area
20,236		62.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: P-2 (WEST)



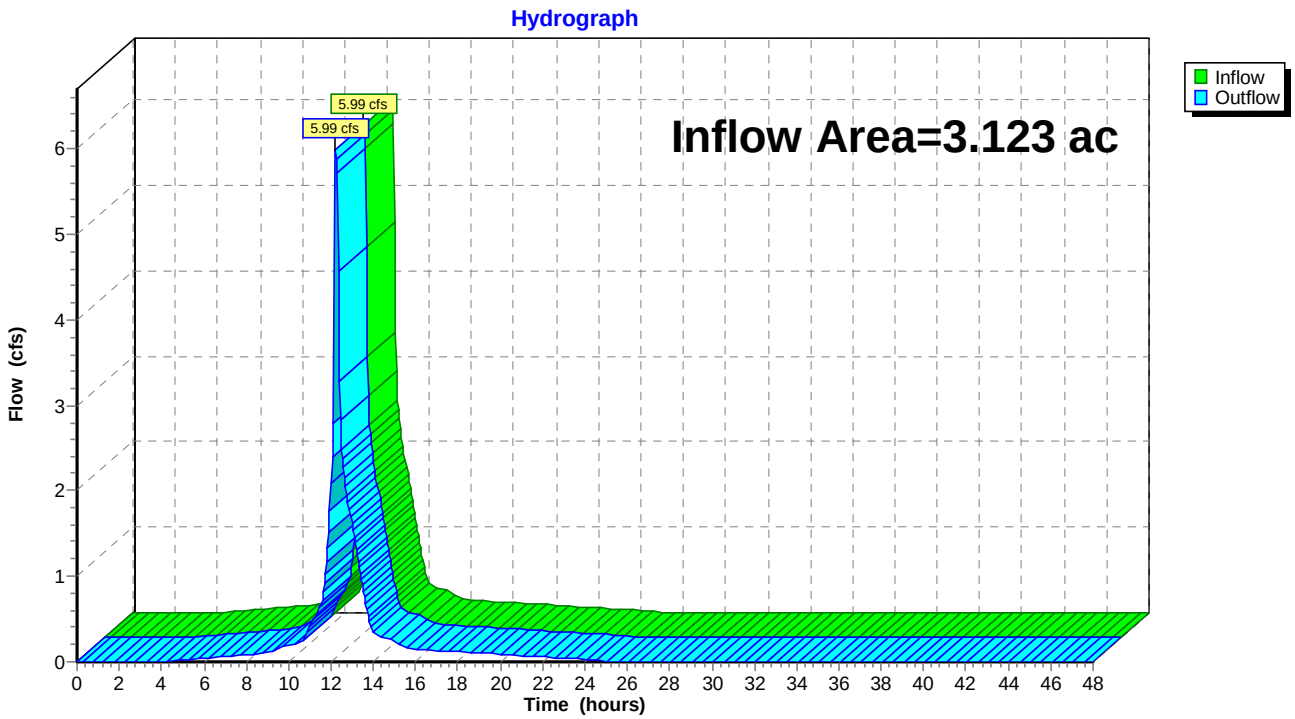
Summary for Reach 5R: Proposed Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 75.56% Impervious, Inflow Depth = 2.12" for 2-yr event
Inflow = 5.99 cfs @ 12.19 hrs, Volume= 0.551 af
Outflow = 5.99 cfs @ 12.19 hrs, Volume= 0.551 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Outfall



Summary for Pond 10P: B1 (EAST)

Inflow Area =	2.187 ac,	86.43% Impervious,	Inflow Depth =	2.27"	for 2-yr event
Inflow =	7.78 cfs @	12.13 hrs,	Volume=	0.415 af	
Outflow =	4.57 cfs @	12.20 hrs,	Volume=	0.415 af,	Atten= 41%, Lag= 4.3 min
Primary =	4.57 cfs @	12.20 hrs,	Volume=	0.415 af	
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 784.88' @ 12.21 hrs Surf.Area= 5,455 sf Storage= 4,229 cf

Plug-Flow detention time= 20.8 min calculated for 0.414 af (100% of inflow)
Center-of-Mass det. time= 20.9 min (779.7 - 758.8)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	12,455 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	781.50'	1,838 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 6,125 cf Overall x 30.0% Voids
		14,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	2,450	0	0
787.50	4,667	12,455	12,455

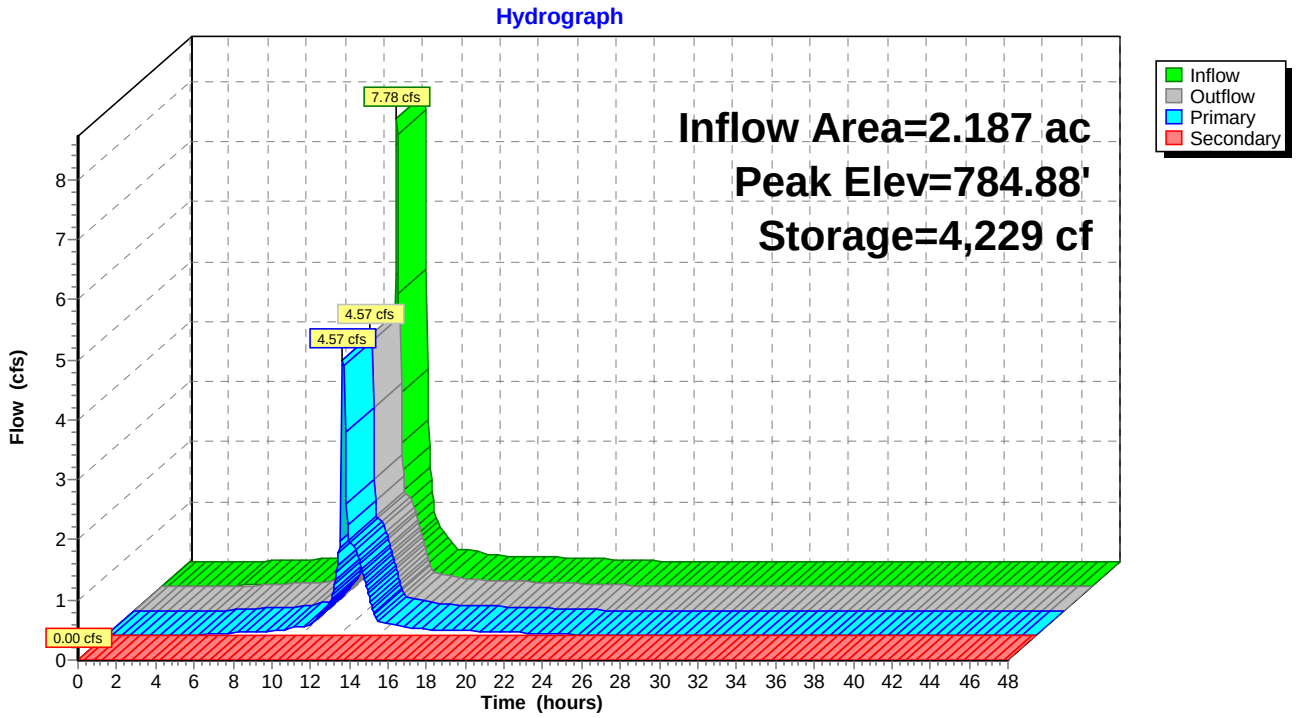
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
781.50	2,450	0	0
784.00	2,450	6,125	6,125

Device	Routing	Invert	Outlet Devices
#1	Primary	781.50'	**10.0" Round Outlet Pipe** L= 55.4' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 781.50' / 781.30' S= 0.0036 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	781.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	784.50'	**48.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.00'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=4.57 cfs @ 12.20 hrs HW=784.87' (Free Discharge)
└─**1=Outlet Pipe** (Barrel Controls 4.57 cfs @ 8.38 fps)
  ├─**2=Orifice/Grate** (Passes < 1.67 cfs potential flow)
  └─**3=Riser** (Passes < 9.33 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=781.50' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: B1 (EAST)



Summary for Pond 12P: B2 (WEST)

Inflow Area = 0.746 ac, 62.31% Impervious, Inflow Depth = 1.93" for 2-yr event
Inflow = 2.29 cfs @ 12.13 hrs, Volume= 0.120 af
Outflow = 1.18 cfs @ 12.23 hrs, Volume= 0.120 af, Atten= 48%, Lag= 6.0 min
Primary = 1.18 cfs @ 12.23 hrs, Volume= 0.120 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 784.82' @ 12.23 hrs Surf.Area= 1,840 sf Storage= 1,002 cf

Plug-Flow detention time= 19.6 min calculated for 0.120 af (100% of inflow)
Center-of-Mass det. time= 19.0 min (787.1 - 768.1)

Volume	Invert	Avail.Storage	Storage Description
#1	785.50'	9,285 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	783.00'	1,380 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			4,600 cf Overall x 30.0% Voids
		10,665 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.50	1,840	0	0
788.50	4,350	9,285	9,285

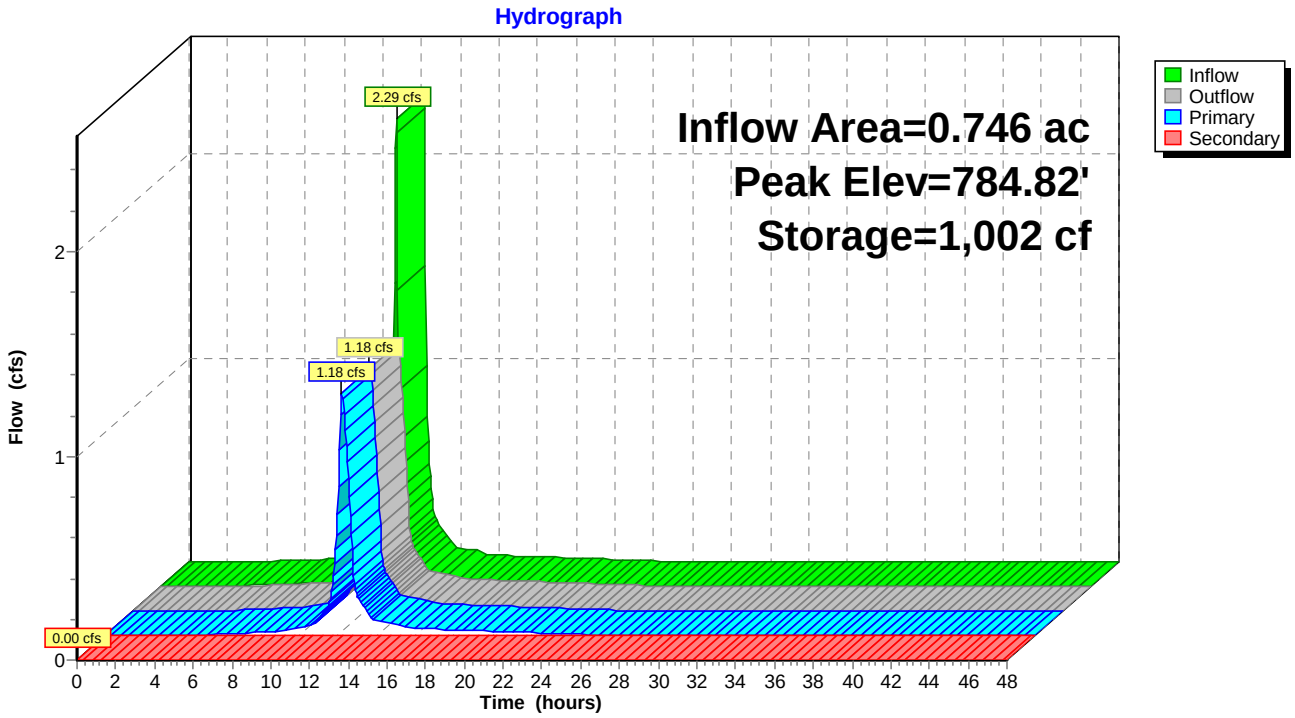
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
783.00	1,840	0	0
785.50	1,840	4,600	4,600

Device	Routing	Invert	Outlet Devices
#1	Primary	783.00'	**8.0" Round Outlet Pipe** L= 71.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 783.00' / 782.75' S= 0.0035 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	783.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	786.00'	**24.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.50'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.18 cfs @ 12.23 hrs HW=784.80' (Free Discharge)
└─**1=Outlet Pipe** (Passes 1.18 cfs of 1.77 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.18 cfs @ 6.00 fps)
  └─**3=Riser** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=783.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: B2 (WEST)



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: U-1 (Undetained) Runoff Area=8,283 sf 2.43% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=WQ Runoff=0.65 cfs 0.031 af

Subcatchment 6S: P-1 (EAST) Runoff Area=95,284 sf 86.43% Impervious Runoff Depth=3.35"
Tc=6.0 min CN=WQ Runoff=11.30 cfs 0.610 af

Subcatchment 11S: P-2 (WEST) Runoff Area=32,474 sf 62.31% Impervious Runoff Depth=2.94"
Tc=6.0 min CN=WQ Runoff=3.48 cfs 0.183 af

Reach 5R: Proposed Outfall Inflow=7.03 cfs 0.823 af
Outflow=7.03 cfs 0.823 af

Pond 10P: B1 (EAST) Peak Elev=785.54' Storage=6,358 cf Inflow=11.30 cfs 0.610 af
Primary=5.10 cfs 0.610 af Secondary=0.00 cfs 0.000 af Outflow=5.10 cfs 0.610 af

Pond 12P: B2 (WEST) Peak Elev=785.67' Storage=1,714 cf Inflow=3.48 cfs 0.183 af
Primary=1.47 cfs 0.183 af Secondary=0.00 cfs 0.000 af Outflow=1.47 cfs 0.183 af

Total Runoff Area = 3.123 ac Runoff Volume = 0.823 af Average Runoff Depth = 3.16"
24.44% Pervious = 0.763 ac 75.56% Impervious = 2.360 ac

Summary for Subcatchment 1S: U-1 (Undetained)

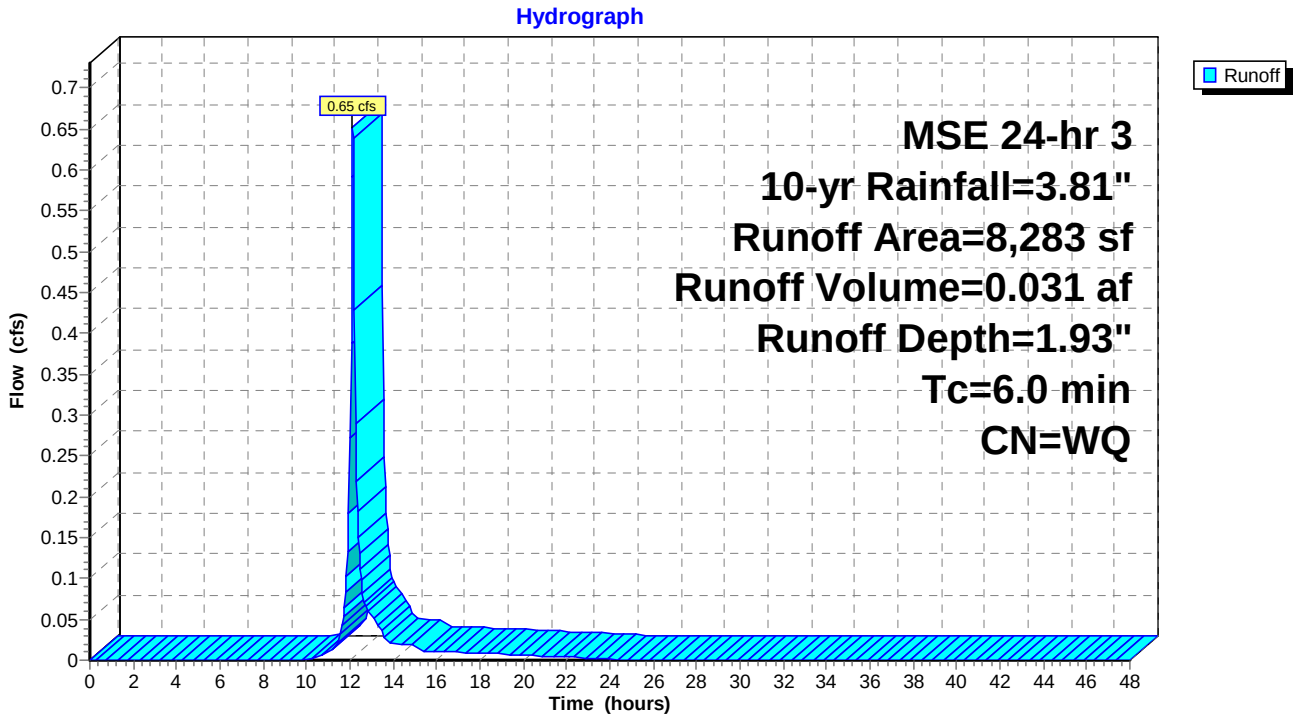
Runoff = 0.65 cfs @ 12.13 hrs, Volume= 0.031 af, Depth= 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

Area (sf)	CN	Description
8,082	80	>75% Grass cover, Good, HSG D
201	98	Paved parking, HSG D
8,283		Weighted Average
8,082		97.57% Pervious Area
201		2.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: U-1 (Undetained)



Summary for Subcatchment 6S: P-1 (EAST)

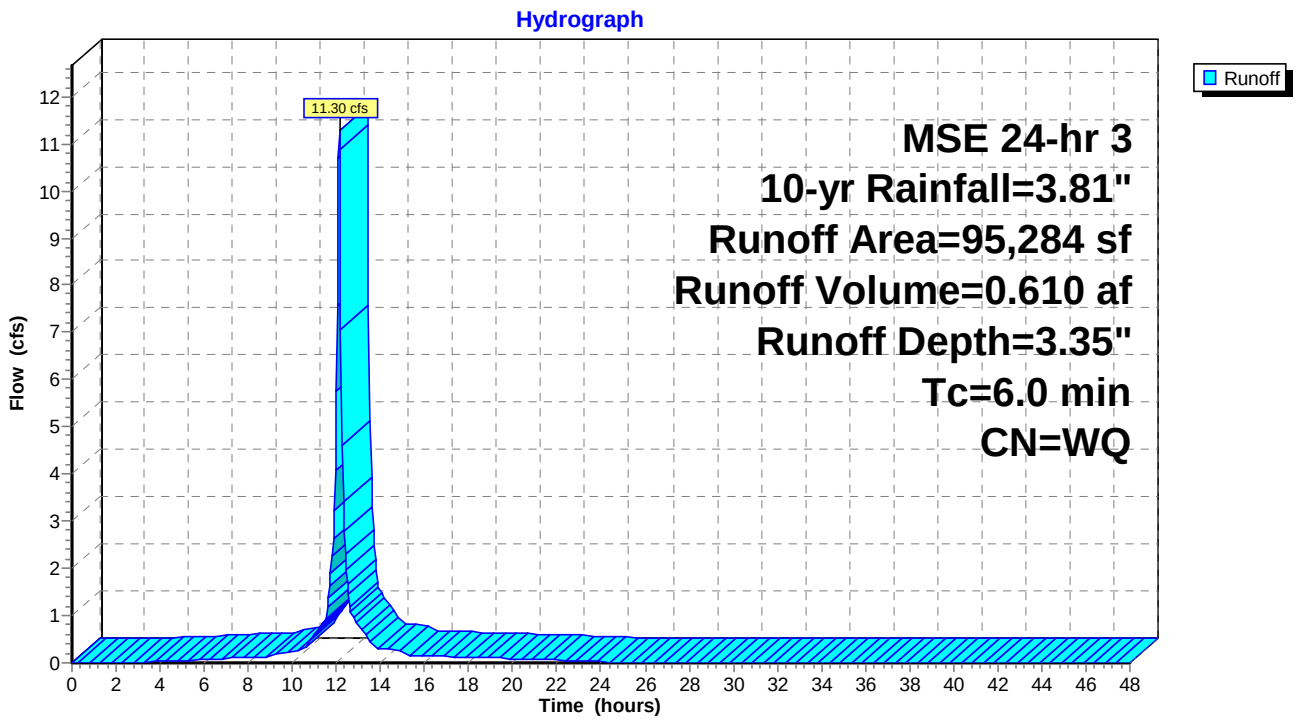
Runoff = 11.30 cfs @ 12.13 hrs, Volume= 0.610 af, Depth= 3.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

Area (sf)	CN	Description
50,950	98	Paved parking, HSG D
12,934	80	>75% Grass cover, Good, HSG D
31,400	98	Roofs, HSG D
95,284		Weighted Average
12,934		13.57% Pervious Area
82,350		86.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6S: P-1 (EAST)



Summary for Subcatchment 11S: P-2 (WEST)

