**Office of the Clerk/Treasurer**

W240N3065 Pewaukee Road
Pewaukee, WI 53072
(262) 691-0770 Fax 691-1798

# COMMON COUNCIL
# MEETING NOTICE AND AGENDA
## Tuesday, September 5, 2023
## 6:30 PM

Common Council Chambers ~ Pewaukee City Hall
W240 N3065 Pewaukee Road ~ Pewaukee, Wisconsin

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1. Call to Order and Pledge of Allegiance
2. Public Comment - Please limit your comments to two (2) minutes, if further time for discussion is needed please contact your District Alderperson prior to the meeting.
3. Consent Agenda
   - 3.1. Approval of the Accounts Payable Listing Dated September 5, 2023
   - 3.2. Approval of **Resolution 23-09-13** Committing to Required Funding for the Pewaukee Public Library and Requesting Exemption from the 2023 Waukesha County Library Tax Levy for 2024 Purposes
4. Highlights Regarding the 2022 Audit Report from Paul Frantz - Baker Tilly
5. Discussion and Possible Action to Approve a Temporary Class B Beer License to the Friends of the Park for their Lake Country Canine Carnival Event on October 7th, 2023 to be Held at the Pewaukee Sports Complex Located at N45 W23440 Lindsay Road
6. **PUBLIC HEARRING,** Discussion and Possible Action Regarding a Conditional Use Permit for Quattro Development/Higher Ground Education for the Property Located on Highfield Court (PWC 0906-994) for the Purpose of Constructing a Childcare Facility [Fuchs]
7. Discussion and Possible Action Regarding **Resolution 23-09-14** Releasing a Forty-Five Foot Reserved Right-of-Way Restriction Upon Lots 1 and 2 of Certified Survey Map No. 10366 as Requested by Quattro Development Reservation [Fuchs]
8. Discussion and Possible Action Regarding Signals at the Intersection of Lindsay Road and Pewaukee Road (STH 164) [Wagner].
9. Public Comment - Please limit your comments to two (2) minutes, if further time for discussion is needed please contact your district Alderperson prior to the meeting.
10. Adjournment

Kelly Tarczewski
Clerk/Treasurer

August 31, 2023

**NOTICE**

It is possible that members of other governmental bodies of the municipality may be in attendance to gather information that may form a quorum. At the above stated meeting, no action will be taken by any governmental body other than the governmental body specifically referred to above in this notice.

Any person who has a qualifying disability under the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible format must contact the Clerk/Treasurer, Kelly Tarczewski, at (262) 691-0770 three business days prior to the meeting so that arrangements may be made to accommodate your request.

# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 3.1.

**DATE:** September 5, 2023

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Approval of the Accounts Payable Listing Dated September 5, 2023

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

A/P 9/5/2023

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| 08/16/2023 | 100 | 1317(E) | DELTA DENTAL | DENTAL CLEARING | 21903 | 00000 | 1,713.20 |
| 08/17/2023 | 100 | 138613 | 1ST AYD | FIRE ADMINISTRATION - OPERATING | 53400 | 52210 | 687.07 |
| 08/17/2023 | 100 | 138614 | AARONIN STEEL SALES, INC. | COURT PENALTIES | 45110 | 00000 | 481.91 |
| 08/17/2023 | 100 | 138615 | AIRGAS USA | FIRE PROTECTIVE SERVICES - EMS | 53450 | 52230 | 314.37 |
| 08/17/2023 | 100 | 138617 | AMERICAN LITHO | RECREATION PROGRAM - PROGRAM PRINTING | 53120 | 55300 | 5,506.00 |
| 08/17/2023 | 100 | 138618 | AMI HURD | CLERK/TREASURER - MILEAGE | 53300 | 51420 | 19.00 |
| 08/17/2023 | 100 | 138619 | ASSOCIATED BAG COMPANY | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 219.64 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 600.00 |
| | | | | CHECK 100 138619 TOTAL FOR FUND 100: | | | 819.64 |
| 08/17/2023 | 100 | 138620 | AT&T MOBILITY | FIRE ADMINISTRATION - MDC AIR CARDS | 52270 | 52210 | 731.59 |
| 08/17/2023 | 100 | 138621 | BEN REMPE | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 552.00 |
| 08/17/2023 | 100 | 138622 | BLAKE MCKINNEY AND JAY SCHMIDT | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 7,040.02 |
| 08/17/2023 | 100 | 138623 | BRADY DALEN | COURT PENALTIES | 45110 | 00000 | 94.50 |
| 08/17/2023 | 100 | 138624 | CHERRIE LARSON | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 50.00 |
| 08/17/2023 | 100 | 138625*# | CINTAS CORP | EMPLOYEE SERVICES - SAFETY PERSONAL | 53480 | 51430 | 90.90 |
| 08/17/2023 | 100 | 138627 | CORE LOGIC TAX SERVICES | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 2,766.61 |
| | | | | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 3,125.48 |
| | | | | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 6,794.34 |
| | | | | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 3,701.77 |
| | | | | CHECK 100 138627 TOTAL FOR FUND 100: | | | 16,388.20 |
| 08/17/2023 | 100 | 138628 | DANIEL & KRISTEN HEXT | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 7,912.91 |
| 08/17/2023 | 100 | 138629 | DANIEL ORITZ | COURT PENALTIES | 45110 | 00000 | 25.20 |
| 08/17/2023 | 100 | 138630 | DAVID WHITE | SALES TAX DUE STATE | 24213 | 00000 | 5.90 |
| | | | | PARK RECREATION FIELD TRIPS | 46722 | 00000 | 112.10 |
| | | | | CHECK 100 138630 TOTAL FOR FUND 100: | | | 118.00 |
| 08/17/2023 | 100 | 138631 | EILEEN BUSKE | AUDIT ACCOUNTS PAYABLE | 21110 | 00000 | 2,134.90 |
| 08/17/2023 | 100 | 138632 | EMMA KEYSER | PARK RECREATION PROGRAMS | 46721 | 00000 | 144.00 |
| 08/17/2023 | 100 | 138635*# | FORWARD TS | COURT - OPERATING SUPPLIES | 53400 | 51200 | 7.59 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| | | | | POLICE - OPERATING SUPPLIES | 53400 | 52100 | 7.58 |
| | | | | ENGINEERING - OPERATING SUPPLIES | 53400 | 53110 | 59.60 |
| | | | | CHECK 100 138635 TOTAL FOR FUND 100: | | | 74.77 |
| 08/17/2023 | 100 | 138636 | GALLS | FIRE PROTECTIVE SERVICES - UNIFORMS | 53410 | 52230 | 124.40 |
| | | | | FIRE PROTECTIVE SERVICES - UNIFORMS | 53410 | 52230 | 62.20 |
| | | | | FIRE PROTECTIVE SERVICES - UNIFORMS | 53410 | 52230 | 141.74 |
| | | | | CHECK 100 138636 TOTAL FOR FUND 100: | | | 328.34 |
| 08/17/2023 | 100 | 138637 | HECKEL DANCE LLC | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 720.00 |
| 08/17/2023 | 100 | 138639 | IS OUTFITTERS | IT - OTHER PROFESSIONAL SERVICES | 52190 | 51450 | 560.00 |
| | | | | IT - OTHER PROFESSIONAL SERVICES | 52190 | 51450 | 217.50 |
| | | | | CHECK 100 138639 TOTAL FOR FUND 100: | | | 777.50 |
| 08/17/2023 | 100 | 138640 | J.F. AHERN COMPANY | FIRE ADMINISTRATION - BUILDING REPAIRS | 52410 | 52210 | 959.00 |
| 08/17/2023 | 100 | 138641 | JAY JOHNSON | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 624.00 |
| 08/17/2023 | 100 | 138642 | JOHN GAHAN | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 648.00 |
| 08/17/2023 | 100 | 138643 | JOHN'S DISPOSAL SERVICE | RECYCLE - GARBAGE COLLECTION | 52800 | 53620 | 15,442.56 |
| 08/17/2023 | 100 | 138644 | LANGE ENTERPRISES, INC | BUILDING SERVICES - ADDRESS TILES | 53430 | 52400 | 406.92 |
| 08/17/2023 | 100 | 138645 | LIFE-ASSIST INC | FIRE PROTECTIVE SERVICES - EMS | 53450 | 52230 | 608.13 |
| 08/17/2023 | 100 | 138646 | MALECKI GRAPHIC ARTS SERVICES | RECREATION PROGRAM - PROGRAM PRINTING | 53120 | 55300 | 900.00 |
| 08/17/2023 | 100 | 138649 | MATRIX TRUST COMPANY | DEFERRED COMPENSATION | 21570 | 00000 | 50.00 |
| | | | | DEFERRED COMPENSATION | 21570 | 00000 | 50.00 |
| | | | | CHECK 100 138649 TOTAL FOR FUND 100: | | | 100.00 |
| 08/17/2023 | 100 | 138650*# | MENARDS | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 69.38 |
| | | | | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 69.99 |
| | | | | PARKS - NEW EQUIPMENT | 53950 | 55200 | 18.99 |
| | | | | CHECK 100 138650 TOTAL FOR FUND 100: | | | 158.36 |
| 08/17/2023 | 100 | 138651*# | MSA PROFESSIONAL SERVICES INC | ENGINEERING - OUTSIDE ENGINEERING | 52190 | 53110 | 1,492.50 |
| 08/17/2023 | 100 | 138653 | NATIONWIDE RETIREMENT SOLUTIONS | DEFERRED COMPENSATION | 21570 | 00000 | 2,069.00 |
| | | | | DEFERRED COMPENSATION | 21570 | 00000 | 2,069.00 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| | | | | CHECK 100 138653 TOTAL FOR FUND 100: | | | 4,138.00 |
| 08/17/2023 | 100 | 138654 | OCCUPATIONAL HEALTH CENTERS | EMPLOYEE SERVICES - EMPLOYMENT EXAMS | 52150 | 51430 | 103.00 |
| 08/17/2023 | 100 | 138655 | ODP BUSINESS SOLUTIONS LLC | BUILDING SERVICES - OPERATING SUPPLIES | 53400 | 52400 | 25.98 |
| | | | | BUILDING SERVICES - OPERATING SUPPLIES | 53400 | 52400 | 60.04 |
| | | | | CHECK 100 138655 TOTAL FOR FUND 100: | | | 86.02 |
| 08/17/2023 | 100 | 138657 | PITNEY BOWES INC | CLERK/TREASURER - EQUIP REPAIR & MAINT | 52430 | 51420 | 132.79 |
| 08/17/2023 | 100 | 138658# | PREMIUM WATERS, INC | COURT - OPERATING SUPPLIES | 53400 | 51200 | 86.99 |
| | | | | PARKS - OPERATING SUPPLIES | 53400 | 55200 | 61.49 |
| | | | | CHECK 100 138658 TOTAL FOR FUND 100: | | | 148.48 |
| 08/17/2023 | 100 | 138660# | PROHEALTH CARE MEDICAL ASSOCIATES | EMPLOYEE SERVICES - EMPLOYMENT EXAMS | 52150 | 51430 | 50.00 |
| | | | | FIRE ADMINISTRATION - EMPLOYMENT | 52150 | 52210 | 511.00 |
| | | | | CHECK 100 138660 TOTAL FOR FUND 100: | | | 561.00 |
| 08/17/2023 | 100 | 138661 | PROHEALTH CARE MEDICAL GROUP | EMPLOYEE SERVICES - EMPLOYMENT EXAMS | 52150 | 51430 | 100.00 |
| 08/17/2023 | 100 | 138662 | PROHEALTH PHARMACY WAUKESHA | FIRE PROTECTIVE SERVICES - EMS | 53450 | 52230 | 736.10 |
| 08/17/2023 | 100 | 138665 | SCOTT ZETTL | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 168.00 |
| 08/17/2023 | 100 | 138666 | SHP VI WSLG Pewaukee JV LLC | BOB21-0039 | 23175 | 00000 | 500.00 |
| 08/17/2023 | 100 | 138667 | ST. BARTHOLOMEW'S EPISCOPAL CHURCH | RECREATION PROGRAM - PROGRAM EXPENSES | 53430 | 55300 | 100.00 |
| 08/17/2023 | 100 | 138668 | STATE OF WI COURT FINES & ASSMTS | COURT PENALTIES | 45110 | 00000 | 4,604.27 |
| 08/17/2023 | 100 | 138671 | UNDER THE TREE EDUCATIONAL | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 307.20 |
| 08/17/2023 | 100 | 138673 | VILLAGE OF PEWAUKEE | AMBULANCE RUNS | 46230 | 00000 | 39,549.36 |
| 08/17/2023 | 100 | 138674*# | WAUKESHA CO TREASURER | COURT PENALTIES | 45110 | 00000 | 1,482.80 |
| | | | | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 600.00 |
| | | | | CHECK 100 138674 TOTAL FOR FUND 100: | | | 2,082.80 |
| 08/17/2023 | 100 | 138676*# | WE ENERGIES | HIGHWAY - ELECTRICITY | 52210 | 53100 | 875.75 |
| | | | | HIGHWAY - HEAT | 52220 | 53100 | 155.08 |
| | | | | CHECK 100 138676 TOTAL FOR FUND 100: | | | 1,030.83 |
| 08/17/2023 | 100 | 138677 | Westridge Builders | BOB22-0042 | 23175 | 00000 | 500.00 |
| 08/17/2023 | 100 | 138678 | WI SUPREME COURT | COURT - MEETINGS & CONVENTIONS | 53210 | 51200 | 80.00 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| 08/17/2023 | 100 | 138679 | WISCONSIN DEPARTMENT OF | EMPLOYEE SERVICES - EMPLOYMENT EXAMS | 52150 | 51430 | 14.00 |
| 08/18/2023 | 100 | 1314(E) | ADP, LLC | | 52160 | 51600 | 492.94 |
| 08/18/2023 | 100 | 1318(E) | DIVERSIFIED BENEFIT SERVICES, INC. | FLEX SPEND | 21590 | 00000 | 2,544.69 |
| 08/18/2023 | 100 | 1325(E) | ADP, LLC | | 52480 | 51450 | 2,005.60 |
| 08/18/2023 | 100 | 1331(E)# | LEASING SERVICES | | 53400 | 51200 | 52.00 |
| | | | | | 53400 | 52100 | 52.00 |
| | | | | CHECK 100 1331(E) TOTAL FOR FUND 100: | | | 104.00 |
| 08/25/2023 | 100 | 1321(E) | DIVERSIFIED BENEFIT SERVICES, INC. | FLEX SPEND | 21590 | 00000 | 583.11 |
| 08/25/2023 | 100 | 1322(E) | DELTA DENTAL | DENTAL CLEARING | 21903 | 00000 | 3,506.20 |
| 08/25/2023 | 100 | 1323(E)*# | MUTUAL OF OMAHA | DISABILITY INSURANCE | 21531 | 00000 | 1,937.98 |
| | | | | LTD - FIRE UNION | 21533 | 00000 | 709.77 |
| | | | | VOLUNTARY LIFE | 21534 | 00000 | 1,160.75 |
| | | | | COURT - LIFE INSURANCE | 51340 | 51200 | 12.16 |
| | | | | COURT - DISABILITY INSURANCE | 51350 | 51200 | 18.21 |
| | | | | ADMINISTRATOR - LIFE INSURANCE | 51340 | 51410 | 9.37 |
| | | | | ADMINISTRATOR - DISABILITY INSURANCE | 51350 | 51410 | 27.79 |
| | | | | CLERK/TREASURER - LIFE INSURANCE | 51340 | 51420 | 70.88 |
| | | | | CLERK/TREASURER - DISABILITY INSURANCE | 51350 | 51420 | 108.77 |
| | | | | EMPLOYEE SERVICES - LIFE INSURANCE | 51340 | 51430 | 20.48 |
| | | | | EMPLOYEE SERVICES - DISABILITY | 51350 | 51430 | 27.79 |
| | | | | IT - LIFE INSURANCE | 51340 | 51450 | 18.08 |
| | | | | IT - DISABILITY INSURANCE | 51350 | 51450 | 27.79 |
| | | | | ASSESSOR - LIFE INSURANCE | 51340 | 51530 | 43.84 |
| | | | | ASSESSOR - DISABILITY INSURANCE | 51350 | 51530 | 67.57 |
| | | | | POLICE - LIFE INSURANCE | 51340 | 52100 | 8.32 |
| | | | | POLICE - DISABILITY INSURANCE | 51350 | 52100 | 11.10 |
| | | | | FIRE ADMINISTRATION - LIFE INSURANCE | 51340 | 52210 | 65.28 |
| | | | | FIRE ADMINISTRATION - DISABILITY | 51350 | 52210 | 83.37 |
| | | | | FIRE PROTECTIVE SERVICES - LIFE | 51340 | 52230 | 537.60 |
| | | | | FIRE PROTECTIVE SERVICES - DISABILITY | 51350 | 52230 | 111.16 |
| | | | | BUILDING SERVICES - LIFE INSURANCE | 51340 | 52400 | 50.88 |
| | | | | BUILDING SERVICES - DISABILITY | 51350 | 52400 | 76.75 |
| | | | | HIGHWAY - LIFE INSURANCE | 51340 | 53100 | 127.30 |
| | | | | HIGHWAY - DISABILITY INSURANCE | 51350 | 53100 | 200.73 |
| | | | | ENGINEERING - LIFE INSURANCE | 51340 | 53110 | 108.96 |
| | | | | ENGINEERING - DISABILITY INSURANCE | 51350 | 53110 | 161.32 |
| | | | | PARKS - LIFE INSURANCE | 51340 | 55200 | 45.12 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| | | | | PARKS - DISABILITY INSURANCE | 51350 | 55200 | 66.10 |
| | | | | RECREATION PROGRAM - LIFE INSURANCE | 51340 | 55300 | 31.84 |
| | | | | RECREATION PROGRAM - DISABILITY | 51350 | 55300 | 50.23 |
| | | | | PLANNER - LIFE INSURANCE | 51340 | 56300 | 20.64 |
| | | | | PLANNER - DISABILITY INSURANCE | 51350 | 56300 | 27.79 |
| | | | | CHECK 100 1323(E) TOTAL FOR FUND 100: | | | 6,045.72 |
| 08/25/2023 | 100 | 1324(E) | GREAT WEST TRUST - WDC | DEFERRED COMPENSATION | 21570 | 00000 | 4,522.08 |
| | | | | DEF COMP - ROTH 457 | 21575 | 00000 | 3,038.70 |
| | | | | CHECK 100 1324(E) TOTAL FOR FUND 100: | | | 7,560.78 |
| 08/25/2023 | 100 | 138681 | MICHAEL AND MARY ELLEN LEDERER | Village Building | 24400 | 00000 | 24.04 |
| | | | | Village Building | 24400 | 00000 | 44.65 |
| | | | | Village Building | 47380 | 00000 | 44.65 |
| | | | | Village Building | 47380 | 00000 | 82.91 |
| | | | | CHECK 100 138681 TOTAL FOR FUND 100: | | | 196.25 |
| 08/25/2023 | 100 | 138683*# | A&M CLEANING SOLUTIONS | HIGHWAY - CONTRACTED JANITORIAL | 52400 | 53100 | 1,020.00 |
| 08/25/2023 | 100 | 138684 | AARONIN STEEL SALES, INC. | HIGHWAY - EQUIP REPAIR & MAINT | 52430 | 53100 | 48.52 |
| 08/25/2023 | 100 | 138687 | AMY KORNOWSKI | RECREATION PROGRAM - MILEAGE | 53300 | 55300 | 372.70 |
| 08/25/2023 | 100 | 138688 | ARAMARK | HIGHWAY - UNIFORMS | 53410 | 53100 | 93.87 |
| | | | | HIGHWAY - UNIFORMS | 53410 | 53100 | 93.87 |
| | | | | HIGHWAY - UNIFORMS | 53410 | 53100 | 93.87 |
| | | | | CHECK 100 138688 TOTAL FOR FUND 100: | | | 281.61 |
| 08/25/2023 | 100 | 138689 | ARO LOCK & DOOR | CITY HALL - BUILDING REPAIRS & MAINT | 52410 | 51600 | 125.00 |
| 08/25/2023 | 100 | 138691 | AUTOMOTIVE SUPPLY OF SUSSEX | HIGHWAY - NEW EQUIPMENT | 53950 | 53100 | 1,979.10 |
| 08/25/2023 | 100 | 138692 | BATTERY SYSTEMS | HIGHWAY - EQUIP REPAIR & MAINT | 52430 | 53100 | 232.08 |
| 08/25/2023 | 100 | 138693 | BIEBEL'S TRUE VALUE AND JUST ASK | HIGHWAY - EQUIPMENT RENTAL | 55310 | 53100 | 270.00 |
| 08/25/2023 | 100 | 138694 | Bryan Johnson & Tricia Henry | BEB22-0017 | 23173 | 00000 | 2,000.00 |
| 08/25/2023 | 100 | 138695 | BUMPER TO BUMPER HARTLAND | HIGHWAY - EQUIP REPAIR & MAINT | 52430 | 53100 | 134.29 |
| 08/25/2023 | 100 | 138696 | CARLIN SALES CORPORATION | PARKS - NEW EQUIPMENT | 53950 | 55200 | 12.14 |
| 08/25/2023 | 100 | 138697 | CINTAS | HIGHWAY - OPERATING SUPPLIES | 53400 | 53100 | 83.61 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| 08/25/2023 | 100 | 138699 | COREY OIL | HIGHWAY - FUEL | 53420 | 53100 | 1,426.74 |
| | | | | HIGHWAY - FUEL | 53420 | 53100 | 1,425.40 |
| | | | | CHECK 100 138699 TOTAL FOR FUND 100: | | | 2,852.14 |
| 08/25/2023 | 100 | 138701 | DAN PLAUTZ CLEANING SERVICE | CITY HALL - JANITORIAL SUPPLIES | 52400 | 51600 | 2,873.00 |
| 08/25/2023 | 100 | 138703 | DIVERSIFIED BENEFIT SERVICES, INC. | INSURANCE CONSULTANT | 52150 | 51930 | 235.35 |
| 08/25/2023 | 100 | 138704 | ELEVITY GORDON FLESCH CO INC | IT - SOFTWARE MAINTENANCE & UPDATES | 52480 | 51450 | 4,638.00 |
| | | | | IT - SOFTWARE MAINTENANCE & UPDATES | 52480 | 51450 | 4,485.80 |
| | | | | CHECK 100 138704 TOTAL FOR FUND 100: | | | 9,123.80 |
| 08/25/2023 | 100 | 138705 | ELLIOTTS ACE HARDWARE | HIGHWAY - OPERATING SUPPLIES | 53400 | 53100 | 8.59 |
| | | | | HIGHWAY - OPERATING SUPPLIES | 53400 | 53100 | 15.99 |
| | | | | CHECK 100 138705 TOTAL FOR FUND 100: | | | 24.58 |
| 08/25/2023 | 100 | 138706 | EQUIPMENT DEPOT WISCONSIN INC | HIGHWAY - EQUIP REPAIR & MAINT | 52430 | 53100 | 134.27 |
| 08/25/2023 | 100 | 138710 | GAVIN CURTY | RECREATION PROGRAM - MILEAGE | 53300 | 55300 | 107.76 |
| 08/25/2023 | 100 | 138712 | GREGORY & BARBARA REISTAD | EROSION/DITCH DEPOSIT | 23173 | 00000 | 2,000.00 |
| 08/25/2023 | 100 | 138716 | JENNY SCHOLTKA | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 828.00 |
| 08/25/2023 | 100 | 138718 | KAREK HOMES INC | EROSION/DITCH DEPOSIT | 23173 | 00000 | 2,000.00 |
| | | | | EROSION/DITCH DEPOSIT | 23173 | 00000 | 2,000.00 |
| | | | | CHECK 100 138718 TOTAL FOR FUND 100: | | | 4,000.00 |
| 08/25/2023 | 100 | 138719 | LANGE ENTERPRISES, INC | HIGHWAY - ROAD SIGNS & MARKINGS | 53720 | 53100 | 1,373.19 |
| 08/25/2023 | 100 | 138720 | MATRIX TRUST COMPANY | DEFERRED COMPENSATION | 21570 | 00000 | 50.00 |
| 08/25/2023 | 100 | 138721*# | MENARDS | HIGHWAY - OTHER ROADWAY SUPPLIES | 53790 | 53100 | 29.92 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 152.85 |
| | | | | PARKS - EQUIP REPAIR & MAINT | 52430 | 55200 | 10.18 |
| | | | | CHECK 100 138721 TOTAL FOR FUND 100: | | | 192.95 |
| 08/25/2023 | 100 | 138722 | NATIONWIDE RETIREMENT SOLUTIONS | DEFERRED COMPENSATION | 21570 | 00000 | 2,069.00 |
| 08/25/2023 | 100 | 138723 | NICK PHALIN | RECREATION PROGRAM - MILEAGE | 53300 | 55300 | 80.24 |
| 08/25/2023 | 100 | 138724 | OCCUPATIONAL HEALTH CENTERS | EMPLOYEE SERVICES - EMPLOYMENT EXAMS | 52150 | 51430 | 206.00 |
| 08/25/2023 | 100 | 138725 | OLIVIA FLADHAMMER | RECREATION PROGRAM - MILEAGE | 53300 | 55300 | 53.71 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| 08/25/2023 | 100 | 138731*# | RUEKERT & MIELKE, INC. | ENGINEERING - OUTSIDE ENGINEERING | 52190 | 53110 | 3,478.24 |
| | | | | ENGINEERING - OUTSIDE ENGINEERING | 52190 | 53110 | 169.50 |
| | | | | CHECK 100 138731 TOTAL FOR FUND 100: | | | 3,647.74 |
| 08/25/2023 | 100 | 138733 | SHAWNS DEER PICK UP | DEER CONTROL - CONTRACTED SERVICES | 52990 | 54160 | 770.00 |
| 08/25/2023 | 100 | 138736 | SORENS FORD | HIGHWAY - EQUIP REPAIR & MAINT | 52430 | 53100 | 22.12 |
| 08/25/2023 | 100 | 138741 | WASTE MANAGEMENT | RECYCLE - HAULING RECYCLABLES | 52900 | 53635 | 1,997.67 |
| 08/25/2023 | 100 | 138744 | WILLOW SPRINGS NURSERY & | FORESTRY - TREE REPLANTING | 53420 | 56110 | 2,399.00 |
| 08/28/2023 | 100 | 1333(E) | LEASING SERVICES | | 53400 | 52210 | 134.00 |
| 08/29/2023 | 100 | 1326(E)*# | WE ENERGIES | | 52210 | 53100 | 875.75 |
| | | | | | 52220 | 53100 | 155.08 |
| | | | | CHECK 100 1326(E) TOTAL FOR FUND 100: | | | 1,030.83 |
| 08/29/2023 | 100 | 1332(E) | LEASING SERVICES | | 52430 | 51420 | 324.00 |
| 08/29/2023 | 100 | 1336(E)# | DELTA DENTAL | DENTAL CLEARING | 21903 | 00000 | 112.00 |
| | | | | | 52150 | 51930 | 400.16 |
| | | | | CHECK 100 1336(E) TOTAL FOR FUND 100: | | | 512.16 |
| 08/29/2023 | 100 | 138747 | CALIBER COLLISION | PARKS - VEHICLE REPAIR & MAINT | 52440 | 55200 | 1,043.14 |
| 08/29/2023 | 100 | 138748 | CALIBER COLLISION | PARKS - VEHICLE REPAIR & MAINT | 52440 | 55200 | 2,461.94 |
| 08/31/2023 | 100 | 1308(E) | WISCONSIN RETIREMENT SYSTEM | WRS GENERAL EMPLYOYEES | 21520 | 00000 | 38,744.58 |
| | | | | WRS FIRE EMPLOYEES | 21522 | 00000 | 53,398.19 |
| | | | | WRS VOLUNTARY CONTRIBUTIONS | 21523 | 00000 | 178.50 |
| | | | | CHECK 100 1308(E) TOTAL FOR FUND 100: | | | 92,321.27 |
| 08/31/2023 | 100 | 1338(E)# | WE ENERGIES ESSENTIAL SERVICES | STREET LIGHT REIMBURSEMENT | | | ** VOIDED ** |
| | | | | CITY HALL - ELECTRICITY | | | ** VOIDED ** |
| | | | | CITY HALL - HEAT | | | ** VOIDED ** |
| | | | | FIRE ADMINISTRATION - ELECTRICITY | | | ** VOIDED ** |
| | | | | FIRE ADMINSITRATION - HEAT | | | ** VOIDED ** |
| | | | | HIGHWAY - ELECTRICITY | | | ** VOIDED ** |
| | | | | PARKS - ELECTRICITY | | | ** VOIDED ** |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| | | | | PARKS - HEAT | | | ** VOIDED ** |
| 08/31/2023 | 100 | 1339(E)# | WE ENERGIES | STREET LIGHT REIMBURSEMENT | 46321 | 00000 | 159.75 |
| | | | | CITY HALL - ELECTRICITY | 52210 | 51600 | 4,582.23 |
| | | | | CITY HALL - HEAT | 52220 | 51600 | 344.53 |
| | | | | FIRE ADMINISTRATION - ELECTRICITY | 52210 | 52210 | 4,241.88 |
| | | | | FIRE ADMINSITRATION - HEAT | 52220 | 52210 | 276.25 |
| | | | | HIGHWAY - ELECTRICITY | 52210 | 53100 | 931.14 |
| | | | | PARKS - ELECTRICITY | 52210 | 55200 | 2,100.24 |
| | | | | PARKS - HEAT | 52220 | 55200 | 80.85 |
| | | | | CHECK 100 1339(E) TOTAL FOR FUND 100: | | | 12,716.87 |
| 08/31/2023 | 100 | 138749 | ABBY LORENZ | RECREATION PROGRAM - PROGRAM EXPENSES | 53430 | 55300 | 400.00 |
| 08/31/2023 | 100 | 138750*# | AT&T MOBILITY | ADMINISTRATOR - TELEPHONE & CELL | 52260 | 51410 | 33.49 |
| | | | | CLERK/TREASURER - TELEPHONE & CELL | 52260 | 51420 | 33.49 |
| | | | | EMPLOYEE SERVICES - PHONE & CELL | 52260 | 51430 | 43.26 |
| | | | | IT - PHONE & CELL | 52260 | 51450 | 81.79 |
| | | | | FIRE ADMINISTRATION - PHONE & CELL | 52260 | 52210 | 133.96 |
| | | | | BUILDING SERVICES - PHONE & CELL | 52260 | 52400 | 153.50 |
| | | | | HIGHWAY - PHONE & CELL | 52260 | 53100 | 38.37 |
| | | | | ENGINEERING - PHONE & CELL | 52260 | 53110 | 62.52 |
| | | | | PARKS - TELEPHONE & CELL | 52260 | 55200 | 86.52 |
| | | | | RECREATION PROGRAM - PHONE & CELL | 52260 | 55300 | 302.82 |
| | | | | CHECK 100 138750 TOTAL FOR FUND 100: | | | 969.72 |
| 08/31/2023 | 100 | 138751 | BATZNER PEST CONTROL | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 73.90 |
| 08/31/2023 | 100 | 138752 | BRIOHN BUILDING | OCCUPANCY DEPOSITS | 23175 | 00000 | 2,500.00 |
| 08/31/2023 | 100 | 138753 | CTACCESS | IT - SOFTWARE MAINTENANCE & UPDATES | 52480 | 51450 | 7,255.38 |
| 08/31/2023 | 100 | 138754 | ELLIOTTS ACE HARDWARE | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 12.99 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 25.98 |
| | | | | PARKS - NEW EQUIPMENT | 53950 | 55200 | 123.54 |
| | | | | CHECK 100 138754 TOTAL FOR FUND 100: | | | 162.51 |
| 08/31/2023 | 100 | 138755 | GOOD CALL REF LLC | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 1,736.00 |
| 08/31/2023 | 100 | 138756 | JAMES IMAGING SYSTEMS | IT - OTHER PROFESSIONAL SERVICES | 52190 | 51450 | 65.00 |
| 08/31/2023 | 100 | 138757 | JULIA ANDERSON | EMPLOYEE SERVICES - SERVICE RECOGNITION | 53430 | 51430 | 32.51 |
| 08/31/2023 | 100 | 138758 | LIFE-ASSIST INC | FIRE PROTECTIVE SERVICES - EMS | 53450 | 52230 | 646.19 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| 08/31/2023 | 100 | 138759 | MATRIX TRUST COMPANY | DEFERRED COMPENSATION | 21570 | 00000 | 50.00 |
| 08/31/2023 | 100 | 138760# | MENARDS | FIRE ADMINISTRATION - OPERATING | 53400 | 52210 | 11.99 |
| | | | | FIRE ADMINISTRATION - OPERATING | 53400 | 52210 | 26.33 |
| | | | | FIRE ADMINISTRATION - OPERATING | 53400 | 52210 | 95.92 |
| | | | | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 20.97 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 141.87 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 44.32 |
| | | | | PARKS - GROUNDS MAINTENANCE | 52420 | 55200 | 2.97 |
| | | | | CHECK 100 138760 TOTAL FOR FUND 100: | | | 344.37 |
| 08/31/2023 | 100 | 138761 | NASSCO INC | PARKS - BUILDING REPAIRS & MAINT | 52410 | 55200 | 72.44 |
| 08/31/2023 | 100 | 138762 | NATIONWIDE RETIREMENT SOLUTIONS | DEFERRED COMPENSATION | 21570 | 00000 | 75.00 |
| 08/31/2023 | 100 | 138763 | PARKSIDE MANAGEMENT | RESCINDED TAXES | 57410 | 51910 | 9,214.32 |
| 08/31/2023 | 100 | 138764 | PREMIUM WATERS, INC | PARKS - OPERATING SUPPLIES | 53400 | 55200 | 42.99 |
| 08/31/2023 | 100 | 138765 | REINDERS, INC. | PARKS - EQUIP REPAIR & MAINT | 52430 | 55200 | 931.93 |
| 08/31/2023 | 100 | 138766 | SCHOOL DISTRICT OF MENOMONEE FALLS | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 520.00 |
| | | | | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 1,180.00 |
| | | | | RECREATION PROGRAM - FIELD TRIPS | 53460 | 55300 | 204.00 |
| | | | | CHECK 100 138766 TOTAL FOR FUND 100: | | | 1,904.00 |
| 08/31/2023 | 100 | 138767 | STACI JOERS | RECREATION PROGRAM - CONTRACTED | 52190 | 55300 | 440.00 |
| 08/31/2023 | 100 | 138768 | VILLAGE OF PEWAUKEE | PARKS - WATER | | | ** VOIDED ** |
| | | | | PARKS - WATER | | | ** VOIDED ** |
| | | | | PARKS - SEWER | | | ** VOIDED ** |
| | | | | PARKS - SEWER | | | ** VOIDED ** |
| | | | | PARKS - PUBLIC FIRE PROTECTION CHARGE | | | ** VOIDED ** |
| | | | | PARKS - PUBLIC FIRE PROTECTION CHARGE | | | ** VOIDED ** |
| 08/31/2023 | 100 | 138769 | WAUKESHA CO TREASURER | POLICE - CONTRACT FOR SERVICES | | | ** VOIDED ** |
| 08/31/2023 | 100 | 138771 | VILLAGE OF PEWAUKEE | PARKS - WATER | 52230 | 55200 | 72.45 |
| | | | | PARKS - WATER | 52230 | 55200 | 206.05 |
| | | | | PARKS - SEWER | 52240 | 55200 | 120.05 |
| | | | | PARKS - SEWER | 52240 | 55200 | 238.14 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 100 GENERAL FUND | | | | | | | |
| | | | | PARKS - PUBLIC FIRE PROTECTION CHARGE | 52950 | 55200 | 27.00 |
| | | | | PARKS - PUBLIC FIRE PROTECTION CHARGE | 52950 | 55200 | 135.00 |
| | | | | CHECK 100 138771 TOTAL FOR FUND 100: | | | 798.69 |
| 08/31/2023 | 100 | 138772 | WAUKESHA CO TREASURER | POLICE - CONTRACT FOR SERVICES | 52160 | 52100 | 275,250.52 |
| | | | | Total for fund 100 GENERAL FUND | | | 601,153.88 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 230 STORM WATER MANAGEMENT | | | | | | | |
| 08/17/2023 | 100 | 138635*# | FORWARD TS | OPERATING SUPPLIES | 53400 | 53650 | 59.61 |
| 08/17/2023 | 100 | 138651*# | MSA PROFESSIONAL SERVICES INC | PROJECTS - FACILITIES PLAN | 58210 | 57357 | 1,492.50 |
| 08/17/2023 | 100 | 138652 | MUSSON BROTHERS INC | PROJECTS - HILL 'N DALE | 58210 | 57301 | 546,001.20 |
| 08/17/2023 | 100 | 138676*# | WE ENERGIES | ELECTRICITY | 52210 | 53650 | 437.87 |
| | | | | HEAT | 52220 | 53650 | 77.54 |
| | | | | CHECK 100 138676 TOTAL FOR FUND 230: | | | 515.41 |
| 08/25/2023 | 100 | 138683*# | A&M CLEANING SOLUTIONS | CONTRACTED JANITORIAL | 52400 | 53650 | 510.00 |
| 08/25/2023 | 100 | 138686 | AMERICAN STATE EQUIPMENT CO., INC. | EQUIPMENT REPAIR & MAINT | 52430 | 53650 | 1,547.66 |
| 08/25/2023 | 100 | 138700 | CRETEX SPECIALTY PRODUCTS | CATCH BASIN MAINT - CATCH BASIN | 53510 | 53655 | 5,990.18 |
| 08/25/2023 | 100 | 138721*# | MENARDS | CATCH BASIN MAINT - CATCH BASIN | 53510 | 53655 | 31.44 |
| | | | | PROJECTS - STORM INLETS & CATCH BASINS | 58210 | 57338 | 130.54 |
| | | | | PROJECTS - STORM INLETS & CATCH BASINS | 58210 | 57338 | 104.17 |
| | | | | CHECK 100 138721 TOTAL FOR FUND 230: | | | 266.15 |
| 08/25/2023 | 100 | 138726 | PAYNE & DOLAN | CATCH BASIN MAINT - CATCH BASIN | 53510 | 53655 | 360.19 |
| 08/25/2023 | 100 | 138729 | R&R INSURANCE SERVICES | PROPERTY & LIABILITY | 55120 | 53650 | 250.00 |
| 08/25/2023 | 100 | 138730 | REINDERS, INC. | DITCH & CULVERT MAINT - DITCH | 53520 | 53652 | 167.00 |
| 08/25/2023 | 100 | 138731*# | RUEKERT & MIELKE, INC. | OUTSIDE ENGINEERING | 52190 | 53650 | 467.67 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 275.73 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 376.92 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 63.98 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 63.98 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 695.75 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 467.67 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 63.98 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 63.98 |
| | | | | OUTSIDE ENGINEERING | 52190 | 53650 | 708.27 |
| | | | | PROJECTS - HILL 'N DALE | 58210 | 57301 | 25,391.04 |
| | | | | PROJECTS - VALLEY BROOK SUB. DITCH | 58210 | 57354 | 3,118.70 |
| | | | | PROJECTS-SPICE CREEK/MEADOWBROOK #2 | 58210 | 57552 | 508.50 |
| | | | | CHECK 100 138731 TOTAL FOR FUND 230: | | | 32,266.17 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 230 STORM WATER MANAGEMENT | | | | | | | |
| 08/25/2023 | 100 | 138732 | SERWE IMPLEMENT MUNICIPAL SALES | EQUIPMENT REPAIR & MAINT | 52430 | 53650 | 2,803.98 |
| | | | | EQUIPMENT REPAIR & MAINT | 52430 | 53650 | 5,414.65 |
| | | | | EQUIPMENT REPAIR & MAINT | 52430 | 53650 | (2,163.16) |
| | | | | CHECK 100 138732 TOTAL FOR FUND 230: | | | 6,055.47 |
| 08/25/2023 | 100 | 138734 | SITEONE LANDSCAPE SUPPLY LLC | CATCH BASIN MAINT - CATCH BASIN | 53510 | 53655 | 17.32 |
| 08/25/2023 | 100 | 138742 | WAUKESHA CO TREASURER | PERMIT COMPLIANCE - INFORMATION & | 53540 | 53656 | 2,931.00 |
| 08/25/2023 | 100 | 138743 | WESTERN CULVERT & SUPPLY | DITCH & CULVERT MAINT - CULVERT | 53510 | 53652 | 774.20 |
| 08/25/2023 | 100 | 138746 | ZIGNEGO READY MIX | CATCH BASIN MAINT - CATCH BASIN | 53510 | 53655 | 487.50 |
| 08/29/2023 | 100 | 1326(E)*# | WE ENERGIES | | 52210 | 53650 | 437.87 |
| | | | | | 52220 | 53650 | 77.54 |
| | | | | CHECK 100 1326(E) TOTAL FOR FUND 230: | | | 515.41 |
| 08/31/2023 | 100 | 138750*# | AT&T MOBILITY | TELEPHONE & CELL | 52260 | 53650 | 144.17 |
| | | | | Total for fund 230 STORM WATER MANAGEMENT | | | 600,351.14 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 250 TOURISM & CONVENTION | | | | | | | |
| 08/17/2023 | 100 | 138656 | PEWAUKEE KIWANIS | TOURISM - HOTEL ROOM TAX | 59000 | 56700 | 6,528.25 |
| 08/31/2023 | 100 | 138770 | WAUKESHA PEWAUKEE CVB | TOURISM - HOTEL ROOM TAX | | | ** VOIDED ** |
| 08/31/2023 | 100 | 138773 | WAUKESHA PEWAUKEE CVB | TOURISM - HOTEL ROOM TAX | 59000 | 56700 | 66,962.50 |
| | | | | Total for fund 250 TOURISM & CONVENTION | | | 73,490.75 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 420 CAPTIAL ROAD PROJECTS | | | | | | | |
| 08/17/2023 | 100 | 138647 | MARIANNE HILTUNEN | APPLE TREE/PEAR TREE | 58210 | 57561 | 9.44 |
| 08/17/2023 | 100 | 138664# | R.A. SMITH & ASSOC., INC. | QUIET ZONE - GREEN ROAD | 58200 | 56710 | 686.77 |
| | | | | QUIET ZONE - DUPLAINVILLE ROAD | 58200 | 56720 | 686.78 |
| | | | | QUIET ZONE - WATERTOWN ROAD | 58200 | 56730 | 686.78 |
| | | | | CHECK 100 138664 TOTAL FOR FUND 420: | | | 2,060.33 |
| 08/17/2023 | 100 | 138674*# | WAUKESHA CO TREASURER | LINDSAY/REDFORD INTERSECTION STUDY | 58210 | 57430 | 105.84 |
| | | | | LINDSAY/REDFORD INTERSECTION STUDY | 58210 | 57430 | 1,541.90 |
| | | | | CHECK 100 138674 TOTAL FOR FUND 420: | | | 1,647.74 |
| 08/25/2023 | 100 | 138731*# | RUEKERT & MIELKE, INC. | SHADY LANE | 58210 | 57407 | 4,534.50 |
| | | | | ROUNDY'S INDUSTRIAL PARK #2 | 58210 | 57422 | 859.77 |
| | | | | JOSEPH ROAD | 58210 | 57553 | 3,255.85 |
| | | | | SPICE CREEK/MEADOWBROOK FARMS #1 | 58210 | 57554 | 282.50 |
| | | | | SPICE CREEK/MEADOWBROOK FARMS #3 | 58210 | 57556 | 28,015.44 |
| | | | | CHECK 100 138731 TOTAL FOR FUND 420: | | | 36,948.06 |
| 08/25/2023 | 100 | 138737*# | STRAND ASSOCIATES, INC | DUPLAINVILLE TRACKS TO WEYER | 58210 | 57420 | 5,031.34 |
| | | | | APPLE TREE/PEAR TREE | 58210 | 57561 | 3,036.18 |
| | | | | CHECK 100 138737 TOTAL FOR FUND 420: | | | 8,067.52 |
| 08/25/2023 | 100 | 138745 | WOLF PAVING | SPICE CREEK/MEADOWBROOK FARMS #3 | 58210 | 57556 | 763,038.24 |
| | | | | Total for fund 420 CAPTIAL ROAD PROJECTS | | | 811,771.33 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 480 DPW BUILDING | | | | | | | |
| 08/25/2023 | 100 | 138685 | ABSOLUTE CONSTRUCTION | DPW BUILDING | 58100 | 57700 | 400,174.10 |
| 08/25/2023 | 100 | 138707 | FABCON PRECAST, LLC | DPW BUILDING | 58100 | 57700 | 105,122.54 |
| 08/25/2023 | 100 | 138714 | J.H. HASSINGER, INC. | DPW BUILDING | 58100 | 57700 | 42,688.25 |
| 08/25/2023 | 100 | 138738 | THRIVE ARCHITECTS | DPW BUILDING | 58100 | 57700 | 2,575.00 |
| 08/25/2023 | 100 | 138740 | WALT'S PETROLEUM SERVICE | DPW BUILDING | 58100 | 57700 | 185,103.12 |
| | | | | Total for fund 480 DPW BUILDING | | | 735,663.01 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 490 CAPTIAL EQUIPMENT | | | | | | | |
| 08/25/2023 | 100 | 138709 | FOSTER COACH SALES, INC. | FIRE ADMINISTRATION - CAPITAL EQUIPMENT | 58100 | 57220 | 299,968.00 |
| | | | | FIRE ADMINISTRATION - CAPITAL EQUIPMENT | 58100 | 57220 | 334,468.00 |
| | | | | CHECK 100 138709 TOTAL FOR FUND 490: | | | 634,436.00 |
| | | | | Total for fund 490 CAPTIAL EQUIPMENT | | | 634,436.00 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 600 WATER UTILITY | | | | | | | |
| 08/17/2023 | 100 | 138616* | ALL CITY COMMUNICATIONS INC. | ANSWERING SERVICE | 52331 | 00921 | 31.80 |
| 08/17/2023 | 100 | 138625*# | CINTAS CORP | UNIFORMS | 53410 | 00641 | 51.25 |
| | | | | OFFICE SUPPLIES & EXPENSES | 53100 | 00921 | 45.45 |
| | | | | CHECK 100 138625 TOTAL FOR FUND 600: | | | 96.70 |
| 08/17/2023 | 100 | 138626 | CORE & MAIN LP | REPAIRS - HYDRANTS | 52400 | 00654 | 2,625.06 |
| 08/17/2023 | 100 | 138633*# | FERGUSON ENTERPIRSES #1550 | REPAIRS - TRANSMISSION LINES | 52400 | 00651 | 85.92 |
| 08/17/2023 | 100 | 138634 | FERGUSON ENTERPIRSES #1550 | REPAIRS - HYDRANTS | 52400 | 00654 | 199.00 |
| 08/17/2023 | 100 | 138638 | HYDROCORP | CROSS CONNECTION INSPECTION | 52381 | 00641 | 1,171.00 |
| 08/17/2023 | 100 | 138648* | MARY JANE MEUNIER | CUSTOMER ACCOUNTS RECEIVABLE | 13100 | 00142 | 42.19 |
| 08/17/2023 | 100 | 138650*# | MENARDS | BUILDING AND GROUNDS | 52310 | 00623 | 7.96 |
| | | | | REPAIRS - MAINTENANCE OF SERVICES | 52400 | 00652 | 16.75 |
| | | | | CHECK 100 138650 TOTAL FOR FUND 600: | | | 24.71 |
| 08/17/2023 | 100 | 138651*# | MSA PROFESSIONAL SERVICES INC | GIS SOFTWARE MAINTENANCE | 52445 | 00950 | 1,492.50 |
| 08/17/2023 | 100 | 138663 | PUBLIC SERVICE COMMISSION OF WI | PSC WATER RCA STUDY | 52382 | 00928 | 675.50 |
| 08/17/2023 | 100 | 138670 | SURF PREP INC | CUSTOMER ACCOUNTS RECEIVABLE | 13100 | 00142 | 440.74 |
| 08/17/2023 | 100 | 138672 | USA BLUEBOOK | RADIUM TREATMENT | 52210 | 00631 | 227.05 |
| 08/17/2023 | 100 | 138680* | XEROX CORPORATION | OFFICE SUPPLIES & EXPENSES | 53100 | 00921 | 177.22 |
| 08/20/2023 | 100 | 1327(E)*# | WE ENERGIES | | 52200 | 00623 | 74.06 |
| 08/24/2023 | 100 | 1312(E)* | AT&T | SCADA/TELEMETARY | 52100 | 00950 | 83.45 |
| 08/25/2023 | 100 | 1323(E)*# | MUTUAL OF OMAHA | BENEFITS - LIFE INSURANCE | 51340 | 00926 | 79.35 |
| | | | | BENEFITS - DISABILITY INSURANCE | 51350 | 00926 | 107.72 |
| | | | | CHECK 100 1323(E) TOTAL FOR FUND 600: | | | 187.07 |
| 08/25/2023 | 100 | 138682 | 120WATER | OUTSIDE PROFESSIONAL SERVICES-ENGINEER | 52380 | 00923 | 13,791.00 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 600 WATER UTILITY | | | | | | | |
| 08/25/2023 | 100 | 138690*# | AT&T MOBILITY | ANSWERING SERVICE | 52331 | 00921 | 177.93 |
| | | | | SCADA/TELEMETARY | 52100 | 00950 | 25.43 |
| | | | | CHECK 100 138690 TOTAL FOR FUND 600: | | | 203.36 |
| 08/25/2023 | 100 | 138698*# | CINTAS CORP | UNIFORMS | 53410 | 00641 | 51.25 |
| 08/25/2023 | 100 | 138702* | DAVID ROSENBERG | CUSTOMER ACCOUNTS RECEIVABLE | 13100 | 00142 | 67.14 |
| 08/25/2023 | 100 | 138708 | FERGUSON ENTERPIRSES #1550 | REPAIRS - MAINTENANCE OF SERVICES | 52400 | 00652 | 113.78 |
| 08/25/2023 | 100 | 138713 | HAWKINS, INC. | CHEMICALS | 53200 | 00631 | 5,826.53 |
| 08/25/2023 | 100 | 138715 | JACOBUS ENERGY LLC | BUILDING AND GROUNDS | 52310 | 00623 | 702.27 |
| 08/25/2023 | 100 | 138717* | KAESTNER AUTO ELECTRIC CO. | TRANSPORTATION EQUIP. | 18568 | 00392 | 477.99 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 675.52 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 49.35 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 31.06 |
| | | | | CHECK 100 138717 TOTAL FOR FUND 600: | | | 1,233.92 |
| 08/25/2023 | 100 | 138721*# | MENARDS | OPERATING SUPPLIES AND EXPENSE | 53400 | 00641 | 429.99 |
| 08/25/2023 | 100 | 138727* | PITNEY BOWES GLOBAL | BILLING | 53300 | 00903 | 495.87 |
| 08/25/2023 | 100 | 138728 | PUBLIC SERVICE COMMISSION OF WI | REGULATORY & COMMISSION EXPENSE | 52381 | 00928 | 57.74 |
| 08/25/2023 | 100 | 138731*# | RUEKERT & MIELKE, INC. | BLUMD WATER MAIN-BUSSE TO FOSTER | 12810 | 00107 | 19,901.89 |
| | | | | NORTH AVE MCC | 12822 | 00107 | 704.00 |
| | | | | APPLE TREE WELL 9&10 REHAB | 12824 | 00107 | 389.25 |
| | | | | SOURCE OF SUPPLY- REPAIRS | 53400 | 00600 | 652.00 |
| | | | | PSC WATER RCA STUDY | 52382 | 00928 | 255.00 |
| | | | | CHECK 100 138731 TOTAL FOR FUND 600: | | | 21,902.14 |
| 08/25/2023 | 100 | 138739 | USA BLUEBOOK | REPAIRS - TRANSMISSION LINES | 52400 | 00651 | 763.81 |
| | | | | Total for fund 600 WATER UTILITY | | | 53,272.77 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 650 SEWER UTILITY | | | | | | | |
| 08/17/2023 | 100 | 138616* | ALL CITY COMMUNICATIONS INC. | ANSWERING SERVICE | 52331 | 00921 | 31.80 |
| 08/17/2023 | 100 | 138625*# | CINTAS CORP | OFFICE SUPPLIES & EXPENSES | 53100 | 00921 | 45.45 |
| | | | | Uniforms & Protective Equipment | 53410 | 01827 | 51.25 |
| | | | | CHECK 100 138625 TOTAL FOR FUND 650: | | | 96.70 |
| 08/17/2023 | 100 | 138633*# | FERGUSON ENTERPIRSES #1550 | SUPPLIES AND EXPENSES | 53400 | 01827 | 45.36 |
| 08/17/2023 | 100 | 138648* | MARY JANE MEUNIER | CUSTOMER ACCOUNTS RECEIVABLE | 13100 | 00142 | 141.00 |
| 08/17/2023 | 100 | 138650*# | MENARDS | MAINTENANCE OF PUMPING EQIUPMENT | 52400 | 01832 | 6.17 |
| | | | | MAINTENANCE OF PUMPING EQIUPMENT | 52400 | 01832 | 40.13 |
| | | | | CHECK 100 138650 TOTAL FOR FUND 650: | | | 46.30 |
| 08/17/2023 | 100 | 138651*# | MSA PROFESSIONAL SERVICES INC | GIS SOFTWARE MAINTENANCE | 52445 | 00950 | 1,492.50 |
| 08/17/2023 | 100 | 138659 | PROFESSIONAL SERVICE INDUSTRIES | Gun Club Sewer Study | 12831 | 00107 | 980.00 |
| 08/17/2023 | 100 | 138669 | STRAND ASSOCIATES, INC | Gun Club Sewer Study | 12831 | 00107 | 39,000.00 |
| 08/17/2023 | 100 | 138675 | WAUKESHA WATER UTILITY | SEWER SERVICE CHARGE - WCC | 52344 | 01827 | 30,505.93 |
| 08/17/2023 | 100 | 138680* | XEROX CORPORATION | OFFICE SUPPLIES & EXPENSES | 53100 | 00921 | 177.23 |
| 08/20/2023 | 100 | 1327(E)*# | WE ENERGIES | | 52210 | 01821 | 199.77 |
| 08/24/2023 | 100 | 1312(E)* | AT&T | SCADA/TELEMETARY | 52100 | 00950 | 83.46 |
| 08/25/2023 | 100 | 1323(E)*# | MUTUAL OF OMAHA | BENEFITS - LIFE INSURANCE | 51340 | 00926 | 42.73 |
| | | | | BENEFITS - DISABILITY INSURANCE | 51350 | 00926 | 58.01 |
| | | | | CHECK 100 1323(E) TOTAL FOR FUND 650: | | | 100.74 |
| 08/25/2023 | 100 | 138690*# | AT&T MOBILITY | ANSWERING SERVICE | 52331 | 00921 | 177.93 |
| | | | | SCADA/TELEMETARY | 52100 | 00950 | 25.43 |
| | | | | CHECK 100 138690 TOTAL FOR FUND 650: | | | 203.36 |
| 08/25/2023 | 100 | 138698*# | CINTAS CORP | Uniforms & Protective Equipment | 53410 | 01827 | 51.25 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 650 SEWER UTILITY | | | | | | | |
| 08/25/2023 | 100 | 138702* | DAVID ROSENBERG | CUSTOMER ACCOUNTS RECEIVABLE | 13100 | 00142 | 141.00 |
| 08/25/2023 | 100 | 138711 | GRAINGER | MAINTENANCE OF PUMPING EQIUPMENT | 52400 | 01832 | 252.87 |
| 08/25/2023 | 100 | 138717* | KAESTNER AUTO ELECTRIC CO. | TRANSPORTATION EQUIP. | 18568 | 00392 | 478.00 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 675.52 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 49.35 |
| | | | | TRANSPORTATION EQUIP. | 18568 | 00392 | 31.05 |
| | | | | CHECK 100 138717 TOTAL FOR FUND 650: | | | 1,233.92 |
| 08/25/2023 | 100 | 138727* | PITNEY BOWES GLOBAL | BILLING | 53300 | 00903 | 495.87 |
| 08/25/2023 | 100 | 138731*# | RUEKERT & MIELKE, INC. | SECTION 26 | 12840 | 00107 | 4,161.50 |
| 08/25/2023 | 100 | 138735 | SMITH&LOVELESS INC | MAINTENANCE OF COLLECTION SYSTEM | 52400 | 01831 | 420.62 |
| | | | | Total for fund 650 SEWER UTILITY | | | 79,861.18 |

| Check Date | Bank | Check # | Payee | Description | Account | Dept | Amount |
|---|---|---|---|---|---|---|---|
| Fund: 800 CEMETERY | | | | | | | |
| 08/25/2023 | 100 | 138737*# | STRAND ASSOCIATES, INC | CAPITAL - ROAD RECONSTRUCTION | 58200 | 54910 | 4,227.00 |
| | | | | Total for fund 800 CEMETERY | | | 4,227.00 |
| | | | TOTAL - ALL FUNDS | | | | 3,594,227.06 |

'*'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE FUND
'#'-INDICATES CHECK DISTRIBUTED TO MORE THAN ONE DEPARTMENT

# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 3.2.