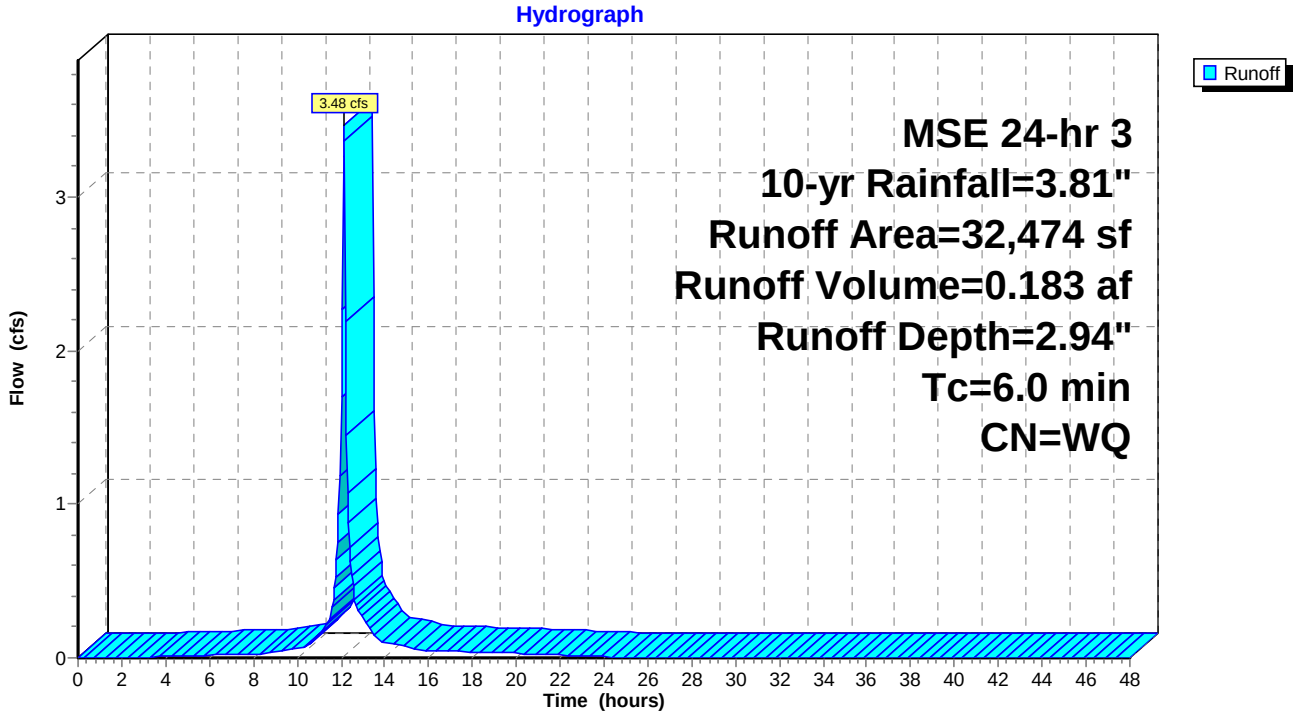
Runoff = 3.48 cfs @ 12.13 hrs, Volume= 0.183 af, Depth= 2.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-yr Rainfall=3.81"

Area (sf)	CN	Description
7,685	98	Paved parking, HSG D
12,238	80	>75% Grass cover, Good, HSG D
12,551	98	Roofs, HSG D
32,474		Weighted Average
12,238		37.69% Pervious Area
20,236		62.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: P-2 (WEST)



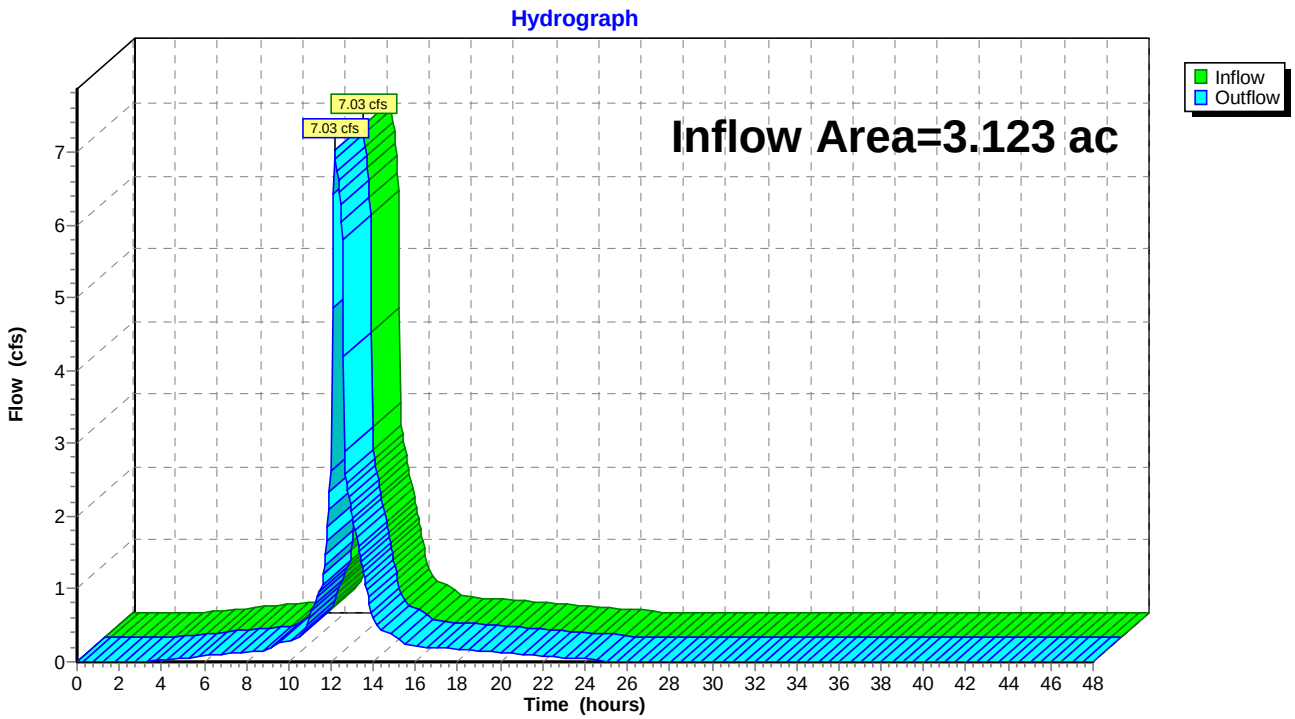
Summary for Reach 5R: Proposed Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 75.56% Impervious, Inflow Depth = 3.16" for 10-yr event
Inflow = 7.03 cfs @ 12.17 hrs, Volume= 0.823 af
Outflow = 7.03 cfs @ 12.17 hrs, Volume= 0.823 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Outfall



Summary for Pond 10P: B1 (EAST)

Inflow Area = 2.187 ac, 86.43% Impervious, Inflow Depth = 3.35" for 10-yr event
Inflow = 11.30 cfs @ 12.13 hrs, Volume= 0.610 af
Outflow = 5.10 cfs @ 12.25 hrs, Volume= 0.610 af, Atten= 55%, Lag= 7.1 min
Primary = 5.10 cfs @ 12.25 hrs, Volume= 0.610 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 785.54' @ 12.25 hrs Surf.Area= 5,875 sf Storage= 6,358 cf

Plug-Flow detention time= 19.9 min calculated for 0.609 af (100% of inflow)
Center-of-Mass det. time= 20.0 min (773.6 - 753.6)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	12,455 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	781.50'	1,838 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			6,125 cf Overall x 30.0% Voids
		14,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	2,450	0	0
787.50	4,667	12,455	12,455

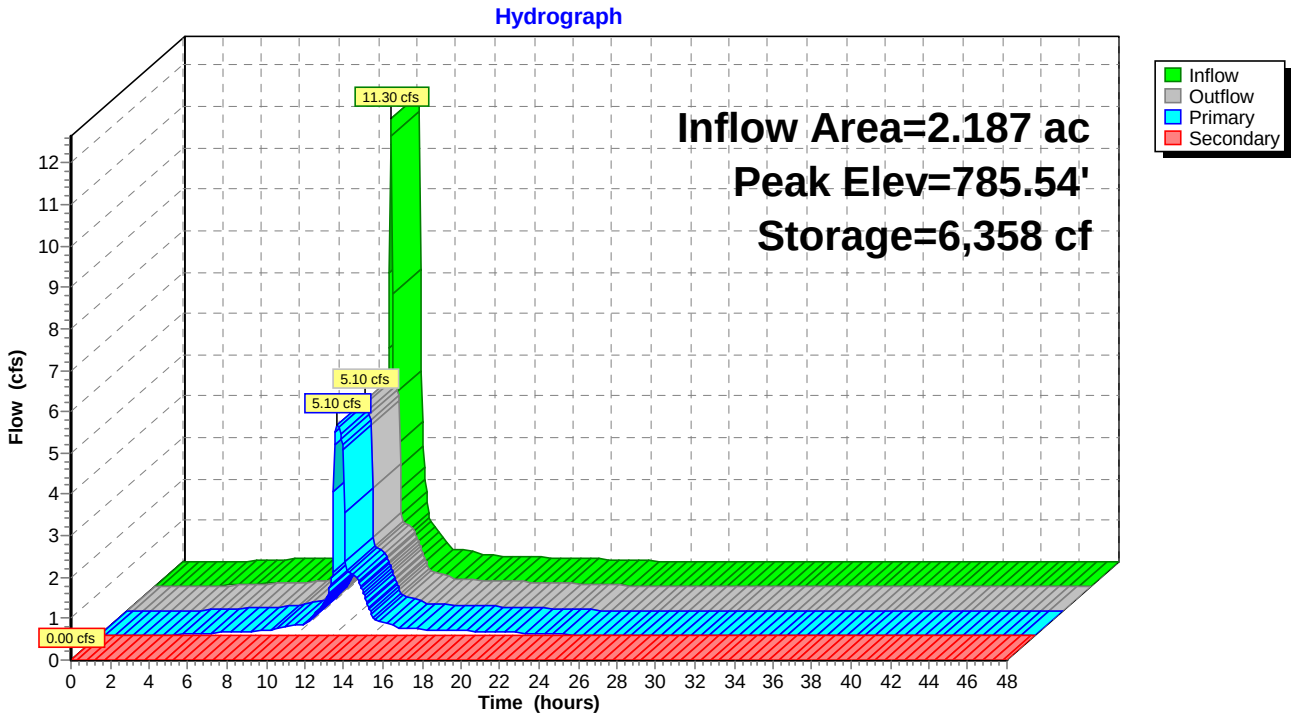
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
781.50	2,450	0	0
784.00	2,450	6,125	6,125

Device	Routing	Invert	Outlet Devices
#1	Primary	781.50'	**10.0" Round Outlet Pipe**
			L= 55.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 781.50' / 781.30' S= 0.0036 '/' Cc= 0.900
			n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	781.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	784.50'	**48.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.00'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=5.09 cfs @ 12.25 hrs HW=785.54' (Free Discharge)
└─**1=Outlet Pipe** (Barrel Controls 5.09 cfs @ 9.34 fps)
  ├─**2=Orifice/Grate** (Passes < 1.84 cfs potential flow)
  └─**3=Riser** (Passes < 43.27 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=781.50' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: B1 (EAST)



Summary for Pond 12P: B2 (WEST)

Inflow Area = 0.746 ac, 62.31% Impervious, Inflow Depth = 2.94" for 10-yr event
Inflow = 3.48 cfs @ 12.13 hrs, Volume= 0.183 af
Outflow = 1.47 cfs @ 12.26 hrs, Volume= 0.183 af, Atten= 58%, Lag= 7.6 min
Primary = 1.47 cfs @ 12.26 hrs, Volume= 0.183 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 785.67' @ 12.26 hrs Surf.Area= 3,826 sf Storage= 1,714 cf

Plug-Flow detention time= 18.1 min calculated for 0.182 af (100% of inflow)
Center-of-Mass det. time= 18.3 min (781.7 - 763.4)

Volume	Invert	Avail.Storage	Storage Description
#1	785.50'	9,285 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	783.00'	1,380 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			4,600 cf Overall x 30.0% Voids
		10,665 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.50	1,840	0	0
788.50	4,350	9,285	9,285

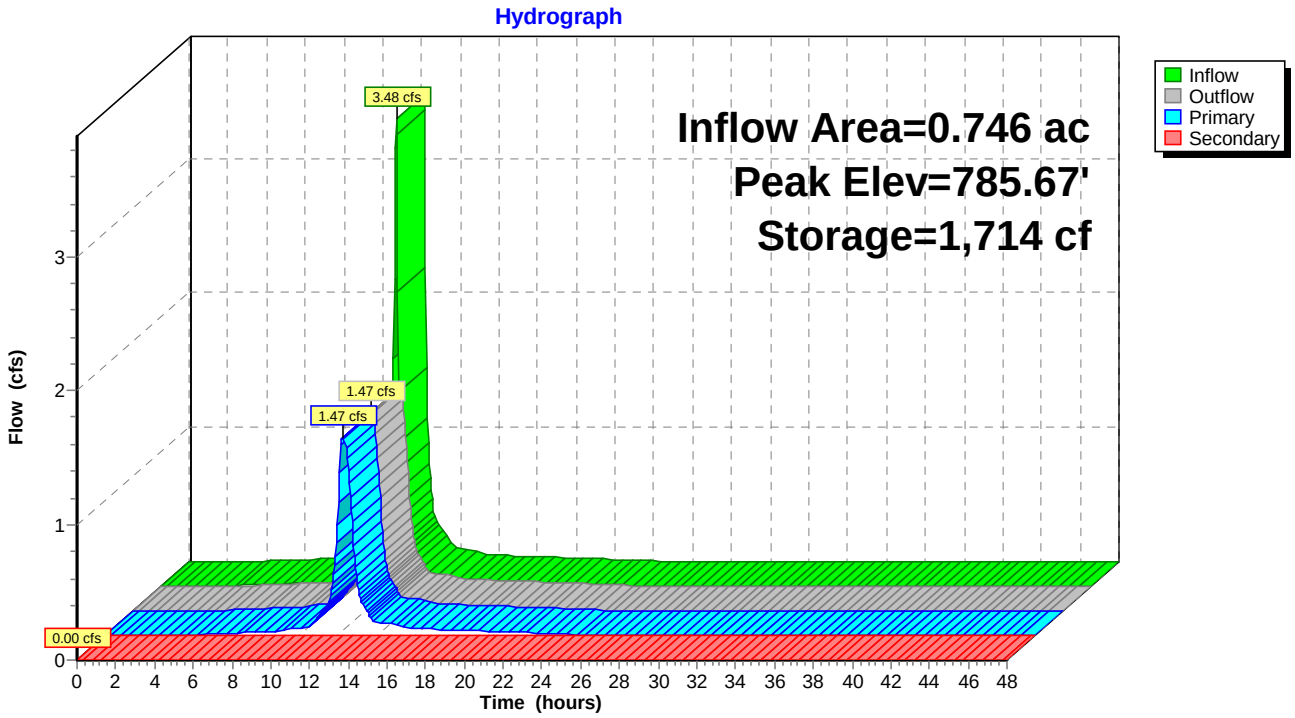
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
783.00	1,840	0	0
785.50	1,840	4,600	4,600

Device	Routing	Invert	Outlet Devices
#1	Primary	783.00'	**8.0" Round Outlet Pipe** L= 71.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 783.00' / 782.75' S= 0.0035 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	783.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	786.00'	**24.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.50'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=1.47 cfs @ 12.26 hrs HW=785.67' (Free Discharge)
└─**1=Outlet Pipe** (Passes 1.47 cfs of 2.25 cfs potential flow)
  ├─**2=Orifice/Grate** (Orifice Controls 1.47 cfs @ 7.49 fps)
  └─**3=Riser** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=783.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: B2 (WEST)



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-Q
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: U-1 (Undetained) Runoff Area=8,283 sf 2.43% Impervious Runoff Depth=3.99"
Tc=6.0 min CN=WQ Runoff=1.32 cfs 0.063 af

Subcatchment 6S: P-1 (EAST) Runoff Area=95,284 sf 86.43% Impervious Runoff Depth=5.67"
Tc=6.0 min CN=WQ Runoff=18.85 cfs 1.034 af

Subcatchment 11S: P-2 (WEST) Runoff Area=32,474 sf 62.31% Impervious Runoff Depth=5.19"
Tc=6.0 min CN=WQ Runoff=6.07 cfs 0.322 af

Reach 5R: Proposed Outfall Inflow=9.65 cfs 1.419 af
Outflow=9.65 cfs 1.419 af

Pond 10P: B1 (EAST) Peak Elev=787.02' Storage=12,132 cf Inflow=18.85 cfs 1.034 af
Primary=6.11 cfs 1.033 af Secondary=0.14 cfs 0.001 af Outflow=6.25 cfs 1.034 af

Pond 12P: B2 (WEST) Peak Elev=786.37' Storage=3,297 cf Inflow=6.07 cfs 0.322 af
Primary=2.58 cfs 0.322 af Secondary=0.00 cfs 0.000 af Outflow=2.58 cfs 0.322 af

Total Runoff Area = 3.123 ac Runoff Volume = 1.419 af Average Runoff Depth = 5.45"
24.44% Pervious = 0.763 ac 75.56% Impervious = 2.360 ac

Summary for Subcatchment 1S: U-1 (Undetained)

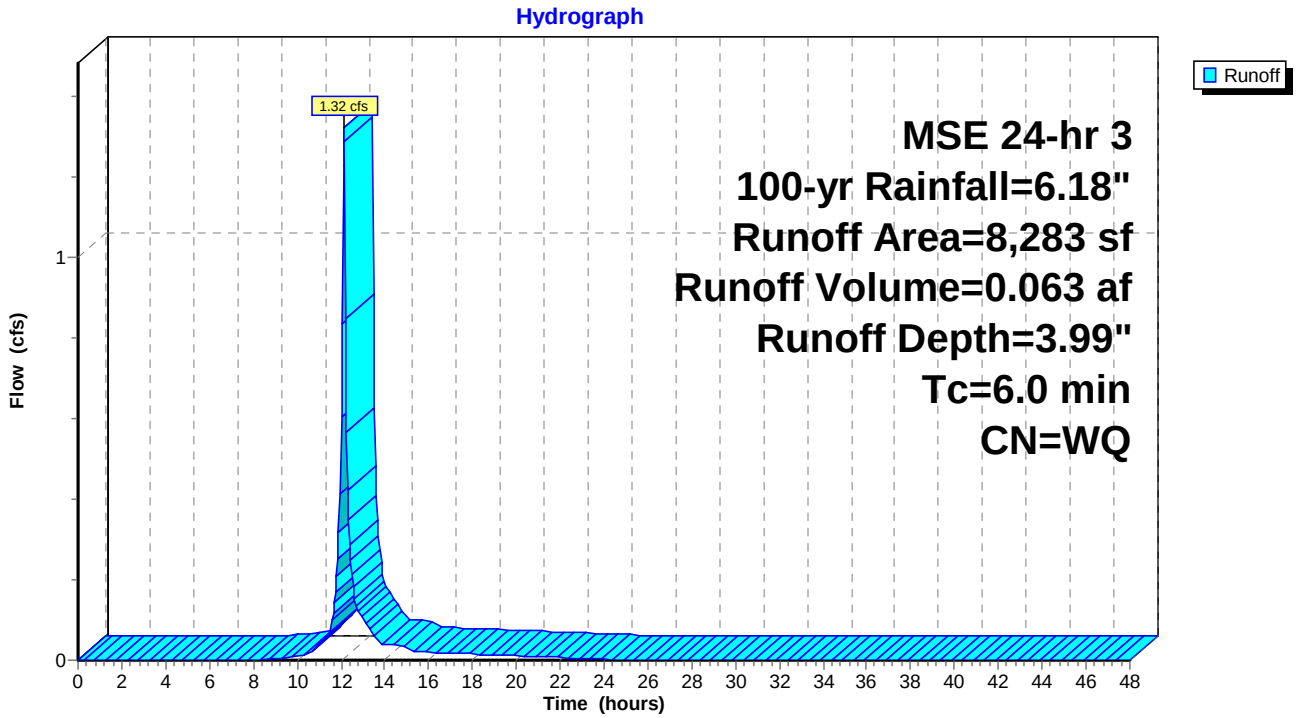
Runoff = 1.32 cfs @ 12.13 hrs, Volume= 0.063 af, Depth= 3.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

Area (sf)	CN	Description
8,082	80	>75% Grass cover, Good, HSG D
201	98	Paved parking, HSG D
8,283		Weighted Average
8,082		97.57% Pervious Area
201		2.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1S: U-1 (Undetained)



Summary for Subcatchment 6S: P-1 (EAST)

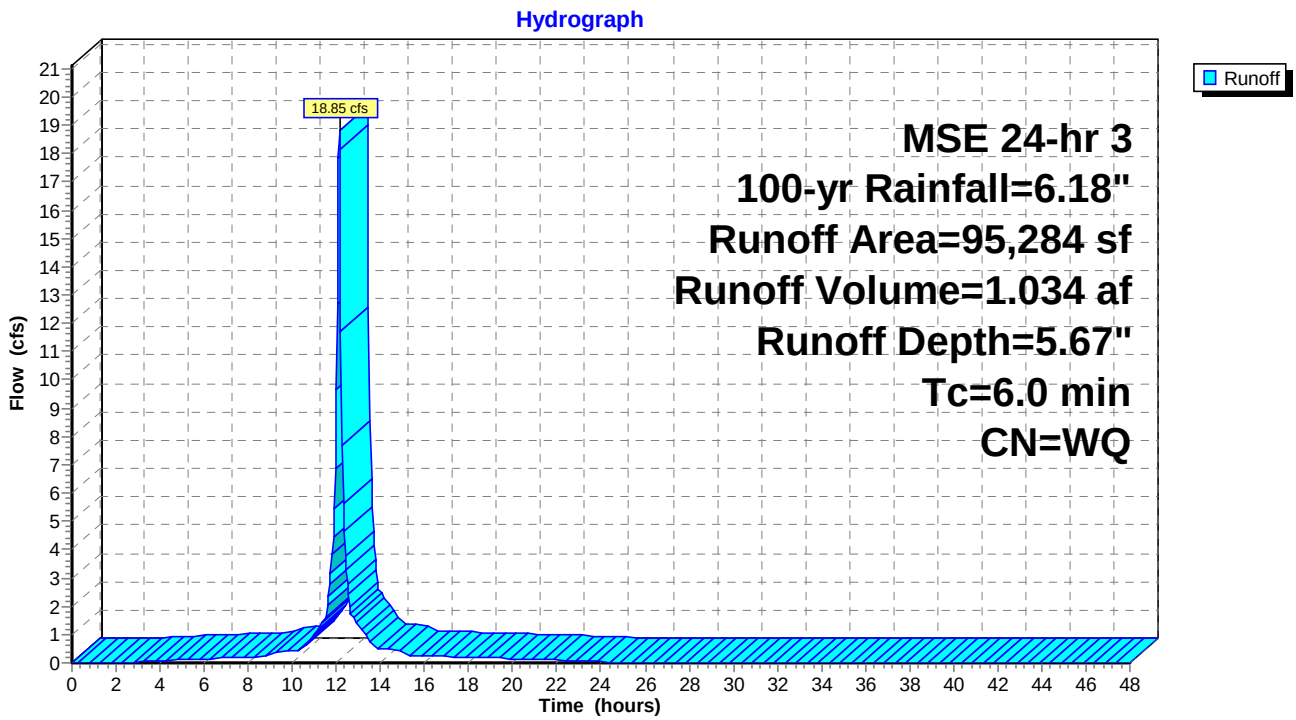
Runoff = 18.85 cfs @ 12.13 hrs, Volume= 1.034 af, Depth= 5.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

Area (sf)	CN	Description
50,950	98	Paved parking, HSG D
12,934	80	>75% Grass cover, Good, HSG D
31,400	98	Roofs, HSG D
95,284		Weighted Average
12,934		13.57% Pervious Area
82,350		86.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 6S: P-1 (EAST)



Summary for Subcatchment 11S: P-2 (WEST)

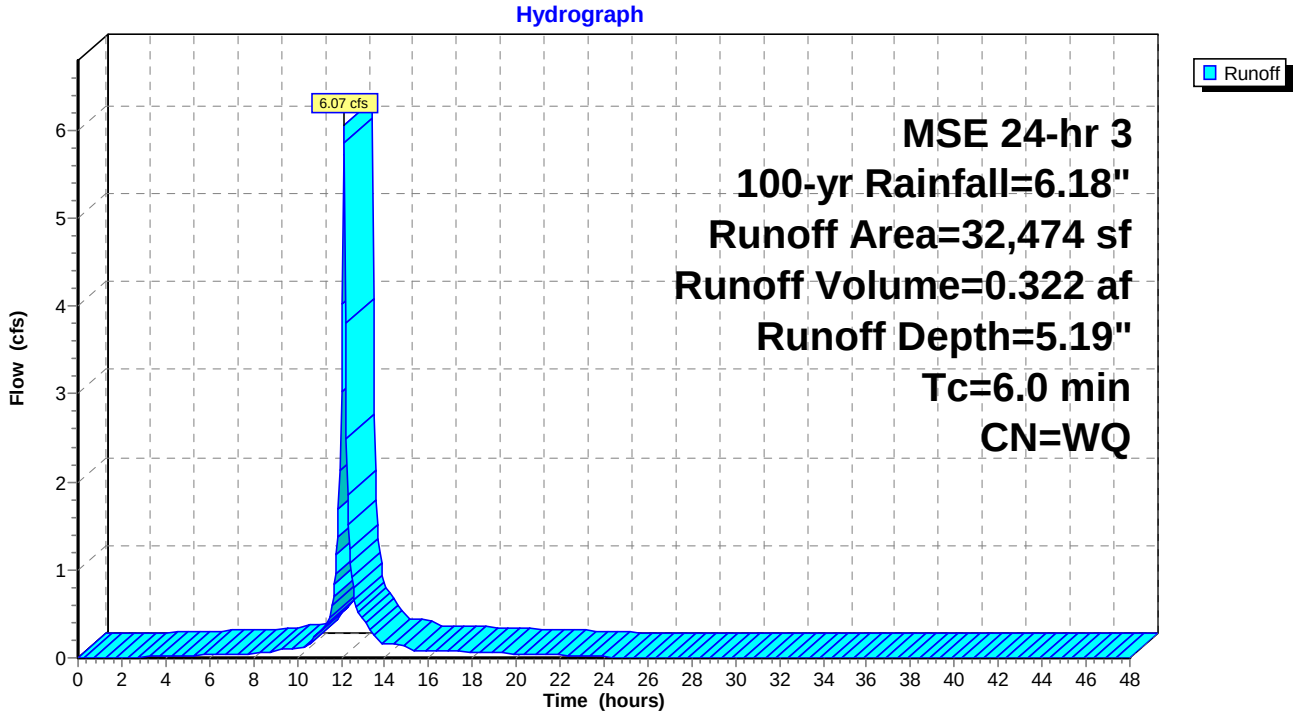
Runoff = 6.07 cfs @ 12.13 hrs, Volume= 0.322 af, Depth= 5.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-yr Rainfall=6.18"

Area (sf)	CN	Description
7,685	98	Paved parking, HSG D
12,238	80	>75% Grass cover, Good, HSG D
12,551	98	Roofs, HSG D
32,474		Weighted Average
12,238		37.69% Pervious Area
20,236		62.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 11S: P-2 (WEST)



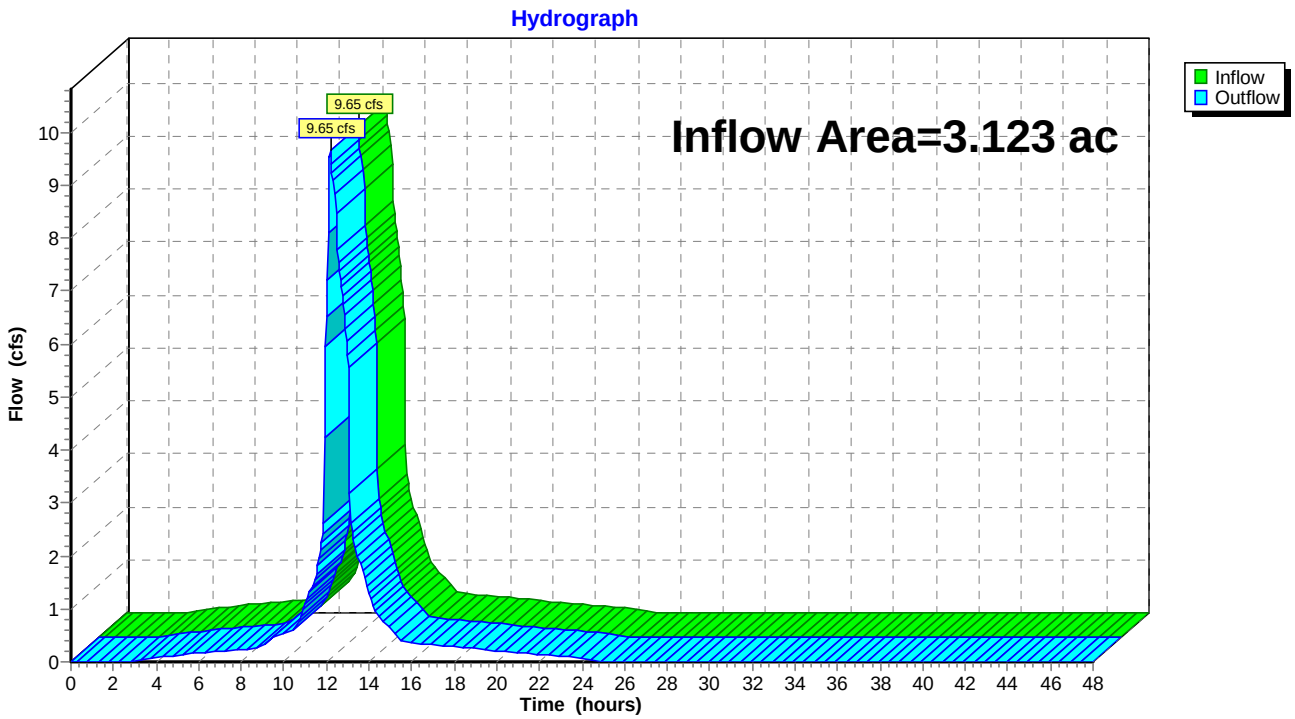
Summary for Reach 5R: Proposed Outfall

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.123 ac, 75.56% Impervious, Inflow Depth = 5.45" for 100-yr event
Inflow = 9.65 cfs @ 12.17 hrs, Volume= 1.419 af
Outflow = 9.65 cfs @ 12.17 hrs, Volume= 1.419 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Reach 5R: Proposed Outfall



Summary for Pond 10P: B1 (EAST)

Inflow Area =	2.187 ac,	86.43% Impervious,	Inflow Depth =	5.67"	for 100-yr event
Inflow =	18.85 cfs @	12.13 hrs,	Volume=	1.034 af	
Outflow =	6.25 cfs @	12.30 hrs,	Volume=	1.034 af,	Atten= 67%, Lag= 10.3 min
Primary =	6.11 cfs @	12.29 hrs,	Volume=	1.033 af	
Secondary =	0.14 cfs @	12.30 hrs,	Volume=	0.001 af	

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 787.02' @ 12.29 hrs Surf.Area= 6,814 sf Storage= 12,132 cf

Plug-Flow detention time= 22.9 min calculated for 1.034 af (100% of inflow)
Center-of-Mass det. time= 22.3 min (769.6 - 747.3)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	12,455 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	781.50'	1,838 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			6,125 cf Overall x 30.0% Voids
		14,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	2,450	0	0
787.50	4,667	12,455	12,455

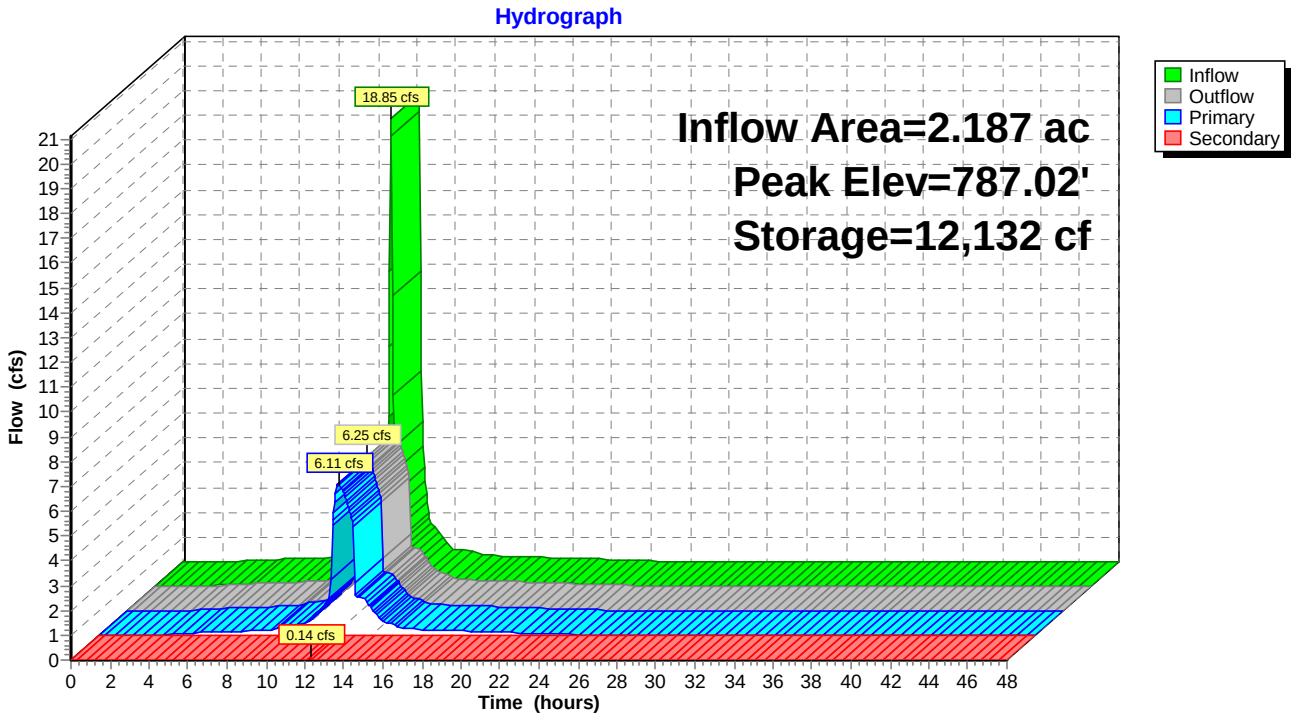
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
781.50	2,450	0	0
784.00	2,450	6,125	6,125

Device	Routing	Invert	Outlet Devices
#1	Primary	781.50'	**10.0" Round Outlet Pipe**
			L= 55.4' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Invert= 781.50' / 781.30' S= 0.0036 '/' Cc= 0.900
			n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf
#2	Device 1	781.50'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	784.50'	**48.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.00'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50 4.00 4.50 5.00 5.50
			Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
			2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=6.10 cfs @ 12.29 hrs HW=787.02' (Free Discharge)
└─**1=Outlet Pipe** (Barrel Controls 6.10 cfs @ 11.19 fps)
  ├─**2=Orifice/Grate** (Passes < 2.17 cfs potential flow)
  └─**3=Riser** (Passes < 96.00 cfs potential flow)

Secondary OutFlow Max=0.14 cfs @ 12.30 hrs HW=787.02' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Weir Controls 0.14 cfs @ 0.34 fps)

Pond 10P: B1 (EAST)



Summary for Pond 12P: B2 (WEST)

Inflow Area = 0.746 ac, 62.31% Impervious, Inflow Depth = 5.19" for 100-yr event
Inflow = 6.07 cfs @ 12.13 hrs, Volume= 0.322 af
Outflow = 2.58 cfs @ 12.25 hrs, Volume= 0.322 af, Atten= 58%, Lag= 7.6 min
Primary = 2.58 cfs @ 12.25 hrs, Volume= 0.322 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 786.37' @ 12.25 hrs Surf.Area= 4,408 sf Storage= 3,297 cf

Plug-Flow detention time= 18.3 min calculated for 0.322 af (100% of inflow)
Center-of-Mass det. time= 18.4 min (775.5 - 757.1)

Volume	Invert	Avail.Storage	Storage Description
#1	785.50'	9,285 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
#2	783.00'	1,380 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)
			4,600 cf Overall x 30.0% Voids
		10,665 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.50	1,840	0	0
788.50	4,350	9,285	9,285

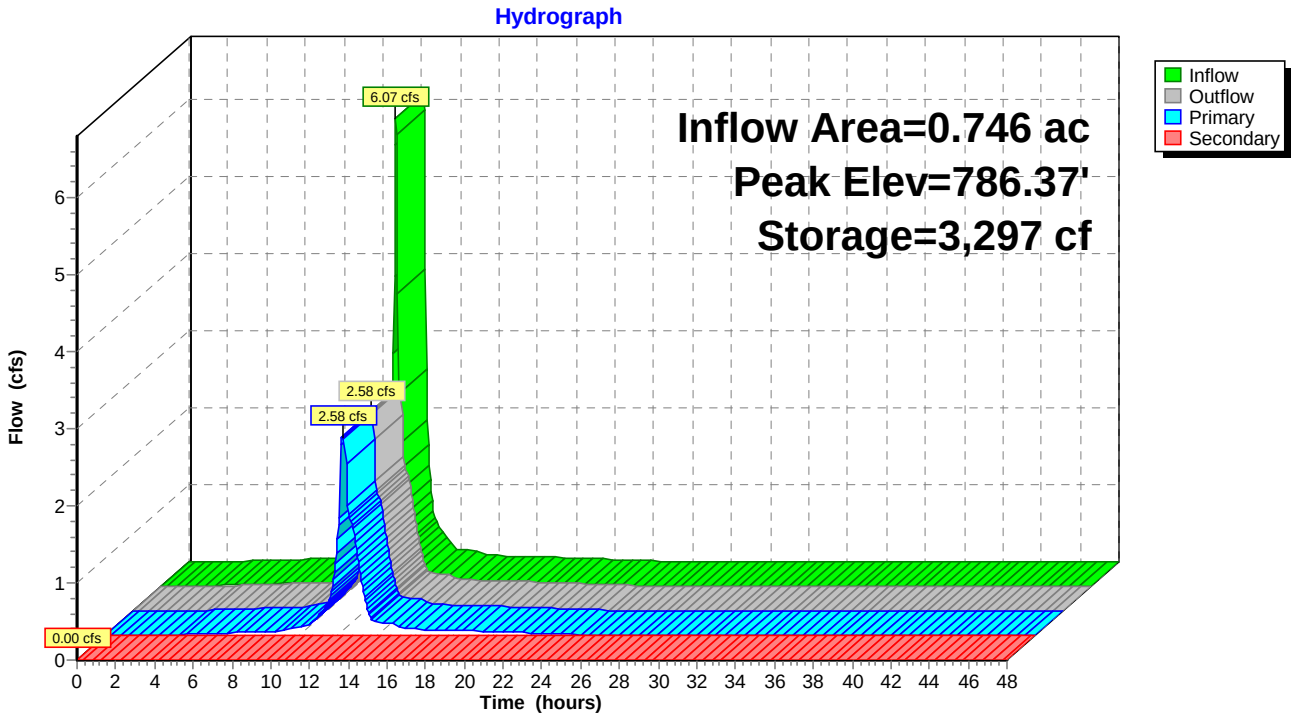
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
783.00	1,840	0	0
785.50	1,840	4,600	4,600

Device	Routing	Invert	Outlet Devices
#1	Primary	783.00'	**8.0" Round Outlet Pipe** L= 71.7' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 783.00' / 782.75' S= 0.0035 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	783.00'	**6.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	786.00'	**24.0" Horiz. Riser** C= 0.600 Limited to weir flow at low heads
#4	Secondary	787.50'	**20.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=2.58 cfs @ 12.25 hrs HW=786.37' (Free Discharge)
└─**1=Outlet Pipe** (Barrel Controls 2.58 cfs @ 7.38 fps)
  ├─**2=Orifice/Grate** (Passes < 1.67 cfs potential flow)
  └─**3=Riser** (Passes < 4.56 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=783.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 12P: B2 (WEST)



Appendix C -

Storm Water Quality Calculations - WinSLAMM

WinSLAMM v 10.5 Data File: [C:\Users\jheinonen\LBri Wiinslamm 2024-09-03.mdb] - [Land Use Model]

File Current File Data Pollutants Tools Run Utilities Help

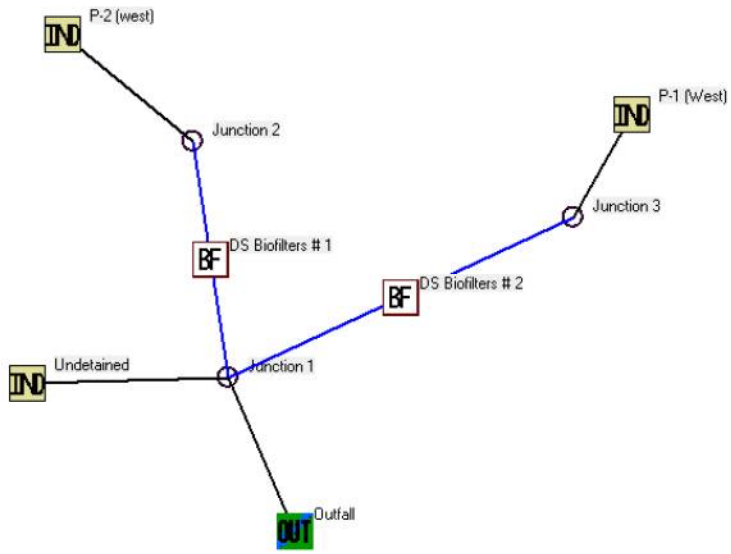
RES INS COM IND OU FRE GS CB WP BF PP HD OD FS SF UF IR

Land Use:
P-2 (west)

Source Area #	Source Area	Area (acres)	Source Area Parameters	First Control Practice	Second Control Practice
34	Sidewalks 4				
35	Sidewalks 5				
36	Sidewalks 6				
	Streets	0.000			
37	Streets 1				
38	Streets 2				
39	Streets 3				
40	Streets 4				
41	Streets 5				
42	Streets 6				
43	Streets 7				
44	Streets 8				
	Landscaped Areas	0.281			
45	Large Landscaped Areas 1	0.281	Entered	--	--
46	Large Landscaped Areas 2				
47	Large Landscaped Areas 3				
48	Large Landscaped Areas 4				
49	Large Landscaped Areas 5				
50	Large Landscaped Areas 6				
51	Small Landscaped Areas 1				
52	Small Landscaped Areas 2				
53	Small Landscaped Areas 3				
54	Small Landscaped Areas 4				
55	Small Landscaped Areas 5				
56	Small Landscaped Areas 6				
57	Undeveloped Areas 1				
58	Undeveloped Areas 2				

Land Use #	Land Use Type	Land Use Label	Land Use Area (acres)
1	**Industrial**	**P-2 (west)**	**0.745**
2	Industrial	P-1 (West)	2.188
3	Industrial	Undetained	0.190

CP #	Control Practice Type	Control Practice Name or Location
1	Biofilter	DS Biofilters # 1
2	Biofilter	DS Biofilters # 2



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Data file name: C:\Users\jheinonen\LBri Wiinslamm 2024-09-03.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Date: 08-29-2024 Time: 09:54:54
Site information:

LU# 1 - Industrial: P-2 (west) Total area (ac): 0.745
1 - Roofs 1: 0.288 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 0.176 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.281 ac. Moderately Compacted Clayey PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Fi

LU# 2 - Industrial: P-1 (West) Total area (ac): 2.188
1 - Roofs 1: 0.721 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 1.170 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.297 ac. Moderately Compacted Clayey PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Fi

LU# 3 - Industrial: Undetained Total area (ac): 0.190
13 - Paved Parking 1: 0.004 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.186 ac. Moderately Compacted Clayey PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Fi

Control Practice 1: Biofilter CP# 1 (DS) - DS Biofilters # 1
1. Top area (square feet) = 4350
2. Bottom aea (square feet) = 1840
3. Depth (ft): 5.5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1
10. Porosity of rock filled volume = 0.3
11. Engineered soil infiltration rate: 8
12. Engineered soil depth (ft) = 1.5
13. Engineered soil porosity = 0.3
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data	Soil Type Fraction in Eng. Soil
User-Defined Media Type	1.000

Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 20
2. Weir crest width (ft): 5
3. Height of datum to bottom of weir opening: 4.5

Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 3

Outlet type: Drain Tile/Underdrain
1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 0
3. Number of underdrain outlets: 1

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Control Practice 2: Biofilter CP# 2 (DS) - DS Biofilters # 2

1. Top area (square feet) = 4667
2. Bottom aea (square feet) = 2450
3. Depth (ft): 6
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1
10. Porosity of rock filled volume = 0.3
11. Engineered soil infiltration rate: 8
12. Engineered soil depth (ft) = 1.5
13. Engineered soil porosity = 0.3
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data	Soil Type Fraction in Eng. Soil
User-Defined Media Type	1.000
Neenah 2 Biofilter Media Mixture	1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 20
2. Weir crest width (ft): 5
3. Height of datum to bottom of weir opening: 5

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 3

Outlet type: Drain Tile/Underdrain

1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 0
3. Number of underdrain outlets: 1

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SLAMM for Windows Version 10.5.0
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Data file name: C:\Users\jheinonen\LBri Wiinslamm 2024-09-03.mdb
WinSLAMM Version 10.5.0
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
Seed for random number generator: -42
Study period starting date: 01/01/81 Study period ending date: 12/31/81
Start of Winter Season: 12/02 End of Winter Season: 03/12
Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
Date of run: 08-29-2024 Time of run: 09:53:39
Total Area Modeled (acres): 3.123
Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	241407	-	170.7	2573	-
Outfall Total with Controls:	242014	-0.25%	52.62	795.0	69.10%
Annualized Total After Outfall Controls:	242679			797.2	

Pollutant	Conc. No Controls	Conc. With Controls	Conc. Units	Pollutant Yield No Controls	Pollutant Yield With Controls	Pol. Yield Units	Percent Reduction
Particulate Solids	170.7	52.62	mg/L	2573	795.0	lbs	69.10 %
Particulate Phosphorus	0.3763	0.1363	mg/L	5.671	2.060	lbs	63.67 %

Biofilter # 1 is expected to clog in 6.81 years.. Percent Solids Reduction due to Engineered Media = 80
Biofilter # 2 is expected to clog in 13.54 years.. Percent Solids Reduction due to Engineered Media = 80

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Appendix D

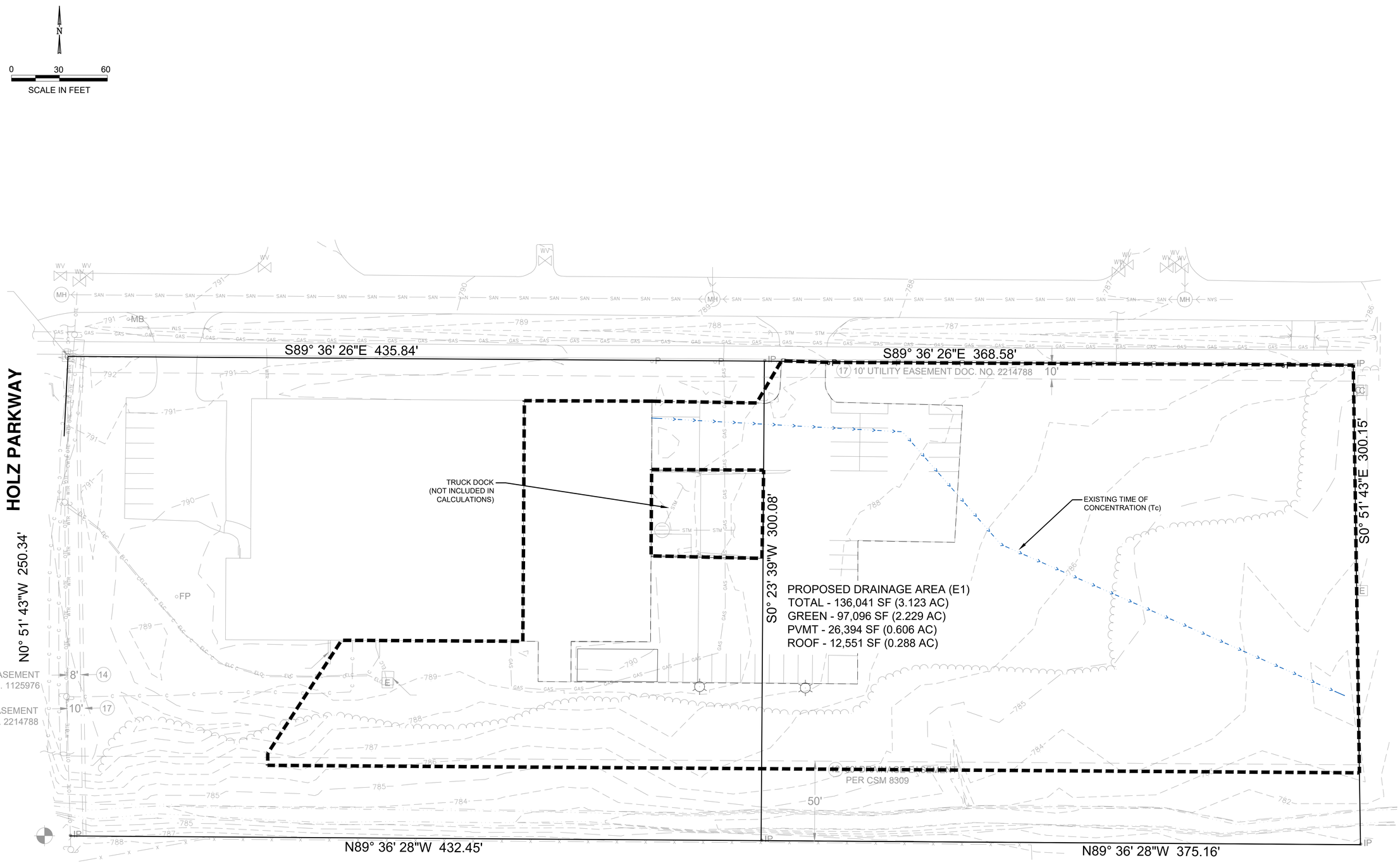
Hydrology Exhibits -

EX-1: Existing Hydrology

EX-2: Proposed Hydrology

EX-3: WinSLAMM Exhibit

EX-4: WinSLAMM Prorated Exhibit



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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

EXISTING HYDROLOGY

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	__	

PROJECT NO.
910-001-005

SHEET NO.
EX 1

Aug 29, 2024 9:31am PLOTTED BY: jheinonen SAVED BY: jheinonen
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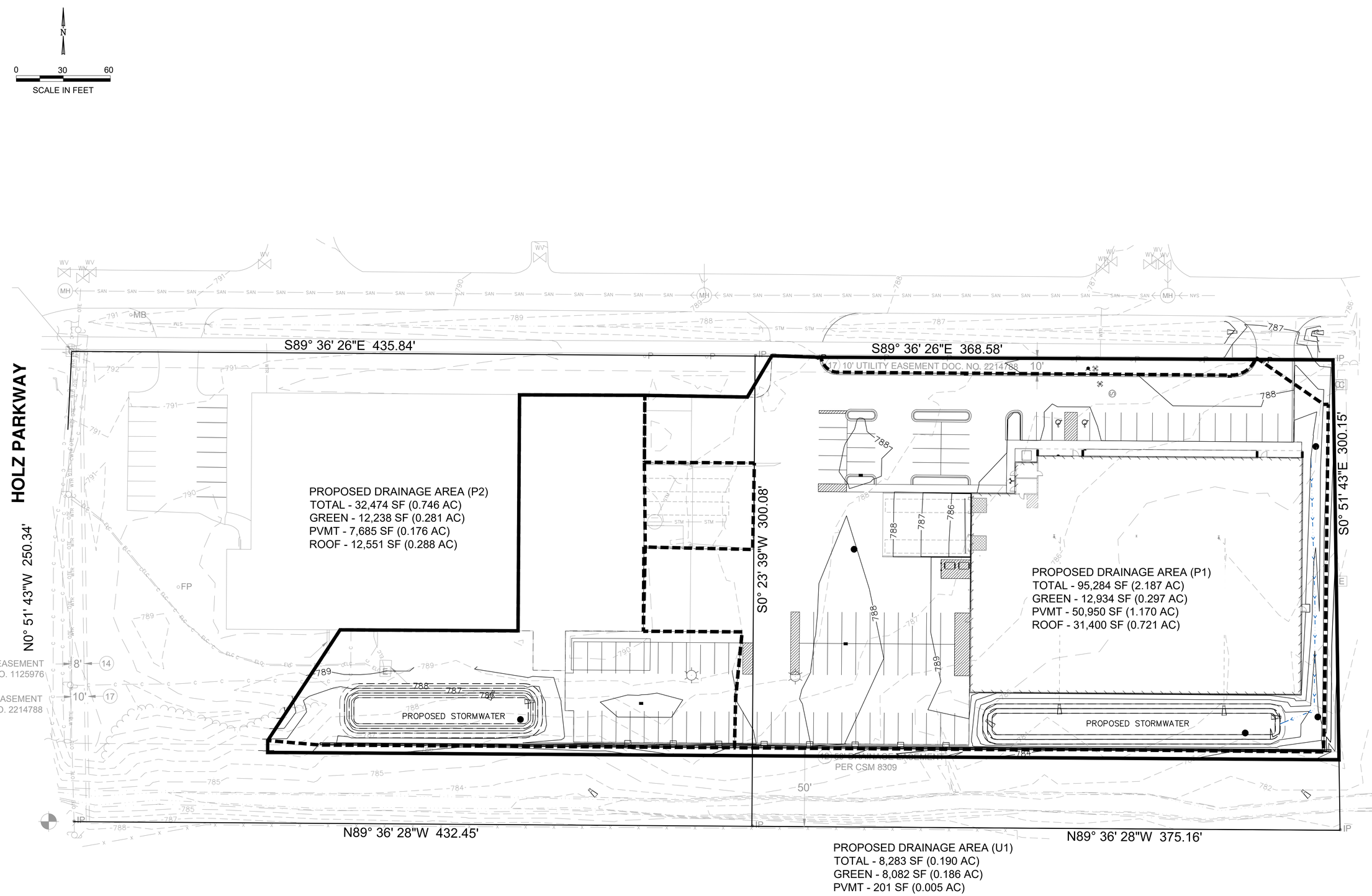

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FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PROPOSED HYDROLOGY

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	__	

PROJECT NO.
910-001-005

SHEET NO.
EX 2

Aug 29, 2024 9:30am PLOTTED BY: jheinonen SAVED BY: jheinonen
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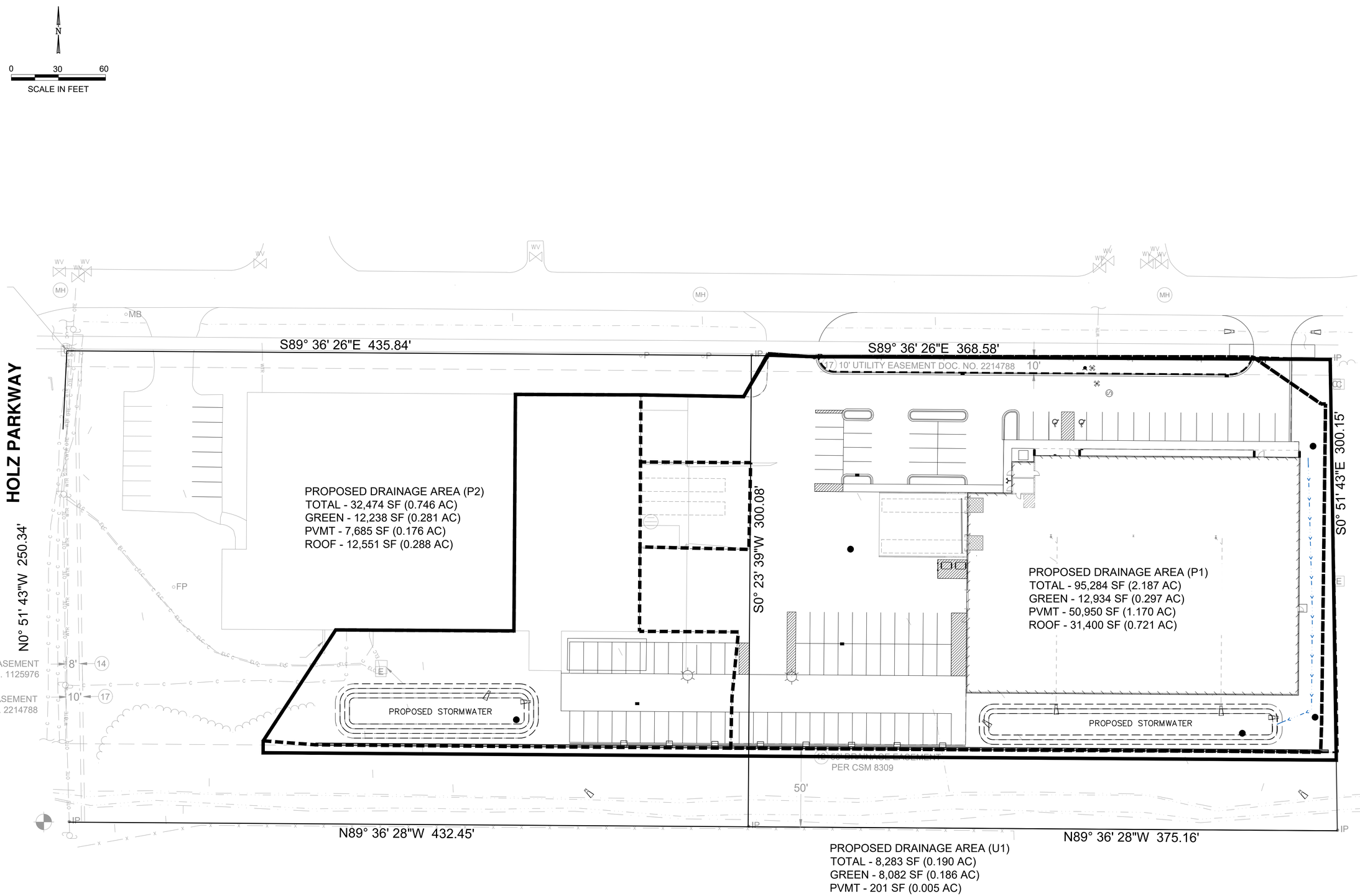

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Endpoint Solutions
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FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PROPOSED WinSLAMM EXHIBIT

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE:
CHECKED BY: JAH	09/03/2024
APPROVED BY: __	

PROJECT NO.
910-001-005

SHEET NO.
EX 3

Aug 29, 2024 9:30am PLOTTED BY: jheinonen SAVED BY: jheinonen
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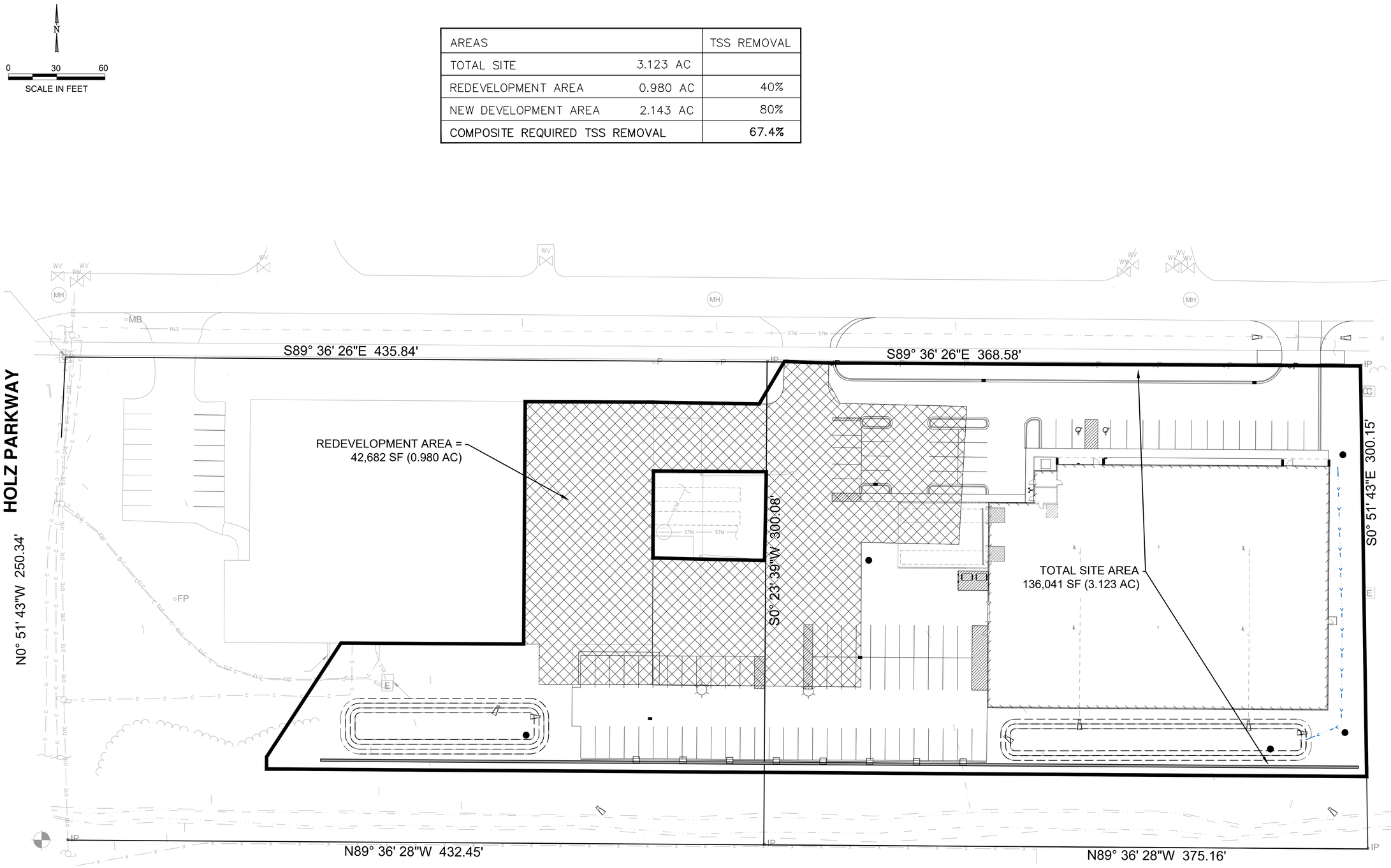
XREFS: T:\Endpoint Border-L' Bri.dwg; \\ \\001 - 2 ALTAS\CAD\910-001-001 Survey Basemap.dwg

AREAS		TSS REMOVAL
TOTAL SITE	3.123 AC	
REDEVELOPMENT AREA	0.980 AC	40%
NEW DEVELOPMENT AREA	2.143 AC	80%
COMPOSITE REQUIRED TSS REMOVAL		67.4%



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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

WinSLAMM PRORATED AREAS EXHIBIT

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:		

PROJECT NO.
910-001-005

SHEET NO.
EX 4

Aug 29, 2024 9:29am PLOTTED BY: jheinonen SAVED BY: jheinonen
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Appendix E

Civil Plans -

CS: Cover Sheet

C1: Pre-Construction Conditions

C2: Demolition Plan

C3: Proposed Site Plan

C4: Proposed Grading and Erosion Control Plan

C5: Proposed Utility Plan

C6: Erosion Control Notes & Details

C7: General Construction Notes

C8: Construction Details

C9: Construction Details

ISSUED FOR MUNICIPAL REVIEW

PROPOSED SITE IMPROVEMENTS

L'BRI PUR N' NATURAL
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

CALL OR CLICK 3 WORKING DAYS BEFORE YOU DIG

Help Us... Help You... Protect Your Facilities!