**DATE:** September 5, 2023

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Approval of **Resolution 23-09-13** Committing to Required Funding for the Pewaukee Public Library and Requesting Exemption from the 2023 Waukesha County Library Tax Levy for 2024 Purposes

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

Resolution 23-09-13 Library Exemption

Letter from the County

**STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY**

**RESOLUTION NO. 23-09-13**

**A RESOLUTION COMMITTING TO REQUIRED FUNDING FOR THE PEWAUKEE PUBLIC LIBRARY AND REQUESTING EXEMPTION FROM THE 2023 WAUKESHA COUNTY LIBRARY TAX LEVY FOR 2024 PURPOSES**

**WHEREAS**, the Common Council of the City of Pewaukee recognizes that pursuant to §43.64, Wis. Stats. and Section 761m.43.64 (2)(c), in order for the City of Pewaukee to obtain an exemption from the Waukesha County library levy for the year 2023 for 2024 purposes, the Common Council must certify that it will expend no less than the average of the funding levels of the previous three years; and

**WHEREAS**, the City of Pewaukee funded the Pewaukee Public Library $834,875 in 2021, $840,591 in 2022 and $871,795, in 2023 with the average of the three years being $849,087; and

**WHEREAS**, the Common Council further recognizes that pursuant to state law, listed funding for the Pewaukee Public Library must come only from municipal sources and must exclude fines, fees and other revenues as well as capital expenditures.

**THEREFORE, BE IT HEREBY RESOLVED** by the City of Pewaukee Common Council that it pledges to appropriate and allow the Pewaukee Public Library to expend no less than $849,087, thereby exempting the City of Pewaukee from the 2023 Waukesha County library levy for 2024 purposes.

Dated this 5th day of September 2023.

CITY OF PEWAUKEE

_____
Steve Bierce, Mayor

ATTEST:

_____
Kelly Tarczewski, Clerk/Treasurer

741 N. Grand Ave., #210
Waukesha, WI 53186

P 262.896.8080
W bridgeslibrarysystem.org

To: Chief Elected Officials/Administrators in Municipalities with Libraries, Library Directors
From: Karol Kennedy, Bridges Library System Director
Re: Waukesha County Library Tax Exemption Notice
Date: August 16, 2023

**Annually Waukesha County sets a special levy for library services. The funds are distributed to the county's public libraries to compensate them for use by non-residents. State law (ss. 43.64(2) Wisc. Statutes) provides that municipalities with libraries may avoid double taxation and exempt themselves from this special levy if they meet certain conditions:**

- Exempting library municipalities must levy and expend an amount equal to or greater than the mill rate set by Waukesha County in the preceding year with the exception of joint libraries whose participating municipalities have an alternate option for exempting which is to levy and expend an amount not less than the average of the previous 3 years (ss.43.64 (2)(c)).
- Exempting library communities are required to provide written notification to the county annually.
- The County Code requires that the notification be from the **local governing body** rather than from the clerk alone.
- The County Code also requires a deadline of September 30 so that the County Executive Budget available to supervisors and the general public can properly reflect the county library taxation levels in the Adopted Budget in November.
- Exempting communities must also have a library that meets or exceeds minimum service levels and quality assurance standards (included in the Waukesha County Library Services Plan and formally adopted by the Waukesha County Board of Supervisors in 2022) which are certified by the library board. (The libraries have already received their standards certification letters.)

If you would like to exempt your municipality from the Waukesha County library tax, the form (on page 2), ***Request for Exemption from Waukesha County Library Levy 2023 Tax for 2024 Purposes*** must be completed, approved by the municipality's governing body, signed, and returned to Bridges Library System no later than September 30, 2023. A copy of your adopted municipal ordinance or resolution certifying that your library appropriation meets or exceeds the requirements is also required. Email submission is acceptable as long as the form includes the actual signature.

Thank you for providing library services to our citizens. Strong libraries build strong communities and your commitment to support your library is vital and valued!

**Request for Exemption from Waukesha County Library Levy**
**2023 Tax for 2024 Purposes**

**Name of Community:**

**Name of library:**

We recognize that, pursuant to 43.64 of Wisconsin Statutes, to obtain an exemption from the 2023 county library levy for 2024 purposes, the municipality must certify that during budget year 2024, its library will be provided and be allowed to expend no less than the county library tax rate in the prior year, $0.215554 per $1,000 Equalized Value.

In the case of a joint library, an alternate exemption option exists pursuant to ss 43.64 (2) (c). Under this language, each participating municipality in the joint library has the option to certify that during its budget year 2024, the library will be provided and allowed to expend no less than the average of the funding levels of the previous 3 years.

We further recognize that, pursuant to state law, listed funding must be only from municipal sources, not the entire library budget. Reported amounts must exclude fines, fees, and other revenues. Capital expenditures are excluded as well.

I am authorized to certify that the governing body of the municipality has enacted an ordinance or resolution pledging that it will appropriate and allow the library to expend no less than a rate of $0.215554 per $1,000 of the actual state Equalized Value amount for the community that was published by the state on August 15, 2023 or, in the case of a joint library whose municipality may choose this option, that the participating municipality will appropriate and allow the library to expend no less than the average of the funding levels of the previous 3 years.

The community meets its requirement stated above and is therefore eligible for exemption from the 2023 Waukesha County library levy.

**Name and Title of Person filling out this form:**

_____ _____

**Signature** **Date**

**This form, along with a copy of the municipal resolution/ordinance, must be filed no later than September 30, 2023.**

Send to:
Bridges Library System
741 N. Grand Avenue, Suite 210
Waukesha, WI 53186
Or email to **kkennedy@bridgeslibrarysystem.org**

**DATE:** September 5, 2023

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Highlights Regarding the 2022 Audit Report from Paul Frantz - Baker Tilly

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

2022 Financial Statement

Reporting & Insights 2022

# City of Pewaukee

Financial Statements and
Supplementary Information

December 31, 2022

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# Independent Auditors' Report

To the City Council of the
City of Pewaukee

**Opinions**

We have audited the accompanying financial statements of the governmental activities, the business-type activities, each major fund and the aggregate remaining fund information of the City of Pewaukee (the City), as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund and the aggregate remaining fund information of the City as of December 31, 2022 and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

**Basis for Opinions**

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of City and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

**Responsibilities of Management for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America; and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the City's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

**Auditors' Responsibilities for the Audit of the Financial Statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

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In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the City's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings and certain internal control-related matters that we identified during the audit.

**Required Supplementary Information**

Accounting principles generally accepted in the United States of America require that the required supplementary information, as listed in the table of contents be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Management has omitted the management discussion and analysis that accounting principles generally accepted in the United States of America require to be presented to supplement the basic financial statements. Such missing information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. Our opinions on the basic financial statements are not affected by this missing information.

**Supplementary Information**

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the City's basic financial statements. The supplementary information as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information is fairly stated in all material respects, in relation to the basic financial statements as a whole.

Baker Tilly US, LLP

Milwaukee, Wisconsin
August 3, 2023

**BASIC FINANCIAL STATEMENTS**

## City of Pewaukee

Statement of Net Position
December 31, 2022

| | Governmental Activities | Business-Type Activities | Total |
|---|---|---|---|
| **Assets** | | | |
| Cash and investments | $ 38,963,551 | $ 19,358,523 | $ 58,322,074 |
| Receivables (net): | | | |
| Taxes | 13,159,498 | - | 13,159,498 |
| Delinquent personal property taxes | 6,168 | - | 6,168 |
| Accounts | 597,017 | 1,490,771 | 2,087,788 |
| Accrued interest | 39,841 | - | 39,841 |
| Special assessments | 1,123,825 | 222,102 | 1,345,927 |
| Due from other governments | 166,155 | - | 166,155 |
| Internal balances | (195,651) | 195,651 | - |
| Investment in Pewaukee Public Library | 468,768 | - | 468,768 |
| Inventories and prepaid expenses | 565,903 | 15,192 | 581,095 |
| Restricted assets: | | | |
| Cash and investments | - | 5,295,029 | 5,295,029 |
| Net pension asset | 3,577,075 | 246,731 | 3,823,806 |
| Capital assets: | | | |
| Land | 7,256,326 | 530,387 | 7,786,713 |
| Construction in progress | 22,257,783 | 2,493,313 | 24,751,096 |
| Other capital assets, net of accumulated depreciation | 50,161,971 | 76,323,103 | 126,485,074 |
| Total assets | 138,148,230 | 106,170,802 | 244,319,032 |
| **Deferred Outflows of Resources** | | | |
| Pension related items | 6,998,770 | 529,053 | 7,527,823 |
| **Liabilities** | | | |
| Accounts payable and accrued expenses | 3,240,306 | 943,278 | 4,183,584 |
| Deposits | 652,628 | 26,198 | 678,826 |
| Unearned revenue | 1,531,406 | - | 1,531,406 |
| Current portion of long-term obligations | 2,415,219 | 950,337 | 3,365,556 |
| Noncurrent portion of long-term obligations | 42,083,150 | 15,752,582 | 57,835,732 |
| Total liabilities | 49,922,709 | 17,672,395 | 67,595,104 |
| **Deferred Inflows of Resources** | | | |
| Unearned revenue | 14,542,220 | - | 14,542,220 |
| Pension related items | 8,379,554 | 627,881 | 9,007,435 |
| Total deferred inflows of resources | 22,921,774 | 627,881 | 23,549,655 |
| **Net Position** | | | |
| Net investment in capital assets | 49,347,245 | 67,962,337 | 117,309,582 |
| Restricted | 9,237,873 | 312,215 | 9,550,088 |
| Unrestricted | 13,717,399 | 20,125,027 | 33,842,426 |
| Total net position | $ 72,302,517 | $ 88,399,579 | $ 160,702,096 |

*See notes to the financial statements*

## City of Pewaukee

Statement of Activities
Year Ended December 31, 2022

| | Program Revenues | | | | Net (Expenses) Revenues and Changes in Net Position | | |
|---|---|---|---|---|---|---|---|
| | Expenses | Charges for Services | Operating Grants and Contributions | Capital Grants and Contributions | Governmental Activities | Business-Type Activities | Total |
| Primary Government: | | | | | | | |
| Governmental activities: | | | | | | | |
| General government | $ 2,471,658 | $ 1,425,758 | $ 202,106 | $ - | $ (843,794) | $ - | $ (843,794) |
| Public safety | 9,097,440 | 2,932,434 | 43,057 | 6,647 | (6,115,302) | - | (6,115,302) |
| Public works | 6,384,164 | 2,694,737 | 485,017 | 3,160,802 | (43,608) | - | (43,608) |
| Health and sanitation | 47,861 | 13,050 | - | - | (34,811) | - | (34,811) |
| Culture and recreation | 2,651,861 | 840,317 | - | 101,679 | (1,709,865) | - | (1,709,865) |
| Conservation and development | 350,012 | - | - | - | (350,012) | - | (350,012) |
| Interest and other related charges | 923,878 | - | - | - | (923,878) | - | (923,878) |
| Total governmental activities | 21,926,874 | 7,906,296 | 730,180 | 3,269,128 | (10,021,270) | - | (10,021,270) |
| Business-type activities: | | | | | | | |
| Water utility | 2,886,925 | 2,888,641 | - | 1,670,859 | - | 1,672,575 | 1,672,575 |
| Sewer utility | 3,795,977 | 4,168,369 | - | 2,150,274 | - | 2,522,666 | 2,522,666 |
| Total business-type activities | 6,682,902 | 7,057,010 | - | 3,821,133 | - | 4,195,241 | 4,195,241 |
| Total primary government | $ 28,609,776 | $ 14,963,306 | $ 730,180 | $ 7,090,261 | (10,021,270) | 4,195,241 | (5,826,029) |
| General revenues and transfers: | | | | | | | |
| Taxes: | | | | | | | |
| Property taxes | | | | | 10,331,629 | - | 10,331,629 |
| Other taxes | | | | | 672,953 | - | 672,953 |
| Intergovernmental revenues not restricted to specific programs | | | | | 814,237 | - | 814,237 |
| Investment income (loss) | | | | | (337,979) | 77,698 | (260,281) |
| Gain on sale of fixed assets | | | | | - | - | - |
| Miscellaneous | | | | | 75,775 | 27,174 | 102,949 |
| Transfers | | | | | 514,560 | (514,560) | - |
| Total general revenues and transfers | | | | | 12,071,175 | (409,688) | 11,661,487 |
| Change in net position | | | | | 2,049,905 | 3,785,553 | 5,835,458 |
| **Net Position, Beginning** | | | | | 70,252,612 | 84,614,026 | 154,866,638 |
| **Net Position, Ending** | | | | | $ 72,302,517 | $ 88,399,579 | $ 160,702,096 |

*See notes to the financial statements*

**City of Pewaukee**

Balance Sheet
Governmental Funds
December 31, 2022

| | General | Storm Water Management | Debt Service | DPW Building | Road Construction | Nonmajor Governmental Funds | Total Governmental Funds |
|---|---|---|---|---|---|---|---|
| **Assets** | | | | | | | |
| Cash and Investments | $ 7,793,854 | $ 7,412,184 | $ 3,660,722 | $ 2,289,455 | $ 6,167,648 | $ 11,639,688 | $ 38,963,551 |
| Receivables (net): | | | | | | | |
| Taxes | 10,267,978 | 813,035 | 1,993,485 | - | - | 85,000 | 13,159,498 |
| Delinquent personal property taxes | 6,168 | - | - | - | - | - | 6,168 |
| Accounts | 534,995 | 16,388 | - | - | - | 45,634 | 597,017 |
| Special assessments | - | - | 1,123,825 | - | - | - | 1,123,825 |
| Accrued interest | 39,841 | - | - | - | - | - | 39,841 |
| Due from other governments | 166,155 | - | - | - | - | - | 166,155 |
| Inventories | 175,958 | - | - | - | - | - | 175,958 |
| Prepaid items | 389,363 | 582 | - | - | - | - | 389,945 |
| | | | | | - | - | |
| Total assets | $ 19,374,312 | $ 8,242,189 | $ 6,778,032 | $ 2,289,455 | $ 6,167,648 | $ 11,770,322 | $ 54,621,958 |
| **Liabilities, Deferred Inflows of Resources and Balances** | | | | | | | |
| **Liabilities** | | | | | | | |
| Accounts payable | $ 692,825 | $ 120,572 | $ - | $ 1,196,519 | $ 428,489 | $ 115,833 | $ 2,554,238 |
| Accrued liabilities | 170,505 | - | - | - | - | - | 170,505 |
| Deposits | 652,628 | - | - | - | - | - | 652,628 |
| Unearned revenues | - | - | - | - | - | 1,531,406 | 1,531,406 |
| Due to other funds | 195,651 | - | - | - | - | - | 195,651 |
| Total liabilities | 1,711,609 | 120,572 | - | 1,196,519 | 428,489 | 1,647,239 | 5,104,428 |
| **Deferred Inflows of Resources** | | | | | | | |
| Unearned revenues | 10,549,101 | 1,652,034 | 1,993,485 | - | - | 347,600 | 14,542,220 |
| Unavailable revenues | 124,240 | - | 1,123,825 | - | - | - | 1,248,065 |
| Total deferred inflows of resources | 10,673,341 | 1,652,034 | 3,117,310 | - | - | 347,600 | 15,790,285 |
| **Fund Balances** | | | | | | | |
| Nonspendable | 571,489 | 582 | - | - | - | - | 572,071 |
| Restricted | - | 4,479,926 | 3,660,722 | 1,092,936 | 5,739,159 | 3,442,231 | 18,414,974 |
| Committed | - | - | - | - | - | 6,333,252 | 6,333,252 |
| Assigned | - | 1,989,075 | - | - | - | - | 1,989,075 |
| Unassigned | 6,417,873 | - | - | - | - | - | 6,417,873 |
| Total fund balances | 6,989,362 | 6,469,583 | 3,660,722 | 1,092,936 | 5,739,159 | 9,775,483 | 33,727,245 |
| Total liabilities, deferred inflows of resources and fund balances | $ 19,374,312 | $ 8,242,189 | $ 6,778,032 | $ 2,289,455 | $ 6,167,648 | $ 11,770,322 | $ 54,621,958 |

*See notes to the financial statements*

Reconciliation of the Balance Sheet - Governmental Funds to the Statement of Net Position
December 31, 2022

| | | |
|---|---|---|
| **Total Fund Balances, Governmental Funds** | $ | 33,727,245 |
| Amounts reported for governmental activities in the statement of net position are different because: | | |
| Capital assets used in governmental funds are not financial resources and therefore are not reported in the funds (See Note 2). | | 79,676,080 |
| The City's investment in the library joint venture is not a financial resource and, therefore, is not reported in the fund statements. | | 468,768 |
| Some receivables that are not currently available are reported as unavailable revenues in the fund financial statements but are recognized as revenue when earned in the government-wide statements. | | 1,248,065 |
| The net pension asset does not relate to current financial resources and is not reported in the governmental funds. | | 3,577,075 |
| Deferred inflows and outflows of resources related to pension do not related to current financial resources and are not reported in the governmental funds. | | (1,380,784) |
| Some liabilities, including long-term debt, are not due and payable in the current period and therefore, are not reported in the funds (See Note 2). | | (45,013,932) |
| **Net Position of Governmental Activities** | $ | 72,302,517 |

*See notes to the financial statements*

**City of Pewaukee**

Statement of Revenues, Expenditures and Changes in Fund Balances
Governmental Funds
Year Ended December 31, 2022

| | General | Storm Water Management | Debt Service | DPW Building | Road Construction | Nonmajor Governmental Funds | Total Governmental Funds |
|---|---|---|---|---|---|---|---|
| **Revenues** | | | | | | | |
| Taxes | $ 8,917,261 | $ - | $ 2,305,576 | $ - | $ - | $ 749,813 | $ 11,972,650 |
| Intergovernmental | 1,548,782 | - | - | - | - | 78,208 | 1,626,990 |
| Licenses and permits | 1,138,555 | 50 | - | - | - | - | 1,138,605 |
| Fines forfeitures and penalties | 589,498 | - | - | - | - | - | 589,498 |
| Public charges for services | 2,269,157 | 1,630,914 | - | - | - | 121,376 | 4,021,447 |
| Intergovernmental charges for services | 2,057,034 | 33,497 | - | - | - | - | 2,090,531 |
| Investment income (loss) | (383,317) | 285 | 35,141 | - | - | 268 | (347,623) |
| Miscellaneous revenues | 130,936 | 101,351 | - | - | - | 40,323 | 272,610 |
| Total revenues | 16,267,906 | 1,766,097 | 2,340,717 | - | - | 989,988 | 21,364,708 |
| **Expenditures** | | | | | | | |
| Current: | | | | | | | |
| General government | 2,201,284 | - | - | - | - | - | 2,201,284 |
| Public safety | 9,034,828 | - | - | - | - | 8,454 | 9,043,282 |
| Public works | 3,208,976 | 750,081 | - | - | - | - | 3,959,057 |
| Health and human services | - | - | - | - | - | 47,861 | 47,861 |
| Culture and recreation | 2,381,561 | - | - | - | - | - | 2,381,561 |
| Conservation and development | - | - | - | - | - | 350,012 | 350,012 |
| Capital outlay | - | 2,840,980 | - | 10,152,926 | 5,599,981 | 1,189,045 | 19,782,932 |
| Debt service: | | | | | | | |
| Principal | - | - | 1,855,245 | - | - | - | 1,855,245 |
| Interest, issuance costs and fiscal charges | - | 33,458 | 356,525 | 86,232 | 52,789 | 16,413 | 545,417 |
| Total expenditures | 16,826,649 | 3,624,519 | 2,211,770 | 10,239,158 | 5,652,770 | 1,611,785 | 40,166,651 |
| Excess (deficiency) of revenues over expenditures | (558,743) | (1,858,422) | 128,947 | (10,239,158) | (5,652,770) | (621,797) | (18,801,943) |
| **Other Financing Sources (Uses)** | | | | | | | |
| Debt issued | - | 6,975,000 | - | 10,090,000 | 11,005,000 | 2,640,000 | 30,710,000 |
| Premium on debt issued | - | - | 2,227,172 | - | - | - | 2,227,172 |
| Proceeds from sale of capital assets | 20,366 | - | - | - | - | - | 20,366 |
| Transfers in | 534,560 | 19,572 | 200,652 | - | - | 1,228,789 | 1,983,573 |
| Transfers out | (148,941) | (200,652) | (1,035,000) | - | - | (84,420) | (1,469,013) |
| Total other financing sources (uses) | 405,985 | 6,793,920 | 1,392,824 | 10,090,000 | 11,005,000 | 3,784,369 | 33,472,098 |
| Net change in fund balances | (152,758) | 4,935,498 | 1,521,771 | (149,158) | 5,352,230 | 3,162,572 | 14,670,155 |
| **Fund Balances, Beginning** | 7,142,120 | 1,534,085 | 2,138,951 | 1,242,094 | 386,929 | 6,612,911 | 19,057,090 |
| **Fund Balances, Ending** | $ 6,989,362 | $ 6,469,583 | $ 3,660,722 | $ 1,092,936 | $ 5,739,159 | $ 9,775,483 | $ 33,727,245 |

*See notes to the financial statements*

## City of Pewaukee

Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances of Governmental Funds to the Statement of Activities
Year Ended December 31, 2022

| | |
|---|---|
| **Net Change in Fund Balances, Total Governmental Funds** | $ 14,670,155 |
| Amounts reported for governmental activities in the statement of activities are different because: | |
| Governmental funds report capital outlays as expenditures. However in the statement of net position, the cost of these assets is capitalized and they are depreciated over their estimated useful lives and reported as depreciation expense in the statement of activities: | |
| Capital outlay is reported as an expenditure in the fund financial statements, but is capitalized in the government-wide statements | 19,782,932 |
| Some items reported as capital outlay were not capitalized | (425,018) |
| Contributed assets | 2,036,977 |
| Depreciation is reported in the government-wide statements | (3,313,894) |
| Net book value of assets retired | (220,114) |
| Receivables not currently available are reported as revenue when collected or currently available in the fund financial statements but are recognized as revenue when earned in the government-wide financial statements. | 60,534 |
| The proportionate share of the change in net position related to joint ventures reported in the statement of activities neither provides nor uses current financial resources and is not reported in the fund financial statements. | 55,381 |
| Debt issued provides current financial resources to governmental funds, but issuing debt increases long-term liabilities in the statement of net position. Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net position. | |
| Principal repaid | 1,855,245 |
| Long-term debt issued | (30,710,000) |
| Premium on debt issued | (2,227,172) |
| Some expenses in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in the governmental funds. | |
| Compensated absences | (19,348) |
| Accrued interest on debt | (473,500) |
| Net pension asset | 938,223 |
| Deferred inflows/outflows of resources related to pension | (55,535) |
| Governmental funds report debt premiums and discounts as other financing sources (uses) or expenditures. However, in the statement of net position, these are reported as additions or deductions from long-term debt. These are allocated over the period the debt is outstanding in the statement of activities and are reported as interest expense: | |
| Amortization of debt premiums | 95,039 |
| **Change in Net Position of Governmental Activities** | $ 2,049,905 |

*See notes to the financial statements*

## City of Pewaukee

Statement of Net Position
Proprietary Funds
December 31, 2022

| | Business-Type Activities - Enterprise Funds | | |
|---|---|---|---|
| | Water Utility | Sewer Utility | Total |
| **Assets** | | | |
| Current assets: | | | |
| Cash and investments | $ 1,902,339 | $ 17,456,184 | $ 19,358,523 |
| Receivables: | | | |
| Accounts | 562,584 | 928,187 | 1,490,771 |
| Special assessments | 59,746 | 162,356 | 222,102 |
| Due from other funds | 44,604 | 151,047 | 195,651 |
| Inventory | 15,192 | - | 15,192 |
| Restricted assets, cash and investments | 2,821,560 | 2,473,469 | 5,295,029 |
| Total current assets | 5,406,025 | 21,171,243 | 26,577,268 |
| **Noncurrent Assets** | | | |
| Capital assets: | | | |
| Land | 530,387 | - | 530,387 |
| Construction in progress | 1,920,235 | 573,078 | 2,493,313 |
| Capital assets, net of accumulated depreciation | 37,611,143 | 38,711,960 | 76,323,103 |
| Restricted asset, net pension asset | 160,374 | 86,357 | 246,731 |
| Advance to water | - | 7,404,609 | 7,404,609 |
| Total noncurrent assets | 40,222,139 | 46,776,004 | 86,998,143 |
| Total assets | 45,628,164 | 67,947,247 | 113,575,411 |
| **Deferred Outflows of Resources** | | | |
| Pension related items | 347,484 | 181,569 | 529,053 |
| **Liabilities** | | | |
| Current liabilities: | | | |
| Accounts payable | 155,852 | 599,344 | 755,196 |
| Accrued liabilities | 126,223 | 58,556 | 184,779 |
| Deposits | 26,198 | - | 26,198 |
| Current portion of general obligation debt | 651,020 | 201,300 | 852,320 |
| Current portion of compensated absences | 21,318 | 11,479 | 32,797 |
| Liabilities payable from restricted assets: | | | |
| Accrued interest payable | - | 3,303 | 3,303 |
| Current portion of revenue bonds | - | 65,220 | 65,220 |
| Total current liabilities | 980,611 | 939,202 | 1,919,813 |
| Noncurrent liabilities: | | | |
| General obligation debt | 10,296,606 | 4,127,222 | 14,423,828 |
| Revenue bonds | - | 1,269,339 | 1,269,339 |
| Compensated absences | 38,620 | 20,795 | 59,415 |
| Advance from sewer | 7,404,609 | - | 7,404,609 |
| Total noncurrent liabilities | 17,739,835 | 5,417,356 | 23,157,191 |
| Total liabilities | 18,720,446 | 6,356,558 | 25,077,004 |
| **Deferred Inflows of Resources** | | | |
| Pension related items | 408,998 | 218,883 | 627,881 |
| **Net Position** | | | |
| Net investment in capital assets | 31,875,569 | 36,086,768 | 67,962,337 |
| Restricted for debt service | - | 5,354 | 5,354 |
| Restricted for radium capital projects | 60,130 | - | 60,130 |
| Restricted for pensions | 160,374 | 86,357 | 246,731 |
| Unrestricted (deficit) | (5,249,869) | 25,374,896 | 20,125,027 |
| Total net position | $ 26,846,204 | $ 61,553,375 | $ 88,399,579 |

*See notes to the financial statements*

## City of Pewaukee

Statement of Revenues, Expenses and Changes in Net Position
Proprietary Funds
Year Ended December 31, 2022

| | Business-Type Activities - Enterprise Funds | | |
|---|---|---|---|
| | Water | Sewer | Total |
| **Operating Revenues** | $ 2,888,641 | $ 4,168,369 | $ 7,057,010 |
| **Operating Expenses** | | | |
| Operation and maintenance | 1,293,441 | 2,864,706 | 4,158,147 |
| Depreciation | 1,293,525 | 812,767 | 2,106,292 |
| Taxes | 33,373 | - | 33,373 |
| Total operating expenses | 2,620,339 | 3,677,473 | 6,297,812 |
| Operating income | 268,302 | 490,896 | 759,198 |
| **Nonoperating Revenues (Expenses)** | | | |
| Interest income | 6,239 | 71,459 | 77,698 |
| Interest and fiscal charges | (266,586) | (118,504) | (385,090) |
| Miscellaneous revenue | - | 730 | 730 |
| Proceeds on sale of capital assets | 1,722 | - | 1,722 |
| Amortization | 18,089 | 6,633 | 24,722 |
| Total nonoperating income (expense) | (240,536) | (39,682) | (280,218) |
| Income before contributions and transfers | 27,766 | 451,214 | 478,980 |
| **Contributions and Transfers** | | | |
| Capital contributions | 1,670,859 | 2,150,274 | 3,821,133 |
| Transfers | (514,560) | - | (514,560) |
| Total contributions and transfers | 1,156,299 | 2,150,274 | 3,306,573 |
| Change in net position | 1,184,065 | 2,601,488 | 3,785,553 |
| **Net Position, Beginning** | 25,662,139 | 58,951,887 | 84,614,026 |
| **Net Position, Ending** | $ 26,846,204 | $ 61,553,375 | $ 88,399,579 |

*See notes to the financial statements*

## City of Pewaukee

Statement of Cash Flows
Proprietary Funds
Year Ended December 31, 2022

| | Business-Type Activities - Enterprise Funds | | |
|---|---|---|---|
| | Water | Sewer | Total |
| **Cash Flows From Operating Activities** | | | |
| Receipts from customers | $ 2,856,849 | $ 4,157,605 | $ 7,014,454 |
| Paid to vendors for goods and services | (1,217,016) | (2,342,600) | (3,559,616) |
| Paid to employees for services | (134,503) | (169,512) | (304,015) |
| Net cash flows from operating activities | 1,505,330 | 1,645,493 | 3,150,823 |
| **Cash Flows From Noncapital and Related Financing Activities** | | | |
| Transfers to other funds | (514,560) | - | (514,560) |
| **Cash Flows From Capital and Related Financing Activities** | | | |
| Acquisition and construction of capital assets | (971,485) | 122,160 | (849,325) |
| Proceeds from debt issued | 4,745,000 | 3,960,106 | 8,705,106 |
| Debt issuance costs | 376,729 | 240,989 | 617,718 |
| Principal paid on long-term debt retirements | (479,755) | (159,845) | (639,600) |
| Proceeds from sale of capital assets | 1,722 | - | 1,722 |
| Collection of special assessments, net | 12,544 | 107,918 | 120,462 |
| Interest paid | (198,393) | (71,278) | (269,671) |
| Net cash used by capital and related financing activates | 3,486,362 | 4,200,050 | 7,686,412 |
| **Cash Flows From Investing Activities** | | | |
| Investment income | 6,239 | 71,459 | 77,698 |
| Net change in cash and investments | 4,483,371 | 5,917,002 | 10,400,373 |
| **Cash and Investments, Beginning** | 240,528 | 14,012,651 | 14,253,179 |
| **Cash and Investments, Ending** | $ 4,723,899 | $ 19,929,653 | $ 24,653,552 |

*See notes to the financial statements*

## City of Pewaukee

Statement of Cash Flows
Proprietary Funds
Year Ended December 31, 2022

| | Business-Type Activities - Enterprise Funds | | |
|---|---|---|---|
| | Water | Sewer | Total |
| **Reconciliation of Operating Income to Net Cash From Operating Activities** | | | |
| Operating income | $ 268,302 | $ 490,896 | $ 759,198 |
| Nonoperating income | - | 730 | 730 |
| Adjustments to reconcile operating income (loss) to net cash from operating activities: | | | |
| Depreciation expense | 1,293,524 | 812,767 | 2,106,291 |
| Changes in assets, deferred outflows/inflows of resources and liabilities: | | | |
| Accounts receivable | (33,072) | (26,282) | (59,354) |
| Due from other funds | 1,280 | 14,788 | 16,068 |
| Pension related deferrals and assets | (40,929) | (21,459) | (62,388) |
| Accounts payable | 19,184 | 372,210 | 391,394 |
| Inventory | (6,084) | - | (6,084) |
| Accrued liabilities | 3,125 | 1,843 | 4,968 |
| **Net Cash Flows From Operating Activities** | $ 1,505,330 | $ 1,645,493 | $ 3,150,823 |
| **Reconciliation of Cash and Investments to the Statement of Net Position, Proprietary Funds** | | | |
| Cash and investments, statement of net position | $ 1,902,339 | $ 17,456,184 | $ 19,358,523 |
| Restricted cash and investments, statement of net position | 2,821,560 | 2,473,469 | 5,295,029 |
| **Cash and Cash Equivalents, Ending** | $ 4,723,899 | $ 19,929,653 | $ 24,653,552 |
| **Noncash Capital and Related Financing Activities** | | | |
| Capital contributions | $ 973,481 | $ 1,584,891 | |
| Amortization on premiums | $ 18,089 | $ 6,633 | |

*See notes to the financial statements*

## City of Pewaukee

Statement of Fiduciary Net Position
Fiduciary Fund
December 31, 2022

| | Custodial Fund<br>Tax Collection Fund |
|---|---|
| **Assets** | |
| Cash and investments | $ 22,356,717 |
| Taxes receivable | 15,083,110 |
| Total assets | 37,439,827 |
| **Liabilities** | |
| Due to other taxing units | 37,439,827 |
| **Net Position** | |
| Total net position | $ - |

*See notes to the financial statements*

## City of Pewaukee

Statement of Changes in Fiduciary Net Position
Fiduciary Fund
Year Ended December 31, 2022

| | Custodial Fund<br>Tax Collection Fund |
|---|---|
| **Additions** | |
| Tax collections | $ 28,189,660 |
| **Deductions** | |
| Tax disbursements to other entities | 28,189,660 |
| Change in fiduciary net position | - |
| **Net Position, Beginning** | - |
| **Net Position, Ending** | $ - |

*See notes to the financial statements*

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## 1. Summary of Significant Accounting Policies

The accounting policies of the City of Pewaukee, Wisconsin (the City) conform to accounting principles generally accepted in the United States of America as applicable to governmental units. The accepted standard-setting body for establishing governmental accounting and financial reporting principles is the Governmental Accounting Standards Board (GASB).

### Reporting Entity

This report includes all of the funds of the City. The reporting entity for the City consists of the primary government and its component units. Component units are legally separate organizations for which the primary government is financially accountable or other organizations for which the nature and significance of their relationship with the primary government are such that their exclusion would cause the reporting entity's financial statements to be misleading. The City has not identified any organizations that meet this criteria.

### Government-Wide and Fund Financial Statements

#### Government-Wide Financial Statements

The statement of net position and statement of activities display information about the reporting government as a whole. They include all funds of the reporting entity. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues and other nonexchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services.

The statement of activities demonstrates the degree to which the direct expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function or segment. The City does not allocate indirect expenses to functions in the statement of activities. Program revenues include 1) charges to customers or applicants who purchase, use or directly benefit from goods, services or privileges provided by a given function or segment and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular function or segment. Taxes and other items not included among program revenues are reported as general revenues. Internally dedicated resources are reported as general revenues rather than as program revenues.

#### Fund Financial Statements

Financial statements of the City are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts, which constitute its assets, deferred outflows of resources, liabilities, deferred inflows of resources, net position/fund balance, revenues and expenditures/expenses.

Funds are organized as major funds or nonmajor funds within the governmental and proprietary statements. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the City or meets the following criteria:

a. Total assets/deferred outflows of resources, liabilities/deferred inflows of resources, revenues or expenditures/expenses of that individual governmental or enterprise fund are at least 10% of the corresponding total for all funds of that category or type, and

b. The same element of the individual governmental or enterprise fund that met the 10% test is at least 5% of the corresponding total for all governmental and enterprise funds combined.

c. In addition, any other governmental or enterprise fund that the City believes is particularly important to financial statement users may be reported as a major fund.

Separate financial statements are provided for governmental funds and proprietary funds. Major individual governmental funds and major individual enterprise funds are reported as separate columns in the fund financial statements.

The City reports the following major governmental funds:

**General Fund**

General Fund accounts for the City's primary operating activities. It is used to account for and report all financial resources except those accounted for and reported in another fund.

**Special Revenue Fund**

Storm Water Management Special Revenue Fund is used to account for and report resources accumulated and payments made for storm water management projects.

**Debt Service Fund**

Debt Service Fund is  accounts for resources accumulated and payments made for principal and interest on long-term debt other than proprietary fund debt

**Capital Projects Funds**

DPW Building Capital Projects Fund are used to account for and report financial resources that are restricted, committed or assigned to expenditures for capital outlays, including the acquisition or construction of capital facilities and other capital assets..

Road Construction Capital Project Fund is used to account for and report financial resources that are restricted, committed or assigned to expenditure for capital outlays, including the acquisition or construction of infrastructure and other related capital assets.

**Enterprise Funds**

The City reports the following major enterprise funds:

Water Utility accounts for operations of the water system.

Sewer Utility accounts for operations of the sewer system.

The City reports the following nonmajor governmental funds:

**Special Revenue Funds**

Special Revenue Funds are used to account for and report the proceeds of specific revenue sources that are restricted or committed to expenditures for specified purposes (other than debt service or capital projects).

Impact Fee
Public Safety Grants
American Rescue Plan
Tourism and Convention
Expendable Cemetery

### Capital Projects Funds

Capital Projects Funds are used to account for and report financial resources that are restricted, committed or assigned to expenditure for capital outlays, including the acquisition or construction of capital facilities and other capital assets.

Capital Equipment
Bike Path
City Hall Remodel

### Permanent Fund

Permanent Fund is used to account for and report resources that are restricted to the extent that only earnings, and not principal, may be used for purposes that support the reporting government's programs, that is, for the benefit of the government or its citizenry.

Nonexpendable Cemetery

In addition, the City reports the following fund type:

### Custodial Fund

Custodial Fund is used to account for and report assets controlled by the City and the assets are for the benefit of individuals, private organizations and/or other governmental units.

Tax Collection Fund

## Measurement Focus, Basis of Accounting and Financial Statement Presentation

### Government-Wide Financial Statements

The government-wide statement of net position and statement of activities are reported using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned and expenses are recorded when the liability is incurred or economic asset used. Revenues, expenses, gains, losses, assets and liabilities resulting from exchange and exchange-like transactions are recognized when the exchange takes place. Property taxes are recognized as revenues in the year for which they are levied. Taxes receivable for the following year are recorded as receivables and deferred inflows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider are met. Special assessments are recorded as revenue when earned. Unbilled receivables are recorded as revenues when services are provided.

As a general rule, the effect of interfund activity has been eliminated from the government-wide financial statements. Exceptions to this general rule are charges between the City's water and sewer and various other functions of the government. Elimination of these charges would distort the direct costs and program revenues reported for the various functions concerned.

### Fund Financial Statements

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recorded when they are both measurable and available. Available means collectible within the current period or soon enough thereafter to be used to pay liabilities of the current period. For this purpose, the City considers revenues to be available if they are collected within 60 days of the end of the current fiscal period. Expenditures are recorded when the related fund liability is incurred, except for unmatured interest on long-term debt, claims, judgments, compensated absences and pension expenditures, which are recorded as a fund liability when expected to be paid with expendable available financial resources.

Property taxes are recorded in the year levied as receivables and deferred inflows. They are recognized as revenues in the succeeding year when services financed by the levy are being provided.

Intergovernmental aids and grants are recognized as revenues in the period the City is entitled to the resources and the amounts are available. Amounts owed to the City which are not available are recorded as receivables and unavailable revenues. Amounts received before eligibility requirements (excluding time requirements) are met are recorded as liabilities. Amounts received in advance of meeting time requirements are recorded as deferred inflows.

Special assessments are recorded as revenues when they become measurable and available as current assets. Annual installments due in future years are reflected as receivables and unavailable revenues. Delinquent special assessments being held by the County are reported as receivables and unavailable revenues. At December 31, 2022, there were $276,140, $3,279,995 and $1,114,591 of unrecorded anticipated future assessments for City, Water and Sewer respectively, which are not recorded as receivables because collection is subject to certain events occurring in the future. No formal repayment schedule has been established.

Revenues susceptible to accrual include property taxes, miscellaneous taxes, public charges for services, special assessments and interest. Other general revenues such as fines and forfeitures, inspection fees, recreation fees and miscellaneous revenues are recognized when received in cash or when measurable and available under the criteria described above.

**Proprietary and Fiduciary Funds**

Proprietary and fiduciary fund financial statements are reported using the economic resources measurement focus and the accrual basis of accounting, as described previously in this note.

The proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the water and sewer funds are charges to customers for sales and services. Special assessments are recorded as receivables and contribution revenue when levied. Operating expenses for proprietary funds include the cost of sales and services, administrative expenses and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

**All Financial Statements**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets, deferred outflows of resources, liabilities and deferred inflows of resources and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenditures/expenses during the reporting period. Actual results could differ from those estimates.

### Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources and Net Position or Equity

#### Deposits and Investments

For purposes of the statement of cash flows, the City considers all highly liquid investments with an initial maturity of three months or less when acquired to be cash equivalents.

Investment of City funds is restricted by Wisconsin state statutes. Available investments are limited to:

a. Time deposits in any credit union, bank, savings bank or trust company.

b. Bonds or securities of any county, city, drainage district, technical college district, village, town or school district of the state. Also, bonds issued by a local exposition district, a local professional baseball park district, a local professional football stadium district, a local cultural arts district, the University of Wisconsin Hospitals and Clinics Authority or the Wisconsin Aerospace Authority.

c. Bonds or securities issued or guaranteed by the federal government.

d. The local government investment pool.

e. Any security maturing in seven years or less and having the highest or second highest rating category of a nationally recognized rating agency.

f. Securities of an open-end management investment company or investment trust, subject to various conditions and investment options.

g. Repurchase agreements with public depositories, with certain conditions.

The City has adopted an investment policy. That policy follows the state statute for allowable investments.

Investments are stated at fair value, which is the amount at which an investment could be exchanged in a current transaction between willing parties. Fair values are based on methods and inputs as outlined in Note 4. No investments are reported at amortized cost. Adjustments necessary to record investments at fair value are recorded in the operating statement as increases or decreases in investment income. Investment income on commingled investments of municipal accounting funds is allocated based on average balances. The difference between the bank statement balance and carrying value is due to outstanding checks and/or deposits in transit.

The Wisconsin Local Government Investment Pool (LGIP) is part of the State Investment Fund (SIF) and is managed by the State of Wisconsin Investment Board. The SIF is not registered with the Securities and Exchange Commission, but operates under the statutory authority of Wisconsin Chapter 25. The SIF reports the fair value of its underlying assets annually. Participants in the LGIP have the right to withdraw their funds in total on one day's notice. At December 31, 2022, the fair value of the City's share of the LGIP's assets was substantially equal to the amount as reported in these statements.

See Note 4 for further information.

### Receivables

Property taxes are levied in December on the assessed value as of the prior January 1. In addition to property taxes for the City, taxes are collected for and remitted to the county government as well as the local school district and technical college district. Taxes for all state and local governmental units billed in the current year for the succeeding year are reflected as receivables and due to other taxing units on the accompanying statement of fiduciary net position.

Property tax calendar - 2022 tax roll:

| | |
|---|---|
| Lien date and levy date | December 2022 |
| Tax bills mailed | December 2022 |
| Payment in full, or | January 31, 2023 |
| First installment due | January 31, 2023 |
| Second installment due | July 31, 2023 |
| Personal property taxes in full | January 31, 2023 |
| Tax sale, 2022 delinquent real estate taxes | October 2025 |

Accounts receivable have been shown net of an allowance for uncollectible accounts. Delinquent real estate taxes as of July 31 are paid in full by the County, which assumes the collection thereof. No provision for uncollectible accounts receivable has been made for the water and sewer utilities because they have the right by law to place substantially all delinquent bills on the tax roll and other delinquent bills are generally not significant.

During the course of operations, transactions occur between individual funds that may result in amounts owed between funds. Short-term interfund loans are reported as "due to and from other funds." Long-term interfund loans (noncurrent portion) are reported as "advances from and to other funds." Interfund receivables and payables between funds within governmental activities are eliminated in the statement of net position. Any residual balances outstanding between the governmental activities and business-type activities are reported in the governmental-wide financial statements as internal balances.

### Inventories and Prepaid Items

Governmental fund inventories, if material, are recorded at cost based on the FIFO method using the purchases method of accounting. Proprietary fund inventories are generally used for construction and/or for operation and maintenance work. They are not for resale. They are valued at cost based on weighted average and charged to construction and/or operation and maintenance expense when used.

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid items in both government-wide and fund financial statements. The cost of prepaid items is recorded as expenditures/expenses when consumed rather than when purchased.

### Restricted Assets

Mandatory segregations of assets are presented as restricted assets. Such segregations are required by bond agreements and other external parties. Current liabilities payable from these restricted assets are so classified. The excess of restricted assets over current liabilities payable from restricted assets will be used first for retirement of related long-term debt. The remainder, if generated from earnings, is shown as restricted net position.

### Capital Assets

#### Government-Wide Financial Statements

Capital assets, which include property, plant and equipment, are reported in the government-wide financial statements. Capital assets are defined by the government as assets with an initial cost of more than $5,000 general capital assets and for infrastructure assets and an estimated useful life in excess of 1 year. All capital assets are valued at historical cost or estimated historical cost if actual amounts are unavailable. Donated capital assets are recorded at their estimated acquisition value at the date of donation.

Additions to and replacements of capital assets of business-type activities are recorded at original cost, which includes material, labor and overhead. The cost of renewals and betterments relating to retirement units is added to plant accounts. The cost of property replaced, retired or otherwise disposed of, is deducted from plant accounts and, generally, together with removal costs less salvage, is charged to accumulated depreciation.

Depreciation and amortization of all exhaustible capital assets is recorded as an allocated expense in the statement of activities, with accumulated depreciation and amortization reflected in the statement of net position. Depreciation and amortization is provided over the assets' estimated useful lives using the straight-line method. The range of estimated useful lives by type of asset is as follows:

| | |
|---|---|
| Buildings and improvements | 15-40 Years |
| Land improvements | 10-40 Years |
| Equipment | 2-20 Years |
| Water and sewer plant | 4-100 Years |
| Infrastructure | 20-60 Years |
| Intangibles | 3-20 Years |
| Library | 15-50 Years |

#### Fund Financial Statements

In the fund financial statements, capital assets used in governmental fund operations are accounted for as capital outlay expenditures of the governmental fund upon acquisition. Capital assets used in proprietary fund operations are accounted for the same way as in the government-wide statements.

### Deferred Outflows of Resources

A deferred outflow of resources represents a consumption of net position/fund balance that applies to a future period and will not be recognized as an outflow of resources (expense/expenditure) until that future time.

### Compensated Absences

Compensated absences represent liabilities arising from the City's sick and vacation leave policies. The sick leave policy allows employees (excluding firefighters) to accrue sick leave at a rate of one day per month to a maximum of 130 days. Represented firefighters are allowed to accrue up to 135 hours per year to a maximum of 1,920 hours. the maximum accumulation for full-time employees hired after January 1, 2016 is 1,456 hours. If such days are not taken as paid time off during the course of employment, payment may be received upon termination at a rate of 50% of total accrued benefits. A liability is recorded only to the extent that it is estimated to result in termination payments.

The City's vacation leave policy allows employees hired before 2015 to accrue vacation benefits beginning in the year of hire. Vacation leave accrues to a maximum of five weeks based upon each employee's length of service. Vacation leave can only be accrued to a maximum of 150% of the earned benefit based upon the employee's seniority at any point during the year. Represented firefighters are not allowed to carryover any days to the next year. For employees hired after January 1, 2015 vacation leave can only be accrued to a maximum of 100% of the earned benefit based upon the employee's seniority at any point during the year.

All vested vacation and sick leave pay is accrued when earned in the full-accrual government-wide and proprietary fund financial statements.

### Long-Term Obligations

All long-term obligations to be repaid from governmental and business-type resources are reported as liabilities in the government-wide statements. The long-term obligations consist primarily of notes and bonds payable and accrued compensated absences.

Long-term obligations for governmental funds are not reported as liabilities in the fund financial statements. The face value of debts (plus any premiums) are reported as other financing sources and payments of principal and interest are reported as expenditures. The accounting in proprietary funds is the same as it is in the government-wide statements.

For the government-wide statements and proprietary fund statements, bond premiums and discounts are amortized over the life of the issue using the straight-line method. The balance at year end is shown as an increase or decrease in the liability section of the statement of net position.

### Deferred Inflows of Resources

A deferred inflow of resources represents an acquisition of net position/fund balance that applies to a future period and therefore will not be recognized as an inflow of resources (revenue) until that future time.

### Equity Classifications

#### Government-Wide Statements

Equity is classified as net position and displayed in three components:

a. **Net Investment in Capital Assets** - Consists of capital assets including restricted capital assets, net of accumulated depreciation/amortization and reduced by the outstanding balances (excluding unspent debt proceeds) of any bonds, mortgages, notes or other borrowings that are attributable to the acquisition, construction or improvement of those assets.

b. **Restricted Net Position** - Consists of net position with constraints placed on their use either by 1) external groups such as creditors, grantors, contributors or laws or regulations of other governments or, 2) law through constitutional provisions or enabling legislation.

c. **Unrestricted Net Position** - All other net positions that do not meet the definitions of "restricted" or "net investment in capital assets."

When both restricted and unrestricted resources are available for use, it is the City's policy to use restricted resources first, then unrestricted resources as they are needed.

**Fund Statements**

Governmental fund balances are displayed as follows:

a. **Nonspendable** - Includes fund balance amounts that cannot be spent either because they are not in spendable form or because legal or contractual requirements require them to be maintained intact.

b. **Restricted** - Consists of fund balances with constraints placed on their use either by 1) external groups such as creditors, grantors, contributors or laws or regulations of other governments or 2) law through constitutional provisions or enabling legislation.

c. **Committed** - Includes fund balance amounts that are constrained for specific purposes that are internally imposed by the government through formal action of the highest level of decision making authority. Fund balance amounts are committed through a formal action (resolution) of the Common Council. This formal action must occur prior to the end of the reporting period, but the amount of the commitment, which will be subject to the constraints, may be determined in the subsequent period. Any changes to the constraints imposed require the same formal action of the Common Council that originally created the commitment.

d. **Assigned** - Includes spendable fund balance amounts that are intended to be used for specific purposes that do not meet the criteria to be classified as restricted or committed. The Council may take official action to assign amounts. Assignments may take place after the end of the reporting period.

e. **Unassigned** - Includes residual positive fund balance within the general fund which has not been classified within the other above mentioned categories. Unassigned fund balance may also include negative balances for any governmental fund if expenditures exceed amounts restricted, committed or assigned for those purposes.