CALL 811 BEFORE YOU DIG — 811 — SAFE DIGGING PARTNER

SITE MAP
0 1000' 2000'
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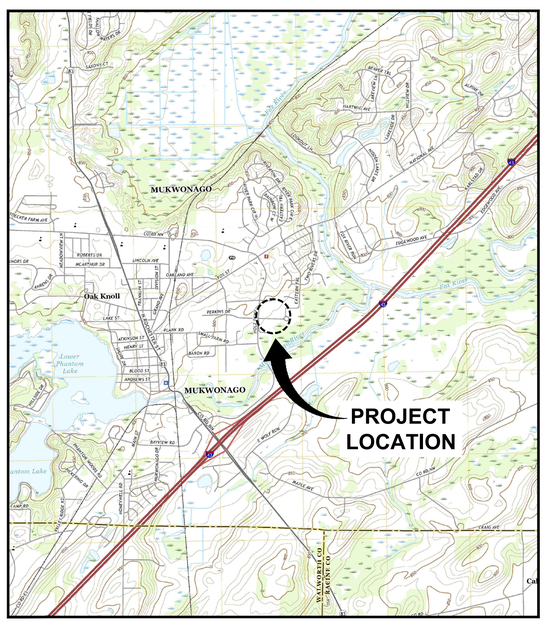

LOCATION MAP
0 3000' 6000'
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DATE ISSUED
SEPTEMBER 3, 2024

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CONTACTS

OWNER:
L'BRI PUR N' NATURAL
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN
CONTACT: BRIAN KAMINSKI
PHONE: 262-363-9674
EMAIL:BRIAN@LBRI.COM

ENGINEER:
ENDPOINT SOLUTIONS CORP.
6871 S. LOVERS LANE
FRANKLIN, WI 53132
CONTACT: JASON HEINONEN, P.E.
PHONE: 414-858-1920
EMAIL: JASON@ENDPOINTCORPORATION.COM

DRAWING SHEET INDEX

CS	COVER SHEET
C1	PRE-CONSTRUCTION CONDITIONS
C2	DEMOLITION PLAN
C3	PROPOSED SITE PLAN
C4	PROPOSED GRADING AND EROSION CONTROL PLAN
C5	PROPOSED UTILITY PLAN
C6	EROSION CONTROL DETAILS
C7	GENERAL CONSTRUCTION NOTES
C8	CONSTRUCTION DETAILS
C9	CONSTRUCTION DETAILS

REVISION LOG

REVISION	ISSUE DATE	REVISED SHEETS	ISSUED FOR
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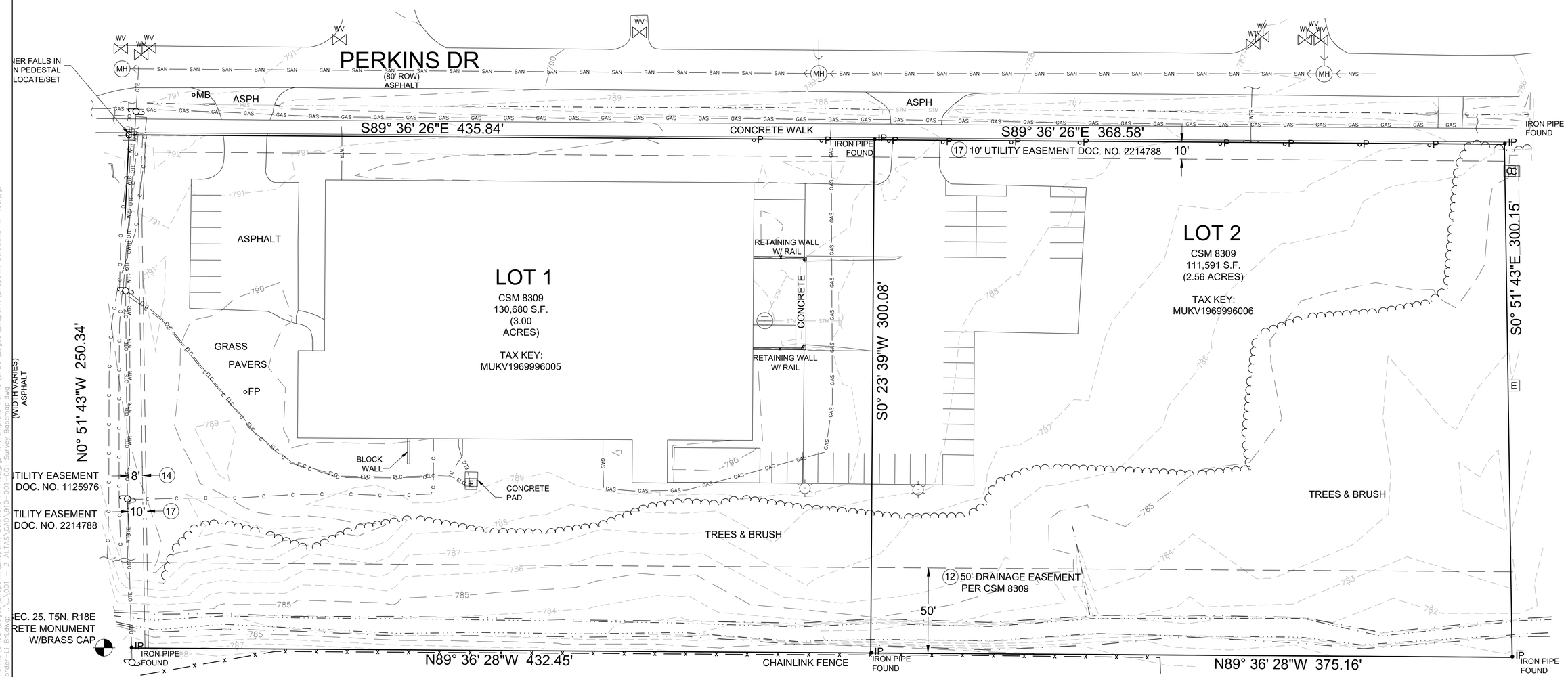
SOURCE: GOOGLE MAPS, USGS

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	



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L' BRI PURE N' NATURAL

PRE CONSTRUCTION CONDITIONS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
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PROJECT NO.
910-001-005

SHEET NO.
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Sep 03, 2024 12:58pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	

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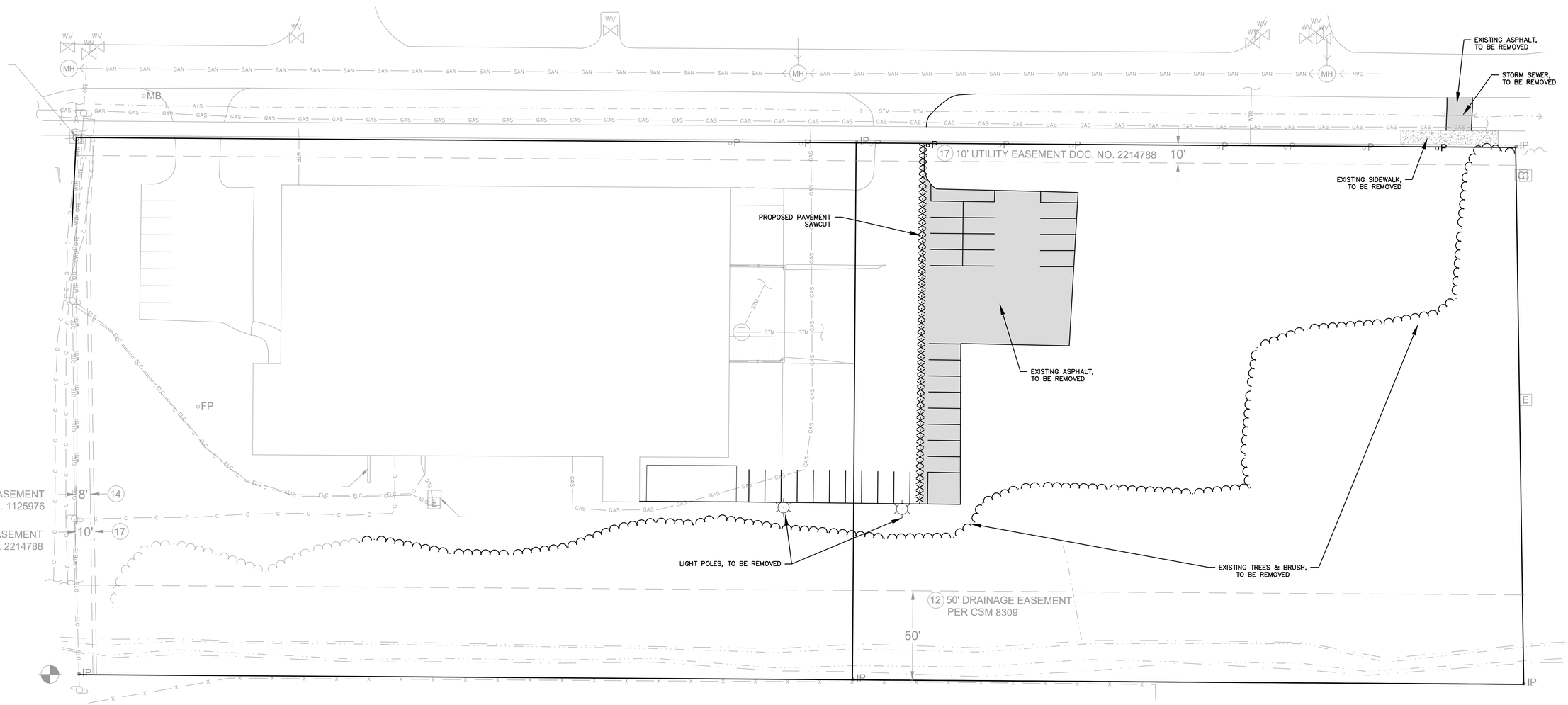
SCALE IN FEET



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L' BRI PURE N' NATURAL

DEMOLITION PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
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PROJECT NO.
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PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	

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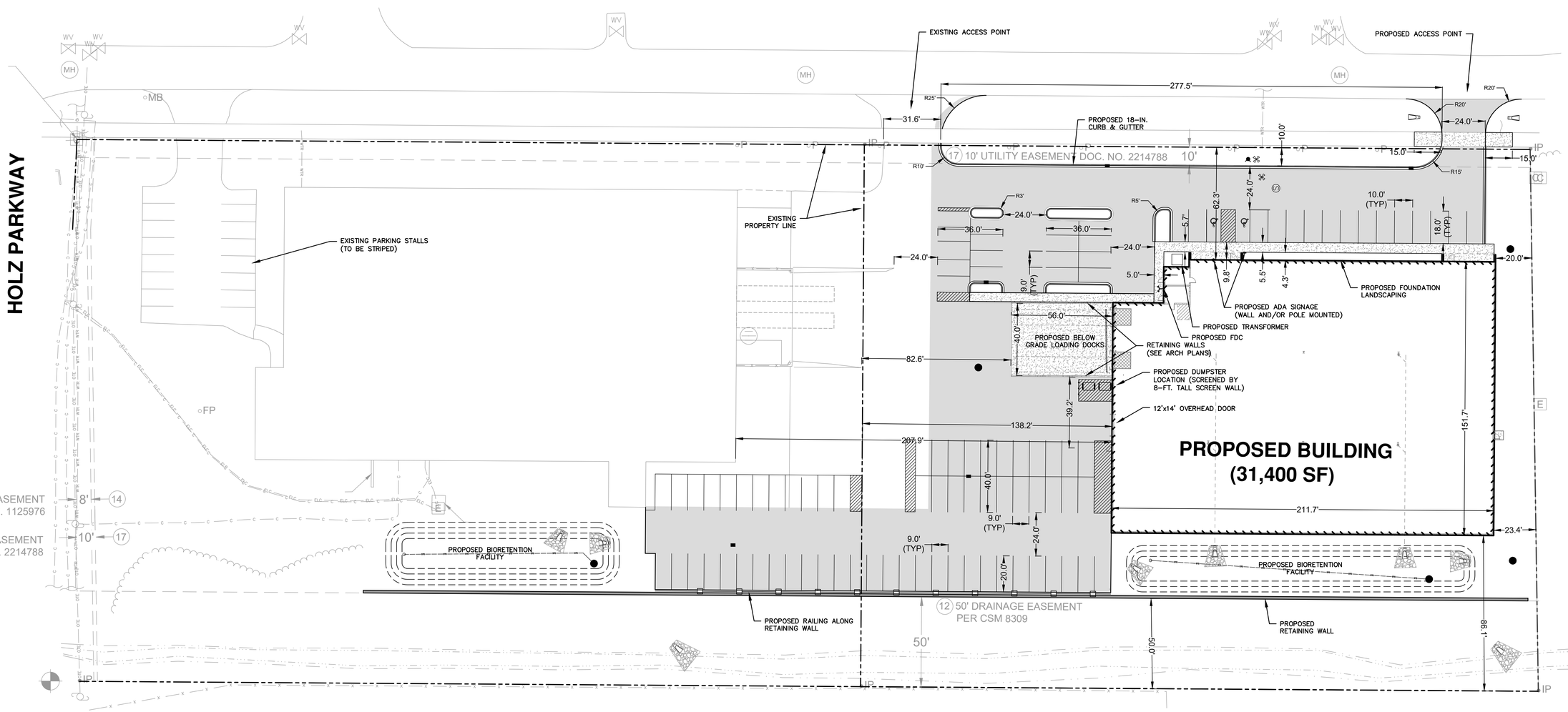
TOTAL PARKING = 112 STALLS



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L' BRI PURE N' NATURAL

PROPOSED SITE PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE: 09/03/2024
CHECKED BY: JAH	
APPROVED BY: ___	

PROJECT NO.
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NOTE:
CONTRACTOR TO PROVIDE SUFFICIENT SIGNAGE, BARRICADES, ETC. TO VERIFY ALL CONSTRUCTION TRAFFIC USES THE MAIN ENTRANCE WITH PROPOSED TRACKING PAD

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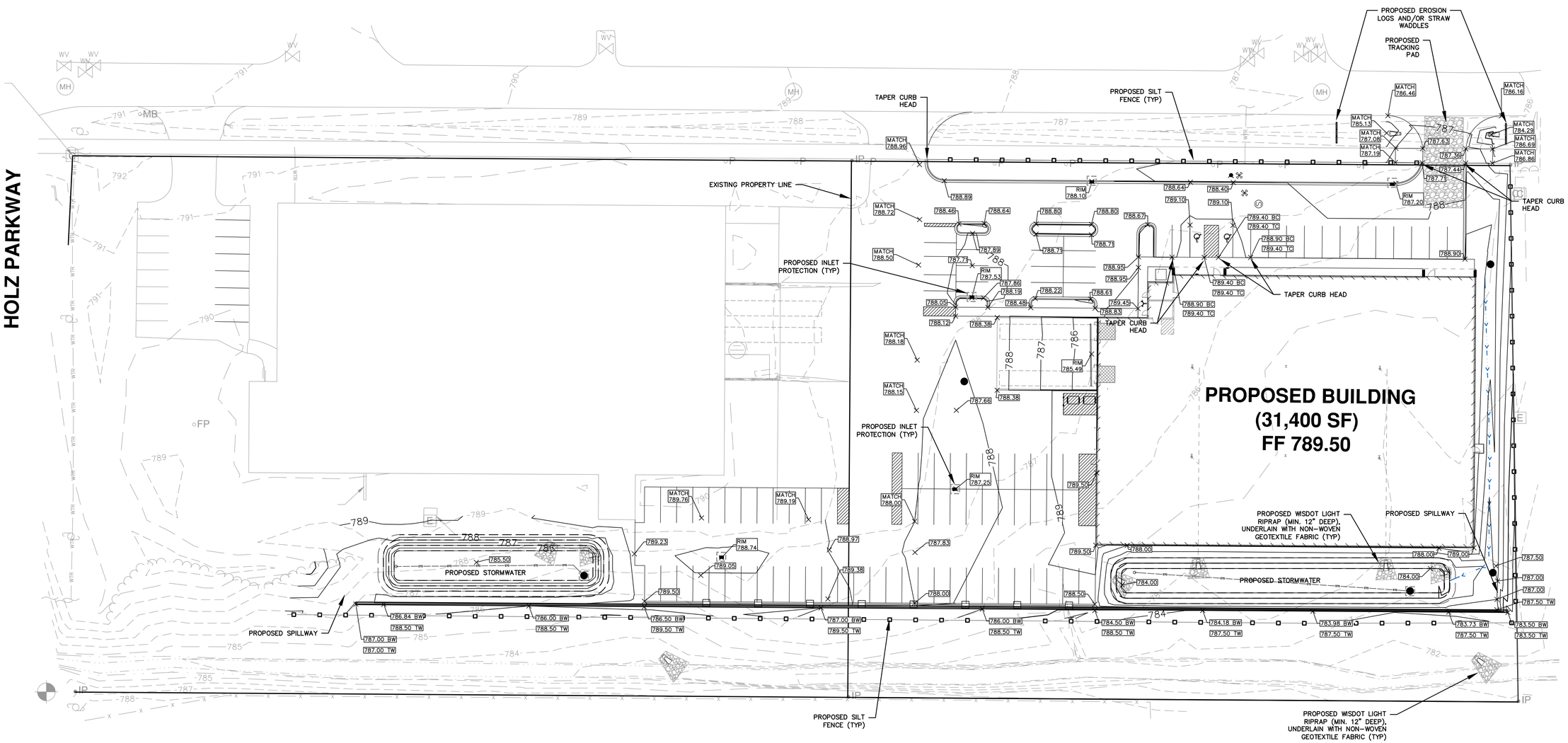
SCALE IN FEET

CONSTRUCTION SEQUENCE

1. INSTALL SILT FENCE AND EROSION CONTROL AS SHOWN ON PLAN. MAINTAIN AS NECESSARY DURING CONSTRUCTION. INSPECT FOLLOWING RAIN EVENTS.
2. INSTALL TRACKING PAD.
3. CLEAR AND GRUB SITE IN THE VICINITY OF THE PROPOSED BIORETENTION DEVICE. CONSTRUCT BIORETENTION AND COMPLETE LOCALIZED GRADING AS NEEDED.
4. CLEAR AND GRUB REMAINDER OF SITE AND STRIP TOPSOIL. TEMPORARILY STOCKPILE TOPSOIL ON SITE (EXCESS TO BE REMOVED FROM SITE ACCORDING TO GENERAL CONTRACTORS CONSTRUCTION PHASING PLAN).
5. GRADE SITE. CONSTRUCT IMPROVEMENTS.
6. STABILIZE DISTURBED GROUND WITH TEMPORARY SEED, FERTILIZER, AND MULCH.
7. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL BMPs WHEN DISTURBED AREAS ARE PERMANENTLY STABILIZED AND NO LONGER SUSCEPTIBLE TO EROSION.
8. FOLLOWING STABILIZATION, VERIFY SEDIMENT IS REMOVED FROM BIORETENTION DEVICE. RECONSTRUCT AS NECESSARY TO MEET DESIGN.

PROPERTY LINE	FLAG POLE
BUILDING	POST
PAVEMENT/CONCRETE/EDGE OF GRASS	WATER VALVE
PAVEMENT MARKING	STORM SEWER INLET
GRAVEL	MANHOLE GENERIC
FENCE	LIGHT POLE
EDGE OF SHORELINE/WETLAND	UTILITY POLE
TOE OF SLOPE/SWALE	GUY WIRE
TOP OF SLOPE	COMMUNICATIONS PEDESTAL/BOX
TREE LINE	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
UNDERGROUND COMMUNICATIONS/CONDUIT	GAS METER
UNDERGROUND ELECTRIC LINE	TELEPHONE BOX/PEDESTAL
GAS LINE	END OF UTILITY
OVERHEAD ELECTRIC & COMMUNICATIONS LINE	END OF UTILITY LOCATE MARKING
SANITARY SEWER	BENCHMARK/MONUMENT
STORM SEWER	
WATER MAIN/SERVICE	
MAJOR CONTOUR, (5' INTERVAL)	
MINOR CONTOUR, (1' INTERVAL)	
PROPOSED MAJOR CONTOUR, (5' INTERVAL)	
PROPOSED MINOR CONTOUR, (1' INTERVAL)	
PROPOSED SPOT ELEVATION	
PROPOSED SPOT ELEVATION (MATCH EXISTING)	
PROPOSED SPOT ELEVATION (TOP OF CURB)	
PROPOSED SPOT ELEVATION (BOTTOM OF CURB)	



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L' BRI PURE N' NATURAL
PROPOSED GRADING AND EROSION CONTROL PLAN
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	---	

PROJECT NO.
910-001-005

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Sep 03, 2024 12:59pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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NOTE:
SANITARY AND WATER LATERALS TO BE INSTALLED ACCORDING TO VILLAGE SPECIFICATIONS.