Proprietary fund equity is classified the same as in the government-wide statements.

The City considers restricted amounts to be spent first when both restricted and unrestricted fund balance is available unless there are legal documents / contracts that prohibit doing this, such as in grant agreements requiring dollar for dollar spending. Additionally, the City would first use committed, then assigned and lastly unassigned amounts of unrestricted fund balance when expenditures are made.

The City has a formal minimum fund balance policy. That policy is to maintain a working capital fund of 10% of subsequent years general fund budgeted expenditures. The balance at year end was $1,854,872, and is included in unassigned general fund balance. Furthermore, the City's policy states that the unassigned fund balance shall be maintained as of December 31 of each year equal to a minimum of 20% of the ensuing year's budgeted general fund revenue. As of December 31, 2022, the City's unassigned fund balance was 36% of subsequent year's budgeted general fund revenue.

See Note 4 for further information.

### Pension

For purposes of measuring the net pension liability (asset), deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Wisconsin Retirement System (WRS) and additions to/deductions from WRS' fiduciary net position have been determined on the same basis as they are reported by WRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

### Basis for Existing Rates

#### Water and Sewer Rates

Current water rates were approved by the Public Service Commission of Wisconsin and effective on September 21, 2020.

Current sewer rates were approved by the Common Council January 2021.

## 2. Reconciliation of Government-Wide and Fund Financial Statements

### Explanation of Certain Differences Between the Governmental Fund Balance Sheet and the Statement of Net Position

Capital assets used in governmental funds are not financial resources and, therefore, are not reported in the funds.

| | |
|---|---|
| Land | $ 7,256,326 |
| Construction in progress | 22,257,783 |
| Buildings and improvements | 14,705,483 |
| Land improvements | 4,848,838 |
| Equipment | 11,399,953 |
| Infrastructure | 61,393,815 |
| Intangibles | 144,597 |
| Library | 1,024,901 |
| Less accumulated depreciation | (43,355,616) |
| Combined adjustment for capital assets | $ 79,676,080 |

Long-term liabilities applicable to the City's governmental activities are not due and payable in the current period, and accordingly, are not reported as fund liabilities. Interest on long-term debt is not accrued in governmental funds, but rather is recognized as an expenditure when due. All liabilities-both current and long-term-are reported in the statement of net position.

| | |
|---|---|
| Bonds and notes payable | $ 41,117,960 |
| Compensated absences | 807,093 |
| Accrued interest | 515,564 |
| Unamortized debt premium | 2,573,315 |
| Combined adjustment for long-term liabilities | $ 45,013,932 |

## 3. Stewardship, Compliance and Accountability

### Excess Expenditures and Other Financing Uses Over Budget

| Funds | Budgeted Expenditures | Actual Expenditures | Excess Expenditures Over Budget |
|---|---|---|---|
| Public Safety Grant Fund | $ - | $ 8,454 | $ 8,454 |
| DPW Building Fund | 7,175,000 | 10,239,158 | 3,064,158 |
| Debt Service Fund | 2,990,326 | 3,246,770 | 256,444 |
| Cemetery Fund | 27,570 | 50,200 | 22,630 |
| City Hall Remodel Fund | - | 9,857 | 9,857 |

The City controls expenditures at the fund level. Some individual functions experienced expenditures which exceeded appropriations. The detail of those items can be found in the City's year-end budget to actual report.

### Limitations on the City's Tax Levy

Wisconsin law limits the City's future tax levies. Generally the City is limited to its prior tax levy dollar amount (excluding TIF Districts), increased by the greater of the percentage change in the City's equalized value due to net new construction or zero percent. Changes in debt service from one year to the next are generally exempt from this limit with certain exceptions. The City is required to reduce its allowable levy by the estimated amount of fee revenue it collects for certain services, if those services were funded in 2013 by the property tax levy. Levies can be increased above the allowable limits if the amount is approved by referendum.

## 4. Detailed Notes on All Funds

### Deposits and Investments

The City's deposits and investments at year end were comprised of the following:

| | Carrying Value | Statement Balances | Associated Risks |
|---|---|---|---|
| Deposits | $ 63,206,059 | $ 56,167,537 | Custodial credit |
| US Agencies | 3,920,340 | 3,920,340 | Credit, custodial credit, interest, concentration of credit |
| US Treasuries | 1,334,198 | 1,334,198 | Custodial credit, interest rate |
| Certificate of deposits, negotiable | 2,005,117 | 2,005,117 | Credit, custodial credit, interest, concentration of credit |
| Municipal bonds | 3,432,298 | 3,432,298 | Credit, custodial credit, interest, concentration of credit |
| LGIP | 12,074,854 | 12,074,854 | Credit |
| Petty cash | 954 | - | N/A |
| Total deposits and investments | $ 85,973,820 | $ 78,934,344 | |

Reconciliation to financial statements

| | |
|---|---|
| Per statement of net position: | |
| Unrestricted cash and investments | $ 58,322,074 |
| Restricted cash and investments | 5,295,029 |
| Per statement of fiduciary net position, custodial funds: | |
| Tax Collection Fund | 22,356,717 |
| Total deposits and investments | $ 85,973,820 |

Deposits in each local and area bank are insured by the FDIC in the amount of $250,000 for time and savings accounts (including NOW accounts) and $250,000 for demand deposit accounts (interest-bearing and noninterest-bearing). In addition, if deposits are held in an institution outside of the state in which the government is located, insured amounts are further limited to a total of $250,000 for the combined amount of all deposit accounts.

Bank accounts are also insured by the State Deposit Guarantee Fund in the amount of $400,000. However, due to the nature of this fund, recovery of material principal losses may not be significant to individual municipalities. This coverage has not been considered in computing custodial credit risk.

The City maintains collateral agreements with its banks. At December 31, 2022, the banks had pledged various government securities in the amount of $60,933,091 to secure the City's deposits.

The City categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The valuation methods for recurring fair value measurements are as follows:

- Market value

| | December 31, 2022 | | | |
|---|---|---|---|---|
| **Investment Type** | **Level 1** | **Level 2** | **Level 3** | **Total** |
| Certificate of deposit, negotiable | $ - | $ 2,005,117 | $ - | $ 2,005,117 |
| Municipal bonds | - | 3,432,298 | - | 3,432,298 |
| US Treasuries | - | 1,334,198 | - | 1,334,198 |
| US Agencies | - | 3,920,340 | - | 3,920,340 |
| Total | $ - | $ 10,691,953 | $ - | $ 10,691,953 |

**Custodial Credit Risk**

**Deposits**

Custodial credit risk is the risk that in the event of a financial institution failure, the City's deposits may not be returned to the City.

The City does not have any deposits exposed to custodial credit risk.

**Investments**

For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the City will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party.

The City does not have any investments exposed to custodial credit risk.

**Credit Risk**

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations.

| Investment Type | Standard & Poors | Moody's Investors Services |
|---|---|---|
| US Agencies | AA+ | Aaa |
| Municipal Bonds | AA+ to AA- | Aaa to A1 |
| Certificates of deposit, negotiable | A+ to BBB- | N/A |
| US Treasury | AA+ | Aaa |

The City also held investments in the following external pool which is not rated:

LGIP

**Concentration of Credit Risk**

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer.

At December 31, 2022, the City's investment portfolio was concentrated as follows:

| Issuer | Investment Type | Percentage of Portfolio |
|---|---|---|
| Federal Home Loan Banks | US Agencies | 12.10 % |

**Interest Rate Risk**

Interest rate risk is the risk that changes in interest rates will adversely affect the value of an investment.

As of December 31, 2022, the City's investments were as follows:

| | | Maturity (In Years) | | |
|---|---|---|---|---|
| Investment Type | Fair Value | Less than 1 | 1-5 | 6-10 |
| US Agencies | $ 3,920,340 | $ 21,146 | $ 3,899,194 | $ - |
| Certificate of deposits, negotiable | 2,005,117 | 765,847 | 1,239,270 | - |
| Municipal Bonds | 3,432,298 | 1,335,196 | 2,097,102 | - |
| US Treasuries | 1,334,198 | - | 1,334,198 | - |
| Total | $ 10,691,953 | $ 2,122,189 | $ 8,569,764 | $ - |

### Investments Highly Sensitive to Interest Rate Changes

At December 31, 2022, the City held $3,920,340, $2,005,117, $3,432,298 and $1,334,198 in US agencies, certificates of deposit - negotiable, municipal bonds and US treasuries, respectively. With all fixed income securities, as interest rates rise, the value will fall. The longer the time to maturity, the more sensitive the value will be to a change in interest rates. The longest time to maturity on any holding is 1-5 years.

See Note 1 for further information on deposit and investment policies.

## Receivables

All of the receivables on the balance sheet are expected to be collected within one year, except for delinquent personal property taxes

Governmental funds report *unavailable* or *unearned revenue* in connection with receivables for revenues that are not considered to be available to liquidate liabilities of the current period. Property taxes levied for the subsequent year are not earned and cannot be used to liquidate liabilities of the current period. Governmental funds also defer revenue recognition in connection with resources that have been received, but not yet earned. At the end of the current fiscal year, the various components of *unavailable revenue* and *unearned revenue* reported in the governmental funds were as follows:

| | Unearned | Unavailable |
|---|---|---|
| Property taxes receivable for subsequent year | $ 14,542,220 | $ - |
| Grants received prior to meeting all eligibility requirements | 1,531,406 | - |
| Special assessments not yet due | - | 1,123,825 |
| Ambulance revenue | - | 124,240 |
| Total unearned/unavailable revenue for governmental funds | $ 16,073,626 | $ 1,248,065 |
| Unearned revenue included in liabilities | $ 1,531,406 | |
| Unearned revenue included in deferred inflows | 14,542,220 | |
| Total unearned revenue for governmental funds | $ 16,073,626 | |

## Restricted Assets

The following represent the balances of the restricted assets:

### Long-Term Debt Accounts

**Redemption** - Used to segregate resources accumulated for debt service payments over the next twelve months.

**Construction** - Used to report proceeds of bond issuances that are restricted for use in construction.

### Net Pension Asset

Restricted assets have been reported in connection with the net pension asset balance since this balance must be used to fund employee benefits.

### Other Restricted Assets

The Water Utility has restricted assets of $60,130 for radium removal.

### Capital Assets

Capital asset activity for the year ended December 31, 2022, was as follows:

| | Beginning Balance | Additions | Deletions | Ending Balance |
|---|---|---|---|---|
| **Governmental Activities** | | | | |
| Capital assets not being depreciated/amortized: | | | | |
| Land | $ 6,903,376 | $ 352,950 | $ - | $ 7,256,326 |
| Construction in progress | 4,345,317 | 18,327,828 | 415,362 | 22,257,783 |
| Total capital assets not being depreciated/amortized | 11,248,693 | 18,680,778 | 415,362 | 29,514,109 |
| Capital assets being depreciated/amortized: | | | | |
| Buildings and improvements | 14,705,483 | - | - | 14,705,483 |
| Land improvements | 4,803,337 | 55,567 | 10,066 | 4,848,838 |
| Equipment | 11,706,589 | 621,569 | 928,205 | 11,399,953 |
| Infrastructure | 58,941,476 | 2,452,339 | - | 61,393,815 |
| Intangibles | 144,597 | - | - | 144,597 |
| Library | 1,024,901 | - | - | 1,024,901 |
| Total capital assets being depreciated/amortized | 91,326,383 | 3,129,475 | 938,271 | 93,517,587 |
| Total capital assets | 102,575,076 | 21,810,253 | 1,353,633 | 123,031,696 |
| Less accumulated for: | | | | |
| Buildings and improvements | (6,183,676) | (411,174) | - | (6,594,850) |
| Land improvements | (1,917,825) | (229,688) | 4,404 | (2,143,109) |
| Equipment | (5,566,560) | (880,047) | 713,753 | (5,732,854) |
| Infrastructure | (26,724,087) | (1,761,495) | - | (28,485,582) |
| Intangibles | (64,354) | (12,881) | - | (77,235) |
| Library | (303,377) | (18,609) | - | (321,986) |
| Total accumulated | (40,759,879) | (3,313,894) | 718,157 | (43,355,616) |
| Net capital assets being depreciated/amortized | 50,566,504 | (184,419) | 220,114 | 50,161,971 |
| Total governmental activities capital assets, net of accumulated | $ 61,815,197 | $ 18,496,359 | $ 635,476 | $ 79,676,080 |

Depreciation/amortization expense was charged to functions as follows:

| | |
|---|---|
| **Governmental Activities** | |
| General government | $ 303,625 |
| Public safety | 523,239 |
| Public works | 2,149,257 |
| Culture and recreation | 337,773 |
| Total governmental activities depreciation/amortization expense | $ 3,313,894 |

| | Beginning Balance | Additions | Deletions | Ending Balance |
|---|---|---|---|---|
| **Business-Type Activities** | | | | |
| Capital assets not being depreciated/amortized: | | | | |
| Land | $ 530,387 | $ - | $ - | $ 530,387 |
| Construction in progress | 2,522,938 | 1,640,592 | 1,670,217 | 2,493,313 |
| Total capital assets not being depreciated/amortized | 3,053,325 | 1,640,592 | 1,670,217 | 3,023,700 |
| Capital assets being depreciated/amortized: | | | | |
| Buildings | 11,091,867 | - | - | 11,091,867 |
| Improvements other than buildings | 93,766,756 | 4,236,707 | 344,177 | 97,659,286 |
| Furniture and equipment | 1,507,685 | 265,701 | - | 1,773,386 |
| Intangibles | 10,772,106 | - | - | 10,772,106 |
| Total capital assets being depreciated/amortized | 117,138,414 | 4,502,408 | 344,177 | 121,296,645 |
| Total capital assets | 120,191,739 | 6,143,000 | 2,014,394 | 124,320,345 |
| Less accumulated for: | | | | |
| Buildings | (4,676,114) | (304,686) | - | (4,980,800) |
| Improvements other than buildings | (26,388,334) | (1,751,512) | 344,177 | (27,795,669) |
| Furniture and equipment | (1,374,874) | (50,094) | - | (1,424,968) |
| Intangibles | (10,772,105) | - | - | (10,772,105) |
| Total accumulated | (43,211,427) | (2,106,292) | 344,177 | (44,973,542) |
| Net capital assets being depreciated/amortized | 73,926,987 | 2,396,116 | - | 76,323,103 |
| Business-type capital assets, net of accumulated | $ 76,980,312 | $ 4,036,708 | $ 1,670,217 | $ 79,346,803 |

**Business-Type Activities**

Depreciation/amortization expense was charged to functions as follows:

| **Business-Type Activities** | |
|---|---|
| Sewer | $ 812,767 |
| Water | 1,293,525 |
| Total business-type activities depreciation / amortization expense | $ 2,106,292 |

**Interfund Receivables/Payables, Advances and Transfers**

**Interfund Receivables/Payables**

The following is a schedule of interfund receivables and payables including any overdrafts on pooled cash and investment accounts:

| Receivable Fund | Payable Fund | Amount |
|---|---|---|
| Water Utility | General Fund | $ 44,604 |
| Sewer Utility | General Fund | 151,047 |
| Total | | $ 195,651 |

| Receivable Fund | Payable Fund | Amount |
|---|---|---|
| Governmental activities | Business-type activities | $ - |
| Business-type activities | Governmental activities | 195,651 |
| Total government-wide financial statements | | $ 195,651 |

All amounts are due within one year.

The principal purpose of these interfunds is to fund timing differences and fund temporary cash deficits. All remaining balances resulted from the time lag between the dates that (1) interfund goods and services are provided or reimbursable expenditures occur, (2) transactions are recorded in the accounting system and (3) payments between funds are made.

**Advances**

The sewer utility is advancing funds to the water utility. The amount advanced is determined by the water utility asset balance as of May 31, 2016 when the water and sewer divisions were split along with the debt payments from 2016-2021 for the water utility that were funded by the sewer utility. A repayment schedule has not been established.

The following is a schedule of interfund advances:

| Receivable Fund | Payable Fund | Amount | Amount Not Due Within One Year |
|---|---|---|---|
| Sewer utility | Water utility | $ 7,404,609 | $ 7,404,609 |
| Total, fund financial statements | | 7,404,609 | |
| Less fund eliminations | | (7,404,609) | |
| Total, interfund advances, government-wide statement of net position | | $ - | |

### Transfers

The following is a schedule of interfund transfers:

| Fund Transferred To | Fund Transferred From | Amount | Principal Purpose |
|---|---|---|---|
| General Fund | Water Utility | $ 514,560 | Tax equivalent |
| Debt Service Fund | Storm Water Management Fund | 200,652 | Debt service |
| Capital Equipment Fund | General Fund | 129,789 | Capital equipment |
| Bike Path Fund | Impact Fees | 64,000 | Bike path study |
| Storm Water Management Fund | General Fund | 19,152 | Council approved contribution |
| General Fund | Tourism and Convention | 20,000 | Operating subsidy |
| Capital Equipment Fund | Debt Service Fund | 1,035,000 | Funding for projects |
| Storm Water Management Fund | Cemetery Fund | 420 | |
| Total, fund financial statements | | 1,983,573 | |
| Less fund eliminations | | (1,469,013) | |
| Total transfers, government-wide statement of activities | | $ 514,560 | |

| Fund Transferred To | Fund Transferred From | Amount |
|---|---|---|
| Governmental activities | Business-type activities | $ 514,560 |
| Business-type activities | Governmental activities | - |
| Total government-wide financial statements | | $ 514,560 |

Generally, transfers are used to (1) move revenues from the fund that collects them to the fund that the budget requires to expend them, (2) move receipts restricted to debt service from the funds collecting the receipts to the debt service fund and (3) use unrestricted revenues collected in the general fund to finance various programs accounted for in other funds in accordance with budgetary authorizations.

### Long-Term Obligations

Long-term obligations activity for the year ended December 31, 2022, was as follows:

| | Beginning Balance | Increases | Decreases | Ending Balance | Amounts Due Within One Year |
|---|---|---|---|---|---|
| **Governmental Activities** | | | | | |
| Bonds and notes payable: | | | | | |
| General obligation debt | $ 12,263,205 | $ 30,710,000 | $ 1,855,245 | $ 41,117,960 | $ 2,143,980 |
| (Discounts)/Premiums | 441,182 | 2,227,172 | 95,039 | 2,573,315 | - |
| Total bonds and notes payable | 12,704,387 | 32,937,172 | 1,950,284 | 43,691,275 | 2,143,980 |
| Other liabilities: | | | | | |
| Vested compensated absences | 787,746 | 229,573 | 210,226 | 807,093 | 271,239 |
| Total governmental activities long-term liabilities | $ 13,492,133 | $ 33,166,745 | $ 2,160,510 | $ 44,498,368 | $ 2,415,219 |

| | Beginning Balance | Increases | Decreases | Ending Balance | Amounts Due Within One Year |
|---|---|---|---|---|---|
| **Business-Type Activities** | | | | | |
| Bonds and notes payable: | | | | | |
| General obligation debt | $ 7,101,795 | $ 7,785,000 | $ 554,756 | $ 14,332,039 | $ 831,020 |
| General obligation notes from direct borrowings and direct placements | 203,095 | - | 20,739 | 182,356 | 21,300 |
| Revenue bonds - direct | 478,559 | 920,107 | 64,107 | 1,334,559 | 65,220 |
| (Discounts)/Premiums | 168,756 | 617,719 | 24,722 | 761,753 | - |
| Total bonds and notes payable | 7,952,205 | 9,322,826 | 664,324 | 16,610,707 | 917,540 |
| Other liabilities: | | | | | |
| Vested compensated absences | 87,143 | 27,763 | 22,694 | 92,212 | 32,797 |
| Total business-type activities long-term liabilities | $ 8,039,348 | $ 9,350,589 | $ 687,018 | $ 16,702,919 | $ 950,337 |

In accordance with Wisconsin Statutes, total general obligation indebtedness of the City may not exceed 5% of the equalized value of taxable property within the City's jurisdiction. The debt limit as of December 31, 2022, was $206,884,185. Total general obligation debt outstanding at year end was $55,632,355.

**General Obligation Debt**

All general obligation debt payable is backed by the full faith and credit of the City. Debt in the governmental funds will be retired by future property tax levies or tax increments accumulated by the debt service fund. Business-type activities debt is payable by revenues from user fees of those funds or, if the revenues are not sufficient, by future tax levies.

| **Governmental Activities**<br>**General Obligation Debt** | Date of Issue | Final Maturity | Interest Rates | Original Indebtedness | Balance December 31, 2022 |
|---|---|---|---|---|---|
| 2012 G.O. Debt | 06/12/12 | 12/01/24 | 1.05-2.15% | $ 3,040,788 | $ 507,960 |
| 2013 G.O. Debt | 05/30/13 | 09/01/32 | 2.0-3.0 | 3,060,000 | 1,720,000 |
| 2016 G.O. Debt | 10/12/16 | 09/01/27 | 2.0-2.25 | 2,995,000 | 1,590,000 |
| 2021 G.O. Debt | 12/01/21 | 03/01/29 | 2.00 | 7,730,000 | 6,590,000 |
| 2022 G.O. Debt | 09/01/22 | 03/01/32 | 3.0-5.0 | 11,090,000 | 11,090,000 |
| 2022 G.O. Debt | 09/01/22 | 03/01/42 | 4.0-5.0 | 19,620,000 | 19,620,000 |
| Total governmental activities, general obligation debt | | | | | $ 41,117,960 |

| **Business-Type Activities**<br>**General Obligation Debt** | Date of Issue | Final Maturity | Interest Rates | Original Indebtedness | Balance December 31, 2022 |
|---|---|---|---|---|---|
| 2010 G.O. Note, direct | 05/01/10 | 05/01/29 | 2.91% | $ 222,618 | $ 96,903 |
| 2011 G.O. Note, direct | 07/13/11 | 05/01/31 | 2.40 | 174,403 | 85,453 |
| 2012 G.O. Debt | 06/12/12 | 12/01/24 | 1.05-2.15 | 834,212 | 172,039 |
| 2013 G.O. Debt | 05/30/13 | 09/01/32 | 2.0-3.0 | 5,915,000 | 3,340,000 |
| 2016 G.O. Debt | 10/12/16 | 09/01/36 | 2.0-2.25 | 2,550,000 | 1,850,000 |
| 2018 G.O. Debt | 11/01/18 | 09/01/38 | 3.0-4.0 | 1,425,000 | 1,185,000 |
| 2022 G.O. Debt | 09/01/22 | 03/01/42 | 4.0-5.0 | 7,785,000 | 7,785,000 |
| Total business-type activities, general obligation debt | | | | | $ 14,514,395 |

Debt service requirements to maturity are as follows:

| Years | Governmental Activities General Obligation Debt Principal | Governmental Activities General Obligation Debt Interest | Business-Type Activities General Obligation Debt Principal | Business-Type Activities General Obligation Debt Interest |
|---|---|---|---|---|
| 2023 | $ 2,143,980 | $ 1,528,393 | $ 831,020 | $ 510,783 |
| 2024 | 2,338,980 | 1,455,588 | 856,019 | 484,488 |
| 2025 | 2,460,000 | 1,369,203 | 795,000 | 457,838 |
| 2026 | 2,545,000 | 1,279,503 | 815,000 | 432,188 |
| 2027 | 2,605,000 | 1,186,513 | 830,000 | 405,643 |
| 2028-2032 | 14,235,000 | 4,417,400 | 4,530,000 | 1,577,736 |
| 2033-2037 | 7,210,000 | 2,271,925 | 3,105,000 | 823,778 |
| 2038-2042 | 7,580,000 | 758,600 | 2,570,000 | 253,900 |
| Total | $ 41,117,960 | $ 14,267,125 | $ 14,332,039 | $ 4,946,354 |

| Years | Business-Type Activities General Obligation Notes From Direct Borrowings And Direct Placements Principal | Business-Type Activities General Obligation Notes From Direct Borrowings And Direct Placements Interest |
|---|---|---|
| 2023 | $ 21,300 | $ 4,583 |
| 2024 | 21,876 | 3,999 |
| 2025 | 22,468 | 3,400 |
| 2026 | 23,076 | 2,784 |
| 2027 | 23,700 | 2,151 |
| 2028-2031 | 69,936 | 2,829 |
| Total | $ 182,356 | $ 19,746 |

**Revenue Debt**

Business-type activities revenue bonds are payable only from revenues derived from the operation of the .

The City has pledged future sewer utility revenues, net of specified operating expenses, to repay revenue bonds issued in 2021. Proceeds from the bonds provided financing for the Fox River Water Pollution Control Center Phosphorus Reduction Project. The bonds are payable solely from sewer revenues and are payable through May 1, 2040. Annual principal and interest payments on the bonds are expected to require 6.00% of net revenues. The total principal and interest remaining to be paid on the bonds is $1,520,777. Principal and interest paid for the current year and total customer net revenues were $64,107 and $16,716, respectively.

Revenue debt payable at December 31, 2022, consists of the following:

**Business-Type Activities Revenue Debt**

| | Date of Issue | Final Maturity | Interest Rates | Original Indebtedness | Balance December 31, 2022 | |
|---|---|---|---|---|---|---|
| **Sewer Utility** | | | | | | |
| 2021 Clean Water Loan | 01/27/21 | 05/01/40 | 1.485% | $ 1,398,666 | $ 1,334,559 | (1) |
| | | | | Total sewer utility | 1,334,559 | |

(1) - During 2021, the utility was authorized to issue $1,619,516 of sewer system Clean Water Fund revenue bonds. The original amount reported above has been issued as of December 31, 2022. The repayment schedule is for the amount issued.

| | |
|---|---|
| Total business-type activities, revenue debt | $ 1,334,559 |

Debt service requirements to maturity are as follows:

| | Business-Type Activities Revenue Debt from Direct Borrowings and Direct Placements | |
|---|---|---|
| **Years** | **Principal** | **Interest** |
| 2023 | $ 65,220 | $ 19,334 |
| 2024 | 66,188 | 18,358 |
| 2025 | 67,171 | 17,368 |
| 2026 | 68,169 | 16,363 |
| 2027 | 69,181 | 15,343 |
| 2028-2032 | 361,624 | 60,881 |
| 2033-2037 | 389,284 | 33,016 |
| 2038-2040 | 247,722 | 5,554 |
| Total | $ 1,334,559 | $ 186,217 |

**Other Debt Information**

Estimated payments of compensated absences are not included in the debt service requirement schedules. The compensated absences liability attributable to governmental activities will be liquidated primarily by the General fund.

### Net Position/Fund Balances

Net position reported on the government-wide statement of net position at December 31, 2022, includes the following:

**Governmental Activities**

| | |
|---|---|
| Net investment in capital assets: | |
| Land | $ 7,256,326 |
| Construction in progress | 22,257,783 |
| Other capital assets, net of accumulated depreciation/amortization | 50,161,971 |
| Less long-term debt outstanding | (41,117,960) |
| Plus unspent capital related debt proceeds | 13,362,440 |
| Less unamortized debt premium | (2,573,315) |
| Total net investment in capital assets | 49,347,245 |
| Restricted: | |
| Debt service | 4,268,985 |
| Cemetery | 118,418 |
| Tourism | 797,936 |
| Public safety grants | 26,119 |
| Impact fees | 361,364 |
| Cemetery perpetual care | 87,976 |
| Pensions | 3,577,075 |
| Total restricted | 9,237,873 |
| Unrestricted | 13,717,399 |
| Total governmental activities net position | $ 72,302,517 |

### Governmental Funds

Governmental fund balances reported on the fund financial statements at December 31, 2022, include the following:

| | General Fund | Storm Water Management | Debt Service | DPW Building | Road Construction | Nonmajor Funds | Total |
|---|---|---|---|---|---|---|---|
| **Fund Balances** | | | | | | | |
| **Nonspendable**: | | | | | | | |
| Prepaid items | $ 389,363 | $ 582 | $ - | $ - | $ - | $ - | $ 389,945 |
| Inventories | 175,958 | - | - | - | - | - | 175,958 |
| Noncurrent receivables | 6,168 | - | - | - | - | - | 6,168 |
| Subtotal | 571,489 | 582 | - | - | - | - | 572,071 |
| **Restricted for:** | | | | | | | |
| Debt service | - | - | 3,660,722 | - | - | - | 3,660,722 |
| Impact fees | - | - | - | - | - | 361,364 | 361,364 |
| Tourism | - | - | - | - | - | 797,936 | 797,936 |
| Cemetery | - | - | - | - | - | 206,394 | 206,394 |
| Public safety | - | - | - | - | - | 26,119 | 26,119 |
| Capital projects | - | 4,479,926 | - | 1,092,936 | 5,739,159 | 2,050,418 | 13,362,439 |
| Subtotal | - | 4,479,926 | 3,660,722 | 1,092,936 | 5,739,159 | 3,442,231 | 18,414,974 |
| **Committed to:** | | | | | | | |
| Capital projects | - | - | - | - | - | 6,333,252 | 6,333,252 |
| **Assigned to**: | | | | | | | |
| Storm water | - | 1,989,175 | - | - | - | - | 1,989,175 |
| **Unassigned**: | 6,417,873 | - | - | - | - | - | 6,417,873 |
| Total fund balances | $ 6,989,362 | $ 6,469,683 | $ 3,660,722 | $ 1,092,936 | $ 5,739,159 | $ 9,775,483 | $ 33,727,345 |

### Business-Type Activities

| | |
|---|---|
| Net investment in capital assets: | |
| Land | $ 530,387 |
| Construction in progress | 2,493,313 |
| Other capital assets, net of accumulated depreciation | 76,323,102 |
| Less long-term debt outstanding | (15,848,954) |
| Plus unspent capital related debt proceeds | 5,226,242 |
| Less unamortized debt premium | (761,753) |
| Total net investment in capital assets | $ 67,962,337 |

## 5. Other Information

### Employees' Retirement System

#### Plan Description

The WRS is a cost-sharing multiple-employer defined benefit pension plan. WRS benefits and other plan provisions are established by Chapter 40 of the Wisconsin Statutes. Benefit terms may only be modified by the legislature. The retirement system is administered by the Wisconsin Department of Employee Trust Funds (ETF). The system provides coverage to all eligible State of Wisconsin, local government and other public employees. All employees, initially employed by a participating WRS employer on or after July 1, 2011, expected to work at least 1,200 hours a year (880 hours for teachers and school district educational support employees) and expected to be employed for at least one year from employee's date of hire are eligible to participate in the WRS.

ETF issues a standalone Annual Comprehensive Financial Report (ACFR), which can be found at https://etf.wi.gov/about-etf/reports-and-studies/financial-reports-and-statements.

Additionally, ETF issued a standalone Wisconsin Retirement System Financial Report, which can also be found using the link above.

#### Vesting

For employees beginning participation on or after January 1, 1990, and no longer actively employed on or after April 24, 1998, creditable service in each of five years is required for eligibility for a retirement annuity. Participants employed prior to 1990 and on or after April 24, 1998, and prior to July 1, 2011, are immediately vested. Participants who initially became WRS eligible on or after July 1, 2011, must have five years of creditable service to be vested.

#### Benefits Provided

Employees who retire at or after age 65 (54 for protective occupation employees, 62 for elected officials and executive service retirement participants, if hired on or before 12/31/2016) are entitled to retirement benefit based on a formula factor, their average earnings and creditable service.

Final average earnings is the average of the participant's three highest annual earnings period. Creditable service includes current service and prior service for which a participant received earnings and made contributions as required. Creditable service also includes creditable military service. The retirement benefit will be calculated as a money purchase benefit based on the employee's contributions plus matching employer's contributions, with interest, if that benefit is higher than the formula benefit.

Vested participants may retire at age 55 (50 for protective occupations) and receive an actuarially reduced benefit. Participants terminating covered employment prior to eligibility for an annuity may either receive employee-required contributions plus interest as a separation benefit or leave contributions on deposit and defer application until eligible to receive a retirement benefit.

The WRS also provides death and disability benefits for employees.

### Post-Retirement Adjustments

The Employee Trust Funds Board may periodically adjust annuity payments from the retirement system based on annual investment performance in accordance with s. 40.27, Wis. Stat. An increase (or decrease) in annuity payments may result when investment gains (losses), together with other actuarial experience factors, create a surplus (shortfall) in the reserves, as determined by the system's consulting actuary. Annuity increases are not based on cost of living or other similar factors. For Core annuities, decreases may be applied only to previously granted increases. By law, Core annuities cannot be reduced to an amount below the original, guaranteed amount (the floor) set at retirement. The Core and Variable annuity adjustments granted during recent years are as follows:

| Year | Core Fund Adjustment % | Variable Fund Adjustment % |
|---|---|---|
| 2012 | (7.0) | (7.0) |
| 2013 | (9.6) | 9.0 |
| 2014 | 4.7 | 25.0 |
| 2015 | 2.9 | 2.0 |
| 2016 | 0.5 | (5.0) |
| 2017 | 2.0 | 4.0 |
| 2018 | 2.4 | 17.0 |
| 2019 | 0.0 | (10.0) |
| 2020 | 1.7 | 21.0 |
| 2021 | 5.1 | 13.0 |

### Contributions

Required contributions are determined by an annual actuarial valuation in accordance with Chapter 40 of the Wisconsin Statutes. The employee required contribution is one-half of the actuarially determined contribution rate for General category employees, including Teachers, Executives and Elected Officials. Starting on January 1, 2016, the Executives and Elected Officials category was merged into the General Employee category. Required contributions for protective employees are the same rate as general employees. Employers are required to contribute the remainder of the actuarially determined contribution rate. The employer may not pay the employee required contribution unless provided for by an existing collective bargaining agreement.

During the reporting period, the WRS recognized $583,727 in contributions from the City.

Contribution rates for the plan year reported as of December 31, 2022 are:

| Employee Category | Employee | Employer |
|---|---|---|
| General (executives & elected officials) | 6.75 % | 6.75 % |
| Protective with Social Security | 6.75 % | 11.75 % |
| Protective without Social Security | 6.75 % | 16.35 % |

**Pension Asset, Pension Expense (Revenue), Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions**

At December 31, 2022, the City reported an asset of $3,823,806 for its proportionate share of the net pension asset. The net pension asset was measured as of December 31, 2021, and the total pension liability used to calculate the net pension asset was determined by an actuarial valuation as of December 31, 2020 rolled forward to December 31, 2021. No material changes in assumptions or benefit terms occurred between the actuarial valuation date and the measurement date. The City's proportion of the net pension asset was based on the City's share of contributions to the pension plan relative to the contributions of all participating employers. At December 31, 2021, the City's proportion was 0.04744068%, which was an increase of 0.00227258% from its proportion measured as of December 31, 2020.

For the year ended December 31, 2022, the City recognized pension revenue of $325,659.

At December 31, 2022, the City reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---|---|---|
| Differences between projected and actual experience | $ 6,177,165 | $ 445,440 |
| Changes in assumptions | 713,391 | - |
| Net differences between projected and actual earnings on pension plan investments | - | 8,554,172 |
| Changes in proportion and differences between employer contributions and proportionate share of contributions | 17,847 | 7,823 |
| Employer contributions subsequent to the measurement date | 619,420 | - |
| Total | $ 7,527,823 | $ 9,007,435 |

$619,420 reported as deferred outflows related to pension resulting from the WRS Employer's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability (asset) in the year ended December 31, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

| Years ending December 31: | Deferred Outflows of Resources and Deferred Inflows of Resources (Net) |
|---|---|
| 2023 | $ (174,169) |
| 2024 | (1,031,831) |
| 2025 | (454,517) |
| 2026 | (438,515) |

**Actuarial Assumptions**

The total pension liability in the December 31, 2021 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

| | |
|---|---|
| Actuarial Valuation Date: | December 31, 2020 |
| Measurement Date of Net Pension Liability (Asset): | December 31, 2021 |
| Experience Study: | January 1, 2018 - December 31, 2020<br>Published November 19, 2021 |
| Actuarial Cost Method: | Entry Age Normal |
| Asset Valuation Method: | Fair Value |
| Long-Term Expected Rate of Return: | 6.8% |
| Discount Rate: | 6.8% |
| Salary Increases: | |
| Wage Inflation | 3.0% |
| Seniority/Merit | 0.1% - 5.6% |
| Mortality: | 2020 WRS Experience Mortality Table |
| Post-Retirement Adjustments*: | 1.7% |

** No post-retirement adjustment is guaranteed. Actual adjustments are based on recognized investment return, actuarial experience and other factors. 1.7% is the assumed annual adjustment based on the investment return assumption and the post-retirement discount rate.*

Actuarial assumptions are based upon an experience study conducted in 2021 that covered a three-year period from January 1, 2018 to December 31, 2020. Based on this experience study, actuarial assumptions used to measure the Total Pension Liability changed from prior year, including the discount rate, long-term expected rate of return, post-retirement adjustment, price inflation, mortality and separation rates. The Total Pension Liability for December 31, 2021 is based upon a roll-forward of the liability calculated from the December 31, 2020 actuarial valuation.

### Long-Term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in the following table:

**Asset Allocation Targets and Expected Returns* As of December 31, 2021**

| Core Fund Asset Class | Asset Allocation % | Long-Term Expected Nominal Rate of Return % | Long-Term Expected Real Rate of Return %** |
|---|---|---|---|
| Global Equities | 52 | 6.8 | 4.2 |
| Fixed Income | 25 | 4.3 | 1.8 |
| Inflation Sensitive | 19 | 2.7 | 0.2 |
| Real Estate | 7 | 5.6 | 3 |
| Private Equity/Debt | 12 | 9.7 | 7 |
| Total Core Fund*** | 115 | 6.6 | 4 |
| **Variable Fund Asset** | | | |
| U.S Equities | 70 | 6.3 | 3.7 |
| International Equities | 30 | 7.2 | 4.6 |
| Total Variable Fund | 100 | 6.8 | 4.2 |

** Asset Allocations are managed within established ranges; target percentages may differ from actual monthly allocations*

*** New England Pension Consultants Long Term US CPI (Inflation) Forecast: 2.5%*

**** The investment policy used for the Core Fund involves reducing equity exposure by leveraging lower-volatility assets, such as fixed income securities. This results in an asset allocation beyond 100%. Currently, an asset allocation target of 15% policy leverage is used subject to an allowable range of up to 20%.*

### Single Discount Rate

A single discount rate of 6.8% was used to measure the total pension liability, as opposed to a discount rate of 7.0% for the prior year. This single discount rate is based on the expected rate of return on pension plan investments of 6.8% and a municipal bond rate of 1.84% (Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-year Municipal GO AA Index" as of December 31, 2021. In describing this index, Fidelity notes that the Municipal Curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.). Because of the unique structure of WRS, the 6.8% expected rate of return implies that a dividend of approximately 1.7% will always be paid. For purposes of the single discount rate, it was assumed that the dividend would always be paid. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments (including expected dividends) of current plan members. Therefore, the investment rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### Sensitivity of the City's Proportionate Share of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the City's proportionate share of the net pension liability (asset) calculated using the discount rate of 6.80%, as well as what the City's proportionate share of the net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage-point lower (5.80%) or 1-percentage-point higher (7.80%) than the current rate:

| | 1% Decrease to Discount Rate (5.8%) | Current Discount Rate (6.8%) | 1% Increase to Discount Rate (7.8%) |
|---|---|---|---|
| City's proportionate share of the net pension liability (asset) | $ 2,713,261 | $ (3,823,806) | $ (8,529,278) |

### Pension Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in separately issued financial statements available at https://etf.wi.gov/about-etf/reports-and-studies/financial-reports-and-statements.

At December 31, 2022, the City reported a payable to the pension plan of $135,884, which represents contractually required contributions outstanding as of the end of the year.

## Risk Management

The City is exposed to various risks of loss related to torts; theft of, damage to or destruction of assets; errors and omissions; workers compensation; and health care of its employees. All of these risks are covered through the purchase of commercial insurance, with minimal deductibles. Settled claims have not exceeded the commercial coverage in any of the past three years. There were no significant reductions in coverage compared to the prior year.

### Commitments and Contingencies

Claims and judgments are recorded as liabilities if all the conditions of Governmental Accounting Standards Board pronouncements are met. The liability and expenditure for claims and judgments are only reported in governmental funds if it has matured. Claims and judgments are recorded in the government-wide statements and proprietary funds as expenses when the related liabilities are incurred.

From time to time, the City is party to various pending claims and legal proceedings. Although the outcome of such matters cannot be forecasted with certainty, it is the opinion of management and the City attorney that the likelihood is remote that any such claims or proceedings will have a material adverse effect on the City's financial position or results of operations.

The City has active construction projects as of December 31, 2022. Work that has been completed on these projects but not yet paid for (including contract retainages) is reflected as accounts payable and expenditures.

### Joint Ventures

#### Pewaukee Public Library

The City of Pewaukee and the Village of Pewaukee jointly operate the library, which is called the Pewaukee Public Library (Library) and provides library services to both communities.

The governing body is made up of citizens from each community. Local representatives are appointed by the mayor. The governing body has authority to adopt its own budget and control the financial affairs of the library. The City is obligated by the joint venture agreement to remit an amount annually to the library. The City made a payment to the library of $840,591 in 2022.

Financial information of the library as of December 31, 2022 is available directly from the library's office.

The equity interest (50% interest for the City) is reported in the governmental activities column of the government-wide statement of net position. Changes in the equity interest are reported on the statement of activities.

### Subsequent Event

On April 17, 2023, The Common Council forgave $5.3 million of the $7.4 million advance from the Sewer Utility to the Water Utility. The remaining amount of the advance will be repaid with a 30 year loan period without interest.

**Effect of New Accounting Standards on Current-Period Financial Statements**

The Governmental Accounting Standards Board (GASB) has approved the following:

- Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*
- Statement No. 96, *Subscription-Based Information Technology Arrangements*
- Statement No. 99, *Omnibus 2022*
- Statement No. 100, *Accounting Changes and Error Corrections - an Amendment of GASB Statement No. 62*
- Statement No. 101, *Compensated Absences*

When they become effective, application of these standards may restate portions of these financial statements.

**REQUIRED SUPPLEMENTARY INFORMATION**

## City of Pewaukee

Schedule of Revenues, Expenditures and Changes in Fund Balance
Budget and Actual - General Fund
Year Ended December 31, 2022

| | Original and Final Budget | Actual | Variance With Final Budget |
|---|---|---|---|
| **Revenues** | | | |
| Taxes | $ 8,787,692 | $ 8,917,261 | $ 129,569 |
| Intergovernmental | 1,473,245 | 1,548,782 | 75,537 |
| Regulation and compliance | 1,609,985 | 1,728,054 | 118,069 |
| Charges for services | 3,756,078 | 4,326,190 | 570,112 |
| Interest income (loss) | 44,500 | (383,317) | (427,817) |
| Miscellaneous | 76,140 | 130,936 | 54,796 |
| Total revenues | 15,747,640 | 16,267,906 | 520,266 |
| **Expenditures** | | | |
| Current: | | | |
| General government | 2,632,512 | 2,201,284 | 431,228 |
| Public safety | 9,444,598 | 9,034,828 | 409,770 |
| Public works | 3,166,240 | 3,208,976 | (42,736) |
| Culture and recreation | 2,388,867 | 2,381,561 | 7,306 |
| Total expenditures | 17,632,217 | 16,826,649 | 805,568 |
| Excess (deficiency) of revenues over expenditures | (1,884,577) | (558,743) | 1,325,834 |
| **Other Financing Sources (Uses)** | | | |
| Proceeds from sale of capital assets | - | 20,366 | 20,366 |
| Transfers in | 600,000 | 534,560 | (65,440) |
| Transfers out | (19,152) | (148,941) | (129,789) |
| Total other financing sources (uses) | 580,848 | 405,985 | (174,863) |
| Net change in fund balance | $ (1,303,729) | (152,758) | $ 1,150,971 |
| **Fund Balance, Beginning** | | 7,142,120 | |
| **Fund Balance, Ending** | | $ 6,989,362 | |

*See notes to required supplementary information*

## City of Pewaukee

Schedule of Revenues, Expenditures and Changes in Fund Balance -
Budget and Actual - Storm Water Management Fund
Year Ended December 31, 2022

| | Original and Final Budget | Actual | Variance With Final Budget |
|---|---|---|---|
| **Revenues** | | | |
| Intergovernmental charges for services | $ 20,000 | $ 33,497 | $ 13,497 |
| Licenses and permits | 200 | 50 | (150) |
| Public charges for services | 1,607,854 | 1,630,914 | 23,060 |
| Investment income | 2,400 | 285 | (2,115) |
| Miscellaneous revenues | 51,000 | 101,351 | 50,351 |
| Total revenues | 1,681,454 | 1,766,097 | 84,643 |
| **Expenditures** | | | |
| Current: | | | |
| Public works | 911,135 | 750,081 | 161,054 |
| Capital outlay | 5,247,500 | 2,840,980 | 2,406,520 |
| Debt service: | | | |
| Interest, issuance costs and fiscal charges | - | 33,458 | (33,458) |
| Total expenditures | 6,158,635 | 3,624,519 | 2,534,116 |
| Excess (deficiency) of revenues over expenditures | (4,477,181) | (1,858,422) | 2,618,759 |
| **Other Financing Sources (Uses)** | | | |
| Debt issued | 3,150,000 | 6,975,000 | 3,825,000 |
| Transfers in | 19,572 | 19,572 | - |
| Transfers out | (200,652) | (200,652) | - |
| Total other financing sources (uses) | 2,968,920 | 6,793,920 | 3,825,000 |
| Net change in fund balance | $ (1,508,261) | 4,935,498 | $ 6,443,759 |
| **Fund Balance, Beginning** | | 1,534,085 | |
| **Fund Balance, Ending** | | $ 6,469,583 | |

*See notes to required supplementary information*

## City of Pewaukee

Schedule of Proportionate Share of the Net Pension Liability/(Asset) - Wisconsin Retirement System
Year Ended December 31, 2022

| WRS Fiscal Year Ending | Proportion of the Net Pension Liability (Asset) | Proportionate Share of the Net Pension Liability (Asset) | Covered Payroll | Proportionate Share of the Net Pension Liability (Asset) as a Percentage of Covered Payroll | Plan Fiduciary Net Position as a Percentage of the Total Pension Liability |
|---|---|---|---|---|---|
| 12/31/14 | 0.03676663% | $ (903,089) | $ 4,320,562 | -20.90% | 102.74% |
| 12/31/15 | 0.03685216% | 598,841 | 4,450,859 | 13.42% | 98.20% |
| 12/31/16 | 0.03771766% | 310,884 | 4,631,126 | 6.71% | 99.12% |
| 12/31/17 | 0.03933083% | (1,167,779) | 4,938,228 | -23.70% | 102.93% |
| 12/31/18 | 0.04138922% | 1,472,498 | 5,206,135 | 28.28% | 96.45% |
| 12/31/19 | 0.04334531% | (1,397,650) | 5,544,374 | -25.21% | 102.96% |
| 12/31/20 | 0.04516810% | (2,819,907) | 5,889,106 | -47.88% | 105.26% |
| 12/31/21 | 0.04744068% | (3,823,806) | 6,435,329 | -59.42% | 106.02% |

Schedule of Employer Contributions - Wisconsin Retirement System
Year Ended December 31, 2022

| City Year Ending | Contractually Required Contributions | Contributions in Relation to the Contractually Required Contributions | Contribution Deficiency (Excess) | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|---|---|---|---|---|---|
| 12/31/15 | $ 360,217 | $ 360,217 | $ - | $ 4,460,859 | 8.08% |
| 12/31/16 | 367,821 | 367,821 | - | 4,631,126 | 7.94% |
| 12/31/17 | 424,351 | 424,351 | - | 4,938,228 | 8.59% |
| 12/31/18 | 446,999 | 446,999 | - | 5,206,135 | 8.59% |
| 12/31/19 | 468,041 | 468,041 | - | 5,544,374 | 8.44% |
| 12/31/20 | 535,948 | 535,948 | - | 5,889,107 | 9.10% |
| 12/31/21 | 586,414 | 586,414 | - | 6,435,330 | 9.11% |
| 12/31/22 | 619,420 | 619,420 | - | 6,775,317 | 9.63% |

*See notes to required supplementary information*

**Budgetary Information**

Budgetary information is derived from the annual operating budget and is presented using the same basis of accounting for each fund as described in Note 1.

The budgeted amounts presented include any amendments made. The City may authorize transfers of budgeted amounts within departments. Transfers between departments and changes to the overall budget must be approved by a two-thirds Board action.

Appropriations lapse at year end unless specifically carried over. There were no carryovers to the following year. Budgets are adopted at the department level of expenditure.

**Wisconsin Retirement System**

The amounts determined for each fiscal year were determined as of the calendar year-end and occurred within the fiscal year.

The City is required to present the last ten years of data; however, accounting standards allow the presentation of as many years as are available until ten fiscal years are presented.

*Changes in benefit terms*. There were no changes of benefit terms for any participating employer in the Wisconsin Retirement System.

*Changes in assumptions*. Based on a three-year experience study conducted in 2021 covering January 1, 2018 through December 31, 2020, the ETF Board adopted assumption changes that were used to measure the total pension liability beginning with the year-end December 31, 2021, including the following:

- Lowering the long-term expected rate of return from 7.0% to 6.8%
- Lowering the discount rate from 7.0% to 6.8%
- Lowering the price inflation rate from 2.5% to 2.4%
- Lowering the post-retirement adjustments from 1.9% to 1.7%
- Mortality assumptions were changed to reflect updated trends by transitioning from the Wisconsin 2018 Mortality Table to the 2020 WRS Experience Mortality Table

Based on a three-year experience study conducted in 2018 covering January 1, 2015 through December 31, 2017, the ETF Board adopted assumption changes that were used to measure the total pension liability beginning with the year-ended December 31, 2018, including the following:

- Lowering the long-term expected rate of return from 7.2% to 7.0%
- Lowering the discount rate from 7.2% to 7.0%
- Lowering the wage inflation rate from 3.2% to 3.0%
- Lowering the price inflation rate from 2.7% to 2.5%
- Lowering the post-retirement adjustments from 2.1% to 1.9%
- Mortality assumptions were changed to reflect updated trends by transitioning from the Wisconsin 2012 Mortality Table to the Wisconsin 2018 Mortality Table

**SUPPLEMENTARY INFORMATION**

**City of Pewaukee**

Combining Balance Sheet
Nonmajor Governmental Funds
December 31, 2022

| | Special Revenue Funds | | | | | Capital Project Funds | | | Permanent Fund | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | Impact Fee | Tourism and Convention | Public Safety Grants | American Rescue Plan | Cemetery | Bike Path | City Hall Remodel | Capital Equipment | Cemetery Perpetual Care | Governmental Funds |
| **Assets** | | | | | | | | | | |
| Cash and Investments | $ 361,364 | $ 814,302 | $ 26,119 | $ 1,531,406 | $ 542,268 | $ 661,543 | $ 990,143 | $ 6,624,567 | $ 87,976 | $ 11,639,688 |
| Receivables (net): | | | | | | | | | | |
| Taxes | - | - | - | - | 35,000 | - | - | 50,000 | - | 85,000 |
| Accounts | - | 45,634 | - | - | - | - | - | - | - | 45,634 |
| Total assets | $ 361,364 | $ 859,936 | $ 26,119 | $ 1,531,406 | $ 577,268 | $ 661,543 | $ 990,143 | $ 6,674,567 | $ 87,976 | $ 11,770,322 |
| **Liabilities, Deferred Inflows of Resources and Fund Balances** | | | | | | | | | | |
| **Liabilities** | | | | | | | | | | |
| Accounts payable | $ - | $ 62,000 | $ - | $ - | $ 23,850 | $ 1,268 | $ - | $ 28,715 | $ - | $ 115,833 |
| Unearned revenues | - | - | - | 1,531,406 | - | - | - | - | - | 1,531,406 |
| Total liabilities | - | 62,000 | - | 1,531,406 | 23,850 | 1,268 | - | 28,715 | - | 1,647,239 |
| **Deferred Inflows of Resources** | | | | | | | | | | |
| Unearned revenues | - | - | - | - | 35,000 | - | - | 312,600 | - | 347,600 |
| **Fund Balances** | | | | | | | | | | |
| Restricted | 361,364 | 797,936 | 26,119 | - | 518,418 | 660,275 | 990,143 | - | 87,976 | 3,442,231 |
| Committed | - | - | - | - | - | - | - | 6,333,252 | - | 6,333,252 |
| Total fund balances | 361,364 | 797,936 | 26,119 | - | 518,418 | 660,275 | 990,143 | 6,333,252 | 87,976 | 9,775,483 |
| Total liabilities, deferred inflows of resources and fund balances | $ 361,364 | $ 859,936 | $ 26,119 | $ 1,531,406 | $ 577,268 | $ 661,543 | $ 990,143 | $ 6,674,567 | $ 87,976 | $ 11,770,322 |

**City of Pewaukee**

Combining Statement of Revenues, Expenditures and Changes in Fund Balances
Nonmajor Governmental Funds
Year Ended December 31, 2022

| | Special Revenue Funds | | | | | Capital Project Funds | | | Permanent Fund | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | Impact Fees | Tourism and Convention | Public Safety Grants | American Rescue Plan | Cemetery | Bike Path | City Hall Remodel | Capital Equipment | Cemetery Perpetual Care | Governmental Funds |
| **Revenues** | | | | | | | | | | |
| Taxes | $ - | $ 664,813 | $ - | $ - | $ 35,000 | $ - | $ - | $ 50,000 | $ - | $ 749,813 |
| Intergovernmental | - | - | 27,030 | - | - | - | - | 51,178 | - | 78,208 |
| Public charges for services | 108,326 | - | - | - | 8,092 | - | - | - | 4,958 | 121,376 |
| Investment income | 234 | - | - | - | - | - | - | - | 34 | 268 |
| Miscellaneous revenues | - | - | - | - | - | - | - | 40,323 | - | 40,323 |
| Total revenues | 108,560 | 664,813 | 27,030 | - | 43,092 | - | - | 141,501 | 4,992 | 989,988 |
| **Expenditures** | | | | | | | | | | |
| Current: | | | | | | | | | | |
| Public safety | - | - | 8,454 | - | - | - | - | - | - | 8,454 |
| Health and human services | - | - | - | - | 47,861 | - | - | - | - | 47,861 |
| Conservation and development | - | 350,012 | - | - | - | - | - | - | - | 350,012 |
| Capital outlay | - | - | - | - | - | 639,928 | 1,311 | 547,806 | - | 1,189,045 |
| Interest, issuance costs and fiscal charges | - | - | - | - | 1,919 | 5,948 | 8,546 | - | - | 16,413 |
| Total expenditures | - | 350,012 | 8,454 | - | 49,780 | 645,876 | 9,857 | 547,806 | - | 1,611,785 |
| Excess (deficiency) of revenues over expenditures | 108,560 | 314,801 | 18,576 | - | (6,688) | (645,876) | (9,857) | (406,305) | 4,992 | (621,797) |
| **Other Financing Sources (Uses)** | | | | | | | | | | |
| Debt issued | - | - | - | - | 400,000 | 1,240,000 | 1,000,000 | - | - | 2,640,000 |
| Transfers in | - | - | - | - | - | 64,000 | - | 1,164,789 | - | 1,228,789 |
| Transfers out | (64,000) | (20,000) | - | - | (420) | - | - | - | - | (84,420) |
| Total other financing sources (uses) | (64,000) | (20,000) | - | - | 399,580 | 1,304,000 | 1,000,000 | 1,164,789 | - | 3,784,369 |
| Net change in fund balances | 44,560 | 294,801 | 18,576 | - | 392,892 | 658,124 | 990,143 | 758,484 | 4,992 | 3,162,572 |
| **Fund Balances, Beginning** | 316,804 | 503,135 | 7,543 | - | 125,526 | 2,151 | - | 5,574,768 | 82,984 | 6,612,911 |
| **Fund Balances, Ending** | $ 361,364 | $ 797,936 | $ 26,119 | $ - | $ 518,418 | $ 660,275 | $ 990,143 | $ 6,333,252 | $ 87,976 | $ 9,775,483 |

# Reporting and insights from 2022 audit:

## City of Pewaukee

**December 31, 2022**

# Executive summary

August 3, 2023

To the Common Council
City of Pewaukee
Pewaukee, Wisconsin

We have completed our audit of the financial statements of the City of Pewaukee (the City) for the year ended December 31, 2022, and have issued our report thereon dated August 3, 2023. This letter presents communications required by our professional standards.