STORM MANHOLE & INLET NOTES:

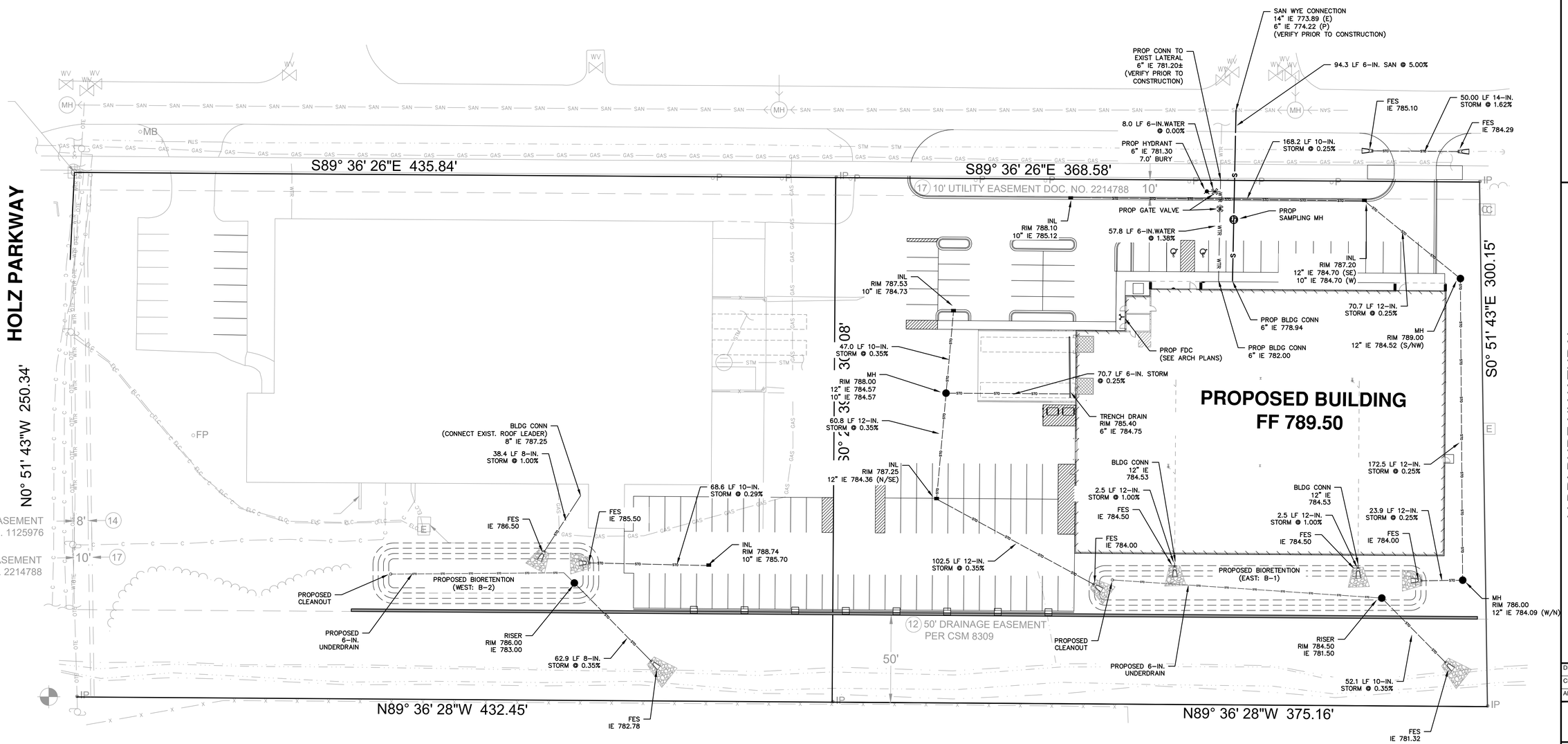
REFER TO FILE No. 25 (STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, EXCEPT:

A. USE CASTING AS INDICATED BELOW (UNLESS INDICATED OTHERWISE ON PLAN):
   1.) CB/INLET (CURB) – NEENAH R–3229–A W/ TYPE C GRATE
   2.) CB/INLET (NON–CURB) – NEENAH R–2501–G
   2.) CB/INLET (BIORETENTION OUTLET STRUCTURE) – NEENAH R–2561 BEEHIVE
B. USE 48" MINIMUM DIAMETER UNLESS INDICATED OTHERWISE ON PLAN
C. CONTRACTOR RESPONSIBLE FOR VERIFYING REQUIRED CASTING IS COMPATIBLE WITH STRUCTURE. IF NOT COMPATIBLE, CONTACT ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.

REFER TO FILE No. 12 (STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN) , EXCEPT:

A. USE CASTING AS INDICATED BELOW:
   ALL MANHOLES – NEENAH R–1642
B. USE 48" MINIMUM DIAMETER UNLESS INDICATED OTHERWISE ON PLAN
C. CONTRACTOR RESPONSIBLE FOR VERIFYING REQUIRED CASTING IS COMPATIBLE WITH STRUCTURE. IF NOT COMPATIBLE, CONTACT ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.

	PROPERTY LINE
	BUILDING
	PAVEMENT/CONCRETE/EDGE OF GRASS
	PAVEMENT MARKING
	GRAVEL
	FENCE
	EDGE OF SHORELINE/WETLAND
	TOE OF SLOPE/SWALE
	TOP OF SLOPE
	TREE LINE
C	UNDERGROUND COMMUNICATIONS/CONDUIT
ELC	UNDERGROUND ELECTRIC LINE
GAS	GAS LINE
OEL	OVERHEAD ELECTRIC & COMMUNICATIONS LINE
SAN	SANITARY SEWER
STM	STORM SEWER
WTR	WATER MAIN/SERVICE
	MAJOR CONTOUR, (5' INTERVAL)
	MINOR CONTOUR, (1' INTERVAL)
FP	FLAG POLE
P	POST
WV	WATER VALVE
	STORM SEWER INLET
MH	MANHOLE GENERIC
	LIGHT POLE
	UTILITY POLE
	GUY WIRE
C	COMMUNICATIONS PEDESTAL/BOX
E	ELECTRIC BOX/PEDESTAL, TRANSFORMER, METER
G	GAS METER
T	TELEPHONE BOX/PEDESTAL
	END OF UTILITY
	END OF UTILITY LOCATE MARKING
	BENCHMARK/MONUMENT



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6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

PROPOSED UTILITY PLAN

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	...	

PROJECT NO.
910-001-005

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Sep 03, 2024 12:59pm PLOTTED BY: jheinonen SAVED BY: jheinonen
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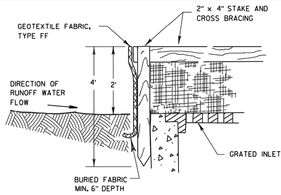
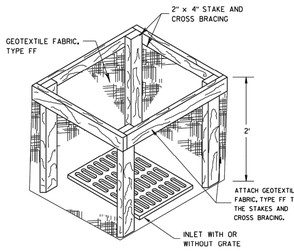
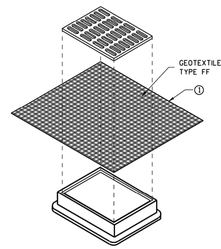
8E10: Inlet Protection Type A, B, C and D

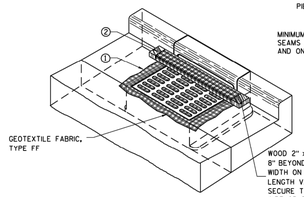




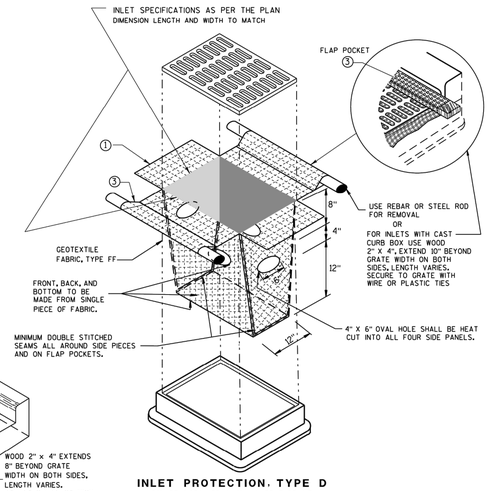
INLET PROTECTION, TYPE A



INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE 2)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

1. FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
2. FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
3. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

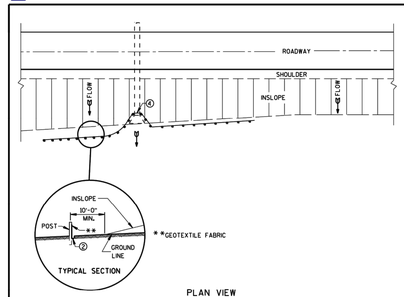
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10-16-02	/S/ Beth Cornestro
DATE	CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

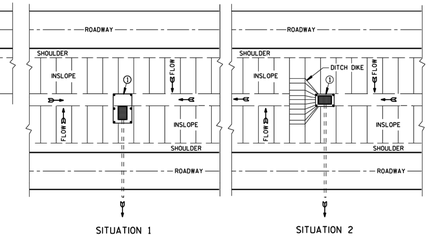
S.D.D. 8 E 10-2

INLET PROTECTION
NOT TO SCALE

8E9: Silt Fence



TYPICAL APPLICATION OF SILT FENCE

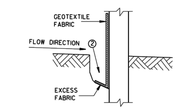


SILT FENCE AT MEDIAN SURFACE DRAINS

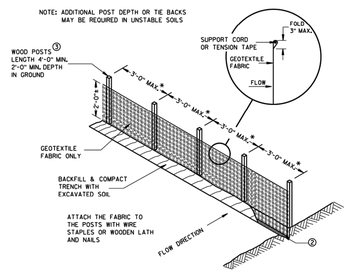
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

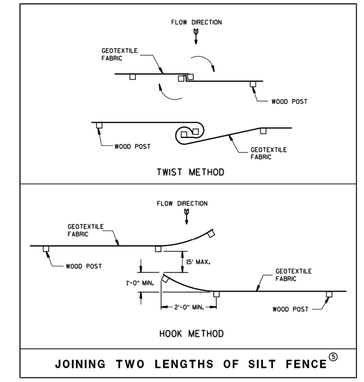
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



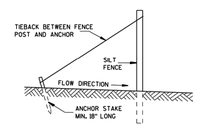
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



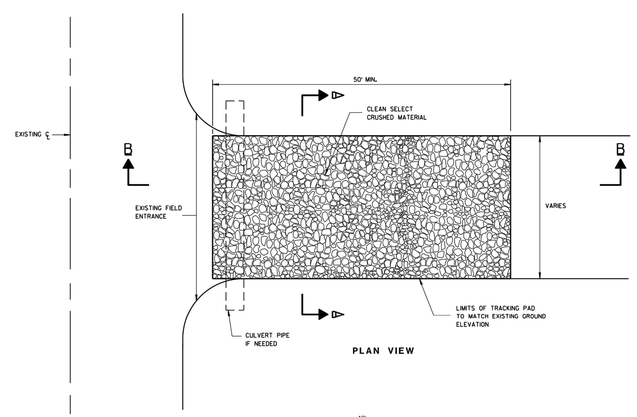
SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

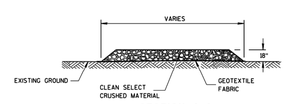
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05	/S/ Beth Cornestro
DATE	CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

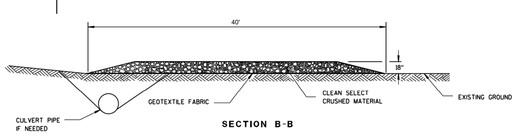
S.D.D. 8 E 9-6

SILT FENCE
NOT TO SCALE

8E14: Tracking Pad







TRACKING PAD

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3-24-201	/S/ Jerry H. Zogg
DATE	ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

S.D.D. 8 E 14-1

TRACKING PAD
NOT TO SCALE

EROSION AND SEDIMENT CONTROL

1. CONSTRUCT AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) CHAPTERS NR 151 AND NR 216, WISCONSIN ADMINISTRATIVE CODE, AND APPROPRIATE WDNR TECHNICAL STANDARDS. EROSION AND SEDIMENT CONTROL PRODUCTS SHALL BE LISTED IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION PRODUCT ACCEPTABILITY LIST (WisDOT PAL). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING COPIES OF THESE STATE REQUIREMENTS, TECHNICAL STANDARDS, AND WisDOT PAL.
2. IMPLEMENT EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) PRIOR TO SOIL DISTURBING ACTIVITIES (E.G., CLEARING, GRUBBING, TOPSOIL STRIPING, EXCAVATION, MATERIAL STOCKPILING, ETC.). INSTALL EROSION CONTROL MEASURES AROUND STOCKPILE LOCATIONS.
3. MINIMIZE DISTURBED AREA BY PHASING OR SEQUENCING CONSTRUCTION AND PRESERVING EXISTING VEGETATION WHERE POSSIBLE.
4. DIVERT STORM WATER AWAY FROM DISTURBED OR EXPOSED AREAS WHEN POSSIBLE.
5. PROTECT ADJACENT PROPERTIES WITH SEDIMENT BALE BARRIERS OR SILT FENCE UNTIL CONSTRUCTION IS COMPLETE IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS 1055 OR 1056, RESPECTIVELY.
6. INSTALL A GRAVEL TRACKING PAD IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1057. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEPT AND/OR SCRAPED PERIODICALLY TO REMOVE SOIL, DIRT, AND/OR DUST. ADJACENT ROADS ARE TO CLEANED IMMEDIATELY IF ANY SEDIMENT TRANSFER AND TRACKING OCCURS.
6. PROTECT INLETS, CATCH BASINS, AND OTHER CONVEYANCE STRUCTURES WITH STRAW BALES, FILTER FABRIC, OR OTHER APPROPRIATE MEASURES IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1060. TYPE D INLET PROTECTION SHALL BE USED IN STORM STRUCTURES IN THE PUBLIC RIGHT-OF-WAY, WHENEVER POSSIBLE.
7. DURING DEWATERING ACTIVITIES, UTILIZE A COMPARTMENTED CONTAINER, SETTLING BASIN, FILTER, OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICE FOR TREATING SEDIMENT-LADEN WATER PRIOR TO DISCHARGE OFF-SITE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1061.
8. INSPECT THE SITE REGULARLY AND PROPERLY MAINTAIN BMPS, ESPECIALLY AFTER RAINSTORMS. AT MINIMUM, INSPECTIONS OF CONSTRUCTION BMPS ARE REQUIRED AT LEAST ONCE EVERY SEVEN DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5 INCH OR MORE.
9. BMPS MUST BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION OR NOTIFICATION OF A PROBLEM.
10. KEEP THE CONSTRUCTION SITE CLEAN BY PUTTING TRASH IN TRASH CANS, KEEPING STORAGE BINS COVERED, AND PREVENTING OR REMOVING EXCESS SEDIMENT ON ROADS AND OTHER IMPERVIOUS SURFACES.
11. SITE RESTORATION AND STABILIZATION MUST BE COMPLETED WITHIN 7 DAYS OF INACTIVITY.

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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

EROSION CONTROL NOTES & DETAILS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	---	

PROJECT NO.
910-001-005

SHEET NO.
C6

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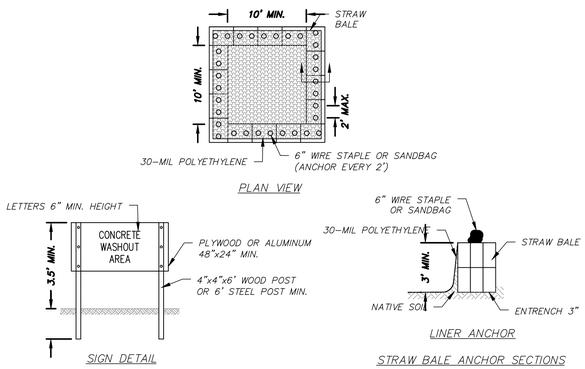
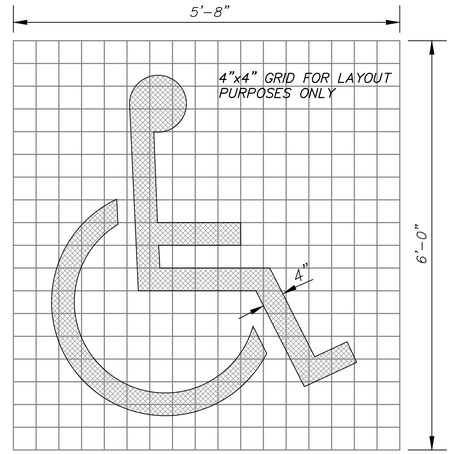


NOTES:
1. MAINTAINING TEMPORARY CONCRETE WASHOUT FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDENED CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.
3. EACH STRAW BALE IS TO BE STAKED IN PLACE USING (2) 2"x2"x4' WOODEN STAKES.

TEMPORARY CONCRETE WASHOUT FACILITY - STRAW BALE

NOT TO SCALE



PAINTED ADA SYMBOL

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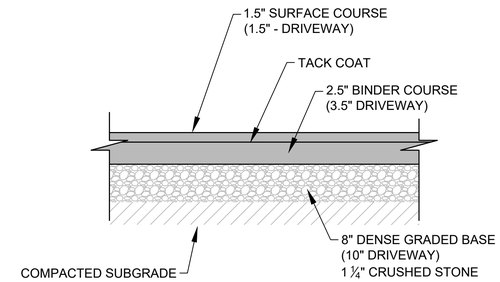
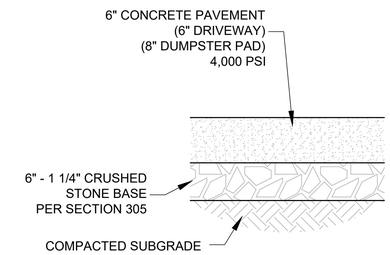


NOTES:

1. PAVEMENT TO BE INSTALLED PER GEOTECHNICAL REPORT OR OWNER RECOMMENDATIONS.

TYPICAL ASPHALT PAVEMENT

NOT TO SCALE



NOTES:

1. PAVEMENT TO BE INSTALLED PER GEOTECHNICAL REPORT OR OWNER RECOMMENDATIONS.

TYPICAL CONCRETE PAVEMENT

NOT TO SCALE

GENERAL GRADING NOTES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE D.O.T. STANDARD SPECIFICATIONS, LOCAL ORDINANCES AND SPECIFICATIONS, AND RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
2. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT.
3. GRADING SHALL CONSIST OF CLEARING AND GRUBBING EXISTING VEGETATION, STRIPPING TOPSOIL, REMOVAL OF EXISTING PAVEMENT OR FOUNDATIONS, IMPORTING OR EXPORTING MATERIAL TO ACHIEVE AND ON-SITE EARTHWORK BALANCE, GRADING THE PROPOSED BUILDING PADS AND PAVEMENT AREAS, SCARIFYING AND FINAL COMPACTION OF THE PAVEMENT SUBGRADE, AND PLACEMENT OF TOPSOIL.
4. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION.
5. EROSION AND SEDIMENT CONTROL MEASURES ARE REQUIRED AS PART OF THIS PROJECT. CONSTRUCTION ACTIVITIES MUST COMPLY WITH ALL PROVISIONS OF LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS THE SITE SPECIFIC SWPPP (IF APPLICABLE). ALL LAND DISTURBING ACTIVITIES MAY BE SUBJECT TO INSPECTION BY LOCAL AUTHORITIES AND THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.
6. CONTRACTOR SHALL MINIMIZE CLEARING AND DISTURBANCE TO THE ENVIRONMENT TO THE EXTENT POSSIBLE. CONTRACTOR RESPONSIBLE FOR RESTORATION OF ALL DISTURBED AREAS.
7. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DISPOSED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE SITE THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE REMOVAL OF CONSTRUCTION WASTE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE SITE HAS STABILIZED.
9. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
10. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT
11. BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE SIZE, LOCATION AND ELEVATION OF ALL UTILITIES.
12. TEMPORARY EROSION CONTROL MATTING SHALL BE PLACED ON ALL SLOPES THAT ARE STEEPER THAT 4:1.
13. ALL PROPOSED CONTOURS REPRESENT FINAL FINISHED GRADE ELEVATIONS.

GENERAL NOTES

1. THE BIDDER WILL BE SOLELY RESPONSIBLE FOR QUANTITIES AND ESTIMATE OF WORK REQUIRED AND SHALL STATE SUCH QUANTITIES IN THEIR BID.
2. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC, FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION OF THIS PROJECT.
3. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
4. SOIL CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT IS AVAILABLE FROM THE OWNER. THE CONTRACTOR SHALL ABIDE BY THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT THEIR WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
6. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINING ALL SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL COMPARE FIELD CONDITIONS WITH DRAWINGS.
7. CONTRACTOR SHALL PROTECT ADJACENT PROPERTIES DURING CONSTRUCTION. ANY PROPERTY (PRIVATE OR PUBLIC) WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED TO ORIGINAL CONDITIONS BY THE CONTRACTOR. THE COST OF THE RESTORATION IS CONSIDERED INCIDENTAL, AND SHOULD BE INCLUDED IN THE BID PRICES.
8. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGER'S HOTLINE TO REQUEST FIELD STAKING OF EXISTING UTILITIES AND NOTIFY THE UTILITIES OF THE PROJECT COMPONENTS.
9. CONTRACTOR SHALL ENSURE ALL MUD AND DEBRIS IS NOT DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE AGENCY HAVING JURISDICTION ON THE ROADWAYS.
10. SUBMITTALS:
    - A. SHOP DRAWINGS AND/OR MANUFACTURER'S PRODUCT DATA SUBMITTALS ARE REQUIRED ONLY IF THE PRODUCT OR METHOD OF CONSTRUCTION:
      - a. IS DIFFERENT FROM THAT SPECIFIED OR
      - b. IS PART OF THE WORK THAT WILL BE DEDICATED AS A PUBLIC UTILITY OR ROADWAY AT THE END OF THE PROJECT OR
      - c. IF REQUIRED BY THE MUNICIPAL ENGINEER.
    - B. FOR UTILITY OR ROAD WORK THAT WILL BE DEDICATED TO A MUNICIPALITY, CONTRACTOR MUST MAKE SUBMITTALS TO THE MUNICIPALITY AS WELL AS ENGINEER.

PRIVATE UTILITIES

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO WISCONSIN ADMINISTRATIVE CODE, SECTION SPS 382-384, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. PROPOSED STORM SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL.
3. MATERIALS FOR PROPOSED STORM SEWER SHALL BE AS FOLLOWS:

STORM SEWER PIPE 30" OR LARGER SHALL BE EITHER:

A. REINFORCED CONCRETE, ASTM C-76, CLASS III OR GREATER, WITH ELASTOMERIC SEALS CONFORMING TO ASTM C-443.

B. HIGH DENSITY POLYETHYLENE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS, SUCH AS ADS N-12 WT. HDPE PIPE SHALL CONFORM TO ASTM F2648 AND F2306. JOINTS SHALL BE WATER TIGHT CONFORMING TO ASTM D3212 WITH ELASTOMERIC SEALS (GASKETS) CONFORMING TO ASTM F477.