Your audit should provide you with confidence in your financial statements. The audit was performed based on information obtained from meetings with management, data from your systems, knowledge of your City's operating environment and our risk assessment procedures. We strive to provide you clear, concise communication throughout the audit process and of the final results of our audit.

Additionally, we have included information on key risk areas the City should be aware of in your strategic planning. We are available to discuss these risks as they relate to your organization's financial stability and future planning.

If you have questions at any point, please connect with us:

- Paul Frantz, CPA, Partner: paul.frantz@bakertily.com or +1 (414) 777 5506

Sincerely,

Baker Tilly US, LLP



Paul Frantz, CPA, Partner

THIS COMMUNICATION IS INTENDED SOLELY FOR THE INFORMATION AND USE OF THOSE CHARGED WITH GOVERNANCE, AND, IF APPROPRIATE, MANAGEMENT, AND IS NOT INTENDED TO BE AND SHOULD NOT BE USED BY ANYONE OTHER THAN THESE SPECIFIED PARTIES.

BAKER TILLY US, LLP, TRADING AS BAKER TILLY, IS A MEMBER OF THE GLOBAL NETWORK OF BAKER TILLY INTERNATIONAL LTD., THE MEMBERS OF WHICH ARE SEPARATE AND INDEPENDENT LEGAL ENTITIES.

# Responsibilities

## Our responsibilities

As your independent auditor, our responsibilities include:

- Planning and performing the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. Reasonable assurance is a high level of assurance.
- Assessing the risks of material misstatement of the financial statements, whether due to fraud or error. Included in that assessment is a consideration of the City's internal control over financial reporting.
- Performing appropriate procedures based upon our risk assessment.
- Evaluating the appropriateness of the accounting policies used and the reasonableness of significant accounting estimates made by management.
- Forming and expressing an opinion based on our audit about whether the financial statements prepared by management, with the oversight of those charged with governance:
  - Are free from material misstatement
  - Present fairly, in all material respects and in accordance with accounting principles generally accepted in the United States of America
- Our audit does not relieve management or those charged with governance of their responsibilities.

We are also required to communicate significant matters related to our audit that are relevant to the responsibilities of those charged with governance, including:

- Internal control matters
- Qualitative aspects of the City's accounting practice including policies, accounting estimates and financial statement disclosures
- Significant unusual transactions
- Significant difficulties encountered
- Disagreements with management
- Circumstances that affect the form and content of the auditors' report
- Audit consultations outside the engagement team
- Corrected and uncorrected misstatements
- Other audit findings or issues

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# Audit status

## Significant changes to the audit plan

There were no significant changes made to either our planned audit strategy or to the significant risks and other areas of emphasis identified during the performance of our risk assessment procedures.

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# Audit approach and results

## Planned scope and timing

### Audit focus

Based on our understanding of the City and environment in which you operate, we focused our audit on the following key areas:

- Key transaction cycles
- Areas with significant estimates

Our areas of audit focus were informed by, among other things, our assessment of materiality. Materiality in the context of our audit was determined based on specific qualitative and quantitative factors combined with our expectations about the City's current year results.

## Key areas of focus and significant findings

### Significant risks of material misstatement

A significant risk is an identified and assessed risk of material misstatement that, in the auditor's professional judgment, requires special audit consideration. Within our audit, we focused on the following areas below.

| Significant risk areas | Testing approach | Conclusion |
|---|---|---|
| Management override of controls | Incorporate unpredictability into audit procedures, emphasize professional skepticism and utilize audit team with industry expertise | Procedures identified provided sufficient evidence for our audit opinion |
| Improper revenue recognition due to fraud | Confirmation or validation of certain revenues supplemented with detailed predictive analytics based on non-financial data and substantive testing of related receivables | Procedures identified provided sufficient evidence for our audit opinion |

### Other areas of emphasis

We also focused on other areas that did not meet the definition of a significant risk, but were determined to require specific awareness and a unique audit response.

| Other areas of emphasis | | |
|---|---|---|
| Cash and investments | Revenues and receivables | General disbursements |
| Payroll | Pension assets | Long-term debt |
| Capital assets including infrastructure | Net position calculations | Financial reporting and required disclosures |

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# Internal control matters

We considered the City's internal control over financial reporting as a basis for designing our audit procedures for the purpose of expressing an opinion on the financial statements. We are not expressing an opinion on the effectiveness of the City's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and, therefore, material weaknesses or significant deficiencies may exist that were not identified.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis.

A material weakness is a deficiency or combination of deficiencies in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. We identified the following deficiencies as material weaknesses:

- **Missing key controls**
  There are certain controls that are not currently in place related to significant transaction cycles. As a result, there is a risk that erroneous or unauthorized transactions or misstatements could occur without the knowledge of management or the governing body. Our recommendations for strengthening controls are listed below.

  Controls over monthly and year-end accounting

  - Adjusting journal entries and supporting documentation should be reviewed and approved by an appropriate person who is not the original preparer.
  - Account reconciliations prepared throughout the year should be performed by someone independent of processing transactions in the account.

  Since the controls listed above or other compensating controls are not currently in place, errors or irregularities could occur as part of the accounting processes that might not be discovered by management or the governing body. Therefore, the absence of these controls is considered to be a material weakness.

  We recommend that a designated employee review the segregation of duties, risks, and these potential controls and determine whether additional controls should be implemented. This determination should take into consideration a cost / benefit analysis.

- **Financial statement close process**
  Properly designed systems of internal control provide your organization with the ability to process and record accurate monthly and year-end transactions and annual financial reports.

  Our audit includes a review and evaluation of the internal controls relating to financial reporting. Common attributes of a properly designed system of internal control for financial reporting are as follows:

  - There is adequate staffing to prepare financial reports throughout the year and at year-end.
  - Material misstatements are identified and corrected during the normal course of duties.
  - Complete and accurate financial statements, including footnotes, are prepared.
  - Financial reports are independently reviewed for completeness and accuracy.

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Our evaluation of the internal controls over financial reporting has identified control deficiencies that are considered material weakness surrounding the preparation of financial statements and footnotes adjusting journal entries identified by the auditors, and an independent review of financial reports.

Management has not prepared financial statements that are in conformity with generally accepted accounting principles. In addition, material misstatements in the general ledger were identified during the financial audit.

# Other comments and recommendations

- **Departmental Controls**

As part of our annual audit process, we focus our efforts on the primary accounting systems, internal controls, and procedures used by the City. This is in keeping with our goal to provide an audit opinion which states that the financial statements of the City are correct in all material respects.

In some cases, the primary system of accounting procedures and controls of the City are supported by smaller systems which are decentralized and reside within a department or location. In many cases, those systems are as simple as handling cash collections and remitting those collections to the Administrative Services Department.

Generally, the more centralized a function is, the easier it is to design and implement accounting controls that provide some level of checks and balances. That is because you are able to divide certain tasks over the people available to achieve some segregation of duties. For those tasks that are decentralized, it is usually very difficult to provide for proper segregation of duties. Therefore, with one person being involved in most or all aspects of a transaction, you lose the ability to rely on the controls to achieve the safeguarding of assets and reliability of financial records.

As auditors, we are required to communicate with you on a variety of topics. Since there is now more emphasis on internal controls and management’s responsibilities, we believe it is appropriate to make sure that you are informed about the lack of segregation of duties that may occur at departments or locations that handle cash. Departments in your City that fit this situation may include the following:

Parks and Recreation
Cemetery
Building Services
Court
Police Services

As you might expect, similar situations are common in most governments.

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As auditors, we are required to focus on the financial statements at a highly summarized level and our audit procedures support our opinion on those financial statements. Departments or locations that handle relatively smaller amounts of money are not the primary focus of our audit. Yet, because of the lack of segregation of duties, the opportunity for loss is higher there than in centralized functions that have more controls.

Because management is responsible for designing and implementing controls and procedures to detect and prevent fraud, we believe that is important for us to communicate this information to you. We have no knowledge of any fraud that has occurred or is suspected to have occurred within the departments mentioned above. However, your role as the governing body is to assess your risk areas and determine that the appropriate level of controls and procedures are in place. As always, the costs of controls and staffing must be weighed against the perceived benefits of safeguarding your assets.

Without adding staff or splitting up the duties, your own day-to-day contact and knowledge of the operation are also important mitigating factors.

- **Repayment Schedule for Advance from Sewer Utility to Water Utility**

As of December 31, 2022, the Sewer Utility has advanced funds to the Water Utility totaling $7.4 million dollars by making debt payments on the Water Utility's behalf. There has been no formal repayment schedule set up to reimburse these funds. We recommend that the Water Utility work to determine a reasonable repayment schedule based on current rate structure and cash flow requirements.

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# Required communications

### Qualitative aspect of accounting practices

- Accounting policies: Management is responsible for the selection and use of appropriate accounting policies. In accordance with the terms of our engagement letter, we have advised management about the appropriateness of accounting policies and their application. The significant accounting policies used by City are described in Note 1 to the financial statements. No new accounting policies were adopted and the application of existing accounting policies was not changed during 2022. We noted no transactions entered into by the City during the year for which accounting policies are controversial or for which there is a lack of authoritative guidance or consensus or diversity in practice.

- Accounting estimates: Accounting estimates, including fair value estimates, are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements, the degree of subjectivity involved in their development and because of the possibility that future events affecting them may differ significantly from those expected. The following estimates are of most significance to the financial statements:

| Estimate | Management's process to determine | Baker Tilly's conclusions regarding reasonableness |
|---|---|---|
| Compensated absences | Evaluation of hours earned and accumulated in accordance with employment policies and average wage per hour rates | Reasonable in relation to the financial statements as a whole |
| Net pension asset and related deferrals | Evaluation of information provided by the Wisconsin Retirement System | Reasonable in relation to the financial statements as a whole |
| Allowance for doubtful accounts | Evaluation of historical revenues and loss levels with the analysis on collectability of individual amounts | Reasonable in relation to the financial statements as a whole |
| Depreciation | Evaluate estimated useful life of the asset and original acquisition value | Reasonable in relation to the financial statements as a whole |

  There have been no significant changes made by management to either the processes used to develop the particularly sensitive accounting estimates, or to the significant assumptions used to develop the estimates, noted above.

- Financial statement disclosures: The disclosures in the financial statements are neutral, consistent and clear.

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## Significant unusual transactions

There have been no significant transactions that are outside the normal course of business for the City or that otherwise appear to be unusual due to their timing, size or nature.

## Significant difficulties encountered during the audit

We encountered no significant difficulties in dealing with management and completing our audit.

## Disagreements with management

Professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting, or auditing matter that could be significant to the financial statements or the auditors' report. We are pleased to report that no such disagreements arose during the course of our audit.

## Audit report

There have been no departures from the auditors' standard report.

## Audit consultations outside the engagement team

We encountered no difficult or contentious matters for which we consulted outside of the engagement team.

## Corrected misstatements

Professional standards require us to accumulate misstatements identified during the audit, other than those that are clearly trivial and to communicate accumulated misstatements to management. Management is in agreement with the misstatements we have identified, and they have been corrected in the financial statements. The schedule within the Appendix summarizes the material corrected misstatements, that, in our judgment, may not have been detected except through our auditing procedures. The internal control matters section of this report describes the effects on the financial reporting process indicated by the corrected misstatements, other than those that we consider to be of a lesser magnitude than significant deficiencies and material weaknesses.

## Other audit findings or issues

We encountered no other audit findings or issues that require communication at this time.

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the City's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

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## Other information in documents containing audited basic financial statements

*Official statements (or other equivalent document)*

The City's audited financial statements are "general purpose" financial statements. General purpose financial statements consist of the basic financial statements that can be used by a broad group of people for a broad range of activities. Once we have issued our audit report, we have no further obligation to update our report for events occurring subsequent to the date of our report. The City can use the audited financial statements in other client prepare documents, such as official statements related to the issuance of debt, without our acknowledgement. Unless we have been engaged to perform services in connection with any subsequent transaction requiring the inclusion of our audit report, as well as to issue an auditor's acknowledgment letter, we have neither read the document nor performed subsequent event procedures in order to determine whether or not our report remains appropriate.

## Management's consultations with other accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing or accounting matters.

## Written communications between management and Baker Tilly

The Appendix include copies of other material written communications, including a copy of the management representation letter.

## Compliance with laws and regulations

We did not identify any non-compliance with laws and regulations during our audit.

## Fraud

We did not identify any known or suspected fraud during our audit.

## Going concern

Pursuant to professional standards, we are required to communicate to you, when applicable, certain matters relating to our evaluation of the City's ability to continue as a going concern for a reasonable period of time but no less than 12 months from the date of the financial statements, including the effects on the financial statements and the adequacy of the related disclosures, and the effects on the auditor's report. No such matters or conditions have come to our attention during our engagement.

## Independence

We are not aware of any relationships between Baker Tilly and the City that, in our professional judgment, may reasonably be thought to bear on our independence.

## Related parties

We did not have any significant findings or issues arise during the audit in connection with the City's related parties.

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**Other matters**

We applied certain limited procedures to the required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the supplementary information which accompanies the financial statements but is not RSI. With respect to the supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

# Nonattest services

The following nonattest services were provided by Baker Tilly:

- Financial statement preparation
- Adjusting journal entries
- Compiled regulatory reports

In addition, we prepared GASB No. 34 conversion entries which are summarized in the "Reconciliation of the Balance Sheet of Governmental Funds to the Statement of Net Position" and the "Reconciliation of the Statement of Revenues, Expenditures, and Changes in Fund Balances of Governmental Funds to the Statement of Activities" in the financial statements.

None of these nonattest services constitute an audit under generally accepted auditing standards, including *Government Auditing Standards*.

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# Reports to those charged with governance

Visit our resource page for regulatory updates, trending challenges and opportunities in your industry and other timely updates.

Visit the resource page at https://www.bakertilly.com/insights/audit-committee-resource-page.

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# Management representation letter

**Administration**

W240N3065 Pewaukee Road
Pewaukee, WI 53072
(262) 691-0770 Fax: (262) 691-1798
www.cityofpewaukee.us

August 3, 2023

Baker Tilly US, LLP
777 E Wisconsin Ave
32nd Floor
Milwaukee, WI 53202

Dear Baker Tilly US, LLP:

We are providing this letter in connection with your audit of the financial statements of the City of Pewaukee as of December 31, 2022 and for the year then ended for the purpose of expressing an opinion as to whether the financial statements present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate remaining fund information of the City of Pewaukee, Wisconsin, and the respective changes in financial position and cash flows, where applicable, in conformity with accounting principles generally accepted in the United States of America (GAAP). We confirm that we are responsible for the fair presentation of the previously mentioned financial statements in conformity with accounting principles generally accepted in the United States of America. We are also responsible for adopting sound accounting policies, establishing and maintaining internal control over financial reporting, and preventing and detecting fraud.

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in the light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement. An omission or misstatement that is monetarily small in amount could be considered material as a result of qualitative factors.

We confirm, to the best of our knowledge and belief, the following representations made to you during your audit.

**Financial Statements**

1) We have fulfilled our responsibilities, as set out in the terms of the audit engagement letter dated November 6, 2019.

2) The financial statements referred to above are fairly presented in conformity with accounting principles generally accepted in the United States of America. We have engaged you to advise us in fulfilling that responsibility. The financial statements include all properly classified funds of the primary government required by accounting principles generally accepted in the United States of America to be included in the financial reporting entity.

3) We acknowledge our responsibility for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

4) We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

5) Significant assumptions we used in making accounting estimates, including those measured at fair value, if any, are reasonable.

6) All events subsequent to the date of the financial statements and for which accounting principles generally accepted in the United States of America require adjustment or disclosure have been adjusted or disclosed. No other events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to or disclosure in the aforementioned financial statements.

7) All material transactions have been recorded in the accounting records and are reflected in the financial statements.

8) All known audit and bookkeeping adjustments have been included in our financial statements, and we are in agreement with those adjustments.

9) There are no known or possible litigation, claims, and assessments whose effects should be considered when preparing the financial statements. There are no unasserted claims or assessments that our lawyer has advised us are probable of assertion and must be disclosed in accordance with accounting principles generally accepted in the United States of America.

**Information Provided**

10) We have provided you with:

    a) Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements, such as financial records and related data, documentation, and other matters.

    b) Additional information that you have requested from us for the purpose of the audit.

    c) Unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.

    d) Minutes of the meetings of City Council or summaries of actions of recent meetings for which minutes have not yet been prepared.

11) We have not completed an assessment of the risk that the financial statements may be materially misstated as a result of fraud.

12) We have no knowledge of any fraud or suspected fraud that affects the entity and involves:

    a) Management,

    b) Employees who have significant roles in internal control, or

    c) Others where the fraud could have a material effect on the financial statements.

13) We have no knowledge of any allegations of fraud or suspected fraud affecting the entity received in communications from employees, former employees, regulators, or others.

14) We have no knowledge of known instances of noncompliance or suspected noncompliance with provisions of laws, regulations, contracts, or grant agreements, or abuse, whose effects should be considered when preparing financial statements.

15) There are no related parties or related party relationships and transactions, including side agreements, of which we are aware.

**Other**

16) There have been no communications from regulatory agencies concerning noncompliance with, or deficiencies in, financial reporting practices.

17) We have a process to track the status of audit findings and recommendations.

18) We have identified to you any previous financial audits, attestation engagements, and other studies related to the audit objectives and whether related recommendations have been implemented.

19) The City has no plans or intentions that may materially affect the carrying value or classification of assets, deferred outflows of resources, liabilities, deferred inflows of resources or fund balance or net position.

20) We are responsible for compliance with federal, state, and local laws, regulations, and provisions of contracts and grant agreements applicable to us, including tax or debt limits, debt contracts, and IRS arbitrage regulations; and we have identified and disclosed to you all federal, state, and local laws, regulations and provisions of contracts and grant agreements that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.

21) There are no:

a) Violations or possible violations of budget ordinances, federal, state, and local laws or regulations (including those pertaining to adopting, approving and amending budgets), provisions of contracts and grant agreements, tax or debt limits, and any related debt covenants whose effects should be considered for disclosure in the financial statements or as a basis for recording a loss contingency, or for reporting on noncompliance, except those already disclosed in the financial statement, if any.

b) Other liabilities or gain or loss contingencies that are required to be accrued or disclosed by accounting principles generally accepted in the United States of America.

c) Nonspendable, restricted, committed, or assigned fund balances that were not properly authorized and approved.

d) Rates being charged to customers other than the rates as authorized by the applicable authoritative body.

e) Violations of restrictions placed on revenues as a result of bond resolution covenants such as revenue distribution or debt service funding.

22) In regards to the nonattest services performed by you listed below, we acknowledge our responsibility related to these nonattest services and have 1) accepted all management responsibility; 2) designated an individual with suitable skill, knowledge, or experience to oversee the services; 3) evaluated the adequacy and results of the services performed, and 4) accepted responsibility for the results of the services.

    a) Financial statement preparation

    b) Adjusting journal entries

    c) Compiled regulatory reports

    None of these nonattest services constitute an audit under generally accepted auditing standards, including *Government Auditing Standards*.

23) The City of Pewaukee has satisfactory title to all owned assets, and there are no liens or encumbrances on such assets nor has any asset been pledged as collateral.

24) The City of Pewaukee has complied with all aspects of contractual agreements that would have a material effect on the financial statement in the event of noncompliance.

25) The financial statements include all component units as well as joint ventures with an equity interest, and properly disclose all other joint ventures and other related organizations, if any. Component units have been properly presented as either blended or discrete.

26) The financial statements include all fiduciary activities required by GASB No. 84.

27) The financial statements properly classify all funds and activities.

28) All funds that meet the quantitative criteria in GASB Statement No. 34 and No. 37 for presentation as major are identified and presented as such and all other funds that are presented as major are particularly important to financial statement users.

29) Components of net position (net investment in capital assets; restricted; and unrestricted) and components of fund balance (nonspendable, restricted, committed, assigned and unassigned) are properly classified and, if applicable, approved.

30) The City of Pewaukee has no derivative financial instruments such as contracts that could be assigned to someone else or net settled, interest rate swaps, collars or caps.

31) Provisions for uncollectible receivables, if any, have been properly identified and recorded.

32) Expenses have been appropriately classified in or allocated to functions and programs in the statement of activities, and allocations have been made on a reasonable basis.

33) Revenues are appropriately classified in the statement of activities within program revenues and general revenues.

34) Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.

35) Deposits and investments are properly classified, valued, and disclosed (including risk disclosures, collateralization agreements, valuation methods, and key inputs, as applicable).

36) Provision, when material, has been made to reduce excess or obsolete inventories to their estimated net realizable value.

37) Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated/amortized. Any known impairments have been recorded and disclosed.

38) Tax-exempt bonds issued have retained their tax-exempt status.

39) We have appropriately disclosed the City of Pewaukee's policy regarding whether to first apply restricted or unrestricted resources when an expense is incurred for purposes for which both restricted and unrestricted net position are available and have determined that net position were properly recognized under the policy. We have also disclosed our policy regarding which resources (that is, restricted, committed, assigned or unassigned) are considered to be spent first for expenditures for which more than one resource classification is available.

40) We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

41) With respect to the supplementary information, (SI):

    a) We acknowledge our responsibility for presenting the SI in accordance with accounting principles generally accepted in the United States of America, and we believe the SI, including its form and content, is fairly presented in accordance with accounting principles generally accepted in the United States of America. The methods of measurement and presentation of the SI have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the supplementary information.

    b) If the SI is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date we issue the supplementary information and the auditor's report thereon.

42) We assume responsibility for, and agree with, the information provided by the Wisconsin Retirement System as audited by the Legislative Audit Bureau relating to the net pension asset/liability and related deferred outflows and deferred inflows and have adequately considered the reasonableness of the amounts and disclosures used in the financial statements and underlying accounting records. We also assume responsibility for the census data that has been reported to the plan.

43) We have reviewed existing contracts and determined there are no items requiring accounting or reporting as leases.

44) We are responsible for the estimation methods and assumptions used in measuring assets and liabilities reported or disclosed at fair value, including information obtained from brokers, pricing services or third parties. Our valuation methodologies have been consistently applied from period to period. The fair value measurements reported or disclosed represent our best estimate of fair value as the measurement date in accordance with the requirements of GASB 72 – *Fair Value Measurement.* In addition our disclosures related to fair value measurements are consistent with the objectives outlined in GASB 72. We have evaluated the fair value information provided to us by brokers, pricing services or other parties that has been used in the financial statements and believe this information to be reliable and consistent with the requirements.

45) The auditing standards define an annual report as "a document, or combination of documents, typically prepared on an annual basis by management or those charged with governance in accordance with law, regulation, or custom, the purpose of which is to provide owners (or similar stakeholders) with information on the entity's operations and the financial results and financial position as set out in the financial statements." Among other items, an annual report contains, accompanies, or incorporates by reference the financial statements and the auditors' report thereon. We confirm that we do not prepare and have no plans to prepare an annual report.

Sincerely,

City of Pewaukee

Signed: _____
Scott Klein, City Administrator

Signed: _____
Kelly Tarczewski, City Clerk/Treasurer

# Client service team



**Paul Frantz, CPA**

**Partner**

777 East Wisconsin Avenue, 32nd Floor
Milwaukee, Wisconsin 53202
United States

**T +1 (414) 777 5506**
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# Accounting changes relevant to the City

### Future accounting standards update

| GASB Statement Number | Description | Potentially Impacts you | Effective Date |
|---|---|---|---|
| 94 | Public-Private and Public-Public Partnerships and Availability Payment Arrangements | ✓ | 12/31/23 |
| 96 | Subscription-Based Information Technology Arrangements | ✓ | 12/31/23 |
| 99 | Omnibus 2022 | ✓ | 12/31/23 |
| 100 | Accounting Changes and Error Corrections | ✓ | 12/31/24 |
| 101 | Compensated Absences | ✓ | 12/31/24 |

Further information on upcoming GASB pronouncements.

### Determining if GASB 94 applies for your organization

GASB 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements* provides guidance related to public-private and public-public partnerships (PPP) and availability payment arrangements (APA).

A PPP is an arrangement in which an entity contracts with an operator to provide public services by conveying control of the right to operate or use infrastructure or other capital asset. A common example of PPP is a service concession arrangement.

An APA is an arrangement in which an entity compensates an operator for services that may include designing, constructing, financing, maintaining, or operating an asset.

The City should start to identify any contracts that could meet either definition to ensure they are reviewed for applicability and accounted for correctly when the standard is effective. Initial steps include reviewing contracts that didn't meet the definition of a lease under GASB 87 and identifying any other agreements where the organization contracts with or partners with another entity to provide services.

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### Future accounting for subscription-based IT arrangements

Subscription-based IT arrangements include contracts that convey control of the right to use another party's IT software. It would not include any licensing arrangements that provide a perpetual license, which would still be accounted for as an intangible asset. Subscription-based IT arrangements are becoming more and more popular with IT vendors. This standard mirrors the new lease standard. The City will be able to utilize the systems put into place to implement the lease standard to properly account for these contracts. Common examples of these contracts in the utility industry include:

- Leasing space in the cloud
- GIS systems
- SCADA systems
- Some work order or inventory systems as well as some general ledger or billing systems

The City should work with its IT department and department managers to determine a population listing of contracts that would fall under this standard to determine the potential future impact to financial reporting.

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# Material corrected misstatements

| Description | Amount | |
|---|---|---|
| To record retainages on City and Utility projects | $ | 858,740 |
| To record current year activity related to GASB 68 in Utilities | $ | 244,960 |
| To record payroll activity for third and fourth quarter | $ | 622,401 |
| To record health insurance expenditures in the appropriate period | $ | 144,429 |
| To record activity appropriately for ambulance receivables | $ | 124,240 |
| To record capital project expenditures in the appropriate fund | $ | 6,349,295 |
| To record Utility capital contributions | $ | 3,085,584 |
| To record Utility deletions | $ | 344,177 |
| To record Utility construction in progress | $ | 1,143,006 |
| To record Utility depreciation | $ | 859,244 |

The remaining misstatements that were identified and corrected by management were not material individually or in the aggregate to the financial statements taken as a whole.

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# Two-way audit communications

As part of our audit of your financial statements, we are providing communications to you throughout the audit process. Auditing requirements provide for two-way communication and are important in assisting the auditor and you with more information relevant to the audit.

As this past audit is concluded, we use what we have learned to begin the planning process for next year's audit. It is important that you understand the following points about the scope and timing of our next audit:

a. We address the significant risks of material misstatement, whether due to fraud or error, through our detailed audit procedures.

b. We will obtain an understanding of the five components of internal control sufficient to assess the risk of material misstatement of the financial statements whether due to error or fraud, and to design the nature, timing and extent of further audit procedures. We will obtain a sufficient understanding by performing risk assessment procedures to evaluate the design of controls relevant to an audit of financial statements and to determine whether they have been implemented. We will use such knowledge to:

   - Identify types of potential misstatements.
   - Consider factors that affect the risks of material misstatement.
   - Design tests of controls, when applicable, and substantive procedures.

c. We will not express an opinion on the effectiveness of internal control over financial reporting or compliance with laws, regulations and provisions of contracts or grant programs.

d. The concept of materiality recognizes that some matters, either individually or in the aggregate, are important for fair presentation of financial statements in conformity with generally accepted accounting principles while other matters are not important. In performing the audit, we are concerned with matters that, either individually or in the aggregate, could be material to the financial statements. Our responsibility is to plan and perform the audit to obtain reasonable assurance that material misstatements, whether caused by errors or fraud, are detected.

Our audit will be performed in accordance with auditing standards generally accepted in the United States of America.

We are very interested in your views regarding certain matters. Those matters are listed here:

a. We typically will communicate with your top level of management unless you tell us otherwise.

b. We understand that the governing board has the responsibility to oversee the strategic direction of your organization, as well as the overall accountability of the entity. Management has the responsibility for achieving the objectives of the entity.

c. We need to know your views about your organization's objectives and strategies, and the related business risks that may result in material misstatements.

d. Which matters do you consider warrant particular attention during the audit, and are there any areas where you request additional procedures to be undertaken?

e. Have you had any significant communications with regulators or grantor agencies?

f. Are there other matters that you believe are relevant to the audit of the financial statements?

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Also, is there anything that we need to know about the attitudes, awareness and actions of the governing body concerning:

a. The entity's internal control and its importance in the entity, including how those charged with governance oversee the effectiveness of internal control?

b. The detection or the possibility of fraud?

We also need to know if you have taken actions in response to developments in financial reporting, laws, accounting standards, governance practices, or other related matters, or in response to previous communications with us.

With regard to the timing of our audit, here is some general information. If necessary, we may do preliminary financial audit work during the months of October-December, and sometimes early in January. Our final financial fieldwork is scheduled during March to best coincide with your readiness and report deadlines. After fieldwork, we wrap up our financial audit procedures at our office and may issue drafts of our report for your review. Final copies of our report and other communications are issued after approval by your staff. This is typically 6-12 weeks after final fieldwork, but may vary depending on a number of factors.

Keep in mind that while this communication may assist us with planning the scope and timing of the audit, it does not change the auditor's sole responsibility to determine the overall audit strategy and the audit plan, including the nature, timing and extent of procedures necessary to obtain sufficient appropriate audit evidence.

We realize that you may have questions on what this all means, or wish to provide other feedback. We welcome the opportunity to hear from you.

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# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 5.

**DATE:** September 5, 2023

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Discussion and Possible Action to Approve a Temporary Class B Beer License to the Friends of the Park for their Lake Country Canine Carnival Event on October 7th, 2023 to be Held at the Pewaukee Sports Complex Located at N45 W23440 Lindsay Road

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

Friends of the Park Application

Save Print Clear

# Application for Temporary Class "B" / "Class B" Retailer's License

*See Additional Information on reverse side. Contact the municipal clerk if you have questions.*

FEE $ 10.00 Application Date: 08/18/2023

☐ Town ☐ Village ☑ City of PEWAUKEE County of WAUKESHA

The named organization applies for: *(check appropriate box(es).)*

☑ A Temporary Class "B" license to sell fermented malt beverages at picnics or similar gatherings under s. 125.26(6), Wis. Stats.

☐ A Temporary "Class B" license to sell wine at picnics or similar gatherings under s. 125.51(10), Wis. Stats.

at the premises described below during a special event beginning 10/07/2023 and ending 10/07/2023 and agrees to comply with all laws, resolutions, ordinances and regulations (state, federal or local) affecting the sale of fermented malt beverages and/or wine if the license is granted.

**1. Organization** *(check appropriate box)* →

☑ Bona fide Club ☐ Church ☐ Lodge/Society

☐ Veteran's Organization ☐ Fair Association or Agricultural Society

☐ Chamber of Commerce or similar Civic or Trade Organization organized under ch. 181, Wis. Stats.

(a) Name Friends of the Parks of Pewaukee

(b) Address PO Box 257 / Pewaukee, WI 53072 *(Street)* ☐ Town ☑ Village ☐ City

(c) Date organized

(d) If corporation, give date of incorporation

(e) If the named organization is not required to hold a Wisconsin seller's permit pursuant to s. 77.54 (7m), Wis. Stats., check this box: ☐

(f) Names and addresses of all officers:

President Bob Rohde

Vice President

Secretary Nancy Roncke

Treasurer Dennis Empey

(g) Name and address of manager or person in charge of affair:

Nick Phalin, W240N3065 Pewaukee Road, Pewaukee, WI 53072

**2. Location of Premises Where Beer and/or Wine Will Be Sold, Served, Consumed, or Stored, and Areas Where Alcohol Beverage Records Will be Stored:**

(a) Street number N45W23440 Lindsay Road (Pewaukee Sports Complex)

(b) Lot Block

(c) Do premises occupy all or part of building? part

(d) If part of building, describe fully all premises covered under this application, which floor or floors, or room or rooms, license is to cover: Sales outside, purchasers may sit under open-air pavilion, all within park boundaries, records to be kept in sales area

**3. Name of Event**

(a) List name of the event Lake Country Canine Carnival

(b) Dates of event 10/07/2023

## DECLARATION

*An officer of the organization, declares under penalties of law that the information provided in this application is true and correct to the best of his/her knowledge and belief. Any person who knowingly provides materially false information in an application for a license may be required to forfeit not more than $1,000.*

Officer [signature] 8/18/23 *(Signature / Date)*

FRIENDS OF THE PARKS OF PEWAUKEE *(Name of Organization)*

Date Filed with Clerk Date Reported to Council or Board

Date Granted by Council License No.

# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 6.

**DATE:** September 5, 2023

**DEPARTMENT:** Planning

**PROVIDED BY:** Nick Fuchs

***SUBJECT:***

**PUBLIC HEARRING,** Discussion and Possible Action Regarding a Conditional Use Permit for Quattro Development/Higher Ground Education for the Property Located on Highfield Court (PWC 0906-994) for the Purpose of Constructing a Childcare Facility [Fuchs]

***BACKGROUND:***

The Conditional Use and Site and Building Plan Review applications were tabled at the March 16, 2023 Plan Commission meeting following concerns from neighbors. Concerns were expressed from residents of the Broken Hills subdivision regarding cars and customers of the Montessori school cutting through the neighborhood to get to their destination. At this meeting, the applicant agreed to complete a Traffic Impact Analysis, which is attached for review.

The applicant returned to the Plan Commission on May 18, 2023. At that meeting, the Plan Commission unanimously voted to recommend denial of the proposed Conditional Use Permit and Site and Building Plans indicating continued traffic concerns and impacts to the adjacent residential subdivision.

The applicant is requesting Common Council review of the business operations and Traffic Impact Analysis and requesting approval of the proposed use.

If approved, the Plan Commission may reconsider their denial of the Site and Building Plan Application.

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

A motion to approve the Conditional Use Permit for the Guidepost Montessori School.

**ATTACHMENTS:**

Description

Quattro Development staff report 2.16.23

Higher Ground project narrative

Higher Ground response comments

Higher Ground civil & architectural plans

Higher Ground ROW release request

Higher Ground CSM
Quattro Development draft Conditional Use Permit 4.3.23
Quattro Development draft Resolution
Quattro Development TIA
Traffic Study

**Office of the Planner & Community Development Director**
W240 N3065 Pewaukee Road
Pewaukee, Wisconsin 53072
Phone (262) 691-0770 Fax (262) 691-1798
fuchs@pewaukee.wi.us

REPORT TO THE PLAN COMMISSION

Meeting of February 16, 2023

**Date:** February 9, 2023

**Project Name:** Guidepost Montessori Conditional Use and Site & Building Plan Review

**Project Address/Tax Key No.:** Highfield Court/PWC 0906994

**Applicant:** Quattro Development, LLC

**Property Owner:** KB Pewaukee, LLC

**Current Zoning:** B-6 Mixed Use Business

**2050 Land Use Map Designation**: Office/Commercial

**Use of Surrounding Properties:** Capitol Dr to the south, Highfield Ct to the north, a daycare to the east and bank to the west.

**Project Description/Analysis:**

The applicant, Quattro Development LLC, submitted a Conditional Use Application and Site & Building Plans for a proposed childcare facility on a mostly vacant lot located along Highfield Court and Capitol Drive between HWY 164 and Highfield Road. The subject property is zoned B-6 Mixed Use Business District and designated as Office/Commercial on the City's Year 2050 Land Use/Transportation Plan map.

Conditional Use

The proposed use is more specifically a Montessori educational facility. The applicant anticipates 15 full-time employees, with a maximum child occupancy of 152 children. The hours of operation are from 7am to 6pm Monday through Friday.

The B-6 District refers to the B-4 and B-5 districts regarding allowed uses. Educational and childcare facilities is not specifically listed as an allowed use; however, the B-4 and B-5 districts allow uses similar to those that are listed as Permitted Uses within each district. Those uses not listed are required to apply for Conditional Use Permits.

The B-4 District generally allows offices, banks, and studios for fine arts. The B-5 District generally allows auto sales and services, hotels and motels, and restaurants.

Staff finds that the proposed use is most similar to B-4 type uses and would not have any adverse impacts to the surrounding area. The B-4 District is intended to consist of less intensive uses in order to be compatible with neighborhood residential uses, such as the residential subdivision to the north and condominiums to the east. Staff contends that the proposed use meets this intent and fits in with adjacent uses.

Furthermore, the abutting use to the east is also a childcare facility. This property is zoned B-1, which similarly does not specifically allow childcare facilities but allows similar uses as those permitted in

the B-1 District via Conditional Use Permit. The B-1 District generally allows retail and office type uses.

Site Plan
The subject property is about 2-acres and the total site disturbance of the project will be a total of 1.67 acres. The project results in about 50% greenspace, which is in conformance with City standards.

The proposed development consists of a new 11,836 square foot, single-story building. Two large playground areas are proposed at the north and south ends of the childcare facility. A smaller play area is also proposed on the east side of the building.

A dumpster enclosure is located beside the driveway, slightly northwest of the northernmost playground area. A 6-foot wrought iron fence runs from the north side of the building down to the south side of the building and 4-foot white vinyl fencing is used to separate play areas.

Overall, the proposed development complies with B-6 District development standards.

*Staff recommends that the playground areas, fencing, and any other accessory structure and use be located behind the building on the north side of the property*. The applicant has indicated that due to the building configuration and operation of the Montessori program, the playground locations as proposed are integral to their use.

Access
This site abuts both Capitol Drive and Highfield Court, but is only accessible from Highfield Court.

Additionally, there is an existing and unimproved 45' right-of-way reservation depicted along the south side of the property, adjacent to Capitol Drive, shown on Certified Survey Map No. 10366. The applicant is requesting that this reservation be released by the City.

Staff has reviewed this request and does not have any objections. It is anticipated that a resolution releasing this reservation will be brought forward to the Common Council for their review and approval.

Landscaping
The applicant is proposing to install 19 Deciduous Trees, 5 Evergreen Trees, 31 Deciduous Shrubs, and 29 Evergreen Shrubs. There are at least three different species of Deciduous Trees, Deciduous Shrubs, and Evergreen Shrubs provided and two different species of Evergreen Trees.

The landscape plan focuses many plantings on screening the fencing and playground area along Capitol Drive. Plantings are also provided directly around the dumpster enclosure.

Parking
The site plan includes 25 new parking spaces, of which three are ADA required spaces.

Additionally, there is existing parking located on the northwest side of the site, which is shared with the bank and office building to the west. There is an existing cross parking easement with the property to the west.

Parking spaces are 10’ x 18’ (180 square feet), which is in compliance with Zoning Code standards.

Architecture
The proposed building exterior consists of Hardie shank siding, thin concrete brick veneer, thin stone veneer, and asphalt shingles. The dumpsters will be enclosed in a decorative masonry enclosure matching the building’s exterior materials.

The mechanicals are located in a recessed rooftop penthouse, which screens them from public view.

Signage
A wall sign and monument sign are anticipated and shown for reference only in the plans. All signage must comply with standards set forth in Section 17.0700 of the City’s Zoning Code and will require separate review and approval by the City Planner as well as a Sign Permit from the Building Services Department, prior to installation.

Utilities
Public sewer and water are available and will serve the development.

*Final grading, erosion control and storm water management plans shall be approved by the Engineering Department, prior to any land disturbing activities*.

Lighting
The Lighting Plan consists of three parking lot lights. Light levels are at 0.0 footcandles at the property lines. The peak height of lights is 18-feet, which complies with the 20-foot maximum height requirement of the Zoning Code. The Wattage is under 150 and not visible from adjacent streets or residential properties.

Bell Tower
The subject property was previously part of the property to the west. In 2005, the City approved Conditional Use Permit No. COP-05-10-3, which included this property, and contained the conditions listed below related to the construction of a bell tower. The bell tower was being proposed by the property owner at that time along with the Bell Tower Memorial non-profit organization.

1. The bank would build a bell tower according to the plans that were developed and brought to the Plan Commission at their November 2005 meeting.
2. The bell tower would be constructed prior to occupancy of the second office building proposed for the site.
3. The second office building proposed for the site would be constructed within three (3) years or by October of 2008.
4. If the bell tower is not built by October 2008, the City will build the tower according to the plans submitted on November 17, 2005, and assess the Foundation Bank for the cost of the tower, plus any administrative costs.

The applicant is requesting that these conditions be removed and that there be no requirement to construct a bell tower. It is staff’s understanding that the Bell Tower Memorial organization is continuing to fundraise to construct the bell tower within the Pewaukee Kiwanis Village Park, opposed

to this location. The bell that was to be utilized for the tower at this site was also sold or given to another organization.

The Conditional Use Permit has been drafted to include language stating that "*The applicant shall not be responsible for the construction of a bell tower as conditioned within Conditional Use Permit No. COP-05-10-3.*"

**Recommendation:**

A motion to recommend approval of the Conditional Use Permit for Quattro Development LLC to locate a childcare facility upon property bearing Tax Key No. PWC 0906994.

and

A motion to approve the Site & Building Plans for the construction of a childcare facility upon property bearing Tax Key No. PWC 0906994, subject to the conditions contained within this report.

February 3, 2023

**Project Narrative**

Project: Higher Ground Education
East of N35W23877 Highfield Ct
Pewaukee, WI 53072
Excel Project No: 2245520

Quattro Development, LLC (partnered with Higher Ground Education) is requesting conditional use permit review and approval for a new childcare facility development located on parcel PWC 0906994, just east of N35W23877 Highfield Ct in the City of Pewaukee. The property is zoned B-6 Mixed Use Business and the proposed use requires a conditional use in this district. The existing site is vacant and undeveloped. Higher Ground Education provides Montessori-powered educational offerings.

The proposed project consists of a new 11,705 SF single story childcare facility. The existing site is 2 acres and the total site disturbance for the project will total 1.67 acres. The site can be accessed via the existing shared drive from Highfield Ct. An existing access easement is in place along with a cross parking easement. The proposed new parking will consist of 38 new stalls. Traffic access will be consistent with the existing facility to the west of the proposed development as the existing shared access drive will be utilized. Some new parking stalls will access directly off the existing driveway with the remaining being placed in a parking lot extension to the south. Truck unloading and deliveries will be at a minimum and when needed, the site drive west of the building will be utilized. The playground areas are strategically located in conjunction with the floor plan and provide ample dedicated area for outdoor play/activities.

Stormwater management for this property was accounted for by the adjacent/neighboring parent development to the west of the subject property. A stormwater wet pond is located west of the existing bank/office complex. Proposed stormwater from the development will surface drain consistent with the original stormwater plan to the neighboring stormwater facility. Final engineering documents will be provided to as-built and model the existing stormwater facility and show conformance with current stormwater management ordinances. Sanitary and water utilities will connect to existing public infrastructure as shown on the proposed Utility Plan.

Exterior materials as represented in the attached colored elevations and rendering will consist of the following: Hardie board lap/vertical siding, Hardie shake siding, thin stone veneer, and asphalt shingles. Refuse and recycling dumpsters will be enclosed in a decorative masonry enclosure to match the building's exterior materials. The enclosure will be located in the north parking field, aligning with perpendicular drive isle for access.

Landscaping will be provided in accordance with the City ordinance, in a fashion which ensures species resiliency and complimentary aesthetics. Site lighting will meet the City ordinance in a fashion that provides appropriate foot candles for safety, cut-off fixtures for zero up-lighting, and a decorative style that compliments the development and building architecture.

The proposed daycare/childcare center will have 15 full-time employees, and 0 part-time employees. The largest shift will be all 15 full-time employees. Maximum child occupancy will be 152. The daycare will be in operation from 7:00 a.m. to 6:00 p.m. during weekdays. No hazardous products or chemicals are located on the property nor is there outside storage. The estimated project value is $3,000,000 and an approximate start date is Spring of 2023.

In conjunction with the proposed development project, it is requested to remove the bell tower requirement that is tied to the title of the subject property. The bell tower is not proposed for this project and will not be provided.



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February 3, 2023

City of Pewaukee
Attn: Nick Fuchs
W240N3065 Pewaukee Road
Pewaukee, WI 53072

Re: Quattro Development - Guidepost Montessori Conditional Use and Site & Building Plan Review

Dear Mr. Fuchs,

This letter is in response to the staff comments dated January 20, 2023.

**General Comments**

1. There appears to be many inconsistencies on page C1.1 between the labels and arrows on the site plan and the Site Plan Keynotes. Below are several examples. Please double check these items and revise accordingly.
   a. 25 is listed as a flagpole yet no flagpole label on the plan.
      Excel Response: Number 25 has been removed from the Site Plan Keynotes as there is no proposed flagpole.

   b. 7 is listed as dumpster pad/apron concrete yet no dumpster pan/apron concrete label is on the plan.
      Excel Response: The mentioned label has been adjusted on the site plan.

   c. 29, 30, & 31 are included within the middle of the building with their arrows not directed at any element on the plan.
      Excel Response: The mentioned labels have been adjusted on the site plan.

   d. 28 is listed as traffic arrows yet they are labeled around the playgrounds. Why are there traffic arrows around the playgrounds?
      Excel Response: The traffic arrows designate the direction of travel around the playgrounds for a tricycle loop.

2. What is directly abutting the north playground to the east?
   Excel Response: This area is designated as an outdoor seating area.

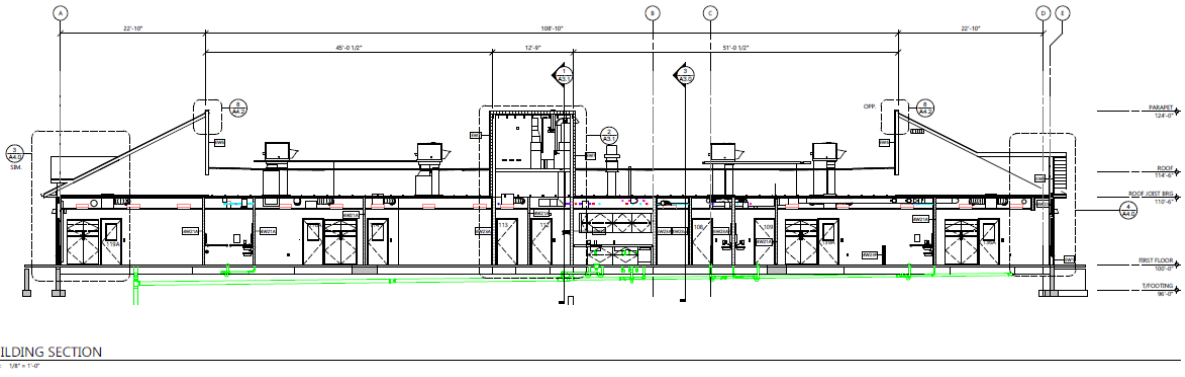
3. Was the poured rubber playground surface included in the impervious surface calculations?
   Excel Response: The poured rubber playground surface was included in the impervious surface calculations.

4. Where are mechanicals located? How are these screened?
   Excel Response: The mechanicals are located in a rooftop penthouse recessed out of view.

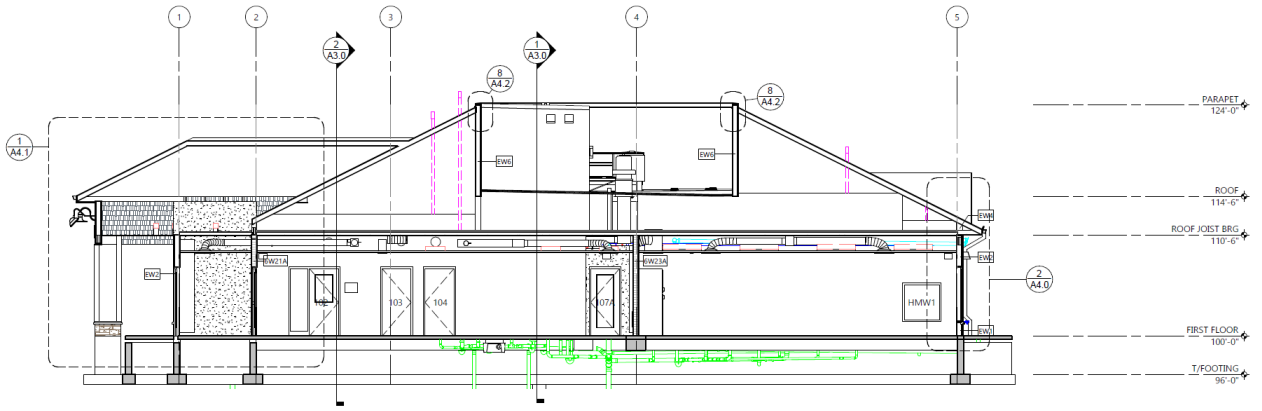




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BUILDING SECTION




3 BUILDING SECTION
A3.0 SCALE: 1/8" = 1'-0"

**Site Plan Comments**

1. Please illustrate the 30-foot parking and loading setback along the south side of the property adjacent to Capitol Drive and remove any portion of the parking lot encroaching into that setback.
   Excel Response: The appropriate adjustments have been made on the site plan.

2. Staff recommends exploring ways to reconfigure the building and site layout to address the comments and recommendations below.
   a. It is recommended that the playground areas, fencing, and majority of parking be located behind the building.
      Excel Response: The site and building have been situated to maintain the intent of stormwater management that was set up at the time of the bank development. Modifications after discussions with staff are implemented in the revised site plans. The building layout cannot change and is specific to the Montessori learning with associated break-out playground areas around the building perimeter.

   b. It is recommended to revise the parking layout to avoid cars having to back out into the main drive aisle. Parking could potentially be configured to follow the layout of the adjacent parking to the west, which extends onto this property.
      Excel Response: Several parking stalls on the north side of the proposed parking lot have been removed to accommodate this. The site plan modifications were discussed with staff, the shared parking will be used for employee parking.

c. Relocate the dumpster enclosure where it can be better screened by landscaping.
Excel Response: The dumpster enclosure has been moved further to the east of its previous position to include landscaping around it.

d. It is recommended to not have the metal doors and service equipment facing Capitol Drive.
Excel Response: Doors have been removed from the south side of the building facing Capitol Drive.

e. Will there be a lot of drop off and pick up occurring onsite? If so, the site plan should be revised to accommodate that better.
Excel Response: Drop off and pick will be in the stalls immediately west of the building. Give the age group of the facility, parents will park and escort children into the building. A "drop off" scenario typical to schools is not applicable for this facility.

**Architecture Comments**

1. Consider incorporating additional masonry on the elevation facing Capitol Drive as well as additional elements to provide more variation in the footprint and roofline of the building. Materials and quality should match that of the adjacent buildings.
Excel Response: The Capitol Drive elevations have been updated to address this comment.

**Parking Comments**

1. On page C1.1 it states that three ADA spaces are required yet two ADA spaces are provided. Please revise and provide the appropriate number of ADA accessible parking spaces.
Excel Response: Three ADA spaces have been provided on the site plan.

**Landscaping Comments**

1. Staff suggests adding additional plantings adjacent to the playground areas. These may be more sporadic as the intent is not to necessarily require these areas to be fully screened.
Excel Response: Additional plantings have been included on the south and north side of the site plan.

2. As previously discussed, there is a requirement that a bell tower be constructed on this property. As part of the Conditional Use, please revise the project narrative to include a specific request to remove this requirement, assuming the bell tower is not being proposed as part of this development.
Excel Response: The CUP project narrative has been updated to remove the bell tower requirement.

**Signage Comments**

1. Please be aware that signage will require separate review and approval by the City Planner as well as a Sign Permit from the Building Services Department prior to installation.
Excel Response: The appropriate accommodations will be made.

2. Also note that per section 17.0706(c) a ground sign located within 660 feet of a residential zoning district boundary shall not be illuminated during the seven-hour period beginning at

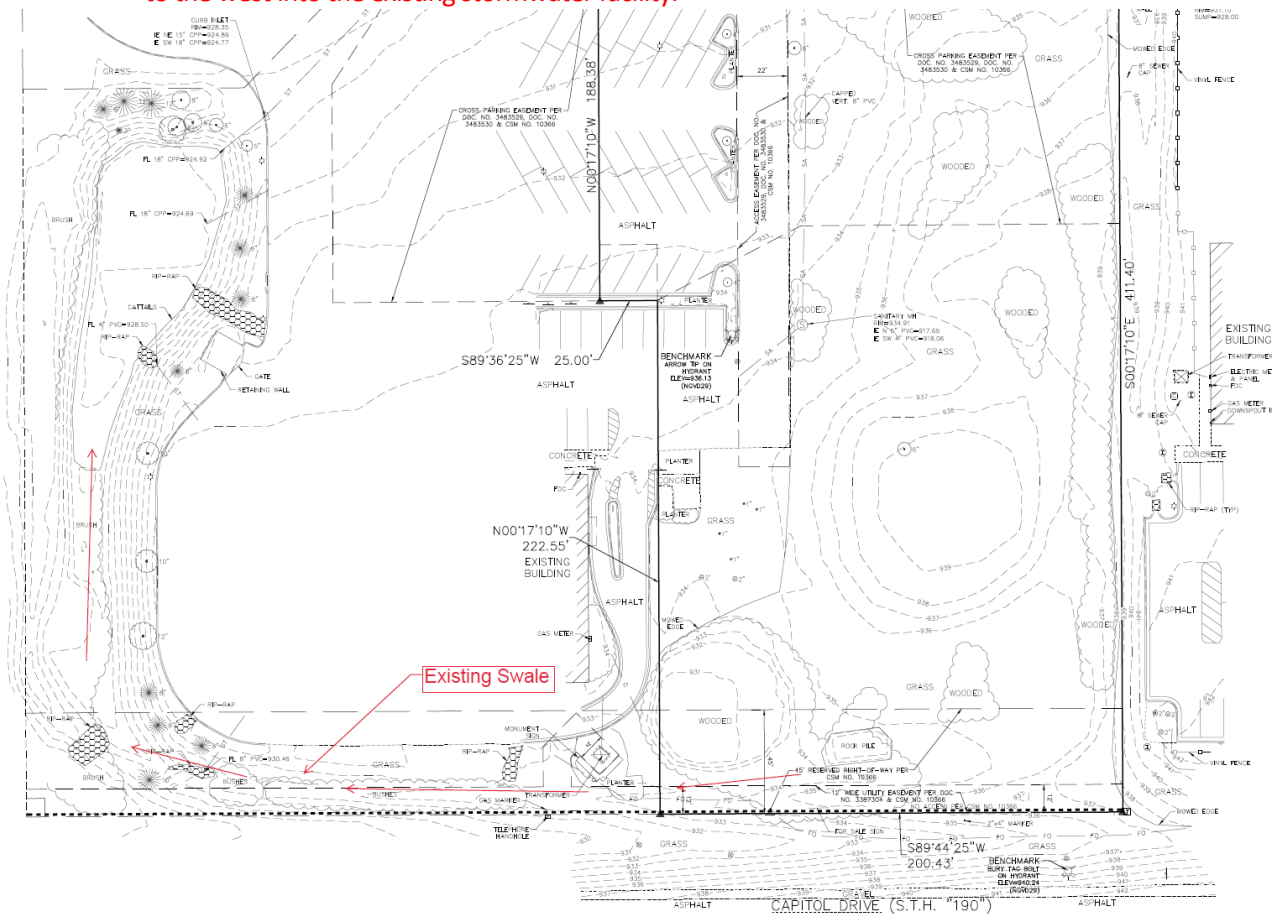


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eleven (11) PM and ending at six (6) AM.
Excel Response: The appropriate accommodations will be made.

**Engineering Department Comments**

1. The project narrative outlines that the existing basin on the adjacent property will be used to address stormwater requirements. Below are comments relating to this strategy.
   a. A large portion of the proposed site appears to drain to the southwest corner of the site into an existing drainage swale. This drainage swale does not lead to the existing stormwater pond based on existing contours.
   Excel Response: There is an on-site drainage swale north of the R/W line that does direct runoff to the west into the existing stormwater facility.




   b. This stormwater facility is off-site. Documentation of agreements with adjacent landowner stating that this development can utilize the existing stormwater facility must be provided to the City. Note that it must also be shown that the existing facility can handle the additional flow.
   Excel Response: Understood.

   c. The north portion of the site is planned to sheet flow towards the neighbor's parking lot. Agreements must be provided stating that the neighbor is aware of this design, approves of it, and won't change their site in a way that would restrict the sheet flow. Calculations

shall be provided that show the existing conveyance systems (mostly storm sewer) are adequate for the additional flow.
Excel Response: Understood.

2. There is currently no stormwater maintenance agreement for the existing stormwater facilities. A stormwater maintenance agreement must be provided and signed by both the developer and the owner of the existing stormwater facilities.
Excel Response: Understood.

3. The proposed plan shows the development connecting to the existing sanitary lateral for the adjacent property which connects to a holding tank. Please note the requirements below:
   a. An easement will need to be created to accommodate the existing sanitary lateral.
   Excel Response: An easement will be provided.

   b. This service is currently connected to a holding bank. It will need to be connected to the sanitary sewer system during construction.
   Excel Response: Understood, a connection to the public sanitary system will be provided.

   c. Each lot will need to have a separate sampling manhole.
   Excel Response: Understood, sampling manholes will be provided.

The submittal documents have been revised per the comments above. Please accept for review and approval. Please let me know if you have any comments, questions, or need additional information.

Sincerely,

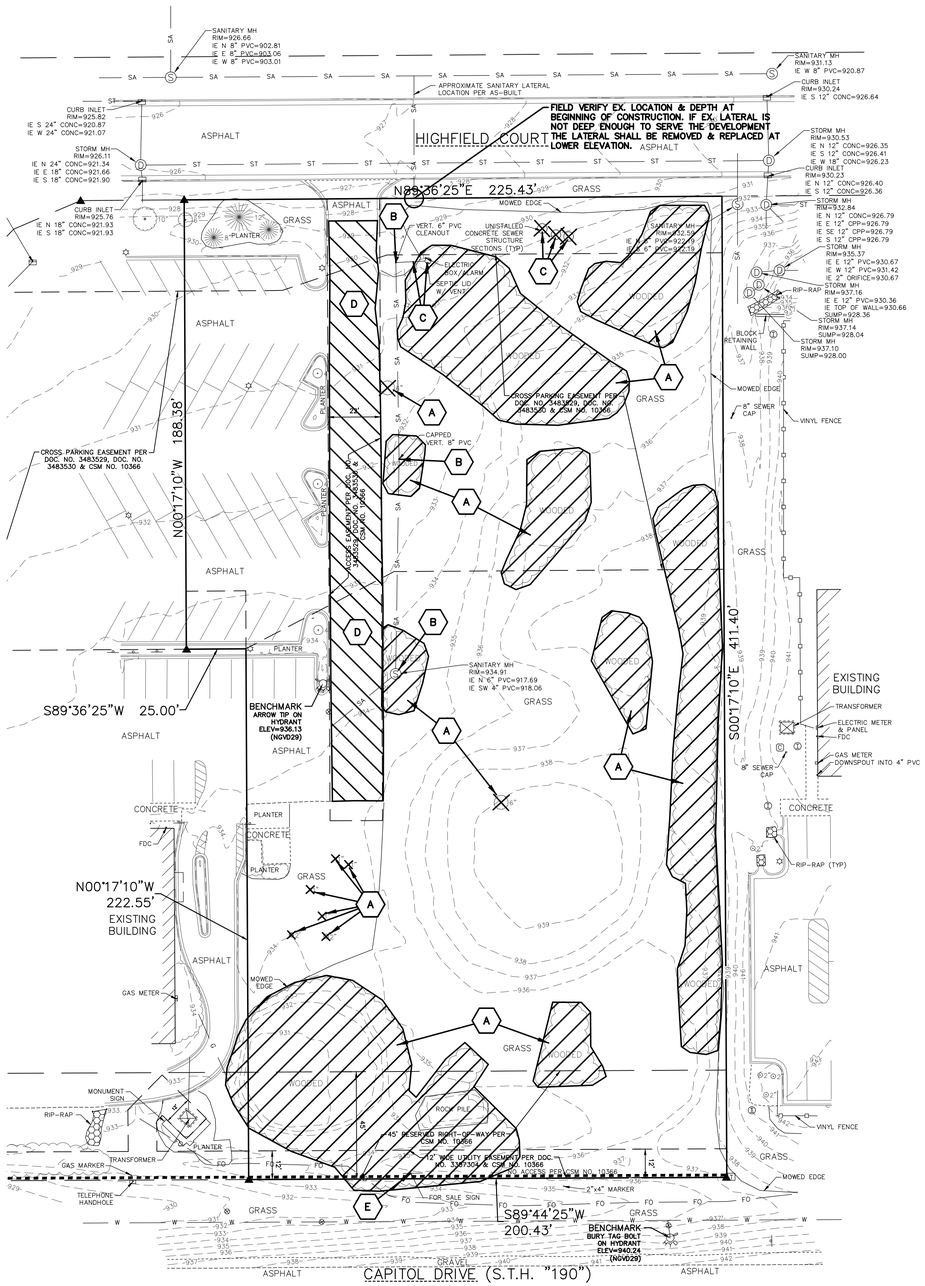
**Excel Engineering, Inc.**



**Grant Duchac, P.E.**
**Project Manager**



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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

## DEMOLITION PLAN KEYNOTES

| | |
|---|---|
| A | CLEAR & GRUB TREES/BRUSH |
| B | PROTECT SANITARY ITEMS |
| C | REMOVE SANITARY ITEMS. VERIFY INACTIVE PRIOR TO REMOVAL. |
| D | REMOVE ASPHALT |
| E | REMOVE SIGN |

X(X) IDENTIFICATION: KEYNOTE ITEM(QUANTITY) – IF NO () = QUANTITY IS 1

NORTH

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

CIVIL EXISTING SITE AND DEMOLITION PLAN

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PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
23877 HIGHFIELD COURT • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

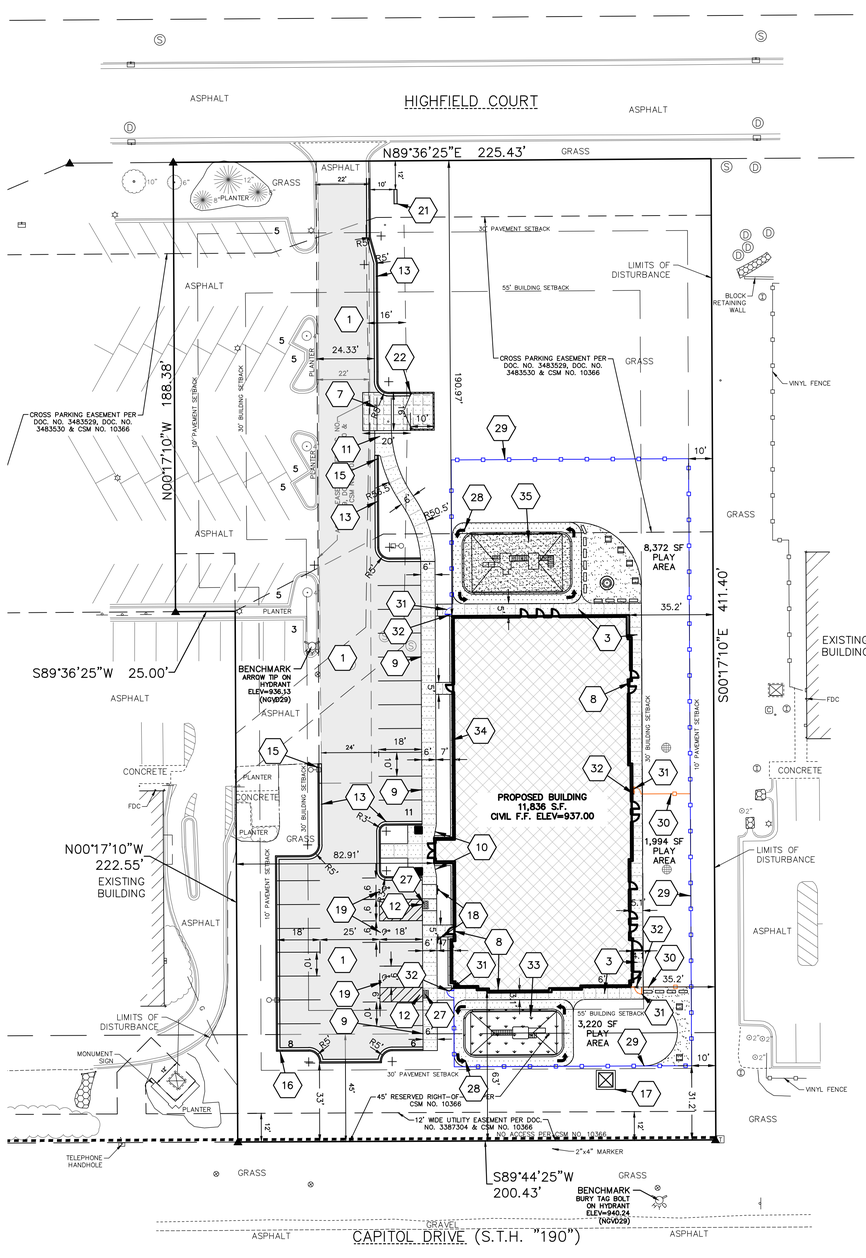
PRELIMINARY DATES
DEC. 12, 2022
JAN. 4, 2023
FEB. 3, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2245520

SHEET NUMBER
C1.0

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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

## EXISTING SITE DATA

| | AREA (AC) | AREA (SF) | RATIO |
|---|---|---|---|
| PROJECT SITE | 2.00 | 87,120 | |
| BUILDING FLOOR AREA | 0.00 | 0 | 0.0% |
| PAVEMENT (ASP. & CONC.) | 0.00 | 0 | 0.0% |
| TOTAL IMPERVIOUS | 0.00 | 0 | 0.0% |
| LANDSCAPE/ OPEN SPACE | 2.00 | 87,120 | 100.0% |

## PROPOSED SITE DATA

| | AREA (AC) | AREA (SF) | RATIO |
|---|---|---|---|
| PROJECT SITE | 2.00 | 87,120 | |
| BUILDING FLOOR AREA | 0.27 | 11,836 | 13.6% |
| PAVEMENT (ASP. & CONC.) | 0.73 | 31,783 | 36.5% |
| TOTAL IMPERVIOUS | 1.00 | 43,619 | 50.1% |
| LANDSCAPE/ OPEN SPACE | 1.00 | 43,501 | 49.9% |

## SITE INFORMATION:

LEGAL DESCRIPTION: Lot 2 of Certified Survey Map Number 10366 filed in Volume 98 of Certified Survey Maps on Page 203 as Document Number 3472291;

PROPERTY AREA: AREA = 87,120 S.F. (2.00 ACRES).

EXISTING ZONING: B-6 MIXED USE BUSINESS

PROPOSED ZONING: B-6 MIXED USE BUSINESS

PROPOSED USE: DAYCARE/CHILDCARE FACILITY

AREA OF SITE DISTURBANCE: 72,650 S.F. (1.67 ACRES)

SETBACKS: BUILDING: FRONT = 55'
SIDE = 30'
REAR = 55'
PAVEMENT: FRONT = 30'
SIDE = 10'
REAR = 10'

PROPOSED BUILDING HEIGHT: 25' (MAX. HEIGHT ALLOWED: 45')

PARKING REQUIRED: 1 SPACE PER 2 EMPLOYEES (8 SPACES REQ.)

PARKING PROVIDED: 25 SPACES (3 H.C. ACCESSIBLE) & 33 SHARED STALLS

HANDICAP STALLS REQUIRED: 3, HANDICAP STALLS PROVIDED: 3

HOURS OF OPERATION: 7:00 A.M. – 6:00 P.M.

BUILDING OCCUPANCY CLASSIFICATION = E

CLASS OF BUILDING CONSTRUCTION = 5B

LANDSCAPE REQUIREMENTS: MIN. LANDSCAPE SURFACE RATIO: 40%
MAXIMUM IMPERVIOUS SURFACE: 60%
MAXIMUM LOT COVERAGE – BUILDING ONLY: 35%

## SITE PLAN KEYNOTES

| | |
|---|---|
| 1 | STANDARD ASPHALT SECTION (TYP.) |
| 3 | CONCRETE SIDEWALK (TYP.) |
| 7 | DUMPSTER PAD/APRON CONCRETE (TYP) |
| 8 | CONCRETE STOOP (TYP.) SEE ARCH. PLANS FOR DETAILS. |
| 9 | RAISED WALK (TYP.) |
| 10 | TRANSITION WALK FROM 5' TO 6' WIDE |
| 11 | WALK RAMP |
| 12 | ADA RAMP |
| 13 | 18" CURB & GUTTER (TYP.) |
| 15 | CURB TAPER (TYP.) |
| 16 | CURB CUT (TYP.) |
| 17 | CONCRETE TRANSFORMER PAD BY UTILITY SUPPLIER (CONTRACTOR TO VERIFY FINAL LOCATION & DESIGN PRIOR TO CONSTRUCTION) |
| 18 | HANDICAP SIGN (TYP.) |
| 19 | HANDICAP STALL & STRIPING PER STATE CODES. |
| 21 | MONUMENT SIGN (DETAILS, FINAL LOCATION, & APPROVAL BY SIGN VENDOR) |
| 22 | DUMPSTER ENCLOSURE (SEE ARCH PLANS FOR DETAILS) |
| 24 | STOP SIGN (TYP.) |
| 27 | DETECTABLE WARNING PLATE |
| 28 | TRAFFIC ARROWS (TYP.) |
| 29 | 6' TALL WROUGHT IRON FENCE |
| 30 | 4' TALL WHITE VINYL FENCE |
| 31 | FENCE GATE |
| 32 | PANIC HARDWARE |
| 33 | POURED RUBBER PLAYGROUND SURFACE OVER 4–6" CLEAR STONE AGGREGATE BASE (FOLLOW DESIGN SPECS. BY SUPPLIER) |
| 34 | 12" WIDE CONCRETE STRIP ALONG WEST FOUNDATION |
| 35 | WOOD FIBER SURFACE BY PLAYGROUND VENDOR |

NORTH

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

CIVIL SITE PLAN

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PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
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PROFESSIONAL SEAL

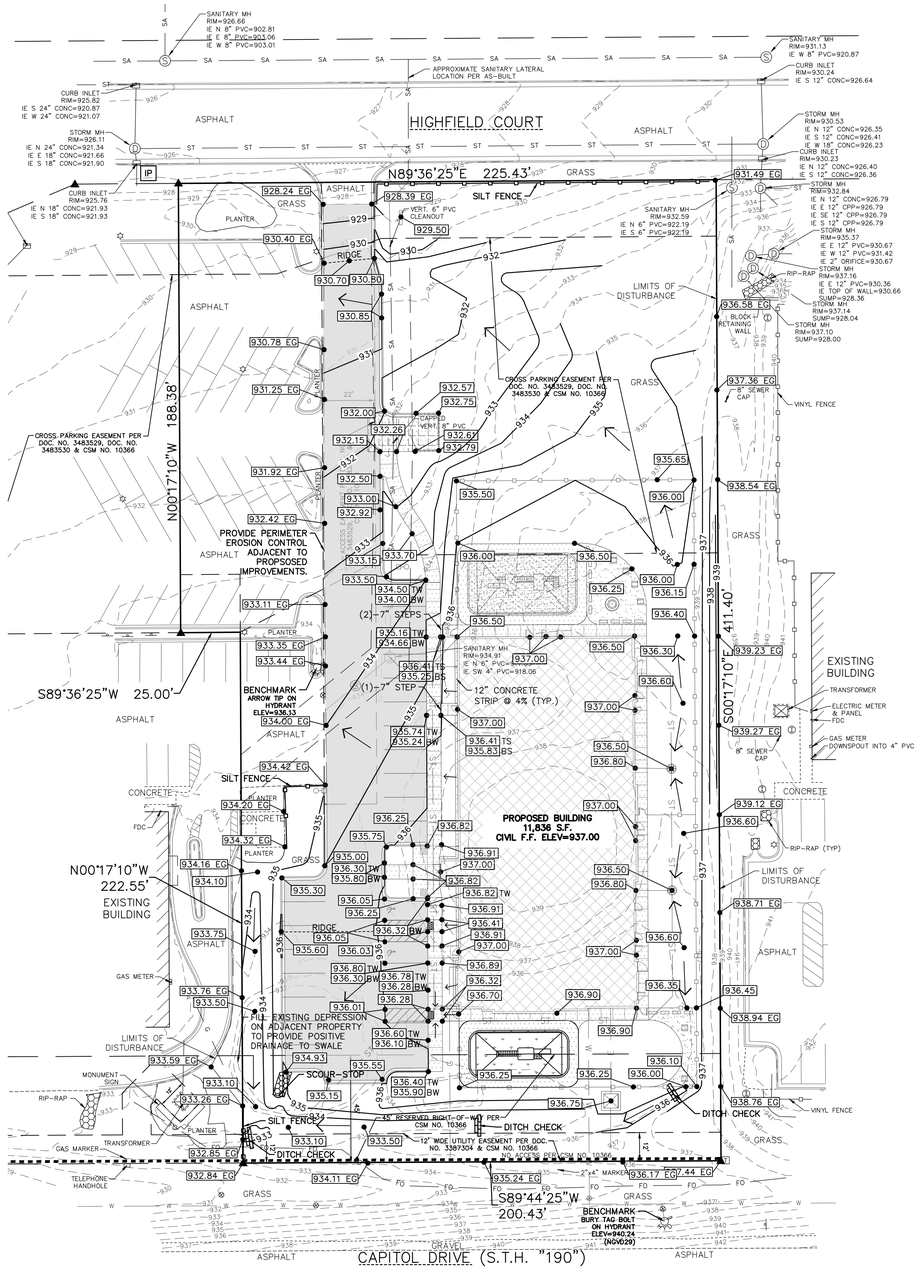
PRELIMINARY DATES
NOV. 29, 2022
DEC. 12, 2022
JAN. 4, 2023
FEB. 3, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2245520

SHEET NUMBER
C1.1

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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTES:

1. HANDICAP STALL AND ACCESS AISLES SHALL NOT EXCEED A SLOPE OF 1.50% IN ANY DIRECTION. HANDICAP STALL & ACCESS AISLES SHALL CONFORM TO ADA REQUIREMENTS (CURRENT EDITION)
2. ALL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.

STORMWATER NOTE:

SITE STORMWATER DRAINS TO EXISTING STORMWATER FACILITY ON NEIGHBORING PROPERTY.

IP

INLET PROTECTION NOTE:

CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ONSITE & OFFSITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.

STABILIZED CONSTRUCTION ENTRANCE NOTE:

CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ENTRANCE FOR PROPOSED IMPROVEMENTS AS REQUIRED PER CODE.

CONCRETE WASHOUT NOTE:

CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.

NORTH

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

CIVIL GRADING AND EROSION CONTROL PLAN

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COLLABORATION

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PROJECT INFORMATION

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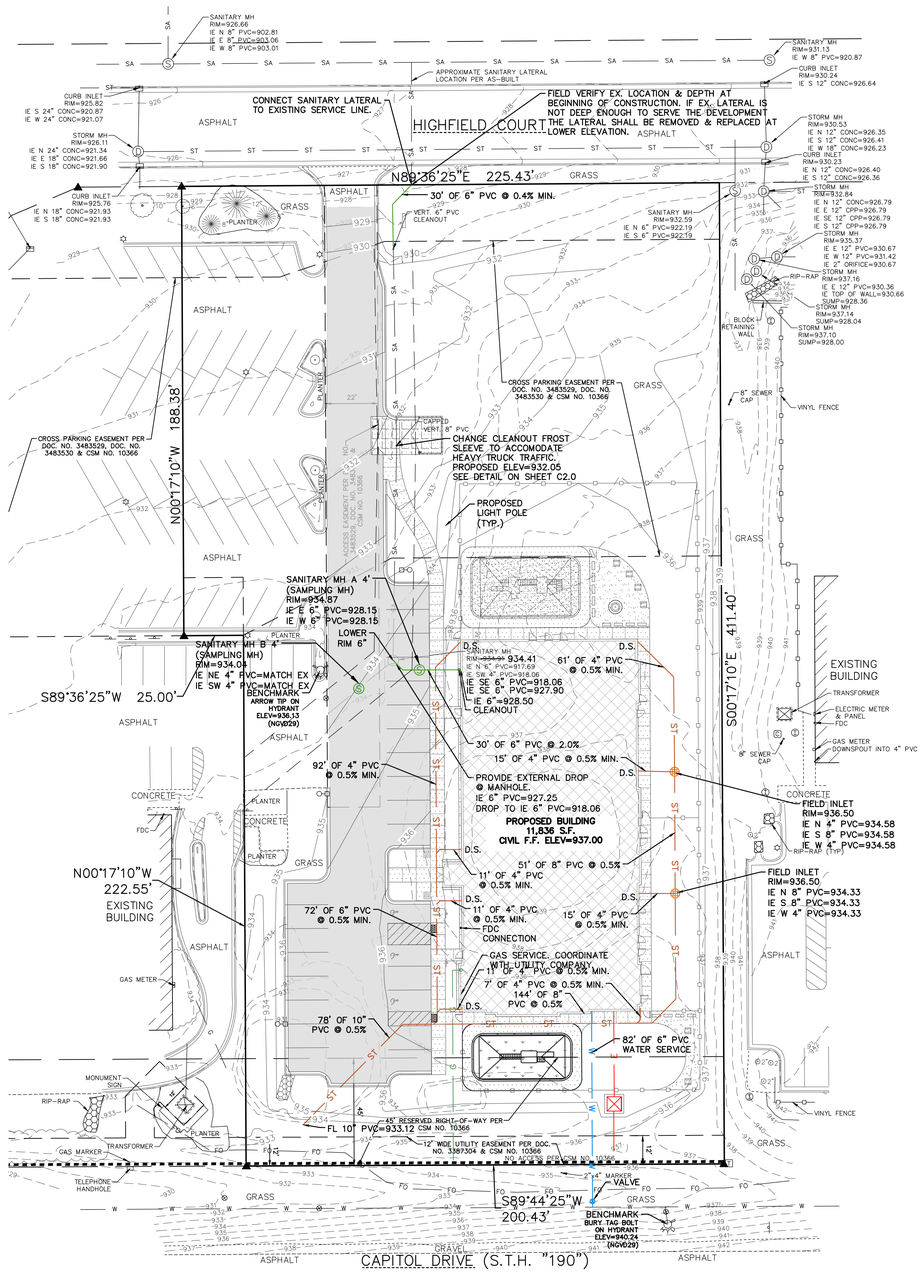
PRELIMINARY DATES
DEC. 12, 2022
JAN. 4, 2023
FEB. 3, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2245520

SHEET NUMBER
C1.2

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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

DOWNSPOUT NOTE:

DS = DENOTES DOWNSPOUT TO GRADE LOCATIONS. PROVIDE SPLASH BLOCKS AT ALL DS TO GRADE LOCATIONS. SEE ARCH PLANS FOR FINAL LOCATIONS.

CLEANOUT NOTE:

CO = DENOTES LOCATIONS WHERE CONTRACTOR SHALL INSTALL CLEANOUTS, SEE C0.1 FOR SPECIFICATION.

NORTH

1" = 30'

30' 0 30' 60'

SCALE FEET

CIVIL UTILITY PLAN

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COLLABORATION

Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
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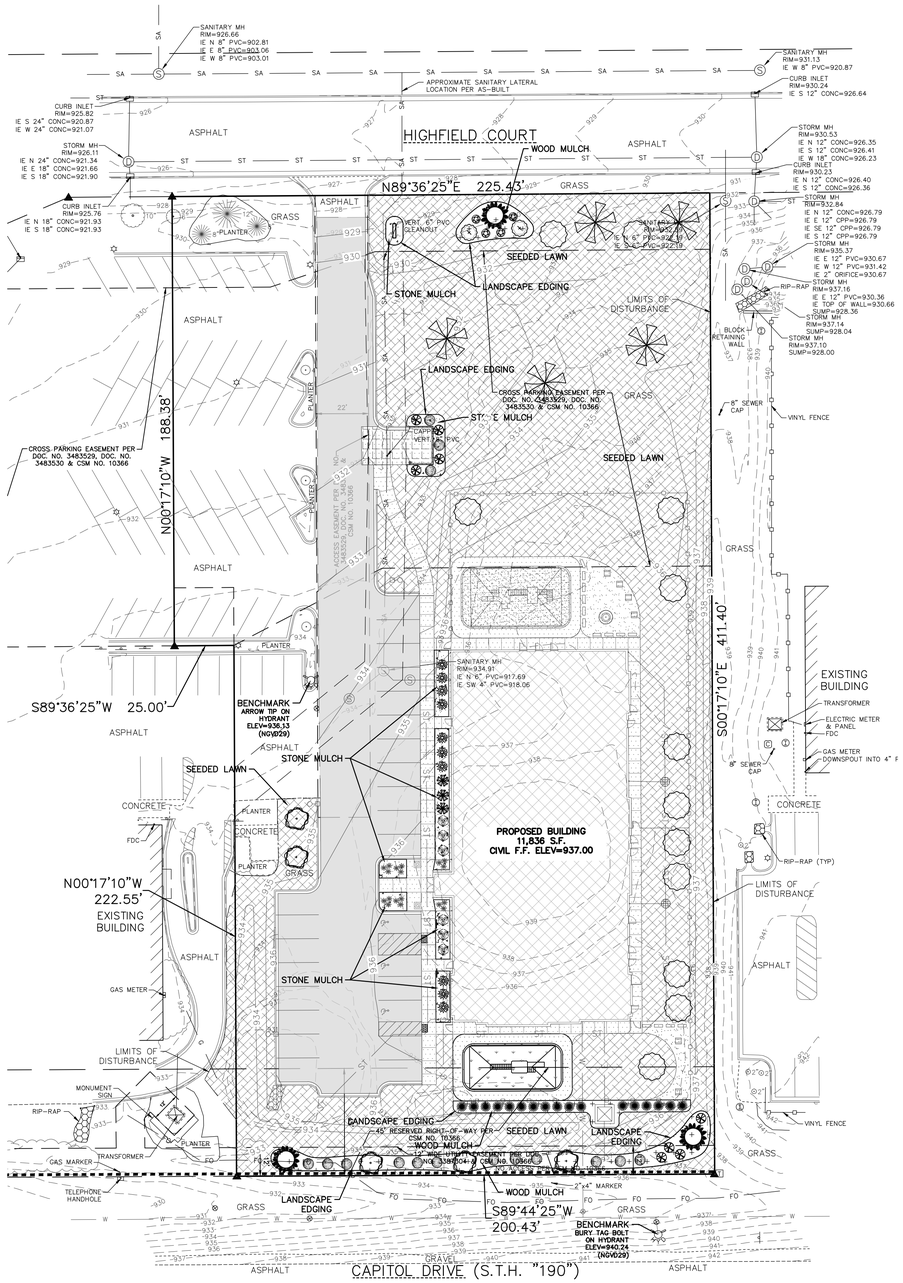
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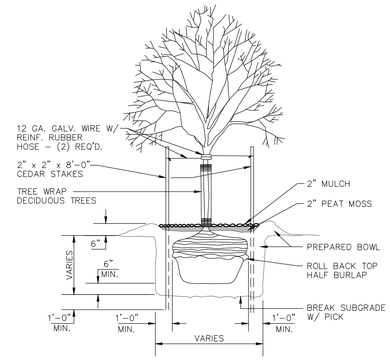
JOB NUMBER
2245520

SHEET NUMBER
C1.3

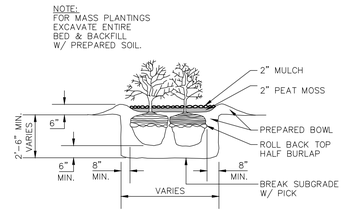
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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS




## TREE PLANTING DETAIL
NO SCALE




## SHRUB PLANTING DETAIL
NO SCALE

## LANDSCAPING PLANTING SCHEDULE

| SYMBOL | COMMON NAME | BOTANICAL NAME | PLANTED SIZE | QUANTITY | MATURE SIZE |
|---|---|---|---|---|---|
| | DECIDUOUS TREES | | | | |
| | Jack Flowering Pear | Pyrus calleryana 'Jaczam' | 2" | 5 | 15–20' |
| | Redmond Linden | Tilia americana | 2" | 9 | 25'–30' |
| | Sugar Maple | Acer saccharum | 3" | 5 | 30–45' |
| | EVERGREEN TREES | | | | |
| | Arborvitae – Nigra | Thuja occidentalis 'Nigra' | 2' | 2 | 4'–10' |
| | Colorado Blue Spruce | Picea pungens | 4' | 3 | 25' |
| | DECIDUOUS SHRUBS | | | | |
| | Emerald Mound Honeysuckle | Lonicera x xylosteum 'Emerald Mound' | 15"–18" | 10 | 4'–6' |
| | Sunrise Forsythia | Forsythia 'Sunrise' | 18"–24" | 6 | 5' |
| | Arrowwood Viburnun | Viburnum dentatum | 30"–36" | 15 | 6'–8' |
| | EVERGREEN SHRUBS | | | | |
| | Taunton Yew | Tauntonii | 24" | 4 | 5'–6' |
| | Techny Arborvitae | Thuja occidentalis | 42"–48" | 8 | 4'–6' |
| | Dwarf Alberta Spruce | Picea glauca 'Conica' | 2' | 17 | 6' |
| | PERENNIALS | | | | 18"–24" |
| | Purple Dome Aster | Aster novae–angliae 'Purple Dome' | 1 gal pot | 6 | 12"–24" |
| | Daylilies 'Stella de Oro' | Hemerocallis 'Stella de Oro' | 1 gal pot | 3 | |

NORTH

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

## CIVIL LANDSCAPE AND RESTORATION PLAN

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION
Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
23877 HIGHFIELD COURT • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

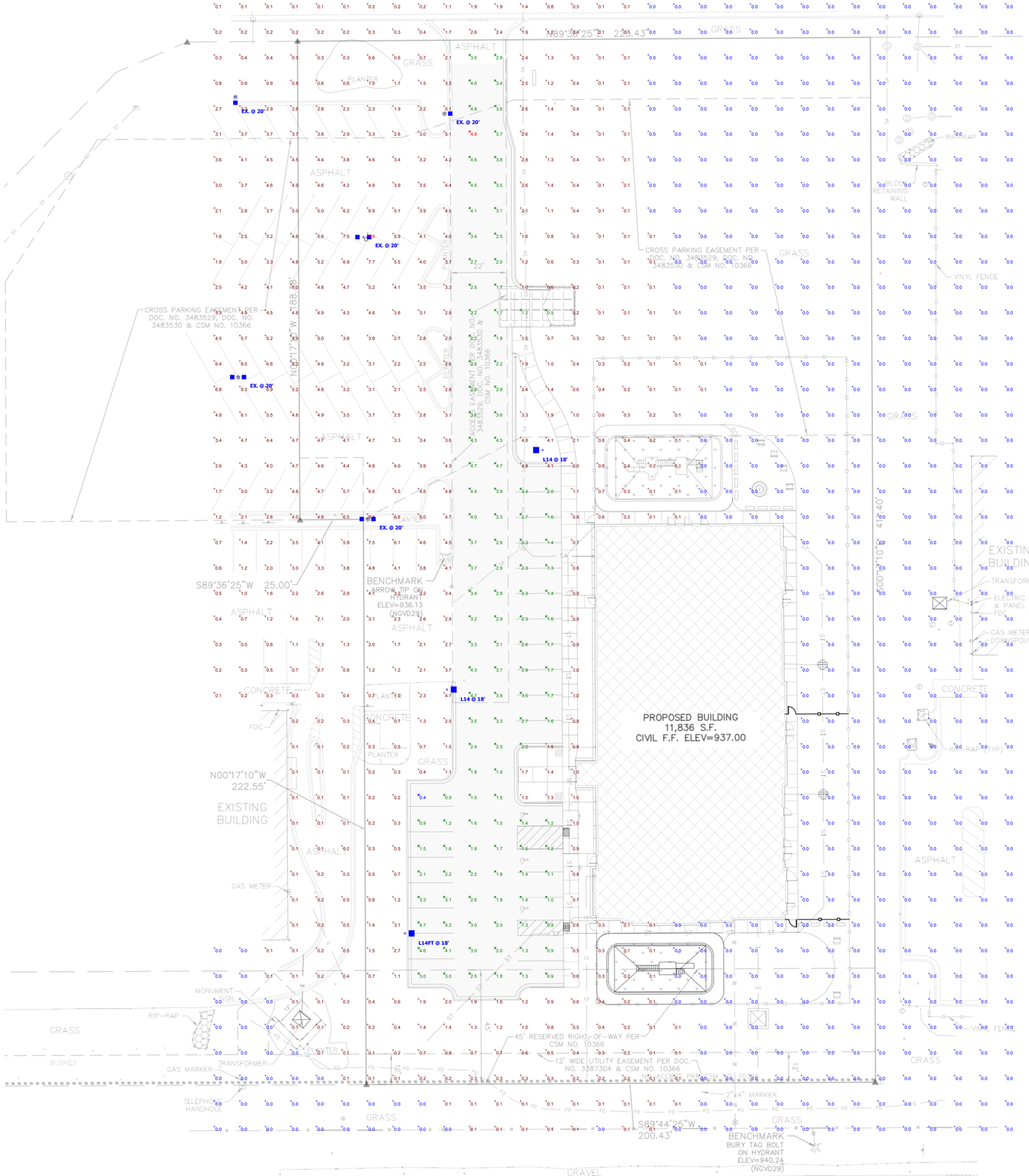
PRELIMINARY DATES
DEC. 12, 2022
DEC. 16, 2022
JAN. 4, 2023
FEB. 3, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2245520

SHEET NUMBER
C1.4

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Page 19 of 138

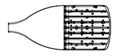


# D-Series Size 1
## LED Area Luminaire

d*series

### Specifications

| | |
|---|---|
| EPA: | 0.69 ft² (0.06 m²) |
| Length: | 32.71" (83.1 cm) |
| Width: | 14.26" (36.2 cm) |
| Height H1: | 7.88" (20.0 cm) |
| Height H2: | 2.23" (5.7 cm) |
| Weight: | 34 lbs (15.4kg) |





### 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 65% and expected service life of over 100,000 hours.

### Ordering Information

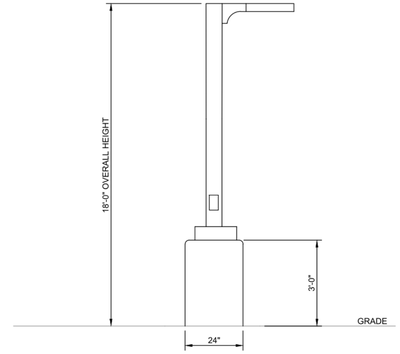
**EXAMPLE:** DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

**DSX1 LED**

| Series | LEDs | Color temperature[1] | Color Rendering Index[1] | Distribution | | Voltage | Mounting |
|---|---|---|---|---|---|---|---|
| DSX1 LED | **Forward optics**<br>P1 P6<br>P2 P7<br>P3 P8<br>P4 P9<br>P5<br>**Rotated optics**<br>P10[2] P12[2]<br>P11[2] P13[2] | (this section 70CRI only)<br>30K 3000K<br>40K 4000K<br>50K 5000K<br>(this section 80CRI only, extended lead times apply)<br>27K 2700K<br>30K 3000K<br>35K 3500K<br>40K 4000K<br>50K 5000K | 70CRI<br>70CRI<br>70CRI<br><br><br><br>80CRI<br>80CRI<br>80CRI<br>80CRI<br>80CRI | AFR Automotive front row<br>T1S Type I short<br>T2M Type II medium<br>T3M Type III medium<br>T3LG Type III low glare[3]<br>T4M Type IV medium<br>T4LG Type IV low glare<br>TFTM Forward Throw medium<br>T5M Type V medium<br>T5LG Type V low glare<br>T5W Type V wide<br>BLC3 Type III backlight control[3]<br>BLC4 Type IV backlight control[3]<br>LCCO Left corner cutoff[3]<br>RCCO Right corner cutoff[3] | MVOLT (120V-277V)[4]<br>HVOLT (347V-480V)[4,5]<br>XVOLT (277V - 480V)[4,5] | **Shipped included**<br>SPA Square pole mounting (RK drilling)<br>RPA Round pole mounting (RK drilling)<br>SPA5 Square pole mounting (5 drilling)<br>RPA5 Round pole mounting (5 drilling)<br>SPANR Square narrow pole mounting (RK drilling)<br>WBA Wall bracket[6] |

| Control options | | Other options | | Finish (required) | |
|---|---|---|---|---|---|
| **Shipped installed**<br>NLTAIR2 PIRHN nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9,10]<br>PIR High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[7,8,9,10]<br>PER NEMA twist-lock receptacle only (controls ordered separately)[11]<br>PER5 Five-pin receptacle only (controls ordered separately)[11,12] | PER7 Seven-pin receptacle only (controls ordered separately)[11,12]<br>FAO Field adjustable output[7,13]<br>BL30 Bi-level switched dimming, 30%[9,14]<br>BL50 Bi-level switched dimming, 50%[9,14]<br>DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[15]<br>DS Dual switching[9,14,16] | **Shipped installed**<br>SPD20KV 20kV surge protection<br>HS Houseside shield (black finish standard)[17]<br>L90 Left rotated optics[7]<br>R90 Right rotated optics[7]<br>CCE Coastal Construction[18]<br>**Shipped separately**<br>EGS External Glare Shield (reversible; field install required, matches housing finish)<br>BS Bird Spikes (field install required) | DDBXD Dark Bronze<br>DBLXD Black<br>DNAXD Natural Aluminum<br>DWHXD White<br>DDBTXD Textured dark bronze<br>DBLBXD Textured black<br>DNATXD Textured natural aluminum<br>DWHGXD Textured white | |


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## LIGHT POLE DETAIL

NO SCALE

| Schedule | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Symbol | Label | Quantity | Manufacturer | Catalog Number | Description | Number Lamps | Lumens Per Lamp | Light Loss Factor | Wattage | Wattage |
| | L14 | 2 | Lithonia Lighting | DSX1 LED P5 40K 80CRI T4M | D-Series Size 1 Area Luminaire P5 Performance Package 4000K CCT 80 CRI Type 4 Medium | 1 | 16418 | 0.9 | 138.16 | |
| | L14FT | 1 | Lithonia Lighting | DSX1 LED P5 40K 80CRI TFTM | D-Series Size 1 Area Luminaire P5 Performance Package 4000K CCT 80 CRI Forward Throw | 1 | 16531 | 0.9 | 138.16 | |

| Statistics | | | | | | |
|---|---|---|---|---|---|---|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| Calc Zone #1 | + | 1.1 fc | 9.9 fc | 0.0 fc | N/A | N/A |
| PARKING LOT | X | 2.6 fc | 4.9 fc | 0.4 fc | 12.3:1 | 6.5:1 |

NORTH

1"= 20' SCALE 20' 0 20' 40' FEET

## CIVIL SITE PHOTOMETRIC PLAN & DETAILS

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Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
23877 HIGHFIELD COURT • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

PRELIMINARY DATES

SHEET ISSUE

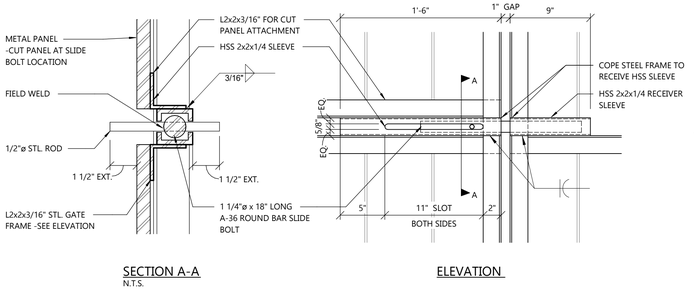
REVISIONS

NOT FOR CONSTRUCTION

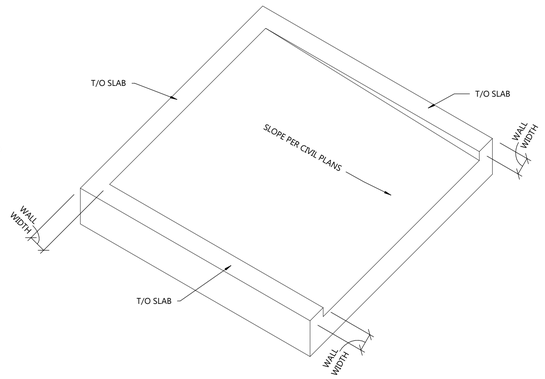
JOB NUMBER
2245520

SHEET NUMBER
**C3.1**

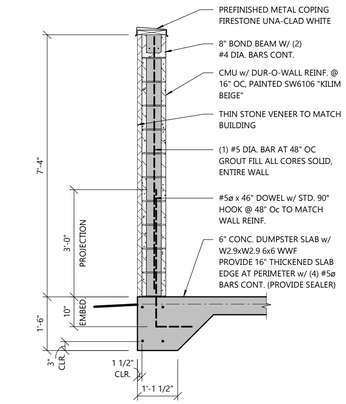
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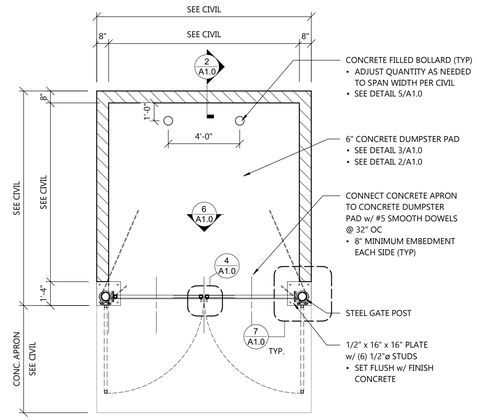

4 A1.0 GATE SLIDE BOLT
SCALE: 1 1/2" = 1'-0"




3 A1.0 DUMPSTER PAD DETAIL
NOT TO SCALE

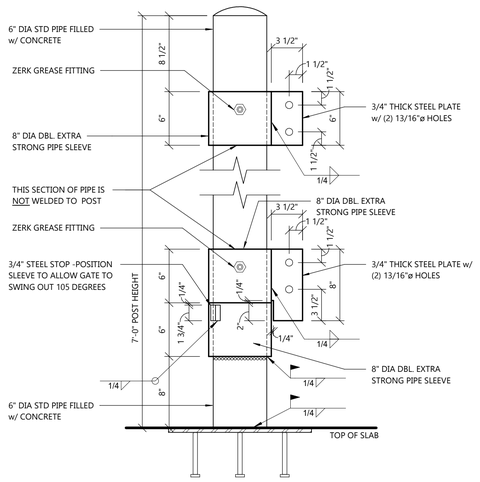



2 A1.0 DUMPSTER WALL SECTION
SCALE: 1/2" = 1'-0"

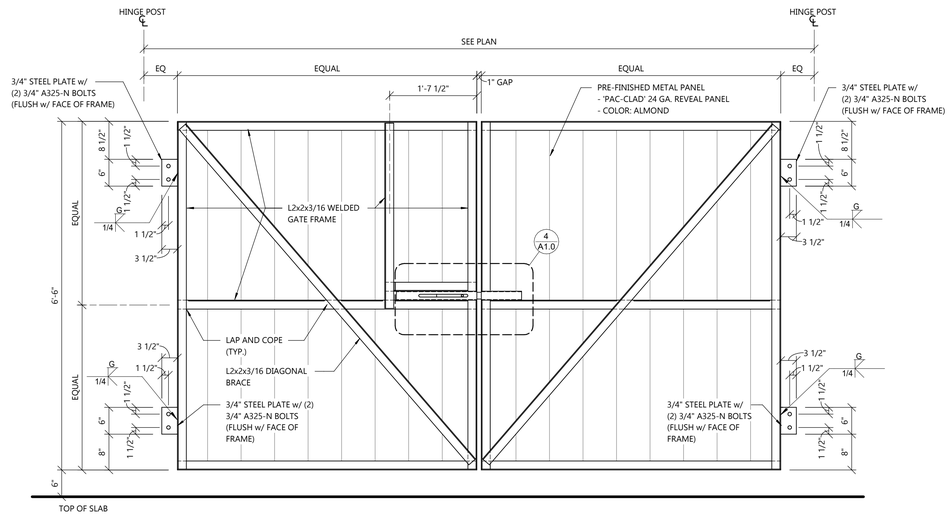



1 A1.0 DUMPSTER PLAN
SCALE: 1/4" = 1'-0"

ALL EXPOSED METAL SURFACES ON DUMPSTER ENCLOSURE TO RECEIVE ONE COAT RUST-INHIBITING PRIMER AND (2) COATS PAINT: SW6106 "KILIM BEIGE" ( UNLESS NOTED OTHERWISE )

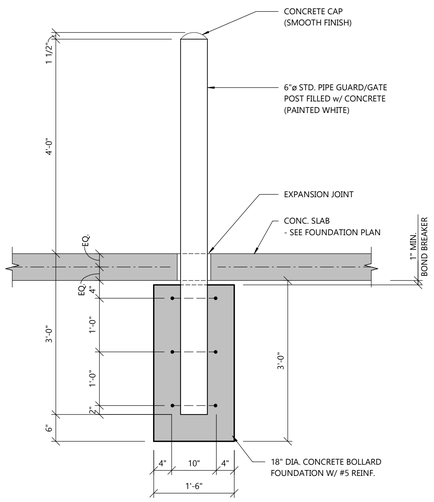



7 A1.0 GATE HINGE DETAIL
SCALE: 1 1/2" = 1'-0"




INSIDE ELEVATION

6 A1.0 DUMPSTER GATE ELEVATION
NOT TO SCALE




5 A1.0 BOLLARD DETAIL
SCALE: 3/4" = 1'-0"

ARCHITECTURAL DUMPSTER ENCLOSURE DETAILS

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Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
N35 W23824 CAPTIOL DRIVE • PEWAUKEE, WI

PROFESSIONAL SEAL

SHEET DATES
SHEET ISSUE DEC. 19, 2022
REVISIONS

JOB NUMBER
2245520

SHEET NUMBER
**A1.0**

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## GENERAL NOTES

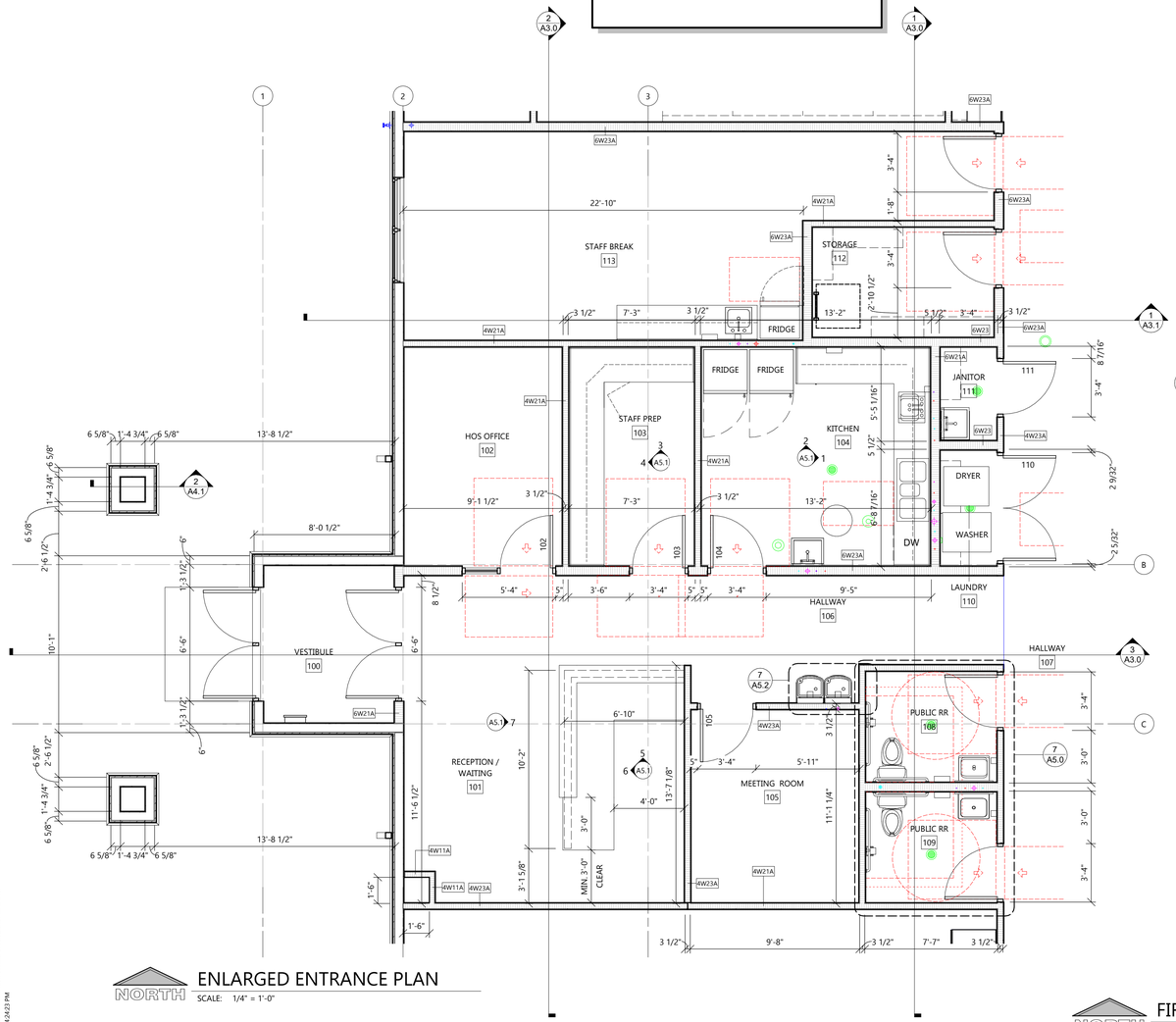
- ALL INTERIOR DIMS. ARE FROM FACE-OF-STUD TO FACE OF-STUD.
- ALL INTERIOR WALLS TO BE 2x4 OR 2x6 @ 16" O.C. (SEE FLOOR PLAN FOR SIZE) W/ 1/2" OR 5/8" GYPSUM BOARD BOTH SIDES - EXTEND TO BOTTOM CHORD OF TRUSSES / UNDERSIDE OF DECK.
- ALL INTERIOR WALLS TO BE 3 5/8" OR 6" METAL STUDS @ 16" O.C. (SEE FLOOR PLAN FOR SIZE) W/ 5/8" GYPSUM BOARD BOTH SIDES - EXTEND TO BOTTOM CHORD OF TRUSSES.
- MISCELLANEOUS HARDWARE INCLUDED: HANDICAP HARDWARE.
- PROVIDE WOOD BLOCKING FOR ANY FURNISHINGS BY OWNER. (VERIFY LOCATIONS)
- ALL EXTERIOR WINDOWS TO HAVE ALUMINUM FLASHING RETURNS AT HEAD, JAMBS, AND SILL OF ALL WINDOWS.
- ALL EXTERIOR WINDOWS TO HAVE GYPSUM BOARD RETURNS AT HEAD AND JAMBS AND PLASTIC LAMINATE COVERED WOOD SILL.
- ALL CABINETS AND COUNTERTOPS TO HAVE PLASTIC LAMINATE FRONTS AND TOPS.
- KITCHEN AND CABINET W/ COUNTERS BY GENERAL CONTRACTOR AS REQUIRED
- ALL CABINETRY AND EQUIPMENT BY OTHERS - SEE EQUIPMENT DRAWING BY INTERIOR DESIGNER FOR REQUIREMENTS.
- FOOD PREP AREA TO BE VERIFIED W/ OWNER. PROVIDE SHOP DRAWINGS ON EQUIPMENT.