STORM SEWER PIPE 24" OR LESS SHALL BE EITHER:

A. HIGH DENSITY POLYETHYLENE (HDPE) WITH A SMOOTH INTERIOR AND ANNULAR EXTERIOR CORRUGATIONS, SUCH AS ADS N-12 WT. HDPE PIPE SHALL CONFORM TO ASTM F2648 AND F2306. JOINTS SHALL BE WATER TIGHT CONFORMING TO ASTM D3212 WITH ELASTOMERIC SEALS (GASKETS) CONFORMING TO ASTM F477.

B. POLYVINYL CHLORIDE (PVC) PIPE, ASTM D-3034, SDR 35, WITH ELASTOMERIC PUSH-ON JOINTS CONFORMING TO ASTM D-3212.

C. REINFORCED CONCRETE, ASTM C-76, CLASS III OR GREATER, WITH ELASTOMERIC SEALS CONFORMING TO ASTM C-443.

TRENCH SECTION SHALL BE CLASS "C" FOR CONCRETE AND CLASS "B" FOR ALL OTHER MATERIALS.

4. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED. THE COST OF THIS GRANULAR MATERIAL AND ITS COMPACTION IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF THE PROPOSED UTILITY.
5. UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE OWNER WITH A SET OF MARKED-UP PRINTS SHOWING ALL CHANGES MADE DURING THE CONSTRUCTION PROCESS. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE OWNER.
7. TRACER WIRE SHALL BE INSTALLED ON ALL BURIED NON-METALLIC SANITARY SEWERS, PRIVATE SANITARY INTERCEPTOR MAIN SEWERS, STORM BUILDING SEWERS, AND PRIVATE STORM INTERCEPTOR MAIN SEWERS THAT DISCHARGE TO MUNICIPAL MAINS. TRACER WIRE SHALL ALSO BE INSTALLED ON ALL BURIED NON-METALLIC WATER SERVICES AND PRIVATE WATER MAINS CONNECTED TO MUNICIPAL SUPPLY SYSTEMS. TRACER WIRE SHALL BE IN ACCORDANCE WITH SPS 382.30(11)(h) AND SPS 382.36(7)(d)10.b.
8. MATERIALS FOR SANITARY SEWER SHALL BE AS FOLLOWS:

SANITARY SEWER PIPE SHALL BE PVC, ASTM D-3034, SDR-35 WITH RUBBER GASKETED JOINTS, CONFORMING TO ASTM D-3212.

TRENCH SECTION SHALL BE CLASS "B" BEDDING. CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. PREFABRICATED WYE CONNECTIONS ARE REQUIRED FOR SANITARY LATERALS

9. MATERIALS FOR WATER SERVICE SHALL BE AS FOLLOWS:

WATER SERVICE SHALL BE CLASS 55 DUCTILE IRON (DI), ASTM A-377, WITH ELASTOMERIC JOINTS (AWWA C-111), WITH A VALVE AT THE SUPPLY MAIN OR C900 PVC PRESSURE RATED FOR WATER.

TRENCH SECTION SHALL CONFORM TO SECTION 4.3.C, FILE NO. 38 OF THE STANDARD SPECIFICATIONS. SAND OR STONE CHIP BEDDING MATERIAL IS REQUIRED.

PAVING

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, AND THE LOCAL ORDINANCES AND SPECIFICATIONS, AND THE GEOTECHNICAL REPORT.
2. PAVING SHALL CONSIST OF FINE GRADING PAVEMENT AREAS, INSTALLATION OF CRUSHED STONE BASE, CONCRETE AND/OR BITUMINOUS PAVEMENT, PAVEMENT MARKING, AND CLEANUP. ALL MATERIALS SHALL BE PROVIDED BY THE CONTRACTOR.
3. AGGREGATES USED IN THE HMA SHALL BE IN ACCORDANCE WITH SUBSECTION 460.2.2.3 OF THE STANDARD SPECIFICATIONS.
4. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE FOLLOWING SECTIONS OF THE STANDARD SPECIFICATIONS: SECTION 415 FOR CONCRETE PAVEMENT AND SECTION 602 FOR CONCRETE SIDEWALKS.
5. RESTORATION OF PUBLIC SIDEWALK SHALL BE JOINT TO JOINT. RESTORATION OF W. LAYTON AVENUE PAVEMENT SHALL BE AT THE DISCRETION OF MILWAUKEE COUNTY. RESTORATION OF CURB AND GUTTER AND PAVEMENT IN S 68TH STREET SHALL BE JOINT TO JOINT OR FULL PANEL AT THE DISCRETION OF THE CITY OF GREENFIELD.
6. PAVEMENT MARKINGS SHALL BE PAINT IN ACCORDANCE WITH SECTION 646 OF THE STANDARD SPECIFICATIONS. THE FOLLOWING ITEMS SHALL BE PAINTED WITH COLORS NOTED BELOW:

PARKING STALLS: WHITE
PEDESTRIAN CROSSWALKS: WHITE
ADA SYMBOLS: BLUE OR PER LOCAL CODE
EXTERIOR SIDEWALK CURBED, LIGHTPOLE BASES, AND GUARD POSTS: YELLOW

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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

GENERAL CONSTRUCTION NOTES

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY: JAH	DATE: 09/03/2024
CHECKED BY: JAH	
APPROVED BY: ...	

PROJECT NO. 910-001-005

SHEET NO. C7

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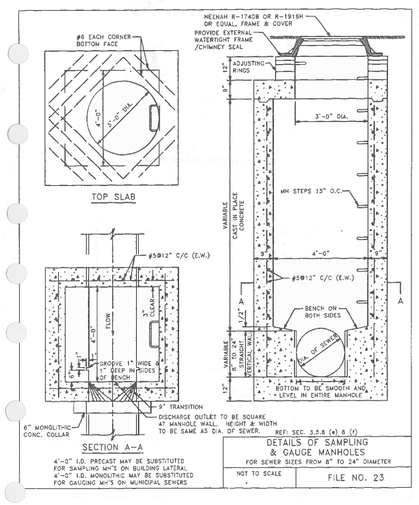

SANITARY SAMPLING MANHOLE

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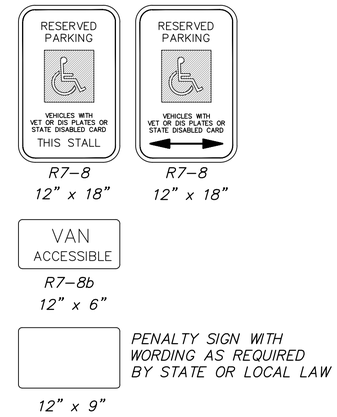

ACCESSIBLE PARKING SIGNS

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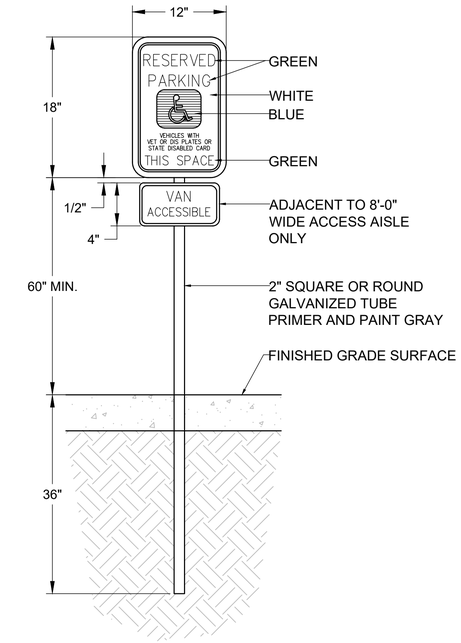
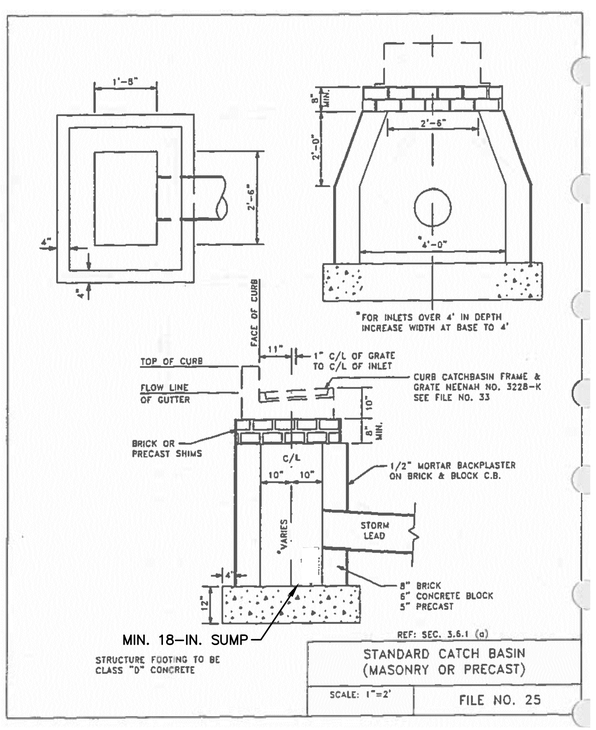


ACCESSIBLE PARKING SIGN

NOT TO SCALE



STANDARD CATCH BASIN DETAIL

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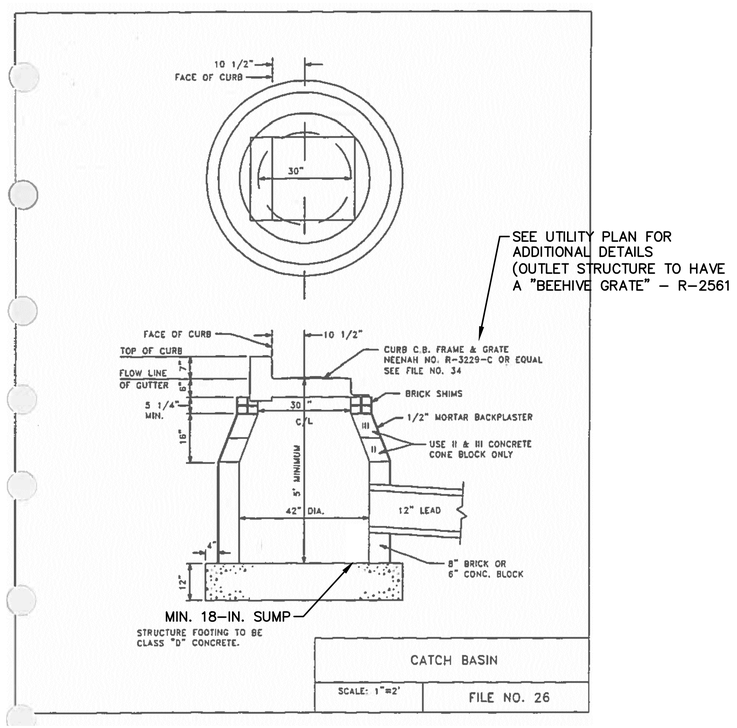

CATCH BASIN DETAIL

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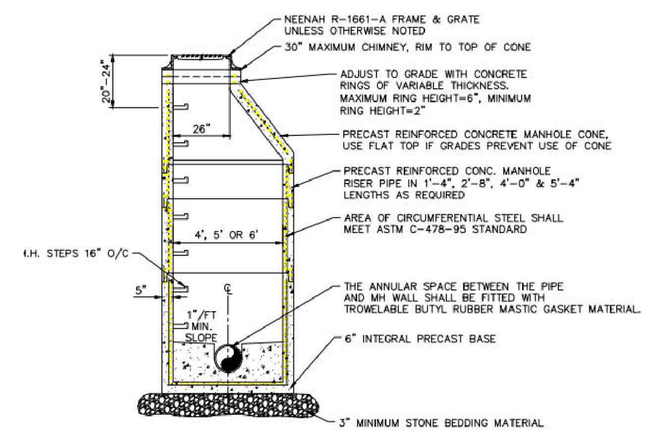

STORM MANHOLE NOTES:

1) PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.

2) CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

3) JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.

4) 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE AND BACKFILLED STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

5) SEE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION, FILE NO. 12 FOR PRECAST MANHOLE AND FILE NO. 13 FOR MANHOLE INVERTS, INCLUDING INVERTS OF LATERAL SEWERS THAT CONNECT DIRECTLY TO MANHOLES.

6) REPLACE CONE WITH FLAT TOP SECTION WHEN NECESSARY DUE TO LARGER DIAMETER OF STRUCTURE/VERTICAL RESTRICTIONS.

(7-5) STORM MANHOLE
N.T.S.

STORM MANHOLE DETAIL

REV.	DATE:
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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL

CONSTRUCTION DETAILS

909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE:
CHECKED BY:	JAH	09/03/2024
APPROVED BY:	...	

PROJECT NO.
910-001-005

SHEET NO.
C8

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IMAGES: ..\..\Design2Construct - 473\002 - 6800 West Layton Avenue\CAD\002-001\City storm MH detail.tif; ..\..\Design2Construct - 473\002 - 6800 West Layton Avenue\CAD\002-001\Erosion Eel.tif; \File no 23.tif; ..\..\Design2Construct - 473\002 - 6800 West Layton Avenue
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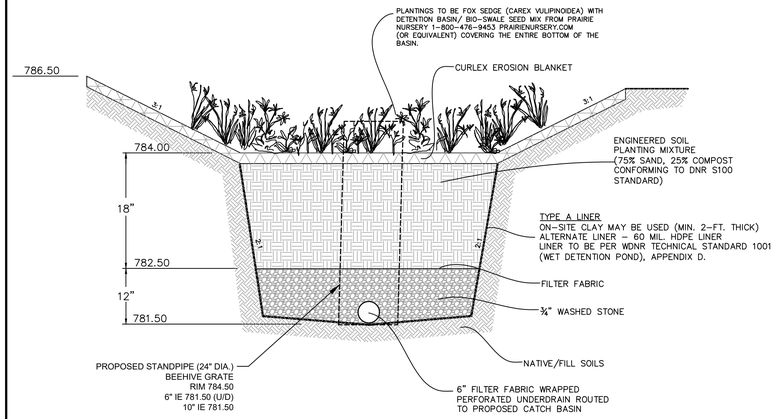
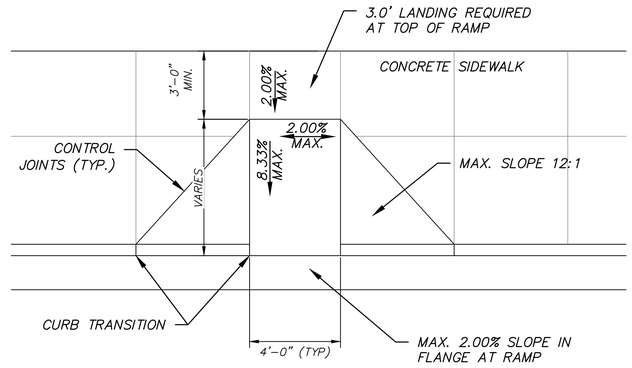


NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
2. IF USING SUPPLIER PROVIDED SOIL MIX, PRIOR TO CONSTRUCTION CONTRACTOR SHALL SUBMIT TO ENGINEER SUPPLIER CERTIFICATION THAT THE SOIL MIXTURE & COMPOST USED IN BIOSWALE MEET S100 AND 1004 REQUIREMENTS.
3. FOLLOWING SITE STABILIZATION, IF THERE ARE ANY CLOGGED/PONDING AREAS WITHIN THE BIOSWALE, THOSE AREAS SHALL HAVE THE TOP 1 FOOT OF MATERIAL REMOVED AND REPLACED WITH NEW ENGINEERED SOIL AND MULCH.

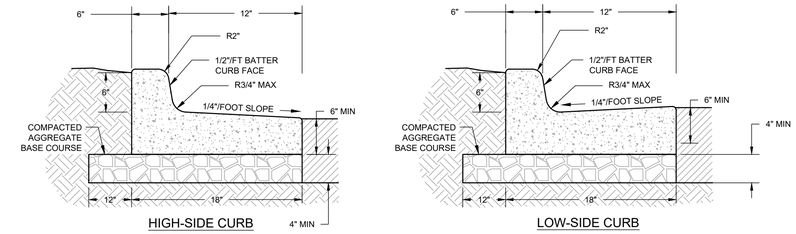
BIOSWALE DETAIL (EAST: B-1)

NOT TO SCALE



IN-LINE ADA RAMP

NOT TO SCALE

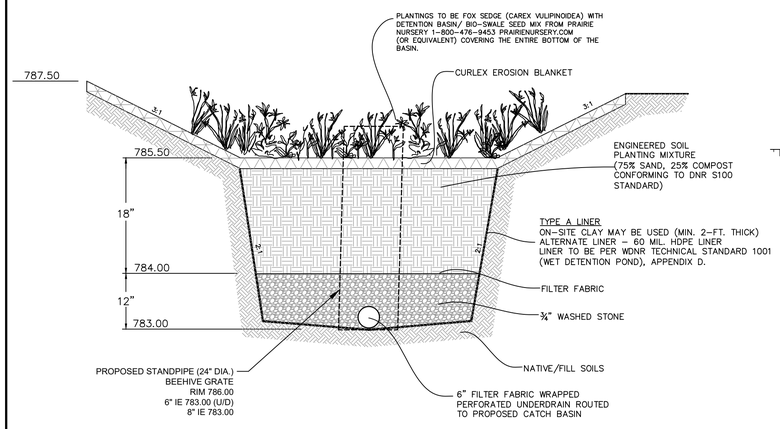


NOTES:
A) 3500 PSI CONCRETE SHALL BE USED IN CONSTRUCTION OF THE CURB & GUTTER.
B) THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE SLOPE OF THE GUTTER PAN.
C) FOR DEPRESSED CURB HEAD SLOPE, USE THE SAME SLOPE AS ADJACENT SIDEWALK.
D) THE BOTTOM OF THE CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDE MINIMUM 6" GUTTER THICKNESS MAINTAINED. TRANSVERSE CONTRACTION JOINTS SHALL BE CUT OR SAWED AT MAXIMUM 20 FOOT INTERVALS.
E) 1/2" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED TRANSVERSELY IN THE CURB ABUTTING EXISTING CURB AND SIDEWALK, WALLS OR BUILDINGS, AND AT INTERVALS NOT TO EXCEED 300 FEET, WITH PREFERRED LOCATIONS BEING AT RADIUS POINTS OR ANGLE POINTS.

18-IN. CONCRETE CURB & GUTTER

NOT TO SCALE

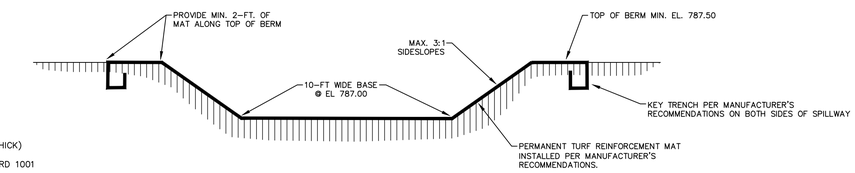
NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WISDOT STANDARD SPECIFICATIONS.
4. CONCRETE SHALL BE GRADE A AIR ENTRAINED IN ACCORDANCE WITH WISDOT SECTION 501.
5. FINISH, CURE, AND PROTECT CURBING IN ACCORDANCE WITH WISDOT SECTION 601.
6. FINISHED CONCRETE SHALL BE COVERED WITH A LIQUID CURING COMPOUND CONFORMING TO AASHTO M 148, TYPE 2, IN ACCORDANCE WITH WISDOT SECTION 415.
7. AGGREGATE BASE COURSE SHALL BE IN ACCORDANCE WITH WISDOT SECTION 305.



NOTES:
1. CONSTRUCT IN ACCORDANCE WITH WDNR TECHNICAL STANDARDS.
2. IF USING SUPPLIER PROVIDED SOIL MIX, PRIOR TO CONSTRUCTION CONTRACTOR SHALL SUBMIT TO ENGINEER SUPPLIER CERTIFICATION THAT THE SOIL MIXTURE & COMPOST USED IN BIOSWALE MEET S100 AND 1004 REQUIREMENTS.
3. FOLLOWING SITE STABILIZATION, IF THERE ARE ANY CLOGGED/PONDING AREAS WITHIN THE BIOSWALE, THOSE AREAS SHALL HAVE THE TOP 1 FOOT OF MATERIAL REMOVED AND REPLACED WITH NEW ENGINEERED SOIL AND MULCH.

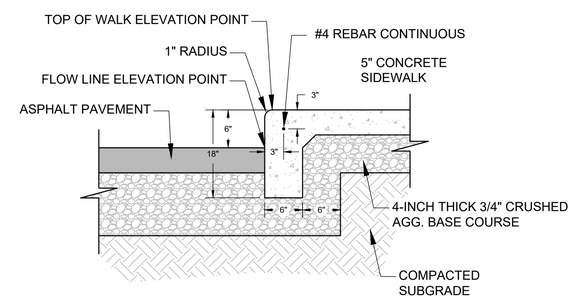
BIOSWALE DETAIL (WEST: B-2)

NOT TO SCALE



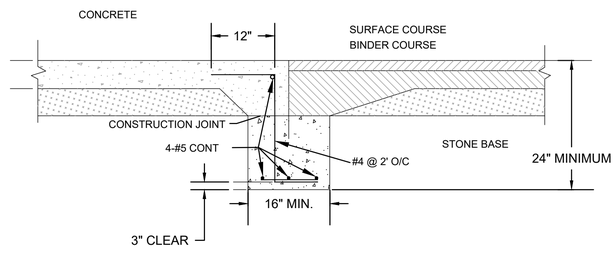
EMERGENCY SPILLWAY DETAIL

NOTE:
1. EXTEND TURF MAT TO PROPERTY LINE.
2. VERIFY BERM EL. MIN. AROUND ENTIRE BIOSWALE AREA.