## SYMBOLS LEGEND

- 12B1 — SEE SHEET AX.X FOR WALL TYPES
- EXIT SIGNAGE
- FIRE EXTINGUISHER -SEE A5 SHEETS
- FIRE EXTINGUISHER w/ CABINET -SEE A5 SHEETS
- STUD WALL
- CONCRETE WALL
- MASONRY VENEER
- C.M.U. WALL
- SEE PLAN FOR ALL WALL WIDTHS
- NEW DOOR
- CHILD HEIGHT TOILET
- ADULT HEIGHT TOILET
- CHILD HEIGHT SINK
- ADULT HEIGHT SINK

## KEYED NOTES

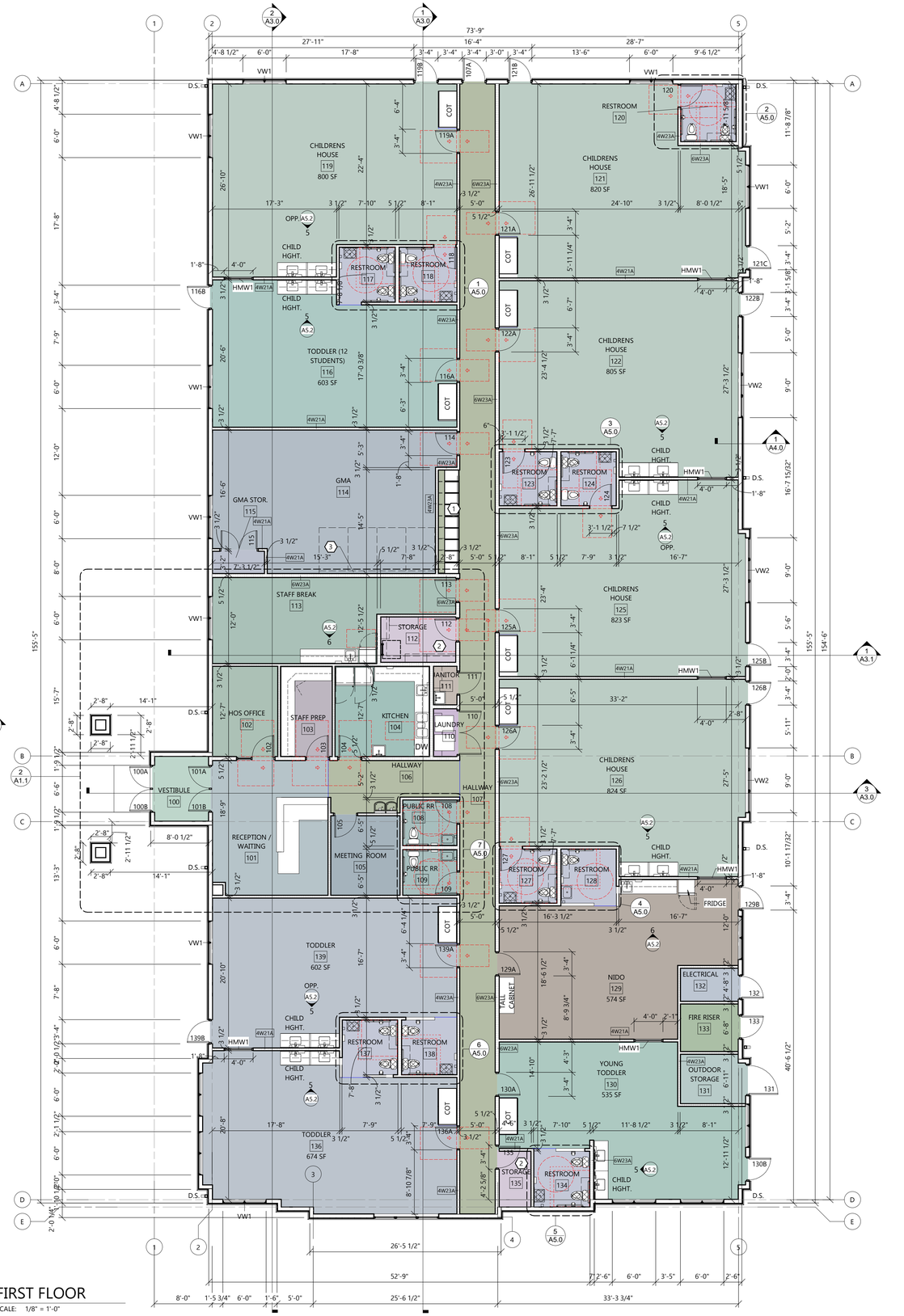
1. PROVIDE METAL LOCKERS PER HGE SPECIFICATIONS.
2. PROVIDE METAL SHELVING PER HGE SPECIFICATIONS.
3. CLIMBING WALL & MATS BY LL PER HGE OUTLINE SPECIFICATIONS




NORTH

ENLARGED ENTRANCE PLAN

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




NORTH

FIRST FLOOR

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

ARCHITECTURAL FIRST FLOOR PLAN

EXCEL

**Always a Better Plan**

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION

Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:

# QUATTRO DEVELOPMENT

N35 W23824 CAPTIOL DRIVE • PEWAUKEE, WI

PROFESSIONAL SEAL

**PRELIMINARY DATES**

- NOV. 3, 2022
- NOV. 11, 2022
- NOV. 16, 2022
- NOV. 17, 2022
- DEC. 12, 2022
- JAN. 24, 2023

NOT FOR CONSTRUCTION

**JOB NUMBER**

2245520

**SHEET NUMBER**

A1.1

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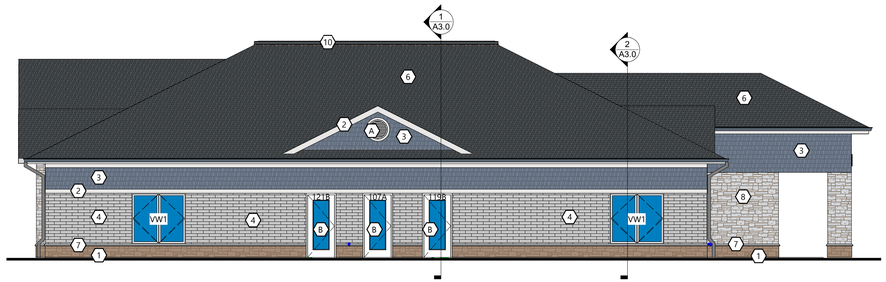



## EXTERIOR FINISH KEY

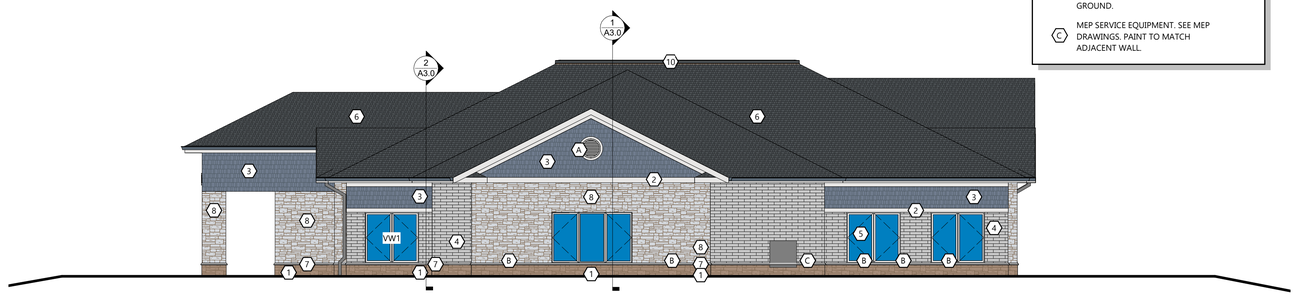
| | |
|---|---|
| 10 | PREFINSIHED METAL COPING<br>MFR: PAC-CLAD<br>COLOR: MUSKET GRAY |
| 9 | VINYL CASEMENT WINDOW<br>MFR: MINNKOTA<br>PRODUCT: ASPEKT 1800<br>COLOR: WHITE |
| 8 | THIN STONE VENEER<br>MFR: LAFARGE FOX RIVER DECORATIVE STONE<br>PRODUCT: CHILTON COUNTRY SPUIRE |
| 7 | PRECAST CONCRETE SILL<br>MFR: STONECAST<br>PRODUCT: LIMESTONE |
| 6 | ASPHALT SHINGLES<br>MFR: CERTAINTEED LANDMARK<br>COLOR: GEORGETWON GRAY |
| 5 | ALUM STOREFRONT WINDOW<br>GLASS: 1" INSUL. LOW-E GLASS<br>FRAMES: DARK BRONZE |
| 4 | THIN CONCRETE BRICK VENEER<br>MFR: COUNTY MATERIALS<br>PRODUCT: HERITAGE COLLECTION<br>COLOR: GRAYSTONE |
| 3 | SHAKE SIDING<br>MFR: JAMES HARDIE<br>PRODUCT: HARDIESHINGLE SIDING<br>COLOR: CADET SW9143 |
| 2 | 1x6 TRIM<br>MFR: JAMES HARDIE<br>COLOR: EXTRA WHITE SW7006 |
| 1 | THIN STONE VENEER<br>MFR: LAFARGE FOX RIVER DECORATIVE STONE<br>PRODUCT: CUSTOM COUNTRY BLEND |

## ELEVATION KEYNOTES

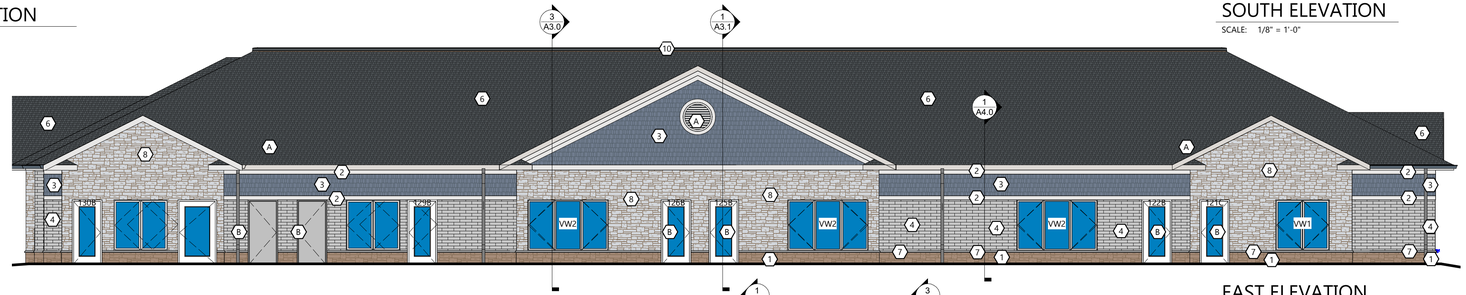
- A — VINYL ATTIC VENT. COLOR TO MATCH HARDIE TRIM, SW 7006 EXTRA WHITE
- B — HOLLOW METAL DOOR TO BE PAINTED PER HIGHER GROUND GUIDELINES. COORDINATE COLOR WITH HIGHER GROUND.
- C — MEP SERVICE EQUIPMENT. SEE MEP DRAWINGS. PAINT TO MATCH ADJACENT WALL.



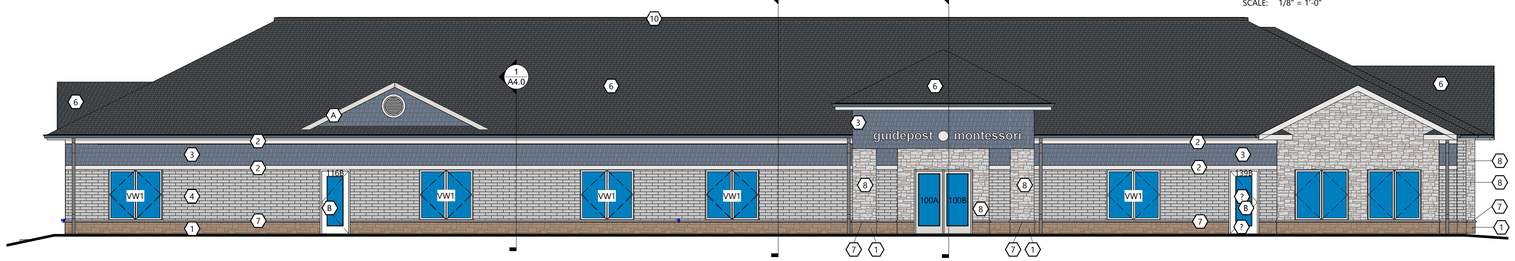

NORTH ELEVATION
SCALE: 1/8" = 1'-0"




SOUTH ELEVATION
SCALE: 1/8" = 1'-0"




EAST ELEVATION
SCALE: 1/8" = 1'-0"




WEST ELEVATION
SCALE: 1/8" = 1'-0"

ARCHITECTURAL EXTERIOR ELEVATIONS

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920-926-9800
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COLLABORATION

Quattro Development

PROJECT INFORMATION

PROPOSED EARLY CHILDHOOD SCHOOL FOR:
**QUATTRO DEVELOPMENT**
N35 W23824 CAPTIOL DRIVE • PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES
NOV. 3, 2022
NOV. 11, 2022
NOV. 16, 2022
DEC. 12, 2022
JAN. 24, 2023

*NOT FOR CONSTRUCTION*

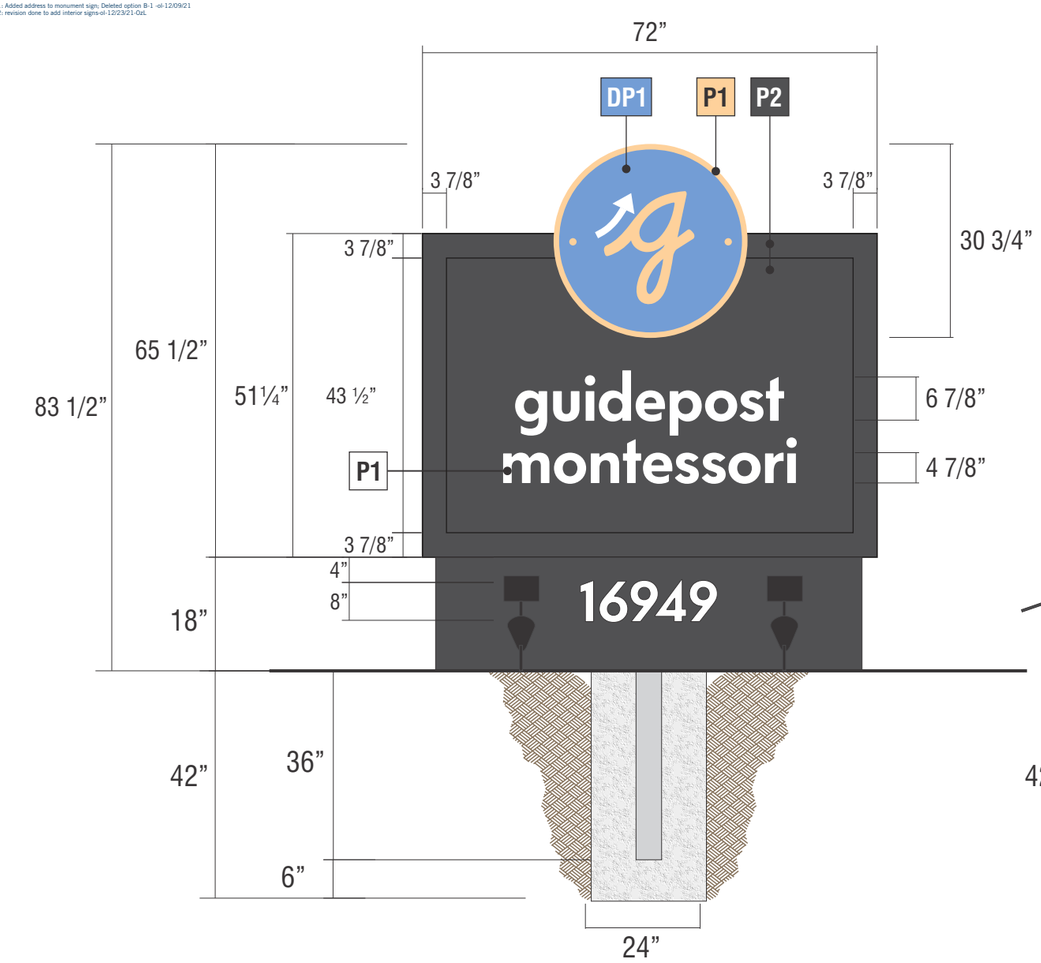
JOB NUMBER
2245520

SHEET NUMBER
**A2.0**

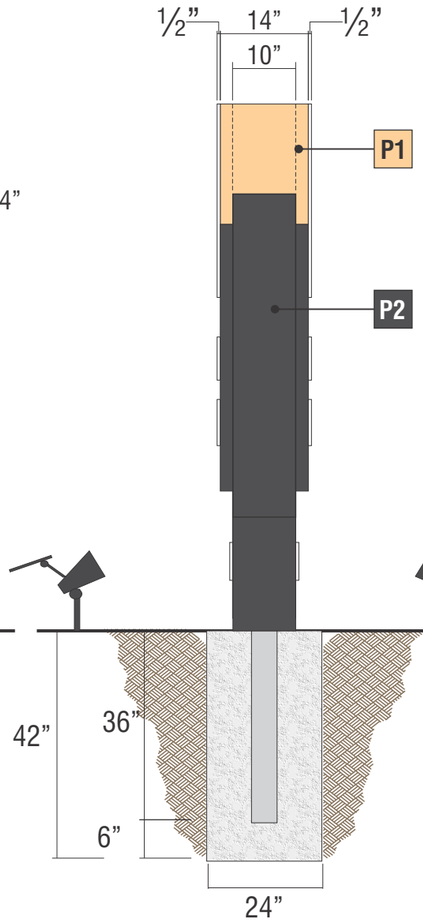
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1/24/2023 4:42:21 PM

R1: Added address to monument sign; Deleted option B-1 -ol-12/09/21
R2: revision done to add interior signs-ol-12/23/21-OzL




**FRONT ELEVATION SCALE: 1/2” = 1’-0”**




**SIDE ELEVATION SCALE: 1/2” = 1’-0”**




**BACK ELEVATION SCALE: 1/2” = 1’-0”**

**A** | **SIGNTYPE** | **GPM-MON-65x72-83-DF**

**MANUFACTURE AND INSTALL ONE (1) DOUBLE SIDED NON-ILLUMINATED MONUMENT SIGN W/ EXTERNAL LIGHTS**

**CABINET:** TO BE CLAD WITH .125” ALUMINUM PAINTED MATTHEWS MP07102 “DEEP RIVER”, SATIN FINISH
**PANEL:** BREAK FORM ALUMINUM 2” DEEP PAINTED MATTHEWS MP07102 “DEEP RIVER”, SATIN FINISH
**LOGO:** 1/2” PLEX WITH FIRST SURFACE DIGITAL PRINTED LOGO.
**COPY:** 1/2” PLEX PAINTED MATTHEWS SATIN WHITE.
**ADDRESS NUMERALS (NON-ILLUMINATED)** : 1/2” ACRYLIC, PAINTED MATTHEWS SATIN WHITE
**POLE:** TO BE CLAD WITH .125” ALUMINUM PAINTED DARK GREY
**FOOTINGS:** BY SIGNTECH ENGINEERING.

## PAINT COLORS

**DP1** DIGITAL PRINT TO MATCH PMS 7453C BLUE, SATIN LAMINATE
( REVERSED WEED DOTS TO SHOW THRU TAN BACKGROUND )

**P1** PAINT TO MATCH ( C-0 M-20 Y-43 K-0 ), SATIN FINISH

**P2** PAINT MATTHEWS MP07102 “DEEP RIVER”, SATIN FINISH

**P1** MATTHEWS SATIN WHITE




**AMIR Solar Spotlights Outdoor = (4) Pack**

Signtech
4444 Federal Blvd San Diego, CA 92102
(619) 527-6100 signtech.com



**GUIDEPOST MONTESSORI**
N56 West 16949 Ridgewood Dr #56,
Menomonee Falls, WI 53051 USA

This design is the exclusive property of Signtech and cannot be reproduced in whole or in part, without their prior written approval

**Sales:** Christine Mello
**Coordinator:** Brian Benson
**Design:** Oz Lemus
**Engineering:**

**Date:** 08/25/21
**Drawing:** 21-01361 **Rev:** R2-12/23/21-OzL
**Quote:**
**Project ID:** GUIDEPOST_N56W_2

Quattro Development
1100 Jorie Blvd. • Suite 140
Oak Brook, IL 60523
(630) 870-1921

January 26, 2023

Mr. Nick Fuchs
Planner & Community Development Director
City of Pewaukee
W240N3065 Pewaukee Road
Pewaukee, WI 53072

Re: Release of 45' Reserved Right-of-Way from
Lot 2 of Certified Survey Map No. 10366
Pewaukee, WI

Dear Mr. Fuchs:

This letter is in regards to the existing 45' reserved right-of-way along the southern property line of Lot 2 of Certified Survey Map No. 13066.

Per our prior conversations, we have confirmed with the Wisconsin DOT that this was not a DOT requirement, but rather a City of Pewaukee requirement. In reviewing the aerial maps of this area, it appears that the lots adjacent to this property have encroached into the reserved right-of-way leading us to believe that the City has no plans to develop within this area. To develop Lot 2 to its full potential, we respectfully request that the City vacate / discontinue this future right-of-way from Lot 2.

Please review and let us know if the City would be open to this request.

If you have any further questions regarding this matter, please feel free to contact me at (630) 870-1921.

Sincerely,

**Quattro Development, LLC**

Brett J. Dahlman, P.E.
Director of Construction & Development
brett@quattrodevelopment.com

Attachment: CSM 10366

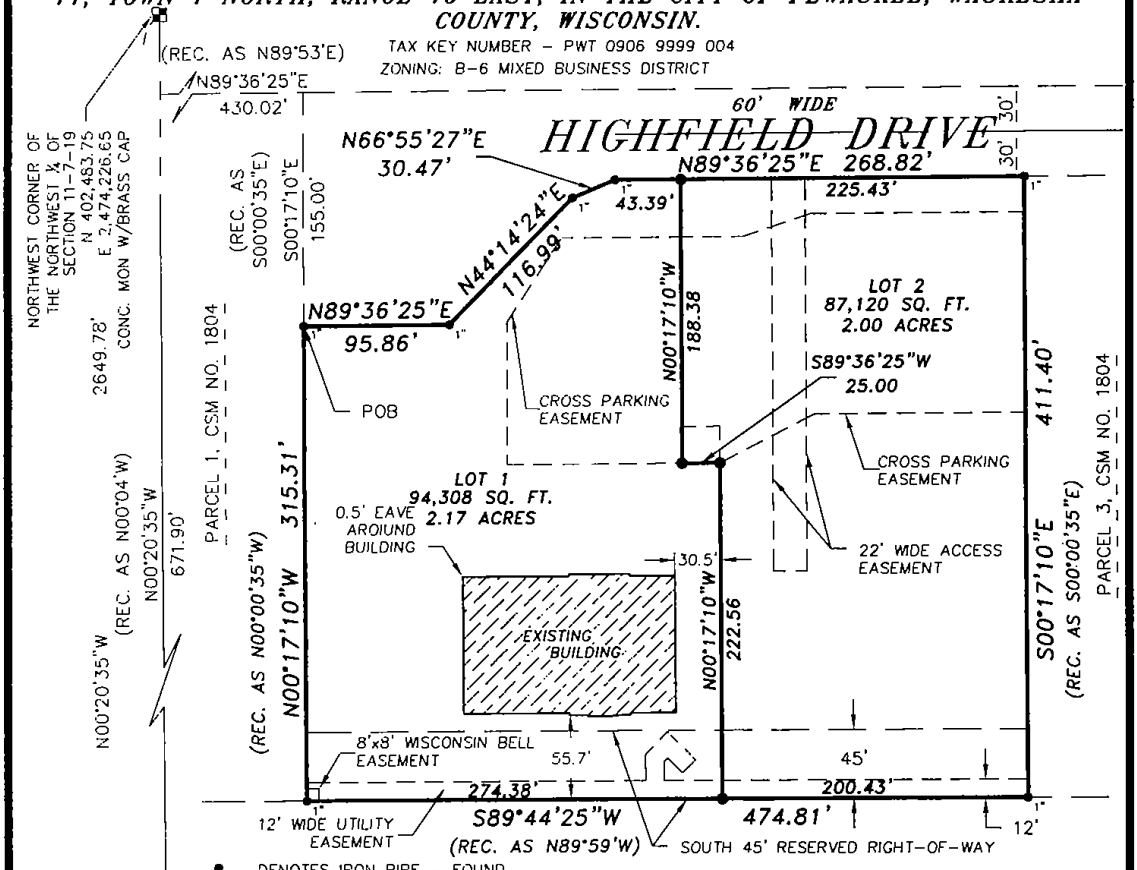
WC3472291-007

3472291

# CERTIFIED SURVEY MAP NO. 10966

**BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.**

TAX KEY NUMBER – PWT 0906 9999 004
ZONING: B-6 MIXED BUSINESS DISTRICT




●1 – DENOTES IRON PIPE – FOUND.

● – DENOTES 1.315" O.D. IRON PIPE, WEIGHTING NOT LESS THAN 1.13 LBS PER LINEAL FOOT, 18" IN LENGTH – SET.

ALL DIMENSIONS ARE MEASURED AND COMPUTED TO THE NEAREST ONE HUNDREDTH OF A FOOT.

BEARINGS ARE REFERENCE TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, ASSUMED WEST LINE N00°20'35"W.

THERE SHALL BE NO DIRECT ACCESS FROM LOTS 1, 2 AND 3 TO S.T.H. "190" / CAPITOL DRIVE.

WIDTH VARIES

CAPITOL DRIVE
(S.T.H. "190")

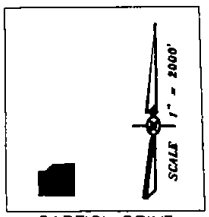
SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11-7-19
N 399,834.27
E 2,474,242.52
CONC. MON W/BRASS CAP

OWNER:
KB Pewaukee, LLC
2226 STATE ROAD 580
CLEARWATER, FL. 33763

SEE SHEET 2 OF 7 FOR EASEMENT DETAILS
SEE SHEET 3 OF 7 FOR LINE TABLE

GRAPHIC SCALE
100' 50' 0 100'

SCALE 1" = 100'



CAPTIOL DRIVE
VICINITY MAP
NW 1/4 SEC. 11-7-19

WISCONSIN
MARK D. NESGOOD
S-1967
KENOSHA, WI
LAND SURVEYOR

**McCLURE ENGINEERING ASSOCIATES, INC.**
5417 North 118th Court, Milwaukee, WI 53225
(414)616-4880 PROJECT NO. 08-15-05-114
(414) 616-4885 (FAX) DRAWING: 05114C2.DWG

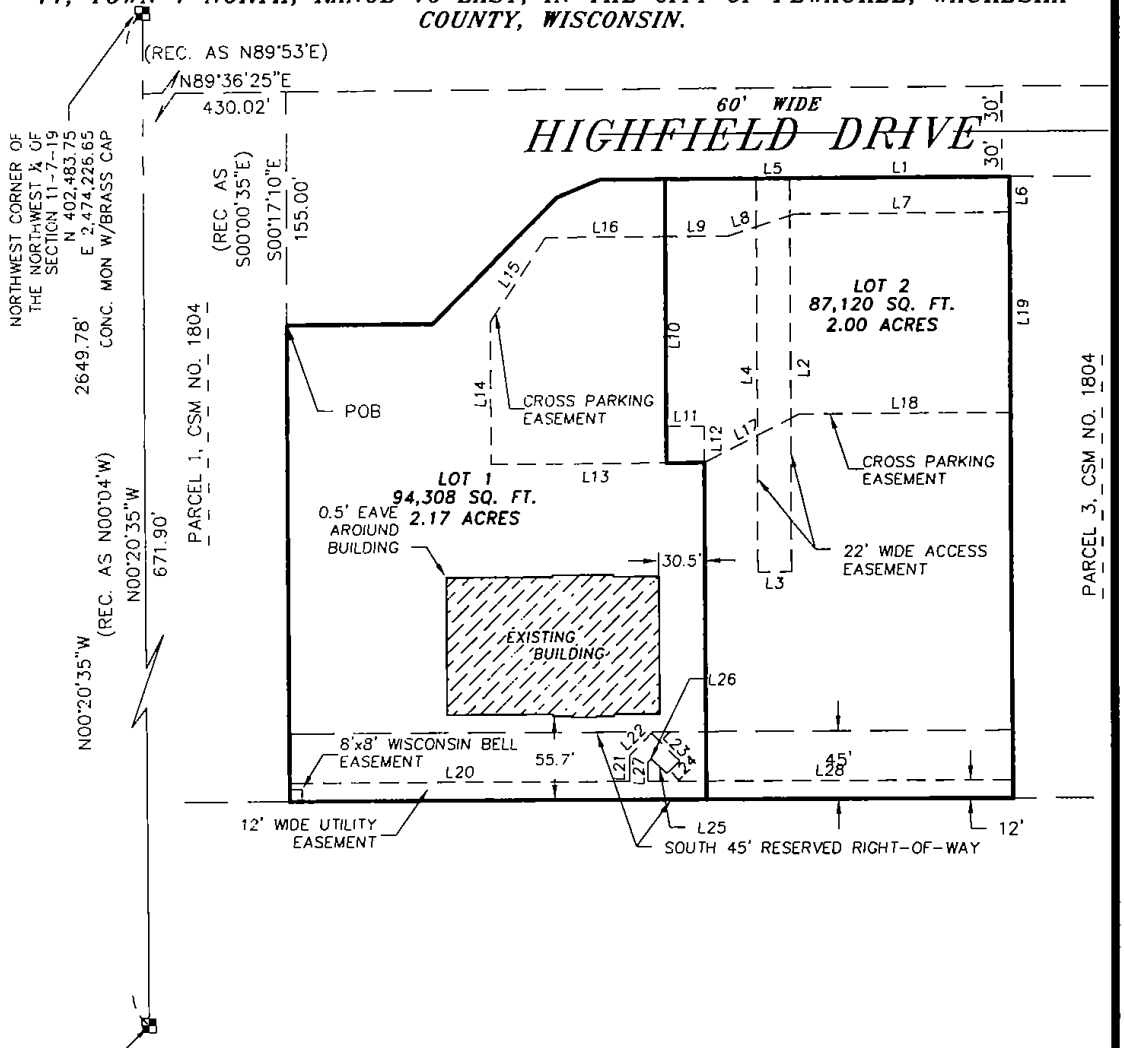
3/28/07
WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 1 OF 7

# CERTIFIED SURVEY MAP NO. 10364

**BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.**




GRAPHIC SCALE

100' 50' 0 100'

1" = 100'

SCALE

WISCONSIN
MARK D. NESGOOD
S-1967
KENOSHA, WI
LAND SURVEYOR


**McCLURE ENGINEERING ASSOCIATES, INC.**
5417 North 118th Court, Milwaukee, WI 53225
(414)616-4880 PROJECT NO. 08-15-05-114
(414) 616-4885 (FAX) DRAWING: 05114C2.DWG


3/28/07

WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 2 OF 7

*CERTIFIED SURVEY MAP NO. 10366*

*BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.*

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | DISTANCE |
| L1 | S89°36'25"W | 143.52' |
| L2 | S00°16'37"E | 260.80' |
| L3 | S89°43'25"W | 22.00' |
| L4 | N00°16'37"W | 260.75' |
| L5 | S89°36'25"W | 22.00' |
| L6 | S00°17'10"E | 23.68' |
| L7 | S89°36'25"W | 140.49' |
| L8 | S71°16'14"W | 46.32' |
| L9 | S89°36'25"W | 41.00' |
| L10 | S00°17'10"E | 125.82' |
| L11 | N89°36'25"E | 25.00' |
| L12 | S00°17'10"E | 24.30' |
| L13 | S89°36'25"W | 140.49' |
| L14 | N00°17'10"W | 94.45' |
| L15 | N32°59'24"E | 66.67' |
| L16 | N89°36'25"E | 78.91' |
| L17 | N62°29'07"E | 70.01' |
| L18 | N89°36'25"E | 138.18' |
| L19 | N00°17'10"W | 132.78' |
| L20 | N89°44'25"E | 223.97' |
| L21 | N00°32'10"W | 17.46' |
| L22 | N44°27'51"E | 20.49' |
| L23 | S45°32'09"E | 26.00' |
| L24 | S44°27'51"W | 12.00' |
| L25 | N45°32'09"W | 14.00' |
| L26 | S44°27'51"W | 3.51' |
| L27 | S00°32'10"E | 12.54' |
| L28 | N89°44'25"E | 238.84' |

WISCONSIN
MARK D. NESGOOD S-1967 KENOSHA, WI
LAND SURVEYOR

3/18/07

WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 3 OF 7

# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

**SURVEYOR'S CERTIFICATE**

STATE OF WISCONSIN)
MILWAUKEE COUNTY) SS

I, Mark D. Nesgood, Registered Land Surveyor, do hereby certify that I have surveyed, divided and mapped a Redivision of a part of Parcel 2 of Certified Survey Map No. 1804, being a part of the Southwest ¼ of the Northwest ¼ of Section 11, Town 7 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the Southwest corner of the Northwest ¼ of said Section; thence N00°20'35"W along the West line of the Northwest ¼ of said Section 671.90 feet; thence N89°36'25"E 430.02 feet to the Northwest corner of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the West line of Parcel 2 of said Certified Survey Map 155.00 feet to the point of beginning; thence N89°36'25"E along the South right-of-way line of Highfield Drive; thence N44°14'24"E along the Southeasterly right-of-way line of said Drive 116.99 feet; thence N66°55'27"E along the Southeasterly right-of-way line of said Drive 30.47 feet; thence N89°36'25"E along the South right-of-way line of said Drive 268.82 feet to a point on the East line of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the East line of Parcel 2 of said Certified Survey Map 411.40 feet to the Southeast corner of Parcel 2 of said Certified Survey Map and a point on the North right-of-way line of Capitol Drive; thence S89°44'25"W along the South line of Parcel 2 of said Certified Survey Map and the North right-of-way line of said Drive 474.81 feet to the Southwest corner of Parcel 2 of said Certified Survey Map; thence N00°17'10"W along the West line of Parcel 2 of said Certified Survey Map 315.31 feet to the point of beginning. Containing 4.17 acres of land more or less.

THAT I have made such survey, land division and map by the direction of KB Pewaukee, LLC, a Florida limited liability company, owner of said land.

THAT such map is a correct representation of all exterior boundaries and of the land surveyed and the land division thereof made.

THAT I have fully complied with the provisions of Chapter 236 of the Wisconsin State Statutes and the regulations of the City of Pewaukee in surveying, dividing and mapping the same.

Dated this 28th day of March, 2007




Wisconsin Registered Land Surveyor
Mark D. Nesgood S-1967

# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

## OWNERS CERTIFICATE

As Owner, I do hereby certify that I have caused the land described on this plat to be surveyed, divided and mapped as represented on this plat. We also certify that this Certified Survey Map is Required to be submitted to the following for approval: City of Pewaukee.

WITNESS the hand and seal of said Owner this 29th day of March, 2007.

IN THE PRESENCE OF:

KB Pewaukee, LLC, a Florida Limited Liability Company.

, Member
Robert E. Schmidt, Jr.
Managing Member

STATE OF Florida )
Pinellas COUNTY) SS

PERSONALLY came before me this 29 day of March, 2007, the above named Robert E Schmidt Member of KB Pewaukee, LLC a Florida Limited Liability Company, to me known to be the person who executed the foregoing instruction and acknowledged the same.

Amanda D. Norwick
Commission # DD641050
Expires: FEB. 15, 2011
www.AaronNotary.com

Notary Public, State of Florida
My commission expires Feb. 15, 2011

WISCONSIN
MARK D. NESGOOD
S-1966
KENOSHA, WI
LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S.

SHEET 5 OF 7



207

## CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

**CONSENT OF CORPORATE MORTGAGEE**

Park Bank, mortgagee of the above described land, does hereby consent to the surveying, dividing and mapping of the land described on this map, and does hereby consent to the foregoing owner's certificate.

Park Bank

STATE OF )
COUNTY) SS

Personally came before me this 2ND day of APRIL, 2007, HEATHER BAYLOR of the above named Corporation, to be known to be the person who executed the foregoing instrument, and to me known to be such VICE PRESIDENT of said Corporation, and acknowledged that he executed the foregoing instrument as such officer as the deed of said corporation, by its authority.

Notary Public, State of WI
My Commission expires 4-[illegible]

WISCONSIN
MARK D.
NESGOOD
S-1967
KENOSHA
LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S. SHEET 6 OF 7

# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

**CITY PLAN COMMISSION APPROVAL:**

Approved by the Plan Commission, City of Pewaukee, this 15th day of March, 2007.

Scott Klein – Chairman

David Mokros – Secretary

**CITY COMMON COUNCIL APPROVAL:**

Approved by the Common Council, City of Pewaukee, this 19th day of March, 2007.

Scott Klein – Mayor

Kelly Tarczewski – Clerk

CITY OF PEWAUKEE CORPORATE SEAL WISCONSIN

Vol 48 Pages 203-209

3472291

REGISTER'S OFFICE
WAUKESHA COUNTY, WI
RECORDED ON

04-13-2007 11:51 AM

MICHAEL J. HASSLINGER
REGISTER OF DEEDS

REC. FEE: 16.00
REC. FEE-CO: 5.00
REC. FEE-ST: 2.00
TRAN. FEE:
TRAN. FEE-STATE:
PAGES: 7

WISCONSIN MARK D. NESGOOD S-1967 KENOSHA WI LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S. SHEET 7 OF 7

**A COVENANT**
**REGARDING THE ISSUANCE OF A**
**CONDITIONAL USE PERMIT**
**BY THE**
**CITY OF PEWAUKEE**

**TAX KEY NUMBER(S) OR PARCEL(S) INVOLVED:**

**CONDITIONAL USE PERMIT: NO. CUP-23-3-3**

**PWC 0906994**

Recording area

Name & Return Address

City of Pewaukee
W240N3065 Pewaukee Rd
Pewaukee, WI 53072

**LEGAL DESCRIPTION:**

LOT 2 CERT SURV 10366 VOL 98/203 2.00 AC PT NW1/4 SEC 11 T7N R19E DOC# 3482373

**PERSON(S), AGENT(S) OR CORPORATION(S) PETITIONING FOR PERMIT:**

Quattro Development/Higher Ground Education

**WHEREAS,** It is understood by all parties to this covenant that Section 62.23 of WIS. Statutes prescribes the legal basis for the granting of a conditional use permit by a City and Chapter 17 of the City Codes and Ordinances provides for the issuance of such permits as well as the standards by which all such uses will be measured; and,

**WHEREAS,** The City Plan Commission has held a meeting on March 16, 2023; has reviewed the various elements of the petitioner's proposal; and has recommended that a Conditional Use Permit be granted to the above-named petitioner for the property/parcel identified above; and,

**WHEREAS,** The City Common Council held a public hearing meeting on April 3, 2023.

**NOW, THEREFORE,** let it be known that the City Common Council, by its action on April 3, 2023 has, hereby, granted a Conditional Use Permit for the following use(s):

Construction of a childcare facility.

**FURTHER,** such approved use of the above designated parcel(s) are hereby allowed based on the following conditions being continually met:

1. Staff recommends that the playground areas, fencing, and any other accessory structure and use be located behind the building on the north side of the property.
2. Final grading, erosion control and storm water management plans shall be approved by the Engineering Department, prior to any land disturbing activities.
3. The applicant shall not be responsible for the construction of a bell tower as conditioned within Conditional Use Permit No. COP-05-10-3.

The parties hereto, namely the City of Pewaukee and the Equitable Owner of the property for which this conditional use has been sought, set their signatures or the signatures of their representatives below, thereby agreeing to the provisions and conditions set forth in this covenant.

_____ _____

Attest: Signature of equitable owner

_____

Date

_____ _____

Kelly Tarczewski
City Clerk

Steve Bierce
Mayor, City of Pewaukee

_____

Date

State of Wisconsin
County of Waukesha

Signed or attested before me on _____, 2023 by Steve Bierce, Mayor and Kelly Tarczewski, Clerk.

_____

(Seal) Ami Hurd
My Commission expires _____

This instrument was drafted by Ami Hurd, Deputy Clerk

DRAFT

**WAUKESHA COUNTY CITY OF PEWAUKEE STATE OF WISCONSIN**

**RESOLUTION NO. __-__**

**A RESOLUTION AUTHORIZING THE RELEASE, WAIVER, VACATION AND REVISION OF A FORTY-FIVE FOOT RESERVED RIGHT-OF-WAY RESTRICTION UPON LOTS 1 AND 2 OF CERTIFIED SURVEY MAP NO. 10366 FOR PROPERTIES LOCATED AT APPROXIMATELY N35W23877 HIGHFIELD COURT BEARING TAX KEY NOS. 0906993 AND 0906994**

**WHEREAS,** the Plan Commission having approved a Conditional Use and Site and Building Plan Review Application upon the application of Quattro Development, LLC on March 16, 2023, and the Plan Commission having conditioned approval thereof in part upon Common Council approval of the release of a 45' Reserved Right-of-Way restriction located upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, as further described below:

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 1 of CSM No. 10366.

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 2 of CSM No. 10366; and

**WHEREAS,** the City Engineering Department and City Planner have reviewed the proposed release of a 45' Reserved Right-of-Way restriction and recommended approval thereof to the Common Council; and

**WHEREAS,** the 45' Reserved Right-of-Way has been determined to no longer be needed considering the developments of the subject properties and adjacent parcels to the east; and

**WHEREAS,** the previously recorded 45' Reserved Right-of-Way restriction described above are located upon Certified Survey Map No. 10366, which properties are legally described as follows:

> Commencing at the Southwest comer of the Northwest ¼ of said Section; thence N00°20'35"W along the West line of the Northwest ¼ of said Section 671.90 feet; thence N89°36'25"E 430.02 feet to the Northwest comer of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the West line of Parcel 2 of said Certified Survey Map 155.00 feet to the point of beginning; thence N 89°36'25"E along the South right-of-way line of Highfield Drive; thence N44°14'24" E along the Southeasterly right-of-way line of said Drive 116.99 feet; thence N66°55'27"E along the Southeasterly right-of-way line of said Drive 30.47 feet; thence

N89°36'25"E along the South right-of-way line of said Drive 268.82 feet to a point on the East line of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the East line of Parcel 2 of said Certified Survey Map 411.40 feet to the Southeast comer of Parcel 2 of said Certified Survey Map and a point on the North right-of-way line of Capitol Drive; thence S89°44'25"W along the South line of Parcel 2 of said Certified Survey Map and the North right-of-way line of said Drive 474.81 feet to the Southwest comer of Parcel 2 of said Certified Survey Map; thence N00°17'10"W along the West line of Parcel 2 of said Certified Survey Map 315.31 feet to the point of beginning. Containing 4.17 acres of land more or less.

**WHEREAS,** Wis. Stats section 236.293 provides in part that any restriction placed on platted land by covenant, grant of easement or in any other manner, which was required by a public body vests in the public body the right to enforce the restriction at law or in equity and that the restriction may be released or waived in writing by the public body having the right of enforcement; and

**WHEREAS,** the Common Council has determined that the release, waiver, vacation and revision of the prior recorded 45' Reserved Right-of-Way is reasonable as it is no longer necessary for the orderly development of the subject properties or appropriate following the approval of the aforesaid site and building development plans submitted by Quattro Development, LLC.

**NOW, THEREFORE, BE IT RESOLVED,** by the Mayor and Common Council of the City of Pewaukee, Wisconsin, that the 45' Reserved Right-of-Way upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, be and the same are hereby waived and released.

**BE IT FURTHER RESOLVED** that the City Clerk is hereby directed to record this Resolution in the Office of the Register of Deeds for Waukesha County, Wisconsin following the approval of the proposed Quattro Development, LLC Conditional Use and Site and Building Plan Review applications.

Passed and adopted this __th day of _____, 2023.

FOR THE COMMON COUNCIL OF THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

ATTEST:

_____
Steve Bierce, Mayor

_____
Kelly Tarczewski, Clerk/Treasurer

# TIA TECHNICAL MEMORANDUM

**Date:** May 2, 2023

**Prepared for:** Brett Dahlman, P.E.
Quattro Development, LLC

**Prepared by:** Tammi Czewski, P.E., PTOE
Traffic Analysis & Design, Inc.

**Subject:** **Early Childhood School – Pewaukee, WI**
**Traffic Impact Analysis**

## INTRODUCTION

This traffic impact analysis (TIA) technical memorandum was prepared to document the peak hour traffic impacts expected at the study intersections with buildout of the proposed early childhood school at 23877 Highfield Court in Pewaukee, Wisconsin. A map showing the development site and proposed access location is on Exhibit 1.

## PROPOSED DEVELOPMENT

The conceptual site plan for the proposed development is on Exhibit 2. The site is zoned B-6 (Mixed-Use Business District). A conditional use is being sought for the proposed childcare development.

The early childhood school is proposed to be located between an existing office building and Capitol Drive East Kindercare on the south side of Highfield Court. Access to the early childhood school is proposed to be shared with the easternmost driveway for the existing office building. The early childhood school will provide Montessori childcare for up to 152 children (aged toddler through six years old) and 29 full-time staff in an 11,836-square foot building. The school will be open from 7:00 a.m. to 6:00 p.m. Monday through Friday. The site does not include a pick-up/drop-off lane – parents park first and then escort the children directly into the school. Due to variability in parent schedules, pick-ups and drop-off times are staggered over a two-to-three-hour period in the morning and afternoon.

## STUDY AREA

### Study Intersections

The study intersections are also identified on Exhibit 1 and include the following:

- Pewaukee Road & Swan Road
- Highfield Road & Capitol Drive
- Highfield Road & Highfield Court
- Highfield Road & Broken Hill Circle South

The Pewaukee Road/Swan Road intersection operates with traffic signal control. All other study intersections operate with stop sign control. The existing geometrics, traffic control, posted speed limits, and distances between study intersections are shown on Exhibit 3.

### Study Area Roadways

*Capitol Drive (STH 190)* is classified as a Principal Arterial and is an east/west roadway with a four-lane cross-section (two through lanes in each direction) that is divided by a wide grass median. The 2022 annual average daily traffic (AADT) on Capitol Drive ranged from 22,800 to 26,200 vehicles per day (vpd) in the study area. The posted speed limit on Capitol Drive is 55 mph through the study area.

*Pewaukee Road (STH 164)* is classified as a Principal Arterial and is a north/south roadway with a four-lane cross-section (two through lanes in each direction) that is divided by a mix of concrete and grass median within the study area. There is a multi-use path along the west side of the roadway between Swan Road/Meadow Creek Market and Capitol Drive. The 2022 AADT on Pewaukee Road ranges from 17,300 vpd (north of Swan Road) to 22,600 vpd (south of Capitol Drive). The posted speed limit on Pewaukee Road is 45 mph through the study area.

*Swan Road* is classified as a Collector Roadway and is a north/south roadway with a two-lane cross-section (one through lane in each direction) and a 2018 AADT of 1,100 vpd north of Pewaukee Road. The posted speed limit on Swan Road is 35 mph through the study area. An advisory speed limit of 30 mph is posted at the curve just east of Pewaukee Road.

*Broken Hill Circle South, Highfield Road, and Highfield Court* are two-lane local roadways providing access for the Broken Hills neighborhood, the Auburn Ridge condominiums, and the commercial development along Highfield Court. The posted speed limit on these roadways is 25 mph.

## EXISTING & FUTURE TRAFFIC VOLUMES

### Existing Traffic Volumes

TADI collected peak hour turning movement counts at the study intersections on April 11 and 12, 2023. The collective peak hours for these intersections occur from 7:30-8:30 a.m. (AM peak hour) and from 4:30-5:30 p.m. (PM peak hour). The traffic counts were compiled for these peak hours as shown on Exhibit 4. The complete traffic counts collected for this study are in Appendix A.