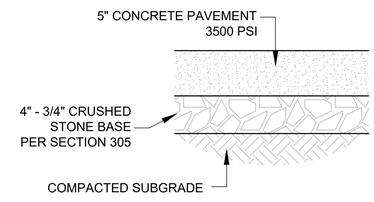
CONCRETE WALK WITH THICKENED EDGE

NOT TO SCALE



CONCRETE/ASPHALT JOINT DETAIL

NOT TO SCALE



CONCRETE SIDEWALK DETAIL

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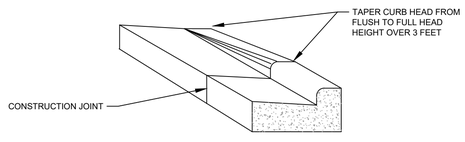

CURB & GUTTER TAPER

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Endpoint Solutions
6871 S. LOVERS LANE
FRANKLIN, WI 53132
PHONE: (414) 427-1200

L' BRI PURE N' NATURAL
CONSTRUCTION DETAILS
909 PERKINS DRIVE
MUKWONAGO, WISCONSIN

DRAWN BY:	JAH	DATE: 09/03/2024
CHECKED BY:	JAH	
APPROVED BY:	---	

PROJECT NO. 910-001-005

SHEET NO. C9

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PLAN COMMISSION STAFF REPORT

TO: Village of Mukwonago Plan Commission

FROM: Peter Gesch, P.E., Ruekert & Mielke, Inc.

REPORT DATE: October 3, 2024

MEETING DATE: October 8, 2024, 6:30 P.M.

SUBJECT: Porch Bar - Site Plan & Architectural Review

BASIC INFORMATION	
Project:	Porch Bar
Applicant:	Mark Weiss
Consulting Engineer:	N/A
Consulting Architect:	N/A
Request:	Site Plan & Architectural Review
Staff Recommendation:	Approve

PARCEL DATA/CHARACTERISTICS	
Tax Key:	MUKV1976122
Acreage:	0.22 Acres
Current Use:	Business
Proposed Use:	Business
Reason for Request:	Exterior Remodel
Land Use Classification:	Business
Zoning Classification:	B-2 – General Business and Downtown Retail Center

Project Summary & Overview

The applicant has applied for an architectural review of the exterior remodel they are performing prior to opening their new business at 204 S. Rochester Street. There are no changes proposed to the existing site. The only modifications being made are to exterior façade of the building that face S. Rochester Street.

This is an after-the-fact application and before and after photos are included in the attached application documents for consideration and review.

Staff Review

Engineering:	No comments.
Public Works	No comments.
Utilities	No comments.
Police	No comments.
Fire:	No comments.
Building Inspection	No comments.
Planning	No comments.

Recommended Action

Staff recommends the Planning Commission approve the application for the Porch Bar.

Attachments

1. Application Materials and Photos

VILLAGE OF MUKWONAGO

SITE PLAN, ARCHITECTURAL, AND PLANNED UNIT DEVELOPMENT (PUD) APPLICATION

Application Fee: Below

Date Submitted: 10-3-2024

FEES

(Please check one)

- ☐ Minor Site Plan (No Building): $160.00
- ☒ Minor Site Pan; Building: $400.00 plus $02 per sq. ft
- ☐ Major Site Plan; New Building/Addition (> 600 sq. ft.): $475.00 plus $.02 per sq. ft.
- ☐ Planned Unit Development (PUD) Review: $225.00 plus $50.00/unit
- ☐ Other (See Current Fee Schedule)_____

CONTACTS

Building Department
Contact: Supervisor of Inspections
Tim Rutenbeck
Phone: (262) 363-6419 Option 1
Fax: (262) 363-6425
Email: trutenbeck@villageofmukwonago.gov

Zoning and Planning
Contact: Village Planner
Peter Gesch
Phone: (262) 542-5733
Fax: (262) 363-6425
Email: pgesch@ruekert-mielke.com

GUIDELINES

The undersigned petition is to consider a request, as stated herein, for the specified parcel(s) of land and will be reviewed by the Plan Commission and Village Board of the Village of Mukwonago. The application packet must be filed with the Village Clerk **at least 30 days prior to the meeting** of the Planning Commission at which action is desired. The Plan Commission meets on the second Tuesday of each month at 6:30 p.m.

Materials listed below must be provided to the Village of Mukwonago in accordance with Village Municipal Code Chapter 100 Article IX. Section 100-601(f) and other pertinent sections of Village ordinances, and, as necessary, to permit review that is consistent with proper planning practice. The Village will strive to accommodate reasonable requests for informal preliminary staff review, however the Village shall not place any items on the agenda for Plan Commission consideration until such time as the application is complete in accordance with all requirements specified on this and other attached application forms.

Mail completed applications to:	Village Planner 440 River Crest Ct Mukwonago, WI 53149
Deliver to:	Village Clerk's Office 440 River Crest Ct
Email to:	trutenbeck@villageofmukwonago.gov

Complete, accurate and specific information must be entered. Please Print.

APPLICANT *(Full Legal Name)*

Name: MARK WEISS
Company: Perseverance Corp DBA THE PORCH BAR
Address: 204 Rochester St. **City:** MUKWONAGO **State:** WI **Zip:** 53149
Daytime Phone: 262-215-7669 **Fax:**
E-Mail: Mark@mapleavenue.com

APPLICANT IS REPRESENTED BY *(Full Legal Name)*

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

ARCHITECT

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

PROFESSIONAL ENGINEER

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

REGISTERED SURVEYOR

Name: _____

Company: _____

Address: _____ City: _____ State: ____ Zip: _____

Daytime Phone: _____ Fax: _____

E-Mail: _____

CONTRACTOR

Name: MYSELF - MARK WEISS

Company: Perseverance CORP.

Address: 200 S. ROCHESTER ST City: MUKWONAGO State: WI Zip: 53149

Daytime Phone: 262.215-7669 Fax: —

E-Mail: Mark@ mapleavenue.com

PROPERTY INFORMATION

Property Owner (s) *(if different from applicant)*: _____

Address: _____ **City:** _____ **State:** _____ **Zip:** _____

Daytime Phone: _____ **Fax:** _____

E-Mail: _____

Present Zoning: _____ **Tax Key No(s).:** _____

Location/Address: _____

Present Use: OFFICES **Intended Use:** TAVERN/BAR.

PROCEDURAL CHECKLIST FOR SITE PLAN/ARCHITECTURAL PLAN/PUD REVIEW AND APPROVAL

Submittals for review must include and be accompanied by the following:

Application:

- ☐ Completed application form including the procedural checklist.
- ☐ Application fee: See page 1.
- ☐ Agreement for Reimbursable Services (separate application).

Other Documents:

- ☐ One(1) complete set of Application and materials, in addition to the original, for Village of Mukwonago review.
- ☐ Project Summary: Please attach a statement detailing the reasons and background for this request including: details of proposal, services provided, wares sold, plans and hours of operation, number of employees, frequency of customer visits, frequency of deliveries to site, description of any interior/exterior modifications or additions to be made to property, any outside storage (dumpsters, trucks, materials...), number of parking stalls, screening/buffer type, any other information available. ***PLEASE EXPLAIN IN DETAIL.***
- ☐ **Electronic Submittals are required.** Email (or CD ROM) with all plans and submittal materials in Adobe PDF to trutenbeck@villageofmukwonago.gov .
- ☐ Any additional information as determined by Village staff.

- **Upon receipt of a complete submittal, staff review will be conducted within ten business days.**
- **All Site Plan, Architectural, and Planned Unit Development review requests require Plan Commission review and Village Board approval.**

CERTIFICATION

Applicant hereby certifies that:

1. All of the above statements and other information submitted as part of this application are true and correct to the best of his or her knowledge.
2. Affirms that no Village of Mukwonago elected or appointed official or employee has a proprietary interest in the above referenced property for which this applications being filed (except as stated below under "Exceptions").
3. None of the above referenced individuals has been promised or given any contract for consultation, planning or construction in relation to this project (except as stated below under "Exceptions").
4. Applicant has read and understands all information in this packet.

Applicant further understands the policies of the Village regarding change of zonings and property development. Conditions of the resolution regarding all approvals are strictly followed. Certificates of Occupancy are not given until all conditions of approval have been met

By the execution of this application, applicant hereby authorizes the Village of Mukwonago or its agents to enter upon the property during the hours of 7:00 am to 7:00 pm daily for the purpose of inspection. Applicant grants this authorization to enter even if this land has been posted against trespassing pursuant to Section 943.13 WI Stats.

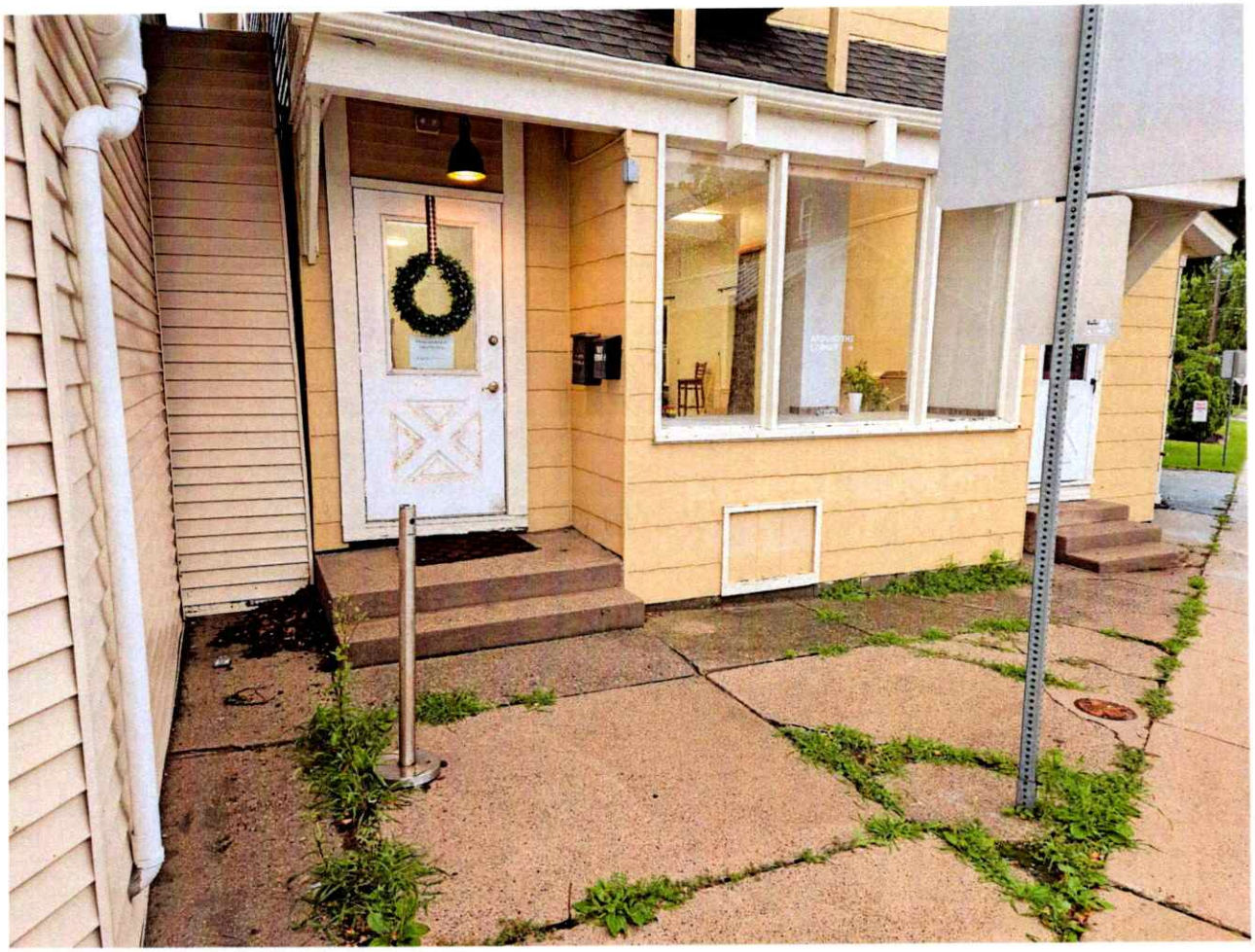
(The applicant's signature must be from a Managing Member if the business is an LLC, or from the President or Vice President if the business is a corporation. A signed applicant's authorization letter may be provided in lieu of the applicant's signature below, and a signed property owner's authorization letter may be provided in lieu of the property owner's signature[s] below. If more than one, all of the owners of the property must sign this Application).

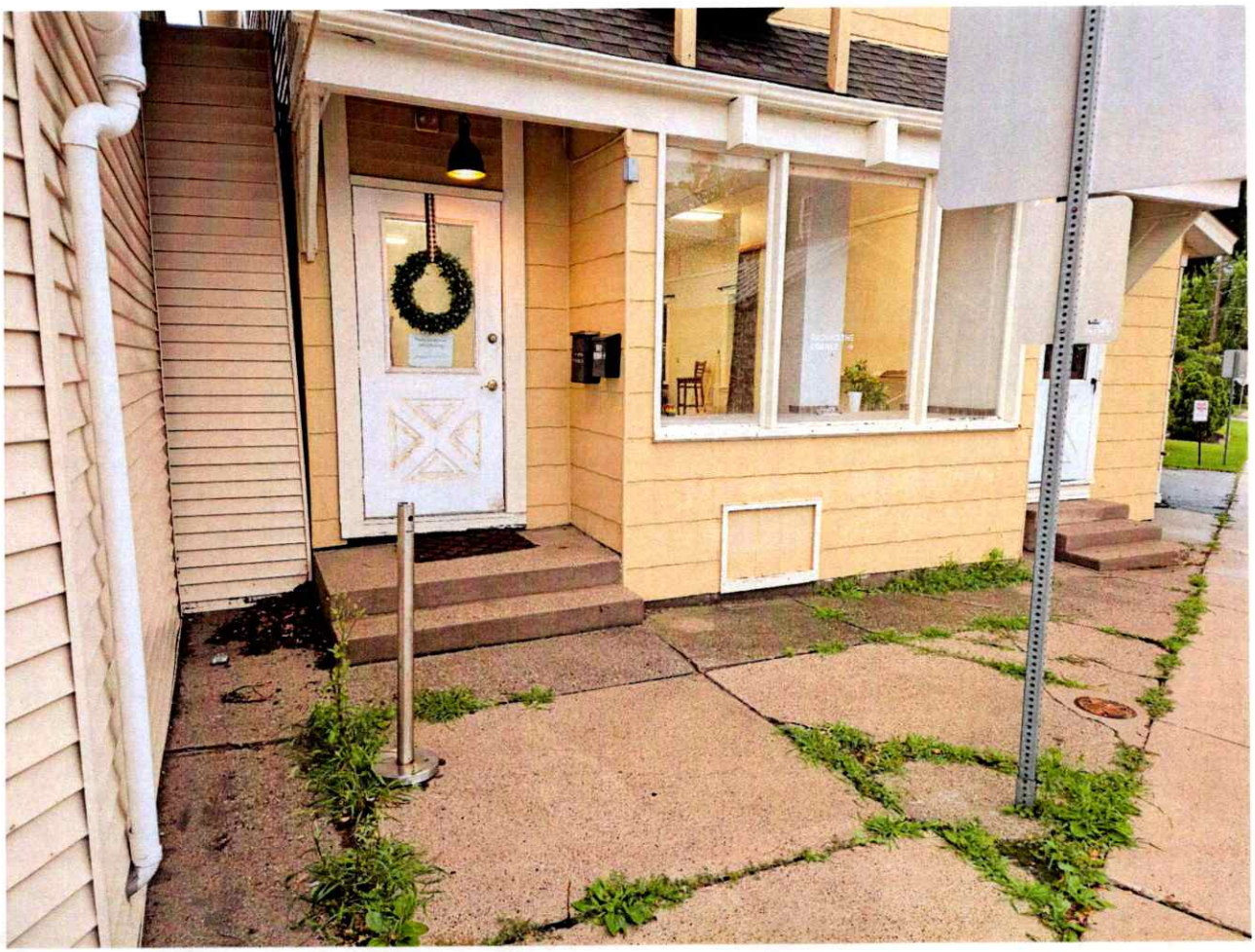
Signature - Property Owner	Signature - Applicant
MARK WEISS Name & Title (PRINT)	Name & Title (PRINT)
10-3-2024 Date	Date
Signature - Property Owner	Signature – Applicant's Representative
Name & Title (PRINT)	Name & Title (PRINT)
Date	Date

FOR OFFICE USE ONLY	
Date Paid	**Receipt #**
Plan Commission Date(s)	**Village Board Date(s)**
Escrow Required? ☐ Yes ☐ No	**Escrow Amount**
Plan Commission Disposition	
Village Board Disposition	

206

206





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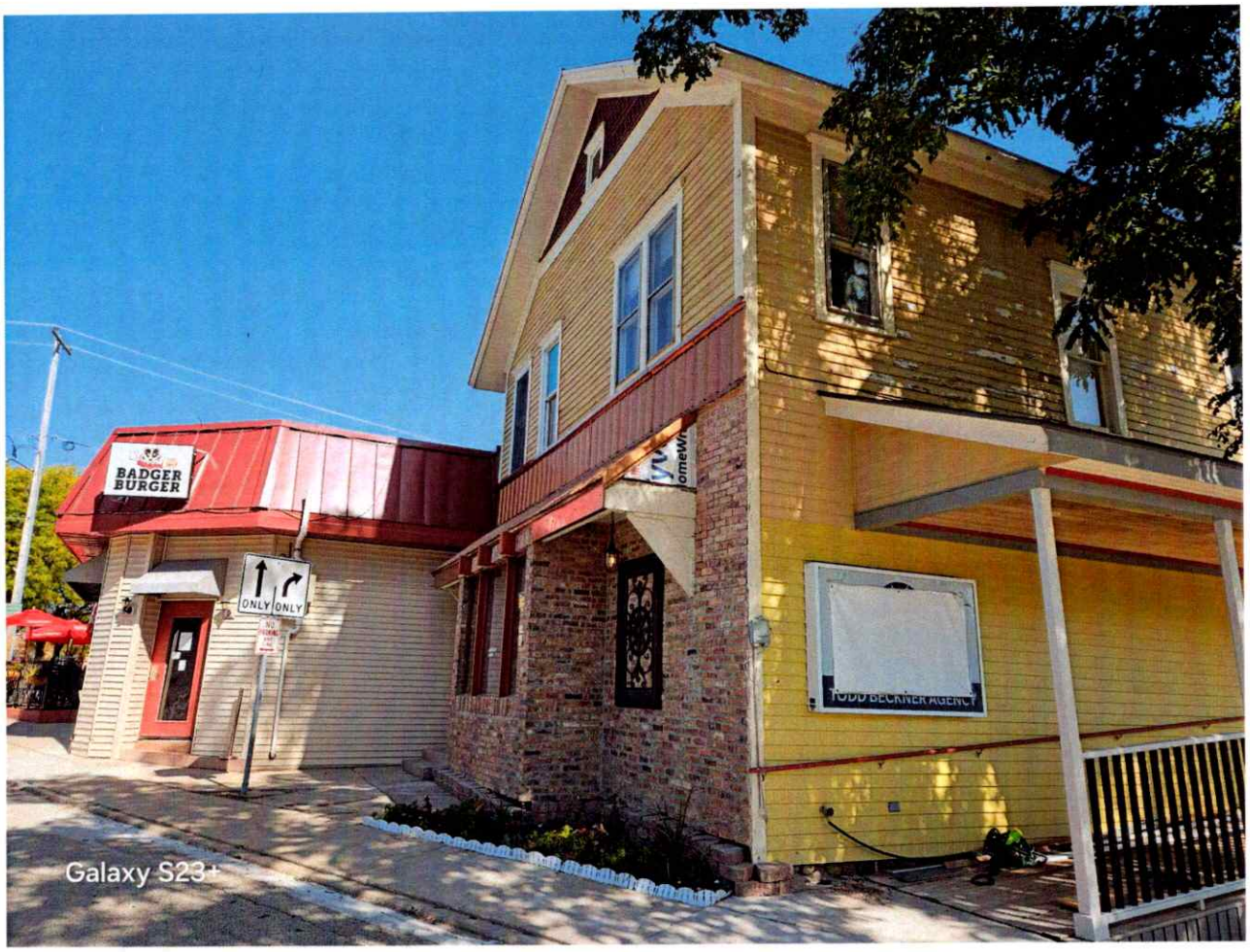
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TODD BECKNER AGENCY
Galaxy S23+

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PC RESOLUTION NO. 2024-13

A RESOLUTION FOR A SITE PLAN AND ARCHITECTURAL REVIEW FOR PORCH BAR LOCATED AT 204 S. ROCHESTER STREET, PARCEL NUMBER MUKV1976122

WHEREAS, pursuant to Section 100-601 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval of an exterior remodel, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by Mark Weiss (applicant and property owner), and

WHEREAS, the project involves the remodel of the front façade of the building that faces S. Rochester Street, and

WHEREAS, the plans have been reviewed and recommended by the Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Plan Commission of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for the exterior remodel at 204 S. Rochester Street based upon the plans and information submitted to the Village.

Passed and adopted by the Village of Mukwonago Plan Commission this 8th day of October 2024.

VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Shay Zerfas, Deputy Clerk-Treasurer