### Development Traffic Volumes

The trip generation and trip distribution for the proposed early childhood school development is on Exhibit 5. Based on trip rates and fitted curve equations published in the Institute of

Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, a daycare with up to 152 students generates 620 weekday daily trips, with 110 trips (60 in/50 out) in the AM peak hour and 105 trips (50 in/55 out) in the PM peak hour.

The distribution of these trips to the study area roadways was estimated based on the existing AADT volumes on the surrounding street system. The trip distribution was evaluated as:

- 30% to/from the west on Capitol Drive
- 25% to/from the east on Capitol Drive
- 20% to/from the north on Pewaukee Road
- 25% to/from the south on Pewaukee Road

The new trips for the proposed development were assigned to the study intersections based on this trip distribution. Trips were assigned for two scenarios:

- Scenario A: Without Cut-Through Traffic. Assumes that 100% of the site trips will access Pewaukee Road and Capitol Drive via at the Highfield Road/Capitol Drive intersection.

  For Scenario A, the early childhood school traffic on Highfield Road, south of Highfield Circle is about 43% of the total traffic on that street segment. No additional site traffic is present on Highfield Road, north of Highfield Circle for Scenario A.

- Scenario B: With Cut-Through Traffic. Assumes that 17% of the site trips will access the Pewaukee Road and Capitol Drive via Swan Road ("cutting through" the neighborhood to the north). This percentage was estimated from the existing Highfield Court peak hour volumes turning to and from the north on Highfield Road.

  For Scenario B, the early childhood school traffic on Highfield Road, south of Highfield Circle is about 38% of the total traffic on that street segment. The early childhood school traffic on Highfield Road, north of Highfield Circle is about 20% of the total traffic on that street segment.

The site traffic assignments are shown on Exhibit 6 (Scenario A) and on Exhibit 7 (Scenario B).

**Future Build Traffic Volumes**

The early childcare school new trips were added to the Existing traffic volumes to generate the Build traffic volumes. The Build traffic volumes are shown on Exhibit 8 (Scenario A) and on Exhibit 9 (Scenario B).

## PEAK HOUR TRAFFIC OPERATIONS & QUEUES

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. 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 definitions for signalized and unsignalized intersections are in Appendix B.

**Existing Traffic Operations**

The Existing traffic volumes were evaluated with the existing geometrics and traffic control at each study intersection. The Existing traffic weekday AM and PM peak hour LOS, delays, and queues for each study intersection are shown on Exhibit 10. The Synchro capacity analysis worksheets for the Existing traffic analyses are in Appendix B. The Synchro analysis shows that the southbound left-turn movement from Highfield Road onto Capitol Drive operates at LOS F with 53 seconds of delay (less than one minute per vehicle) during the weekday PM peak hour. Traffic queues for this movement are relatively low, however, at 1-2 vehicles per lane. All other study intersections operate acceptably at LOS D or better during the peak hours. All traffic movements at the Highfield Road intersections with Highfield Court and Broken Hills Circle South operate at LOS A.

**Build Traffic Operations**

The Build traffic operations were evaluated with the additional trips generated from the proposed early childhood school on Highfield Court. Build traffic volumes for Scenario A (no cut-through traffic) results in increased AM and PM delays (LOS E and/or F) at both northbound and southbound movements from Highfield Road and Five Fields Road. Delays for these movements are approximately 0.5-1.5 minutes or less per vehicle, and queues are 1-3 vehicles per lane. With the additional site traffic, the Highfield Road intersection with Highfield Ct. operates at LOS B or better during the peak hours.

To avoid these peak hour delays, some development traffic may choose to travel northward and use Swan Road to access Pewaukee Road and Capitol Drive. Build traffic volumes for Scenario B (with cut-through traffic), the traffic impact to the Highfield Road/Capitol Drive intersection is less, with northbound delays from Five Fields Road remaining at LOS D or better for both the AM and PM peak hours, and southbound delays from Highfield Road remaining at LOS D for the AM peak hour. Southbound delays from Highfield Road are expected to remain at LOS F during the weekday PM peak hours, but with only 17 seconds of additional delay and approximately one additional vehicle in queue. Even with the additional traffic traveling northward for Scenario B, all movements at the Highfield Road/Broken Circle South intersection remain at LOS A during the peak hours, and no significant increase in delays or queues are expected at the Swan Road/Pewaukee Road intersection.

The Build traffic weekday AM and PM peak hour LOS, delays, and queues for each study intersection are shown on Exhibit 11 (Scenario A) and Exhibit 12 (Scenario B). The Synchro capacity analysis worksheets for the Build traffic analyses are in Appendix C (Scenario A) and Appendix D (Scenario B).

**TRAFFIC GAP STUDY**

A traffic gap study was completed for the Highfield Road/Capitol Drive intersection to field-verify the traffic operations evaluated in Synchro. The intersection is located just east of the

Capitol Drive/Pewaukee Road traffic signal which creates one-way/eastbound traffic gaps on Capitol Drive through the Highfield Road intersection.

The length of gaps, in time, between vehicles traveling along eastbound and westbound Capitol Drive at the median opening for Highfield Road were collected during the weekday AM and PM peak hours. Critical gap and follow-up times for vehicle turning movements were then calculated based on equations in the Highway Capacity Manual (HCM). These equations include adjustment factors for heavy vehicles, grade, divided roadways, and intersection geometry. The gap analysis worksheet calculations and compiled gap counts are in Appendix E.

Equivalent gaps (or capacity of gaps) are calculated by adding the number of gaps available for only one vehicle to turn, gaps long enough for two vehicles to turn, and gaps long enough for three vehicles to turn (without counting the same gaps twice). The equivalent gaps represent the number of additional turning movements that could be made above and beyond the existing turning movements already occurring. Table 1 summarizes the findings of the gap study. The table shows the equivalent gaps calculated from the field counts, the new site trips assigned to the turning movements at Highfield Road, and the excess gaps available for additional turning movements above those numbers.

**Table 1. Capitol Drive at Highfield Road Traffic Gaps**

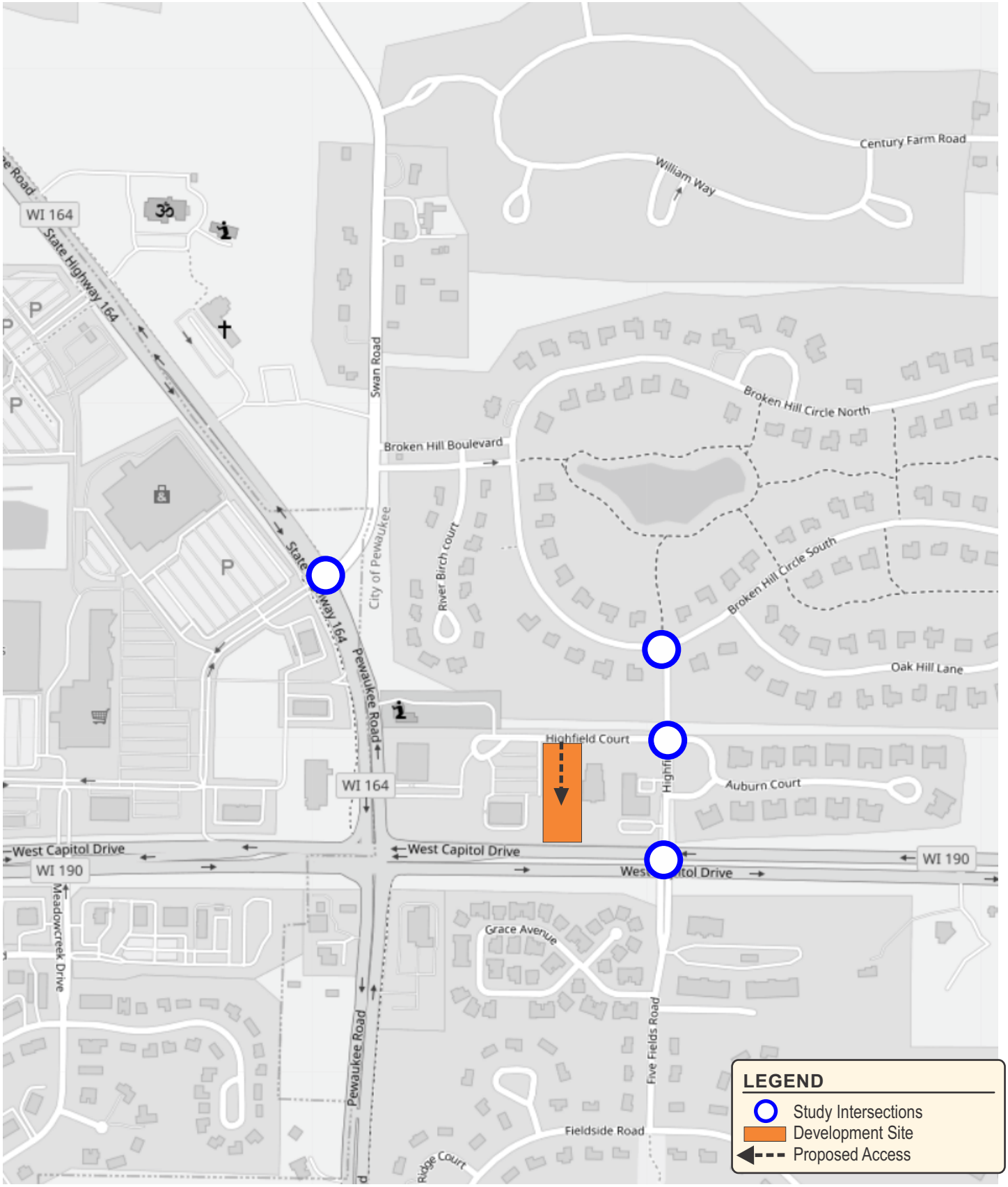
| Intersection Direction | Peak Hour | Equivalent Gaps | Net New Site Trips | Excess Gaps |
|---|---|---|---|---|
| **Scenario A: Without Cut-Through Traffic to Swan Road** | | | | |
| SB Left Turn from Highfield Road[1] | AM | 160 | 10 | 150 |
| | PM | 171 | 15 | 156 |
| SB Right Turn from Highfield Road | AM | 214 | 40 | 174 |
| | PM | 160 | 40 | 120 |
| EB Left Turn from Capitol Drive | AM | 404 | 45 | 359 |
| | PM | 278 | 40 | 238 |
| **Scenario B: With Cut-Through Traffic to Swan Road** | | | | |
| SB Left Turn from Highfield Road[1] | AM | 160 | 5 | 155 |
| | PM | 171 | 10 | 161 |
| SB Right Turn from Highfield Road | AM | 214 | 35 | 179 |
| | PM | 160 | 35 | 125 |
| EB Left Turn from Capitol Drive | AM | 404 | 35 | 369 |
| | PM | 278 | 30 | 248 |

[1] *SB left turn is completed in a two-stage gap maneuver (1 stage: SB Through to Median, 2nd stage, SB left turn from Median). The lower number of gaps between the stage 1 and stage 2 movements is reported in the table.*

As shown, there are anywhere from 120-369 excess gaps for additional turning movements beyond the existing and site trip traffic assigned to the Capitol Drive/Highfield Road intersection (Scenarios A & B). These excess gaps affirm that the adjacent signal provides one-way gaps in traffic along Capitol Drive that are not reflected in the Synchro traffic model. With a significant amount of excess gaps, traffic movements from Highfield Road may operate with less delays than shown in the LOS tables.

## RECOMMENDTIONS & CONCLUSIONS

No modifications to the study intersections are recommended to accommodate the additional traffic from the proposed early childhood school on Highfield Court in Pewaukee, Wisconsin. Although the traffic signal at the Capitol Drive/Pewaukee Road intersection creates gaps for traffic to make southbound left-turn movements from Highfield Court with reasonable delays (per the gap study), some traffic may "cut-through" the neighborhood roads to the north of the site and use Swan Road to access Pewaukee Road and then Capitol Drive. The additional "cut-through" traffic is not expected to significantly increase delays at the Swan Road/Pewaukee Road intersection, and traffic operations at the Highfield Road/Broken Hills Circle South intersection is expected to remain at LOS A during the peak hours for all turning movements.

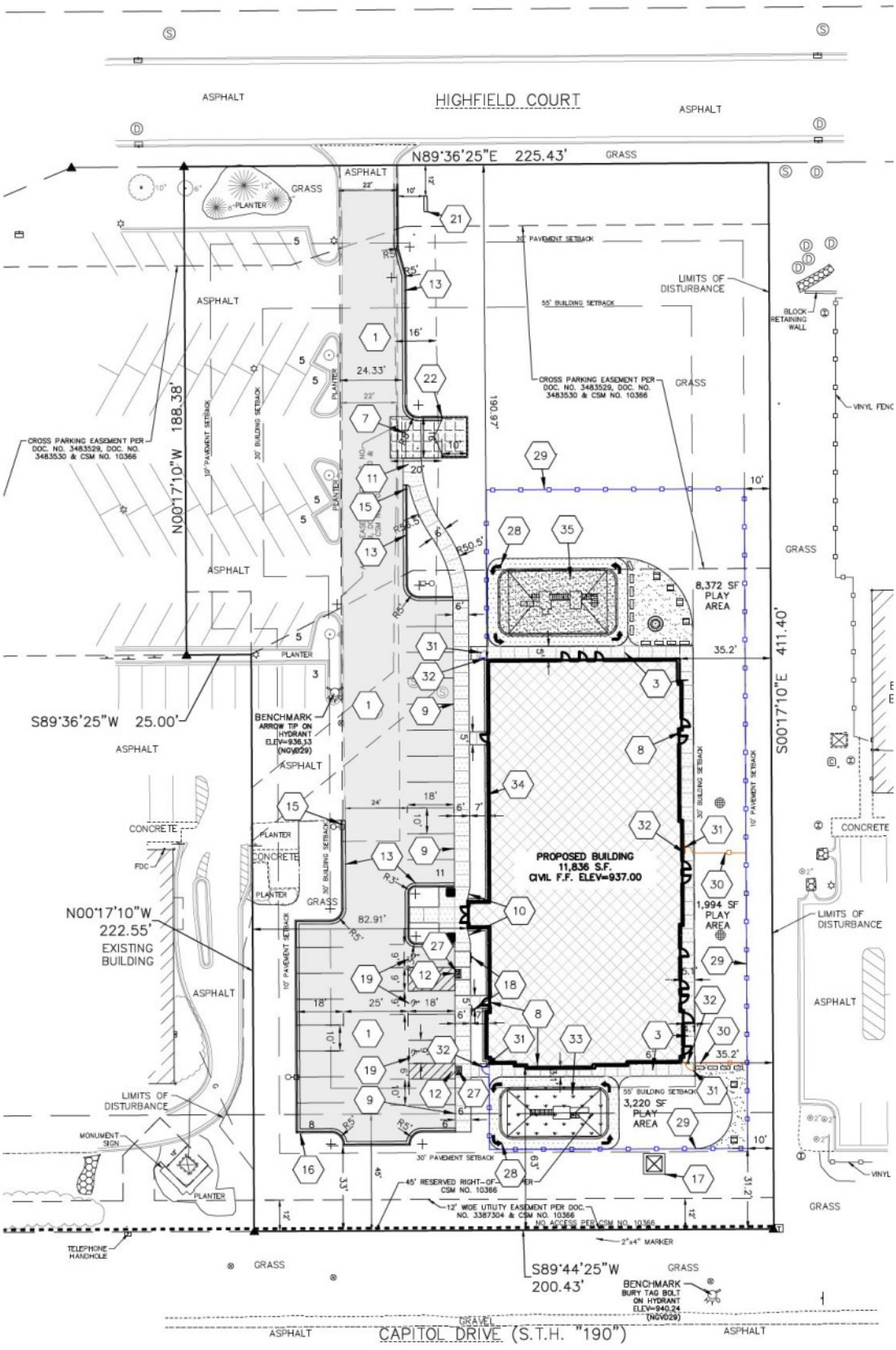



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**EXHIBIT 1**
**PROJECT LOCATION MAP**




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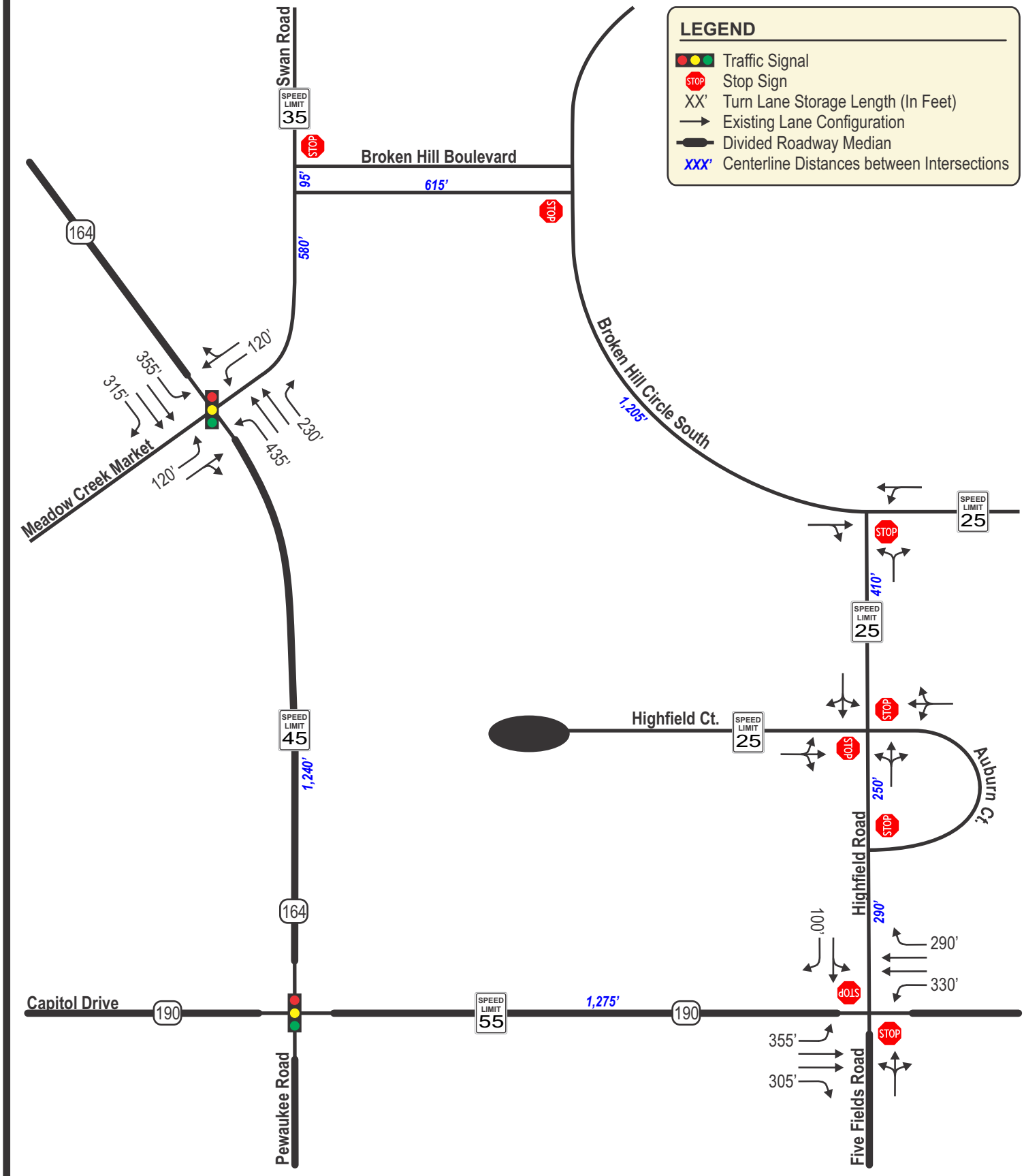
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**EXHIBIT 2**
**CONCEPTUAL SITE PLAN**



EARLY CHILDHOOD SCHOOL TIA - PEWAUKEE, WISCONSIN

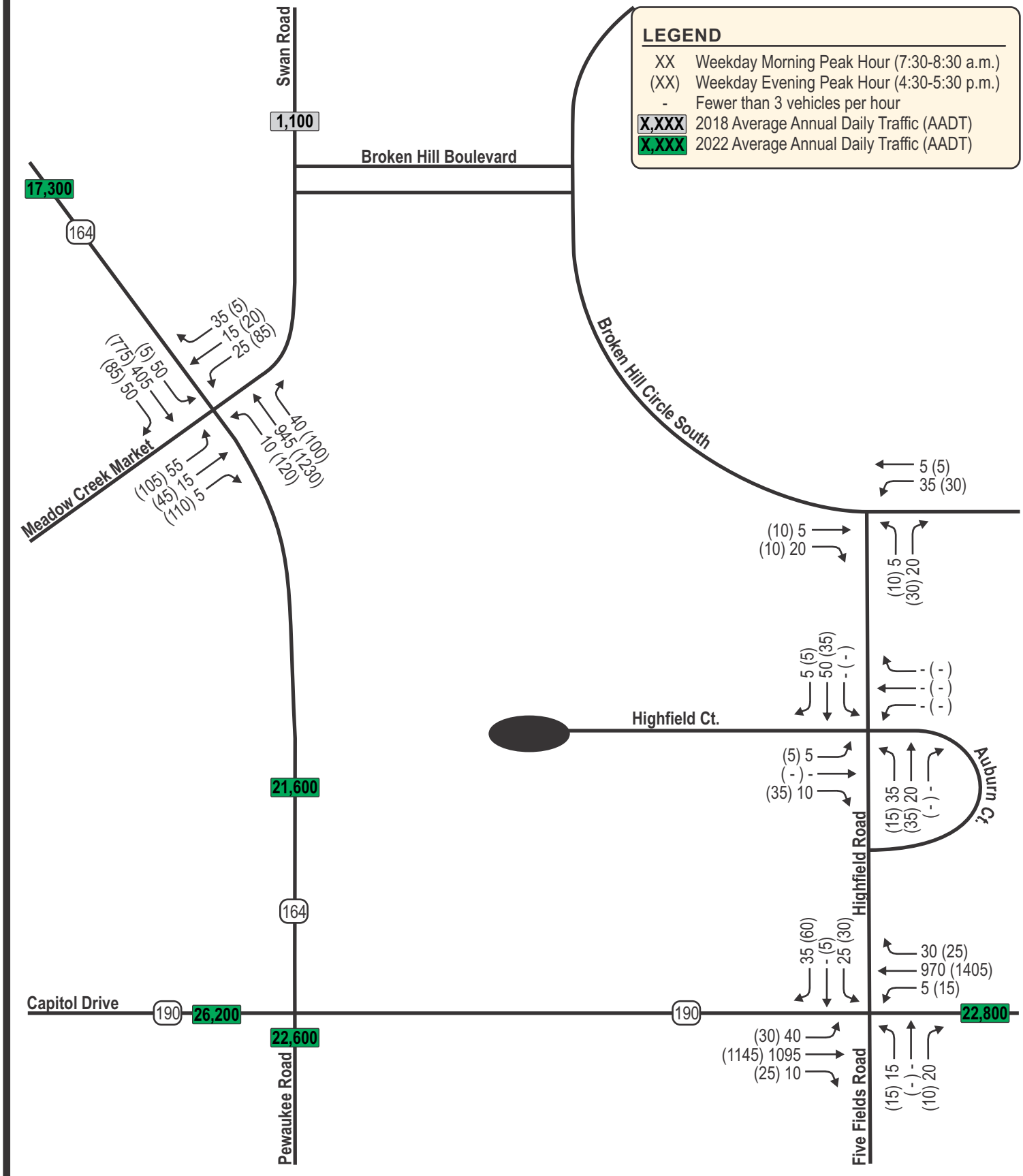



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**EXHIBIT 3**
**EXISTING TRANSPORTATION SYSTEM**




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**EXHIBIT 4**
**EXISTING PEAK HOUR TRAFFIC VOLUMES**

**Day Care Trip Generation Table[1]**

| Land Use | ITE Code | Proposed Size | Weekday Daily | AM Peak In | AM Peak Out | AM Peak Total | PM Peak In | PM Peak Out | PM Peak Total |
|---|---|---|---|---|---|---|---|---|---|
| Day Care Center | 565 | 152 Students | 620 (4.09) | 60 (53%) | 50 (47%) | 110 FCE | 50 (47%) | 55 (53%) | 105 FCE |
| **Total New Trips** | | | **620** | **60** | **50** | **110** | **50** | **55** | **105** |

*[1]ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 11th Edition.*

| ***TRIP DISTRIBUTION (New Trips)*** | | | | | | |
|---|---|---|---|---|---|---|
| W. on Capitol Drive | 30% | 20 | 15 | 15 | 15 | |
| E. on Capitol Drive | 25% | 15 | 10 | 10 | 15 | |
| N. on STH 164 | 20% | 10 | 10 | 10 | 10 | |
| S. on STH 164 | 25% | 15 | 15 | 15 | 15 | |
| | ***100%*** | ***60*** | ***50*** | ***50*** | ***55*** | |

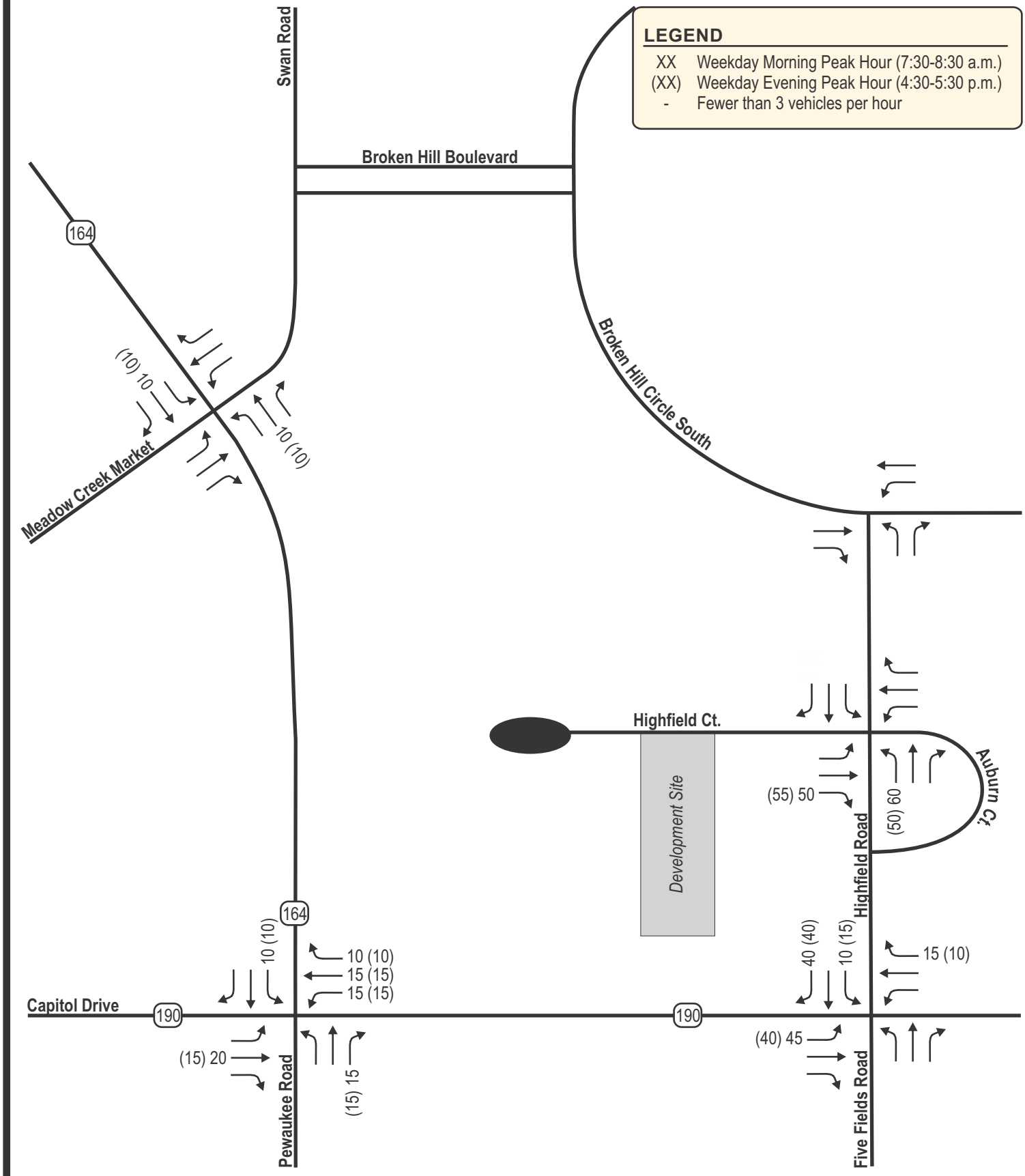
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**EXHIBIT 5**
**TRIP GENERATION & TRIP DISTRIBUTION**



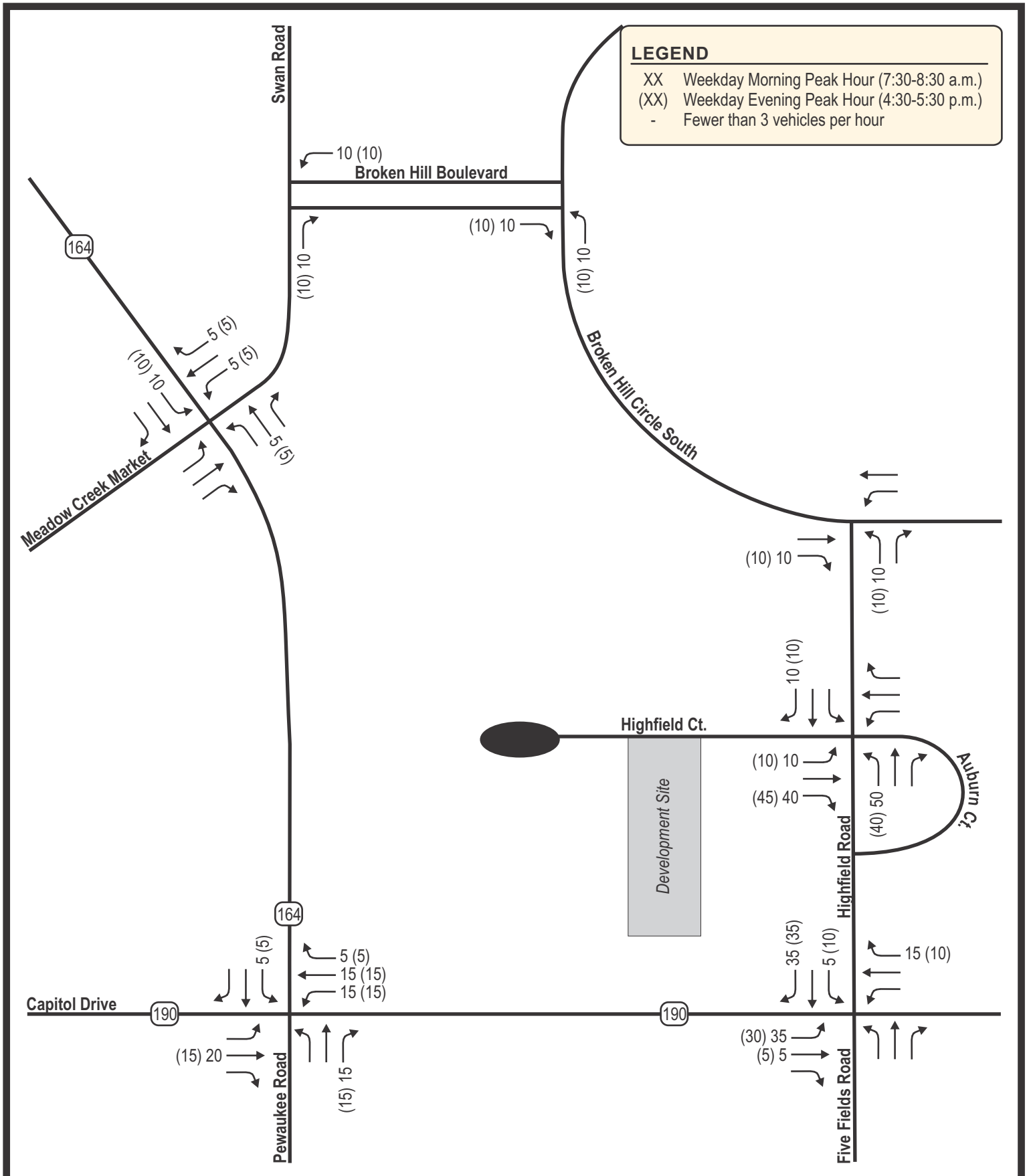

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**EXHIBIT 6**
**SCENARIO A NEW TRIPS**
***WITHOUT CUT-THROUGH TRAFFIC***

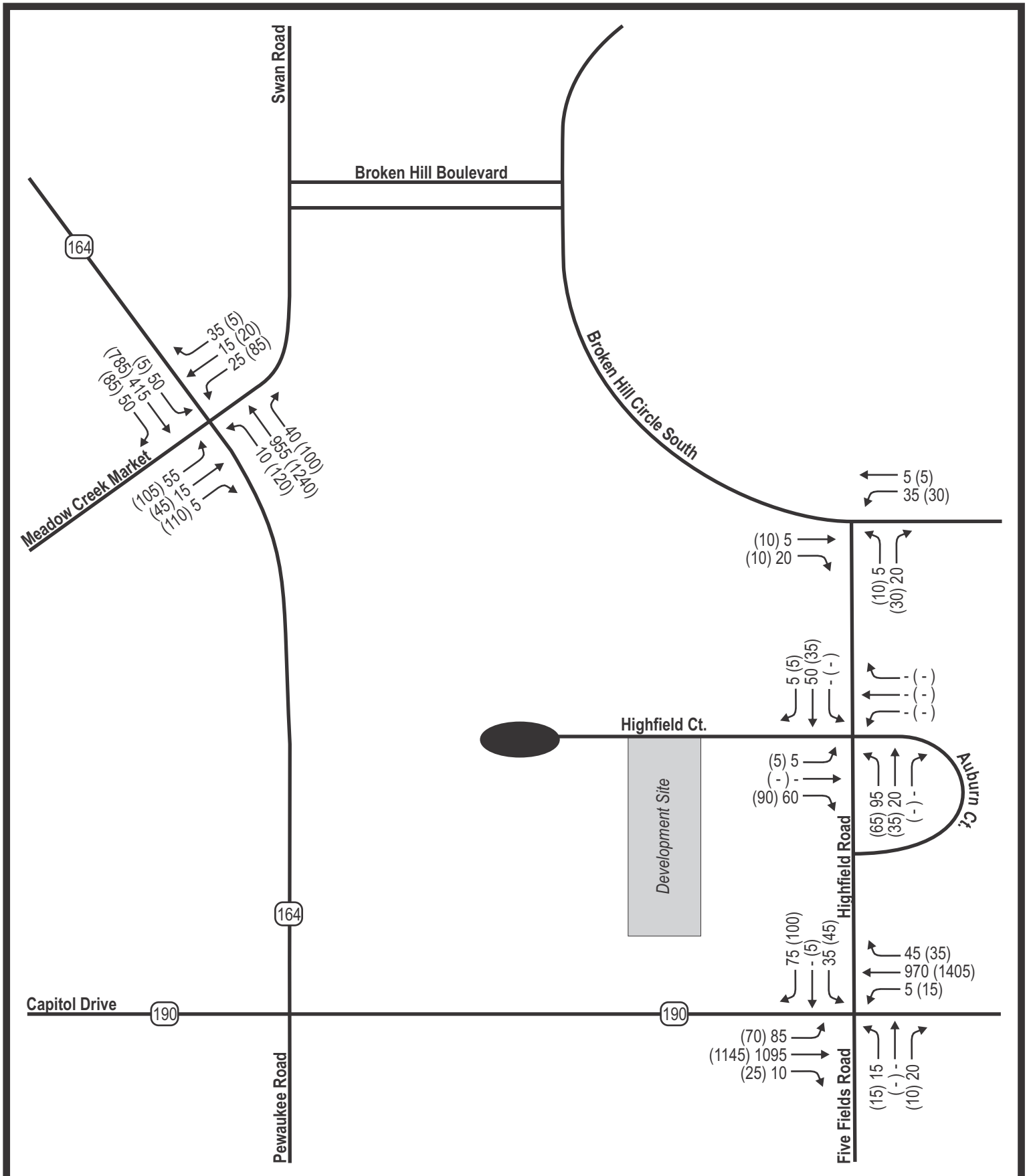



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**EXHIBIT 7**
**SCENARIO B NEW TRIPS**
***WITH CUT-THROUGH TRAFFIC***



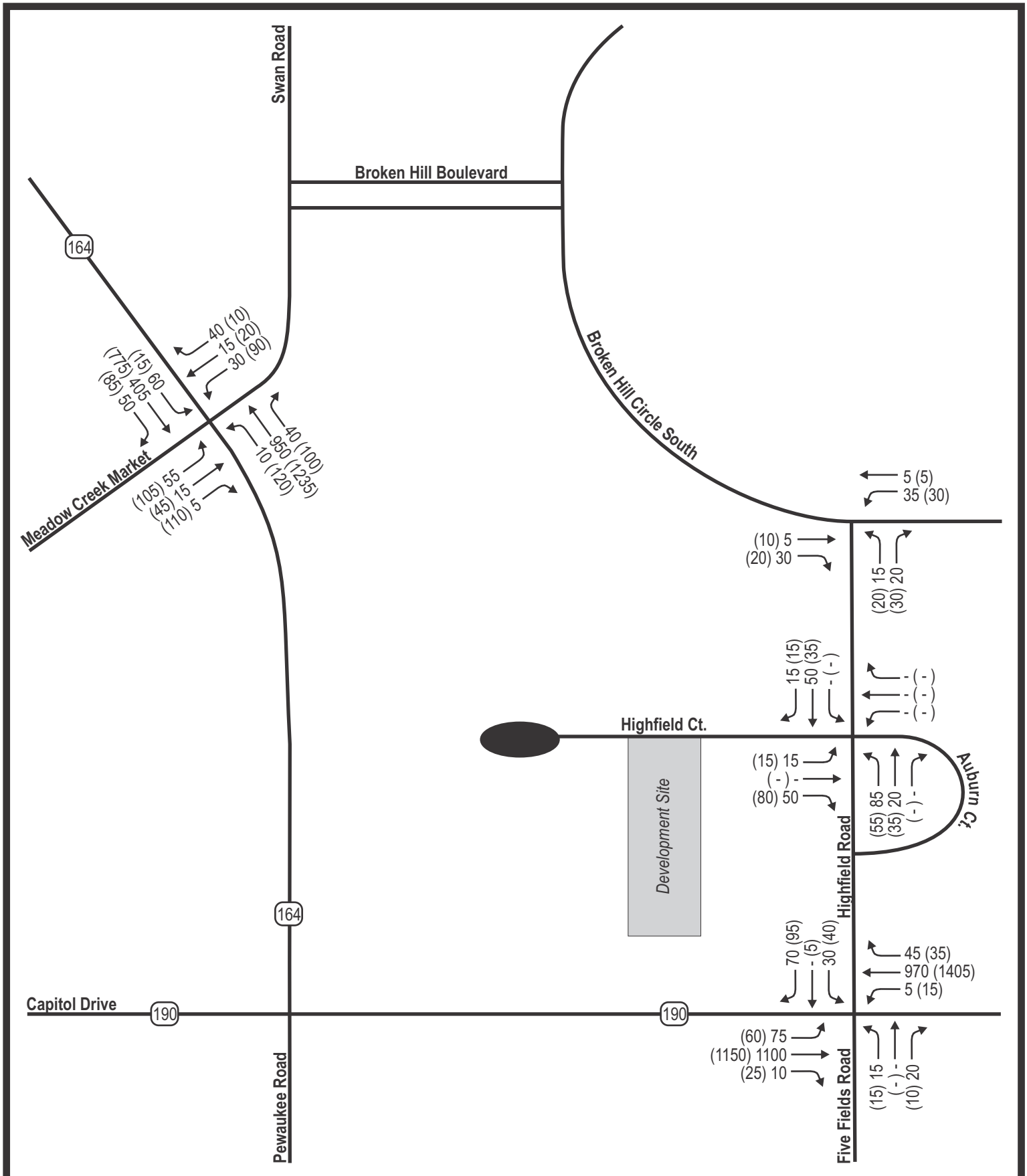

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**EXHIBIT 8**
**SCENARIO A BUILD PEAK HOUR TRAFFIC VOLUMES**
***WITHOUT CUT-THROUGH TRAFFIC***




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**EXHIBIT 9**
**SCENARIO B BUILD PEAK HOUR TRAFFIC VOLUMES**
***WITH CUT-THROUGH TRAFFIC***

EARLY CHILDHOOD SCHOOL TIA - PEWAUKEE, WISCONSIN

**Year 2023 Existing Traffic Peak Hour Operating Conditions**

***With Existing Geometrics and Traffic Control***

| Intersection | Peak Hour | Metric | Level of Service (LOS) per Movement by Approach | | | | | | | | | | | | I/S LOS & Delay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | | | ↗ | → | ↘ | ↙ | ← | ↖ | ↖ | ↑ | ↗ | ↘ | ↓ | ↙ | |
| Pewaukee Road & Swan Road<br>*Traffic Signal Control* | | *Lanes->* | *1* | *1>* | | *1* | *1>* | | *1* | *2* | *1* | *1* | *2* | *1* | |
| | AM | LOS | D | D | | D | D | | A | A | A | A | A | A | A |
| | | Delay | 39 | 35 | | 36 | 36 | | 4 | 4 | 3 | 7 | 6 | 5 | 8 |
| | | Queue | 65' | 30' | | 35' | 60' | | 5' | 140' | 10' | 40' | 90' | 20' | |
| | PM | LOS | C | C | | D | C | | A | A | A | B | B | B | B |
| | | Delay | 30 | 31 | | 37 | 27 | | 8 | 8 | 5 | 11 | 14 | 11 | 13 |
| | | Queue | 100' | 135' | | 85' | 30' | | 35' | 205' | 25' | 5' | 180' | 35' | |
| Highfield Road/Five Fields Road & Capitol Drive<br>*Stop Sign Control (NB/SB)* | | *Lanes->* | *1* | *2* | *1* | *1* | *2* | *1* | *<1>* | | | *1* | | *1>* | |
| | AM | LOS | B | * | * | B | * | * | C | | | D | | B | A |
| | | Delay | 11 | * | * | 11 | * | * | 23 | | | 28 | | 12 | 1 |
| | | Queue | 5' | * | * | 0' | * | * | 15' | | | 15' | | 5' | |
| | PM | LOS | B | * | * | B | * | * | D | | | F | | C | A |
| | | Delay | 13 | * | * | 11 | * | * | 28 | | | 53 | | 17 | 1 |
| | | Queue | 5' | * | * | 5' | * | * | 15' | | | 35' | | 15' | |
| Highfield Road & Highfield Ct./Auburn Ct.<br>*Stop Sign Control (EB/WB)* | | *Lanes->* | *<1>* | | | *<1>* | | | *<1>* | | | *<1>* | | | |
| | AM | LOS | A | | | A | | | A | | | A | | | A |
| | | Delay | 9 | | | 9 | | | 7 | | | 7 | | | 3 |
| | | Queue | 5' | | | 0' | | | 5' | | | 0' | | | |
| | PM | LOS | A | | | A | | | A | | | A | | | A |
| | | Delay | 8 | | | 9 | | | 7 | | | 7 | | | 3 |
| | | Queue | 5' | | | 0' | | | 0' | | | 0' | | | |
| Highfield Road & Broken Hills Circle South<br>*Stop Sign Control (NB)* | | *Lanes->* | - | *1>* | | *<1* | | - | *<1>* | | | - | | | |
| | AM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 8 | | | - | | | 5 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |
| | PM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 8 | | | - | | | 6 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |

*(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement; (< or >) indicates a shared turn lane movement.*

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

*U-Turns, if any, are included in the left-turn volume.*

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**EXHIBIT 10**
**EXISTING TRAFFIC LOS & QUEUES**

**Year 2023 Build Scenario A Traffic Peak Hour Operating Conditions**

***With Existing Geometrics and Traffic Control***

| Intersection | Peak Hour | Metric | Level of Service (LOS) per Movement by Approach | | | | | | | | | | | | I/S LOS & Delay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | | | ↗ | → | ↘ | ↙ | ← | ↖ | ↖ | ↑ | ↗ | ↘ | ↓ | ↙ | |
| Pewaukee Road & Swan Road<br>*Traffic Signal Control* | | *Lanes->* | *1* | *1>* | | *1* | *1>* | | *1* | *2* | *1* | *1* | *2* | *1* | |
| | AM | LOS | D | D | | D | D | | A | A | A | A | A | A | A |
| | | Delay | 39 | 35 | | 36 | 36 | | 4 | 4 | 3 | 7 | 6 | 5 | 8 |
| | | Queue | 65' | 30' | | 35' | 60' | | 5' | 145' | 10' | 40' | 95' | 20' | |
| | PM | LOS | C | C | | D | C | | A | A | A | B | B | B | B |
| | | Delay | 30 | 31 | | 37 | 27 | | 8 | 8 | 5 | 12 | 14 | 11 | 13 |
| | | Queue | 100' | 135' | | 85' | 30' | | 35' | 210' | 25' | 5' | 185' | 35' | |
| Highfield Road/Five Fields Road & Capitol Drive<br>*Stop Sign Control (NB/SB)* | | *Lanes->* | *1* | *2* | *1* | *1* | *2* | *1* | *<1>* | | | *1* | | *1>* | |
| | AM | LOS | B | * | * | B | * | * | D | | | E | | B | A |
| | | Delay | 11 | * | * | 11 | * | * | 28 | | | 35 | | 13 | 1 |
| | | Queue | 15' | * | * | 0' | * | * | 20' | | | 25' | | 15' | |
| | PM | LOS | B | * | * | B | * | * | E | | | F | | C | A |
| | | Delay | 14 | * | * | 11 | * | * | 36 | | | 81 | | 19 | 2 |
| | | Queue | 15' | * | * | 5' | * | * | 20' | | | 65' | | 30' | |
| Highfield Road & Highfield Ct./Auburn Ct.<br>*Stop Sign Control (EB/WB)* | | *Lanes->* | *<1>* | | | *<1>* | | | *<1>* | | | *<1>* | | | |
| | AM | LOS | A | | | B | | | A | | | A | | | A |
| | | Delay | 9 | | | 10 | | | 7 | | | 7 | | | 5 |
| | | Queue | 10' | | | 0' | | | 5' | | | 0' | | | |
| | PM | LOS | A | | | B | | | A | | | A | | | A |
| | | Delay | 9 | | | 10 | | | 7 | | | 7 | | | 5 |
| | | Queue | 10' | | | 0' | | | 5' | | | 0' | | | |
| Highfield Road & Broken Hills Circle South<br>*Stop Sign Control (NB)* | | *Lanes->* | - | *1>* | | *<1* | | - | *<1>* | | | - | | | |
| | AM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 8 | | | - | | | 5 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |
| | PM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 8 | | | - | | | 6 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |

*(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement; (< or >) indicates a shared turn lane movement.*

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

*U-Turns, if any, are included in the left-turn volume.*

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**EXHIBIT 11**

**SCENARIO A BUILD TRAFFIC LOS & QUEUES**

***WITHOUT CUT-THROUGH TRAFFIC***

**Year 2023 Build Scenario B Traffic Peak Hour Operating Conditions**

***With Existing Geometrics and Traffic Control***

| Intersection | Peak Hour | Metric | Level of Service (LOS) per Movement by Approach | | | | | | | | | | | | I/S LOS & Delay |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | |
| | | | ↗ | → | ↘ | ↙ | ← | ↖ | ↖ | ↑ | ↗ | ↘ | ↓ | ↙ | |
| | | *Lanes->* | *1* | *1>* | | *1* | *1>* | | *1* | *2* | *1* | *1* | *2* | *1* | |
| Pewaukee Road & Swan Road<br>*Traffic Signal Control* | AM | LOS | D | D | | D | D | | A | A | A | A | A | A | A |
| | | Delay | 39 | 35 | | 36 | 36 | | 4 | 5 | 3 | 8 | 6 | 5 | 8 |
| | | Queue | 65' | 30' | | 45' | 65' | | 5' | 145' | 10' | 40' | 90' | 20' | |
| | PM | LOS | C | C | | D | C | | A | A | A | B | B | B | B |
| | | Delay | 31 | 31 | | 37 | 28 | | 8 | 8 | 5 | 12 | 14 | 11 | 13 |
| | | Queue | 100' | 135' | | 90' | 35' | | 35' | 210' | 25' | 15' | 180' | 35' | |
| | | *Lanes->* | *1* | *2* | *1* | *1* | *2* | *1* | *<1>* | | | *1* | | *1>* | |
| Highfield Road/Five Fields Road & Capitol Drive<br>*Stop Sign Control (NB/SB)* | AM | LOS | B | * | * | B | * | * | D | | | D | | B | A |
| | | Delay | 11 | * | * | 11 | * | * | 27 | | | 33 | | 13 | 1 |
| | | Queue | 15' | * | * | 0' | * | * | 20' | | | 20' | | 15' | |
| | PM | LOS | B | * | * | B | * | * | D | | | F | | C | A |
| | | Delay | 14 | * | * | 11 | * | * | 34 | | | 70 | | 18 | 2 |
| | | Queue | 15' | * | * | 5' | * | * | 15' | | | 55' | | 30' | |
| | | *Lanes->* | *<1>* | | | *<1>* | | | *<1>* | | | *<1>* | | | |
| Highfield Road & Highfield Ct./Auburn Ct.<br>*Stop Sign Control (EB/WB)* | AM | LOS | A | | | B | | | A | | | A | | | A |
| | | Delay | 9 | | | 10 | | | 7 | | | 7 | | | 5 |
| | | Queue | 10' | | | 0' | | | 5' | | | 0' | | | |
| | PM | LOS | A | | | B | | | A | | | A | | | A |
| | | Delay | 9 | | | 10 | | | 7 | | | 7 | | | 5 |
| | | Queue | 10' | | | 0' | | | 5' | | | 0' | | | |
| | | *Lanes->* | - | *1>* | | *<1* | | - | *<1>* | | | - | | | |
| Highfield Road & Broken Hills Circle South<br>*Stop Sign Control (NB)* | AM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 9 | | | - | | | 5 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |
| | PM | LOS | - | * | | A | | - | A | | | - | | | A |
| | | Delay | - | * | | 7 | | - | 8 | | | - | | | 5 |
| | | Queue | - | * | | 5' | | - | 5' | | | - | | | |

*(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement; (< or >) indicates a shared turn lane movement.*

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

*U-Turns, if any, are included in the left-turn volume.*

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**EXHIBIT 12**

**SCENARIO B BUILD TRAFFIC LOS & QUEUES**

***WITH CUT-THROUGH TRAFFIC***

# APPENDIX A

# TRAFFIC COUNTS

# Intersection Traffic Volume Report

| Count Basics | Version 2022.11.2 | | Page 1 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Base Information, Observed (5.5) Hour and Estimated (24) Hour Volume Summaries*

***Major St:*** **STH 164**
***Minor St:*** **SWAN RD**
***Intersection of:*** ***STH 164 & SWAN RD***

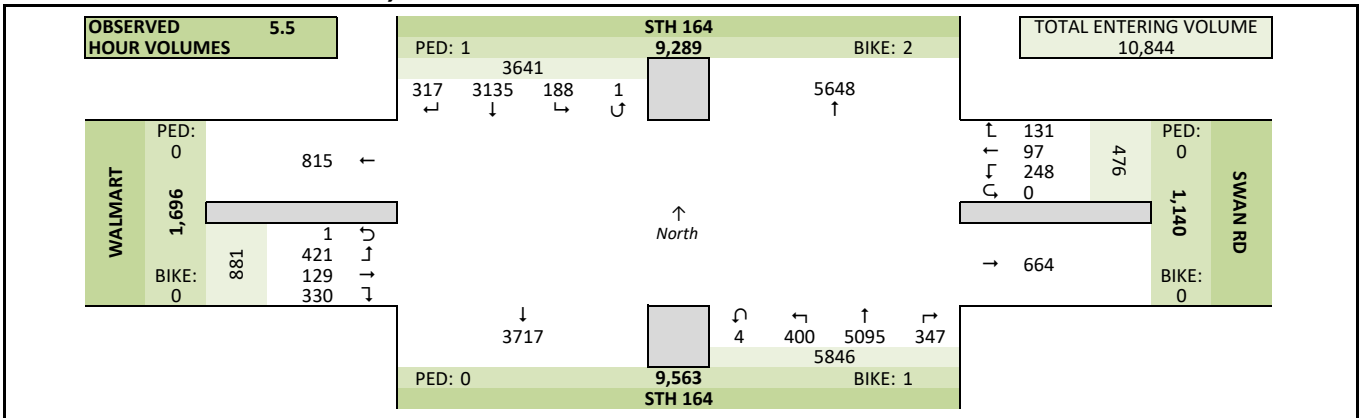
### Site Information

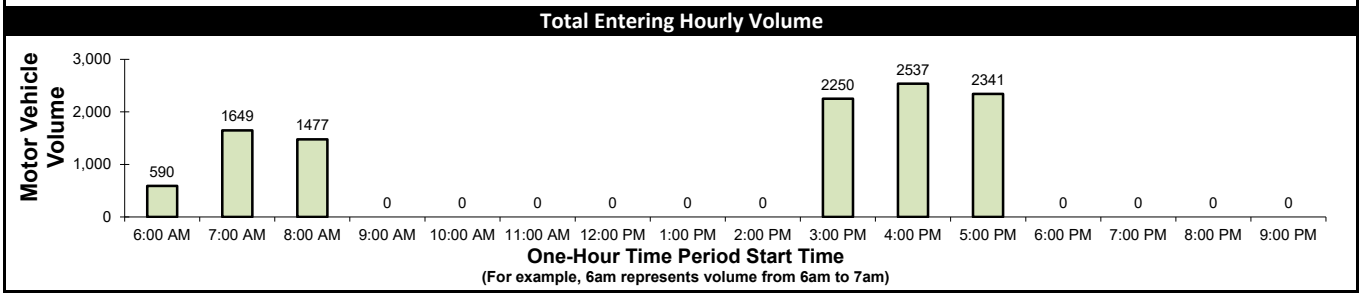
| | | | |
|---|---|---|---|
| Municipality | City of Pewaukee | | |
| County | 67 - Waukesha | WisDOT Region | SE |
| Traffic Control | Traffic Signal | | |
| Roadway Names | | North Direction | ↑ |
| North Leg | STH 164 | | |
| East Leg | SWAN RD | | |
| South Leg | STH 164 | | |
| West Leg | WALMART | | |
| Special Considerations | | | |
| Schools | 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

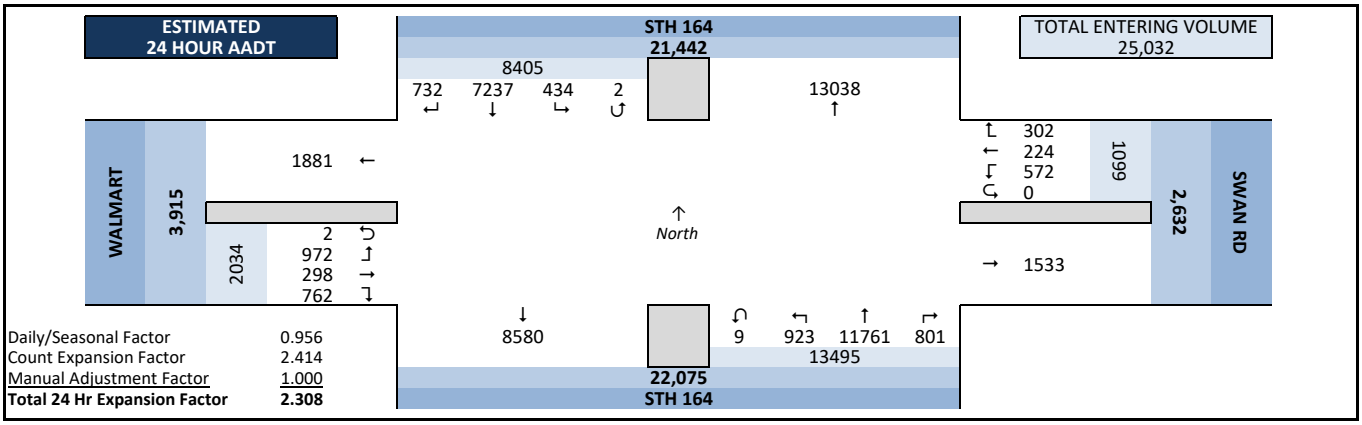
| | | | | | |
|---|---|---|---|---|---|
| Hrs Counted: | 06:30 AM-09:00 AM and 03:00 PM-06:00 PM | | | | |
| 1st Day of Count | Tuesday, April 11, 2023 | | | Weather | |
| AM Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| Midday Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| PM Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| Calculated Peak Hours | | | | | |
| AM | 7:15-8:15am | MD | | PM | 4:15-5:15pm |
| Peak Hours Selected for Analysis | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Daily/Seasonal Adjustment Group | (2) Urban Arterials & Collectors | | | | |
| Count Expansion Group | (2) Urban Arterials & Collectors | | | | |
| Daily/Seasonal Adjustment Factor | 0.956 | Count Expansion Factor | 2.414 | | |
| Company Name | TADI, Inc. | | | Manual Adj. | 1.000 |
| Observers: AM Peak Period | LuAnn Gaertner | | | | |
| Observers: Midday Peak Period | None | | | | |
| Observers: PM Peak Period | Lori Atwell | | | | |
| Comments | 2021 DOT Daily & Seasonal Factors | | | | |

### *Observed 5.5 Hour Volume Summary*




### *Estimated 24 Hour AADT*



# Intersection Traffic Volume Report

| Count Basics | | | Page 2 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

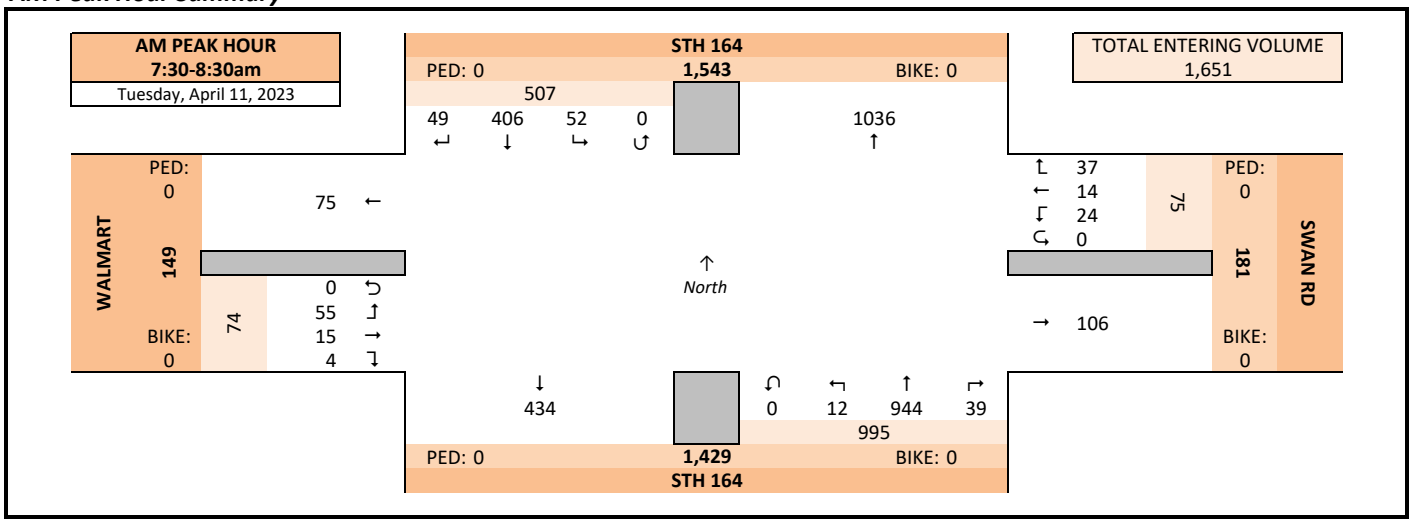
## *Peak Hour Volume Graphical Summary*

***STH 164 & SWAN RD***

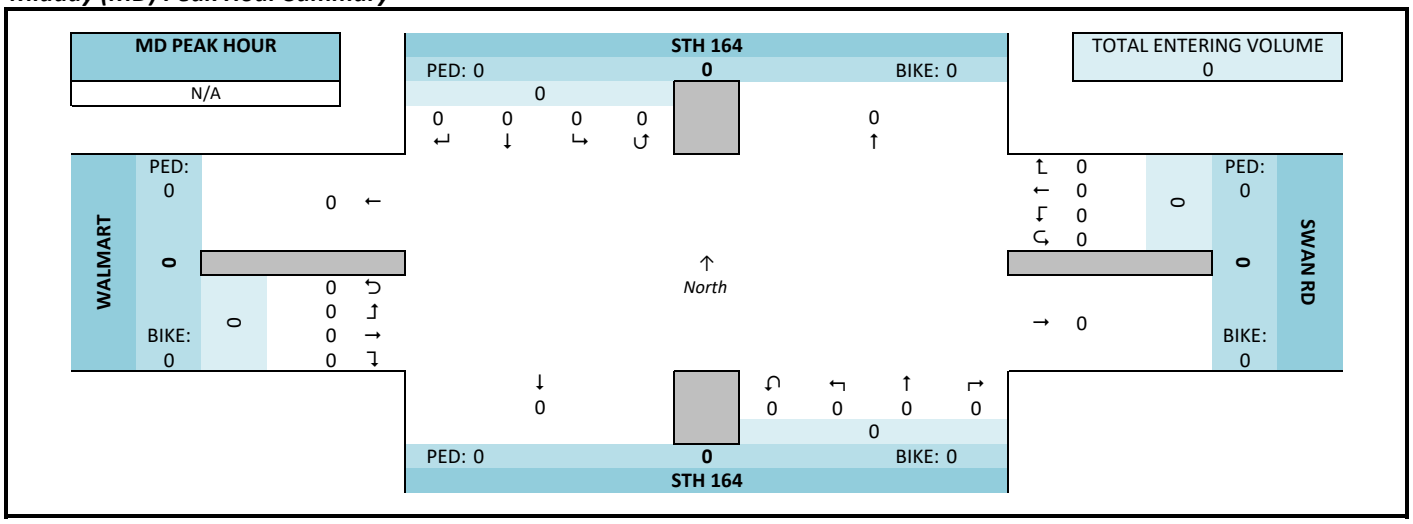
**All Motor Vehicles**



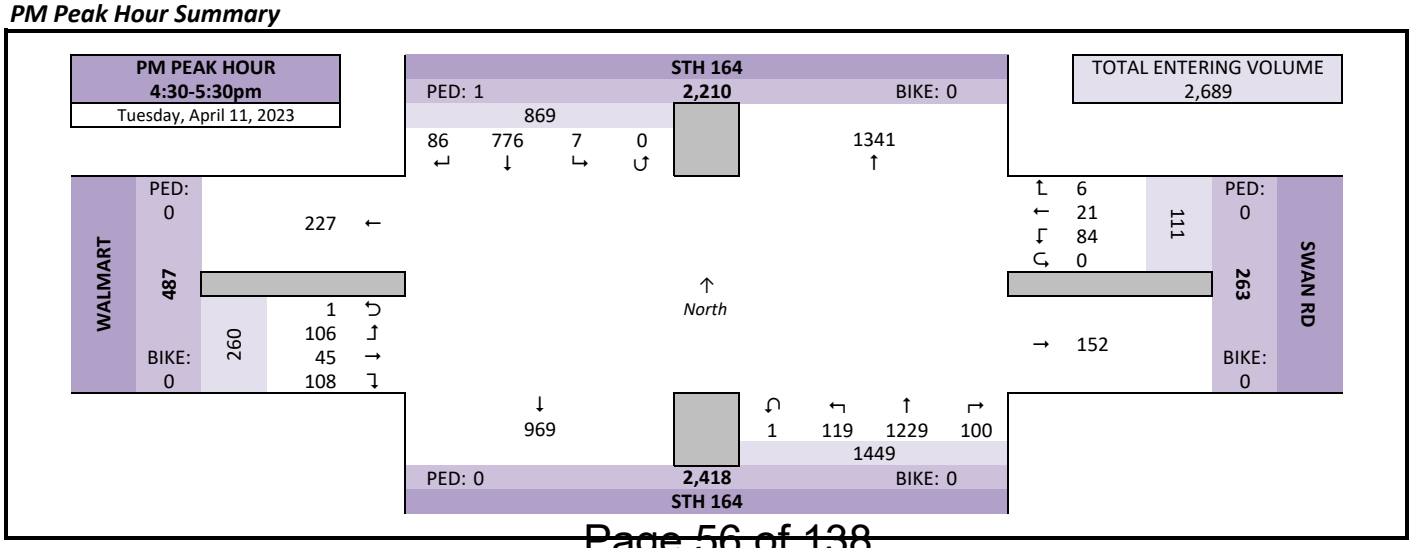
### *AM Peak Hour Summary*




### *Midday (MD) Peak Hour Summary*




### *PM Peak Hour Summary*



# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 3 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Peak Hour Volume Summary*

***STH 164 & SWAN RD***

**All Motor Vehicles**



**Peak Hour Volumes, Truck Percentages, and PHFs**

| Tuesday, April 11, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour | STH 164 | | | | | SWAN RD | | | | | STH 164 | | | | | WALMART | | | | | |
| | 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* | 7:30 AM | 7 | 90 | 10 | 0 | 107 | 13 | 3 | 5 | 0 | 21 | 7 | 284 | 1 | 0 | 292 | 2 | 2 | 15 | 0 | 19 | 439 |
| | 7:45 AM | 20 | 115 | 15 | 0 | 150 | 9 | 6 | 3 | 0 | 18 | 8 | 258 | 2 | 0 | 268 | 1 | 5 | 14 | 0 | 20 | 456 |
| | 8:00 AM | 13 | 102 | 11 | 0 | 126 | 6 | 3 | 5 | 0 | 14 | 13 | 202 | 4 | 0 | 219 | 0 | 2 | 14 | 0 | 16 | 375 |
| | 8:15 AM | 9 | 99 | 16 | 0 | 124 | 9 | 2 | 11 | 0 | 22 | 11 | 200 | 5 | 0 | 216 | 1 | 6 | 12 | 0 | 19 | 381 |
| | Peak Hour Volume | 49 | 406 | 52 | 0 | 507 | 37 | 14 | 24 | 0 | 75 | 39 | 944 | 12 | 0 | 995 | 4 | 15 | 55 | 0 | 74 | 1651 |
| | Rounded Hourly Volume | 50 | 405 | 50 | 0 | 505 | 35 | 15 | 25 | 0 | 75 | 40 | 945 | 10 | 0 | 995 | 5 | 15 | 55 | 0 | 75 | 1650 |
| | % Single Unit Trucks | 16.3 | 8.1 | 3.8 | 0.0 | 8.5 | 5.4 | 14.3 | 0.0 | 0.0 | 5.3 | 5.1 | 4.2 | 25.0 | 0.0 | 4.5 | 0.0 | 13.3 | 5.5 | 0.0 | 6.8 | 5.9 |
| | % Heavy Trucks | 2.0 | 2.2 | 3.8 | 0.0 | 2.4 | 8.1 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 1.3 | 0.0 | 0.0 | 1.2 | 25.0 | 0.0 | 1.8 | 0.0 | 2.7 | 1.8 |
| | % Trucks (Total) | 18.4 | 10.3 | 7.7 | 0.0 | 10.8 | 13.5 | 14.3 | 0.0 | 0.0 | 9.3 | 5.1 | 5.5 | 25.0 | 0.0 | 5.7 | 25.0 | 13.3 | 7.3 | 0.0 | 9.5 | 7.6 |
| | Peak Hour Factor (PHF) | 0.61 | 0.88 | 0.81 | 0.00 | 0.84 | 0.71 | 0.58 | 0.55 | 0.00 | 0.85 | 0.75 | 0.83 | 0.60 | 0.00 | 0.85 | 0.50 | 0.62 | 0.92 | 0.00 | 0.92 | 0.91 |

| N/A | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MD Peak Hour | STH 164 | | | | | SWAN RD | | | | | STH 164 | | | | | WALMART | | | | | |
| | 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* | 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 |

| Tuesday, April 11, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PM Peak Hour | STH 164 | | | | | SWAN RD | | | | | STH 164 | | | | | WALMART | | | | | |
| | 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* | 4:30 PM | 20 | 218 | 1 | 0 | 239 | 3 | 2 | 26 | 0 | 31 | 28 | 321 | 36 | 0 | 385 | 19 | 6 | 22 | 0 | 47 | 702 |
| | 4:45 PM | 19 | 182 | 2 | 0 | 203 | 0 | 9 | 17 | 0 | 26 | 22 | 322 | 23 | 0 | 367 | 33 | 12 | 19 | 1 | 65 | 661 |
| | 5:00 PM | 25 | 201 | 2 | 0 | 228 | 2 | 6 | 19 | 0 | 27 | 29 | 286 | 35 | 0 | 350 | 28 | 19 | 43 | 0 | 90 | 695 |
| | 5:15 PM | 22 | 175 | 2 | 0 | 199 | 1 | 4 | 22 | 0 | 27 | 21 | 300 | 25 | 1 | 347 | 28 | 8 | 22 | 0 | 58 | 631 |
| | Peak Hour Volume | 86 | 776 | 7 | 0 | 869 | 6 | 21 | 84 | 0 | 111 | 100 | 1229 | 119 | 1 | 1449 | 108 | 45 | 106 | 1 | 260 | 2689 |
| | Rounded Hourly Volume | 85 | 775 | 5 | 0 | 865 | 5 | 20 | 85 | 0 | 110 | 100 | 1230 | 120 | 0 | 1450 | 110 | 45 | 105 | 0 | 260 | 2685 |
| | % Single Unit Trucks | 1.2 | 2.7 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 4.8 | 0.0 | 3.6 | 0.0 | 1.5 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 |
| | % Heavy Trucks | 0.0 | 0.8 | 0.0 | 0.0 | 0.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| | % Trucks (Total) | 1.2 | 3.5 | 0.0 | 0.0 | 3.2 | 0.0 | 0.0 | 4.8 | 0.0 | 3.6 | 0.0 | 1.6 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| | Peak Hour Factor (PHF) | 0.86 | 0.89 | 0.87 | 0.00 | 0.91 | 0.50 | 0.58 | 0.81 | 0.00 | 0.90 | 0.86 | 0.95 | 0.83 | 0.25 | 0.94 | 0.82 | 0.59 | 0.62 | 0.25 | 0.72 | 0.96 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STH 164 | | | SWAN RD | | | STH 164 | | | WALMART | | | |
| | 15-Minute Start Time | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | |
| *AM* | 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 |
| | 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* | 4:30 PM | 1 | 0 | 1 | 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 |
| | 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 |
| | Total | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

# Intersection Traffic Volume Report

| *Count Basics* | | *Page 5 of 13* |
|---|---|---|
| Start Date: Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | Non-Holiday | No Special Events |

## *15-Minute Motor Vehicle Data*

***STH 164 & SWAN RD***

**All Motor Vehicles**



**15-Minute Motor Vehicle Data**

| | 15-Minute Time Period | From North (↓) STH 164 | | | | | From East (←) SWAN RD | | | | | From South (↑) STH 164 | | | | | From West (→) WALMART | | | | | 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 | 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 | 6 | 63 | 15 | 0 | 84 | 7 | 1 | 2 | 0 | 10 | 9 | 158 | 1 | 0 | 168 | 1 | 2 | 6 | 0 | 9 | 271 | 1344 | 0.84 |
| | 6:45 AM | 9 | 82 | 14 | 0 | 105 | 8 | 3 | 2 | 0 | 13 | 11 | 172 | 0 | 0 | 183 | 2 | 3 | 13 | 0 | 18 | 319 | 1512 | 0.86 |
| | 7:00 AM | 7 | 71 | 13 | 0 | 91 | 21 | 1 | 5 | 0 | 27 | 10 | 198 | 4 | 0 | 212 | 1 | 1 | 20 | 0 | 22 | 352 | 1649 | 0.90 |
| | 7:15 AM | 14 | 103 | 13 | 0 | 130 | 11 | 2 | 7 | 0 | 20 | 8 | 229 | 4 | 0 | 241 | 1 | 2 | 8 | 0 | 11 | 402 | 1672 | 0.92 |
| | 7:30 AM | 7 | 90 | 10 | 0 | 107 | 13 | 3 | 5 | 0 | 21 | 7 | 284 | 1 | 0 | 292 | 2 | 2 | 15 | 0 | 19 | 439 | 1651 | 0.91 |
| | 7:45 AM | 20 | 115 | 15 | 0 | 150 | 9 | 6 | 3 | 0 | 18 | 8 | 258 | 2 | 0 | 268 | 1 | 5 | 14 | 0 | 20 | 456 | 1562 | 0.86 |
| | 8:00 AM | 13 | 102 | 11 | 0 | 126 | 6 | 3 | 5 | 0 | 14 | 13 | 202 | 4 | 0 | 219 | 0 | 2 | 14 | 0 | 16 | 375 | 1477 | 0.97 |
| | 8:15 AM | 9 | 99 | 16 | 0 | 124 | 9 | 2 | 11 | 0 | 22 | 11 | 200 | 5 | 0 | 216 | 1 | 6 | 12 | 0 | 19 | 381 | | |
| | 8:30 AM | 14 | 98 | 34 | 1 | 147 | 5 | 7 | 6 | 0 | 18 | 7 | 160 | 2 | 0 | 169 | 1 | 1 | 14 | 0 | 16 | 350 | | |
| | 8:45 AM | 9 | 104 | 20 | 0 | 133 | 16 | 3 | 14 | 0 | 33 | 25 | 165 | 2 | 0 | 192 | 0 | 3 | 10 | 0 | 13 | 371 | | |
| | 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 | 14 | 172 | 2 | 0 | 188 | 4 | 4 | 14 | 0 | 22 | 21 | 210 | 29 | 1 | 261 | 22 | 8 | 33 | 0 | 63 | 534 | 2250 | 0.95 |
| | 3:15 PM | 19 | 167 | 2 | 0 | 188 | 3 | 6 | 17 | 0 | 26 | 9 | 233 | 28 | 0 | 270 | 30 | 8 | 22 | 0 | 60 | 544 | 2246 | 0.95 |
| | 3:30 PM | 17 | 188 | 3 | 0 | 208 | 1 | 3 | 7 | 0 | 11 | 22 | 259 | 41 | 1 | 323 | 16 | 6 | 16 | 0 | 38 | 580 | 2346 | 0.91 |
| | 3:45 PM | 18 | 197 | 5 | 0 | 220 | 3 | 4 | 9 | 0 | 16 | 24 | 241 | 32 | 0 | 297 | 30 | 3 | 26 | 0 | 59 | 592 | 2468 | 0.88 |
| | 4:00 PM | 12 | 153 | 1 | 0 | 166 | 4 | 9 | 14 | 0 | 27 | 11 | 229 | 38 | 1 | 279 | 31 | 5 | 22 | 0 | 58 | 530 | 2537 | 0.90 |
| | 4:15 PM | 12 | 208 | 2 | 0 | 222 | 3 | 4 | 19 | 0 | 26 | 14 | 268 | 35 | 0 | 317 | 34 | 13 | 32 | 0 | 79 | 644 | 2702 | 0.96 |
| | 4:30 PM | 20 | 218 | 1 | 0 | 239 | 3 | 2 | 26 | 0 | 31 | 28 | 321 | 36 | 0 | 385 | 19 | 6 | 22 | 0 | 47 | 702 | 2689 | 0.96 |
| | 4:45 PM | 19 | 182 | 2 | 0 | 203 | 0 | 9 | 17 | 0 | 26 | 22 | 322 | 23 | 0 | 367 | 33 | 12 | 19 | 1 | 65 | 661 | 2526 | 0.91 |
| | 5:00 PM | 25 | 201 | 2 | 0 | 228 | 2 | 6 | 19 | 0 | 27 | 29 | 286 | 35 | 0 | 350 | 28 | 19 | 43 | 0 | 90 | 695 | 2341 | 0.84 |
| | 5:15 PM | 22 | 175 | 2 | 0 | 199 | 1 | 4 | 22 | 0 | 27 | 21 | 300 | 25 | 1 | 347 | 28 | 8 | 22 | 0 | 58 | 631 | | |
| | 5:30 PM | 15 | 173 | 4 | 0 | 192 | 1 | 6 | 8 | 0 | 15 | 23 | 223 | 35 | 0 | 281 | 25 | 9 | 17 | 0 | 51 | 539 | | |
| | 5:45 PM | 16 | 174 | 1 | 0 | 191 | 1 | 9 | 16 | 0 | 26 | 14 | 177 | 18 | 0 | 209 | 24 | 5 | 21 | 0 | 50 | 476 | | |
| | 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** | | 317 | 3135 | 188 | 1 | 3641 | 131 | 97 | 248 | 0 | 476 | 347 | 5095 | 400 | 4 | 5846 | 330 | 129 | 421 | 1 | 881 | 10844 | | |

**Peak Hour All Vehicle Volume Summary**

| | Hourly Time Period | From North (↓) STH 164 | | | | | From East (←) SWAN RD | | | | | From South (↑) STH 164 | | | | | From West (→) WALMART | | | | | 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 | PHF |
| AM | 7:30 AM | 49 | 406 | 52 | 0 | 507 | 37 | 14 | 24 | 0 | 75 | 39 | 944 | 12 | 0 | 995 | 4 | 15 | 55 | 0 | 74 | 1651 | 0.91 |
| 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 | 4:30 PM | 86 | 776 | 7 | 0 | 869 | 6 | 21 | 84 | 0 | 111 | 108 | 1329 | 99 | 5 | 1441 | 108 | 45 | 106 | 1 | 260 | 2689 | 0.96 |

# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 9 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *15-Minute Heavy Vehicle Data*

***STH 164 & SWAN RD***




**15-Minute Heavy Vehicle Data**

| | 15-Minute | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | STH 164 | | | | | SWAN RD | | | | | STH 164 | | | | | WALMART | | | | | 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 | 1 | 1 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 14 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 19 | 67 |
| | 6:45 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 11 | 78 |
| | 7:00 AM | 0 | 7 | 2 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 1 | 12 | 0 | 0 | 13 | 0 | 0 | 1 | 0 | 1 | 24 | 95 |
| | 7:15 AM | 2 | 3 | 2 | 0 | 7 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 13 | 102 |
| | 7:30 AM | 1 | 7 | 3 | 0 | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 17 | 1 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 30 | 126 |
| | 7:45 AM | 4 | 9 | 1 | 0 | 14 | 1 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 0 | 12 | 0 | 1 | 0 | 0 | 1 | 28 | 121 |
| | 8:00 AM | 2 | 11 | 0 | 0 | 13 | 2 | 1 | 0 | 0 | 3 | 1 | 10 | 2 | 0 | 13 | 0 | 0 | 2 | 0 | 2 | 31 | 126 |
| | 8:15 AM | 2 | 15 | 0 | 0 | 17 | 1 | 1 | 0 | 0 | 2 | 1 | 13 | 0 | 0 | 14 | 1 | 1 | 2 | 0 | 4 | 37 | |
| | 8:30 AM | 2 | 8 | 3 | 0 | 13 | 0 | 0 | 2 | 0 | 2 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 25 | |
| | 8:45 AM | 0 | 15 | 2 | 0 | 17 | 1 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 0 | 14 | 0 | 1 | 0 | 0 | 1 | 33 | |
| | 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 | 8 | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 1 | 2 | 10 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 1 | 24 | 81 |
| | 3:15 PM | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 2 | 0 | 2 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 18 | 68 |
| | 3:30 PM | 1 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 14 | 71 |
| | 3:45 PM | 0 | 10 | 1 | 0 | 11 | 0 | 0 | 1 | 0 | 1 | 1 | 10 | 1 | 0 | 12 | 0 | 1 | 0 | 0 | 1 | 25 | 73 |
| | 4:00 PM | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 11 | 58 |
| | 4:15 PM | 0 | 9 | 0 | 0 | 9 | 1 | 0 | 3 | 0 | 4 | 0 | 7 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 21 | 60 |
| | 4:30 PM | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 16 | 52 |
| | 4:45 PM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 10 | 50 |
| | 5:00 PM | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 13 | 48 |
| | 5:15 PM | 1 | 5 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 3 | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 13 | |
| | 5:30 PM | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 14 | |
| | 5:45 PM | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | |
| | 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 | | 19 | 167 | 16 | 0 | 202 | 9 | 3 | 13 | 0 | 25 | 9 | 182 | 8 | 0 | 199 | 2 | 4 | 6 | 0 | 12 | 438 | |

**Peak Hour Heavy Vehicle Volume Summary**

| | Hourly | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | STH 164 | | | | | SWAN RD | | | | | STH 164 | | | | | WALMART | | | | | 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 | 7:30 AM | 9 | 42 | 4 | 0 | 55 | 5 | 2 | 0 | 0 | 7 | 2 | 52 | 3 | 0 | 57 | 1 | 2 | 4 | 0 | 7 | 126 |
| 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 | 4:30 PM | 1 | 27 | 0 | 0 | 28 | 0 | 0 | 4 | 0 | 4 | 0 | 20 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 52 |

# Intersection Traffic Volume Report

| Count Basics | Version 2022.11.2 | | Page 1 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Base Information, Observed (5.5) Hour and Estimated (24) Hour Volume Summaries*

***Major St:*** **BROKEN HILL CIR S**
***Minor St:*** **HIGHFIELD RD**
***Intersection of:*** ***BROKEN HILL CIR S & HIGHFIELD RD***

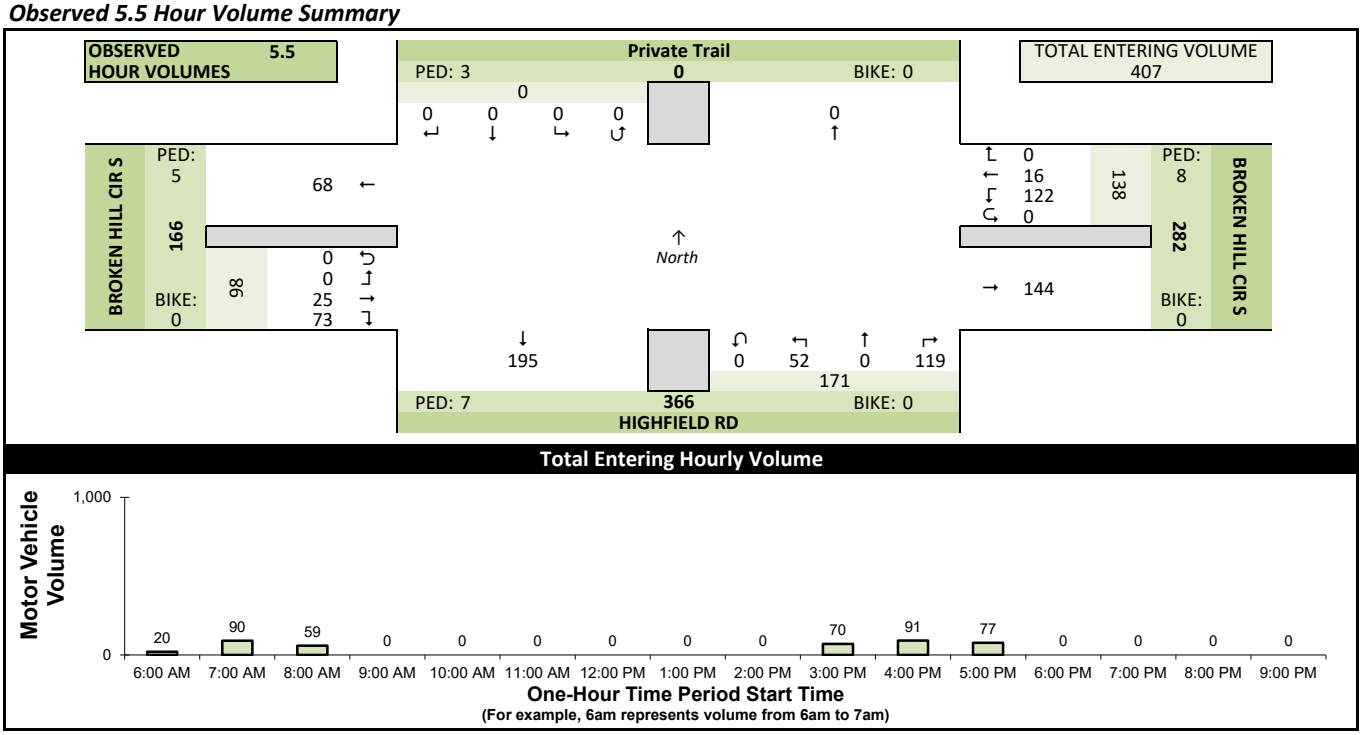
### Site Information

| | | | |
|---|---|---|---|
| Municipality | City of Pewaukee | | |
| County | 67 - Waukesha | WisDOT Region | SE |
| Traffic Control | Partial Stop Control | | |
| Roadway Names | | North Direction | ↑ |
| North Leg | Private Trail | | |
| East Leg | BROKEN HILL CIR S | | |
| South Leg | HIGHFIELD RD | | |
| West Leg | BROKEN HILL CIR S | | |
| Special Considerations | | | |
| Schools | 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: | 06:30 AM-09:00 AM and 03:00 PM-06:00 PM | | | | |
| 1st Day of Count | Tuesday, April 11, 2023 | | | Weather | |
| AM Peak Period | Wednesday, April 12, 2023 | | | Clear & Dry | |
| Midday Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| PM Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| Calculated Peak Hours | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Peak Hours Selected for Analysis | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Daily/Seasonal Adjustment Group | (2) Urban Arterials & Collectors | | | | |
| Count Expansion Group | (2) Urban Arterials & Collectors | | | | |
| Daily/Seasonal Adjustment Factor | 0.955 | Count Expansion Factor | 2.414 | | |
| Company Name | TADI, Inc. | | | Manual Adj. | 1.000 |
| Observers: AM Peak Period | Wendy Picard | | | | |
| Observers: Midday Peak Period | None | | | | |
| Observers: PM Peak Period | Dani Ruffalo | | | | |
| Comments | 2021 DOT Daily & Seasonal Factors | | | | |

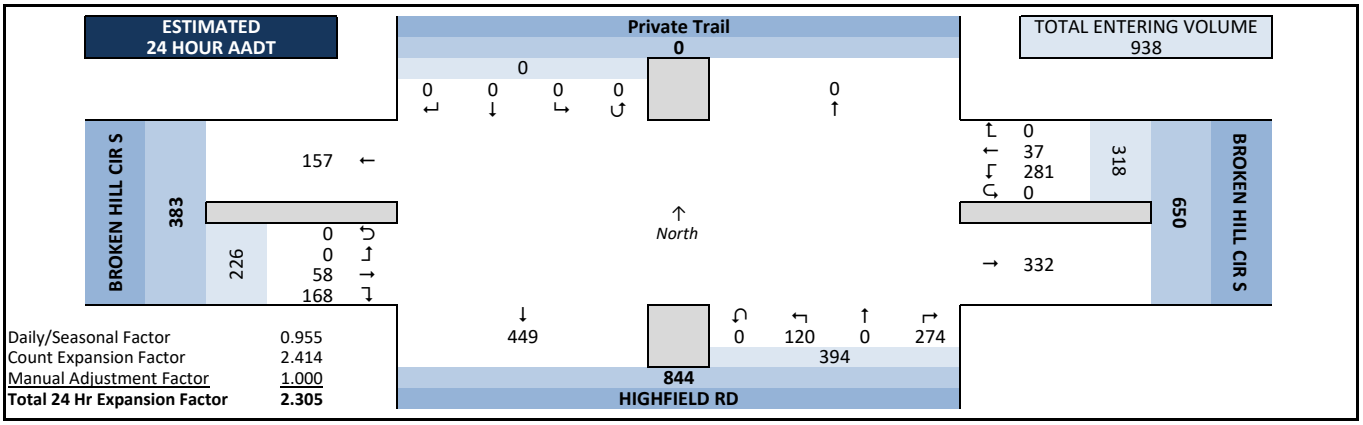
### *Observed 5.5 Hour Volume Summary*







### *Estimated 24 Hour AADT*



# Intersection Traffic Volume Report

| Count Basics | | | Page 2 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

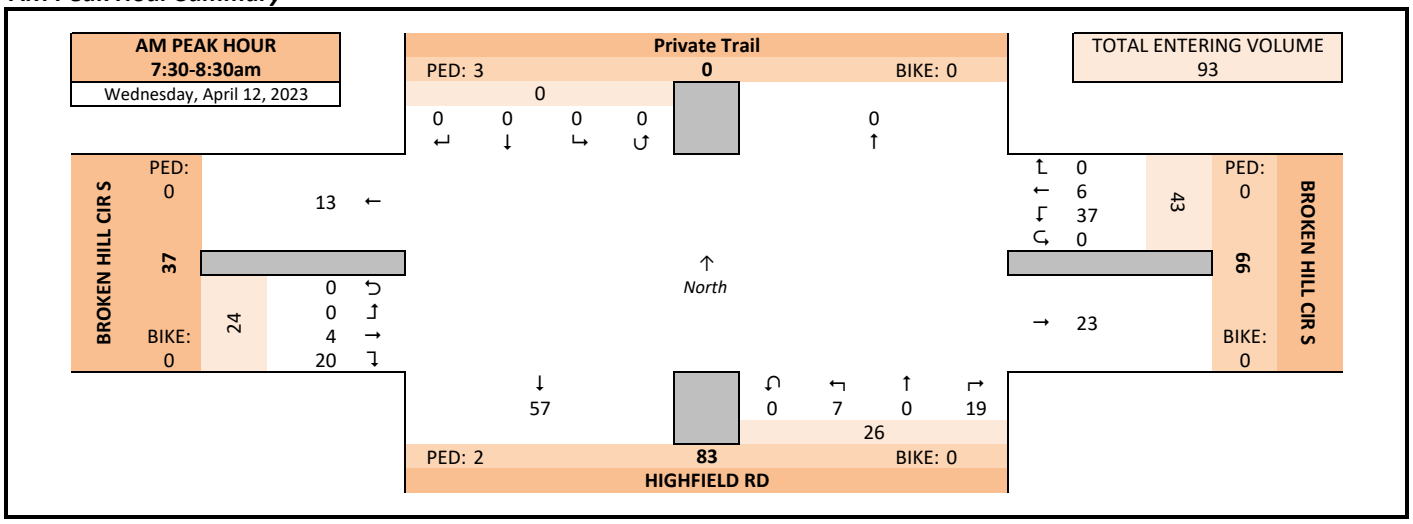
## *Peak Hour Volume Graphical Summary*

***BROKEN HILL CIR S & HIGHFIELD RD***

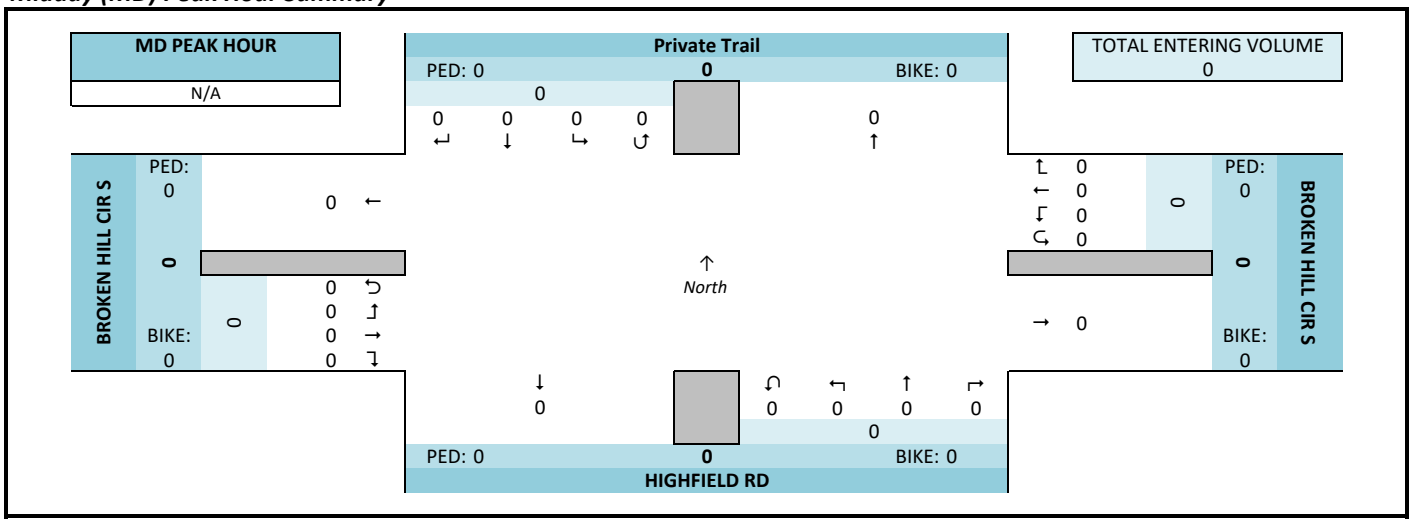
**All Motor Vehicles**



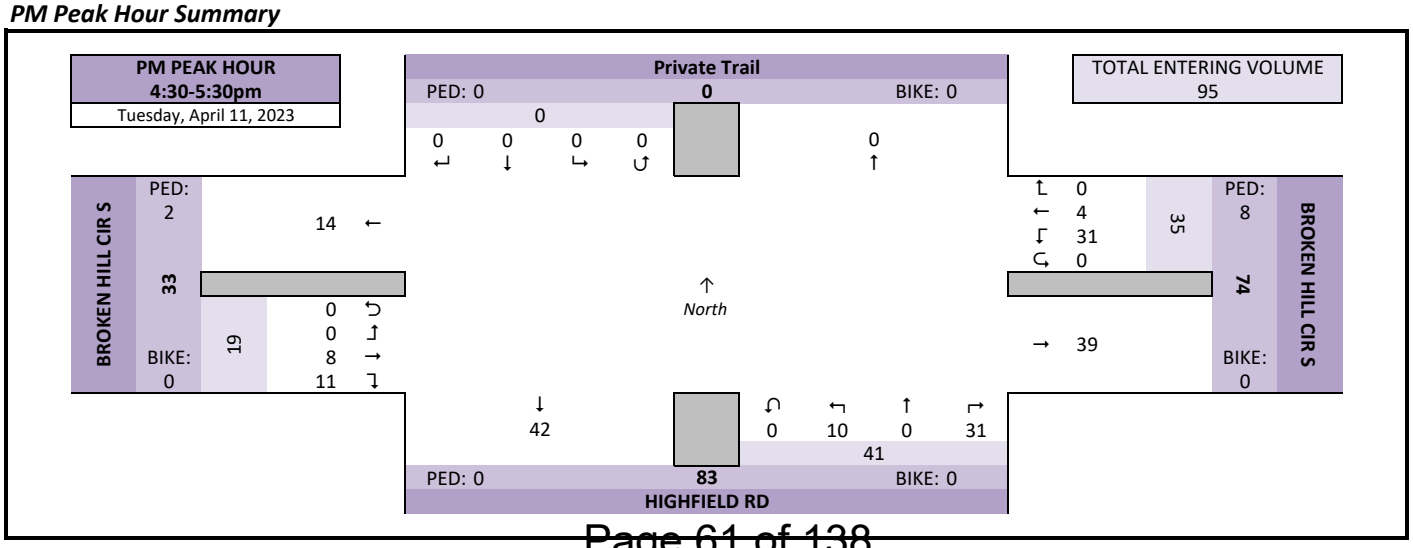
### *AM Peak Hour Summary*




### *Midday (MD) Peak Hour Summary*




### *PM Peak Hour Summary*



# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 3 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Peak Hour Volume Summary*

***BROKEN HILL CIR S & HIGHFIELD RD***

**All Motor Vehicles**



**Peak Hour Volumes, Truck Percentages, and PHFs**

| Wednesday, April 12, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | |
| | 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 | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 8 | 5 | 0 | 3 | 0 | 8 | 4 | 1 | 0 | 0 | 5 | 21 |
| | 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 14 | 7 | 0 | 1 | 0 | 8 | 7 | 1 | 0 | 0 | 8 | 30 |
| | 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 4 | 0 | 0 | 0 | 4 | 6 | 1 | 0 | 0 | 7 | 18 |
| | 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 0 | 14 | 3 | 0 | 3 | 0 | 6 | 3 | 1 | 0 | 0 | 4 | 24 |
| | Peak Hour Volume | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 37 | 0 | 43 | 19 | 0 | 7 | 0 | 26 | 20 | 4 | 0 | 0 | 24 | 93 |
| | Rounded Hourly Volume | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 35 | 0 | 40 | 20 | 0 | 5 | 0 | 25 | 20 | 5 | 0 | 0 | 25 | 90 |
| | % Single Unit Trucks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.5 | 0.0 | 14.3 | 0.0 | 11.5 | 10.0 | 50.0 | 0.0 | 0.0 | 16.7 | 7.5 |
| | % 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 | 10.5 | 0.0 | 14.3 | 0.0 | 11.5 | 10.0 | 50.0 | 0.0 | 0.0 | 16.7 | 7.5 |
| | Peak Hour Factor (PHF) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.75 | 0.71 | 0.00 | 0.77 | 0.68 | 0.00 | 0.58 | 0.00 | 0.81 | 0.71 | 1.00 | 0.00 | 0.00 | 0.75 | 0.77 |

| N/A | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MD Peak Hour | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | |
| | 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 | 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 |

| Tuesday, April 11, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PM Peak Hour | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | |
| | 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 | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 9 | 0 | 2 | 0 | 11 | 5 | 3 | 0 | 0 | 8 | 27 |
| | 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 11 | 0 | 14 | 6 | 0 | 3 | 0 | 9 | 2 | 2 | 0 | 0 | 4 | 27 |
| | 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 8 | 0 | 3 | 0 | 11 | 3 | 2 | 0 | 0 | 5 | 25 |
| | 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 8 | 0 | 2 | 0 | 10 | 1 | 1 | 0 | 0 | 2 | 16 |
| | Peak Hour Volume | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 31 | 0 | 35 | 31 | 0 | 10 | 0 | 41 | 11 | 8 | 0 | 0 | 19 | 95 |
| | Rounded Hourly Volume | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 30 | 0 | 35 | 30 | 0 | 10 | 0 | 40 | 10 | 10 | 0 | 0 | 20 | 95 |
| | % Single Unit Trucks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 9.7 | 0.0 | 8.6 | 3.2 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.2 |
| | % 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 | 9.7 | 0.0 | 8.6 | 3.2 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.2 |
| | Peak Hour Factor (PHF) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.70 | 0.00 | 0.62 | 0.86 | 0.00 | 0.83 | 0.00 | 0.93 | 0.55 | 0.67 | 0.00 | 0.00 | 0.59 | 0.88 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Private Trail | | | BROKEN HILL CIR S | | | HIGHFIELD RD | | | BROKEN HILL CIR S | | | |
| | 15-Minute Start Time | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | |
| AM | 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 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| | 8:00 AM | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 3 |
| | 8:15 AM | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Total | 3 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 5 |
| 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 | 4:30 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | 4:45 PM | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| | 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 0 | 2 | 0 | 2 | 10 |

# Intersection Traffic Volume Report

| *Count Basics* | | *Page 5 of 13* |
|---|---|---|
| Start Date: Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | Non-Holiday | No Special Events |

## *15-Minute Motor Vehicle Data*

***BROKEN HILL CIR S & HIGHFIELD RD***

**All Motor Vehicles**



**15-Minute Motor Vehicle Data**

| | 15-Minute | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | 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 | 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 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 6 | 59 | 0.64 |
| | 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 | 3 | 0 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 6 | 14 | 74 | 0.80 |
| | 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 14 | 2 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 7 | 23 | 90 | 0.75 |
| | 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 0 | 3 | 0 | 7 | 3 | 2 | 0 | 0 | 5 | 16 | 85 | 0.71 |
| | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 8 | 5 | 0 | 3 | 0 | 8 | 4 | 1 | 0 | 0 | 5 | 21 | 93 | 0.78 |
| | 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 14 | 7 | 0 | 1 | 0 | 8 | 7 | 1 | 0 | 0 | 8 | 30 | 88 | 0.73 |
| | 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 4 | 0 | 0 | 0 | 4 | 6 | 1 | 0 | 0 | 7 | 18 | 59 | 0.61 |
| | 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 0 | 14 | 3 | 0 | 3 | 0 | 6 | 3 | 1 | 0 | 0 | 4 | 24 | | |
| | 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 4 | 0 | 1 | 0 | 5 | 2 | 1 | 0 | 0 | 3 | 16 | | |
| | 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| | 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 | 1 | 0 | 1 | 4 | 0 | 4 | 0 | 8 | 3 | 1 | 0 | 0 | 4 | 13 | 70 | 0.83 |
| | 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 9 | 0 | 4 | 0 | 13 | 2 | 2 | 0 | 0 | 4 | 20 | 80 | 0.87 |
| | 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 4 | 0 | 5 | 0 | 9 | 3 | 0 | 0 | 0 | 3 | 16 | 74 | 0.80 |
| | 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 3 | 0 | 8 | 5 | 4 | 0 | 0 | 9 | 21 | 85 | 0.79 |
| | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 7 | 0 | 6 | 0 | 13 | 3 | 0 | 0 | 0 | 3 | 23 | 91 | 0.84 |
| | 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 2 | 0 | 7 | 2 | 2 | 0 | 0 | 4 | 14 | 93 | 0.86 |
| | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 | 9 | 0 | 2 | 0 | 11 | 5 | 3 | 0 | 0 | 8 | 27 | 95 | 0.88 |
| | 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 11 | 0 | 14 | 6 | 0 | 3 | 0 | 9 | 2 | 2 | 0 | 0 | 4 | 27 | 90 | 0.83 |
| | 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 9 | 8 | 0 | 3 | 0 | 11 | 3 | 2 | 0 | 0 | 5 | 25 | 77 | 0.77 |
| | 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 8 | 0 | 2 | 0 | 10 | 1 | 1 | 0 | 0 | 2 | 16 | | |
| | 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 14 | 0 | 2 | 0 | 16 | 2 | 1 | 0 | 0 | 3 | 22 | | |
| | 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 4 | 0 | 9 | 2 | 0 | 0 | 0 | 2 | 14 | | |
| | 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 | 16 | 122 | 0 | 138 | 119 | 0 | 52 | 0 | 171 | 73 | 25 | 0 | 0 | 98 | 407 | | |

**Peak Hour All Vehicle Volume Summary**

| | Hourly | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | 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 | PHF | |
| **AM** | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 37 | 0 | 43 | 19 | 0 | 7 | 0 | 26 | 20 | 4 | 0 | 0 | 24 | 93 | 0.78 | |
| **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** | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 31 | 0 | 35 | 36 | 0 | 20 | 0 | 56 | 11 | 8 | 0 | 0 | 19 | 95 | 0.88 | |

# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 9 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *15-Minute Heavy Vehicle Data*

***BROKEN HILL CIR S & HIGHFIELD RD***




**15-Minute Heavy Vehicle Data**

| | 15-Minute | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | 15-Min | Hourly |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | Totals | 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 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 5 |
| | 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 3 |
| | 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| | 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 7 |
| | 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 3 | 5 |
| | 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | |
| | 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | 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 | 2 |
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 3 |
| | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| | 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 |
| | 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 |
| | 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| | 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| | 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 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 9 | 0 | 2 | 0 | 11 | 5 | 2 | 0 | 0 | 7 | 21 | |

**Peak Hour Heavy Vehicle Volume Summary**

| | Hourly | From North (↓) | | | | | From East (←) | | | | | From South (↑) | | | | | From West (→) | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Private Trail | | | | | BROKEN HILL CIR S | | | | | HIGHFIELD RD | | | | | BROKEN HILL CIR S | | | | | 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** | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 2 | 2 | 0 | 0 | 4 | 7 |
| **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** | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |

# Intersection Traffic Volume Report

| Count Basics | Version 2022.11.2 | | Page 1 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Base Information, Observed (5.5) Hour and Estimated (24) Hour Volume Summaries*

***Major St:*** **HIGHFIELD RD**
***Minor St:*** **HIGHFIELD COURT**
***Intersection of:*** ***HIGHFIELD RD & HIGHFIELD COURT***

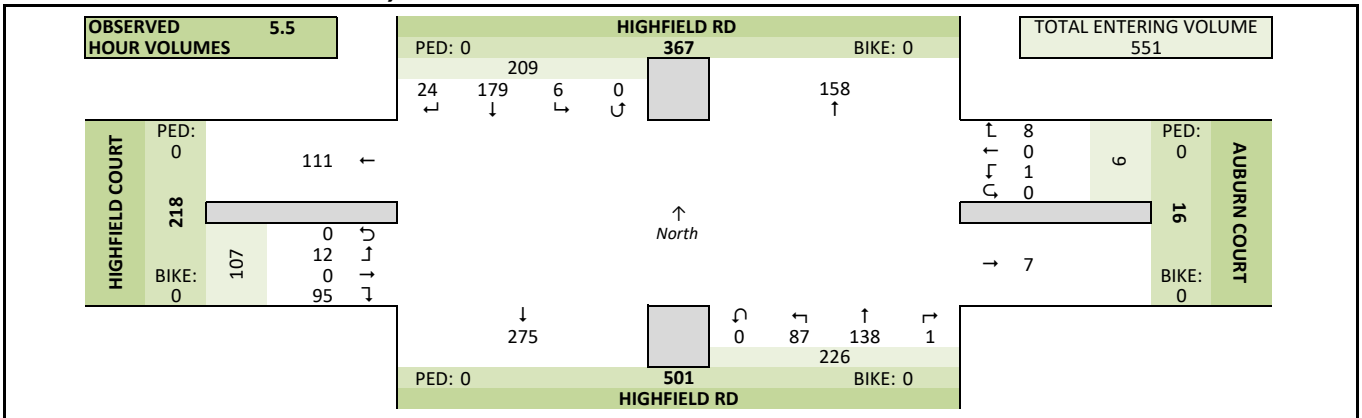
### Site Information

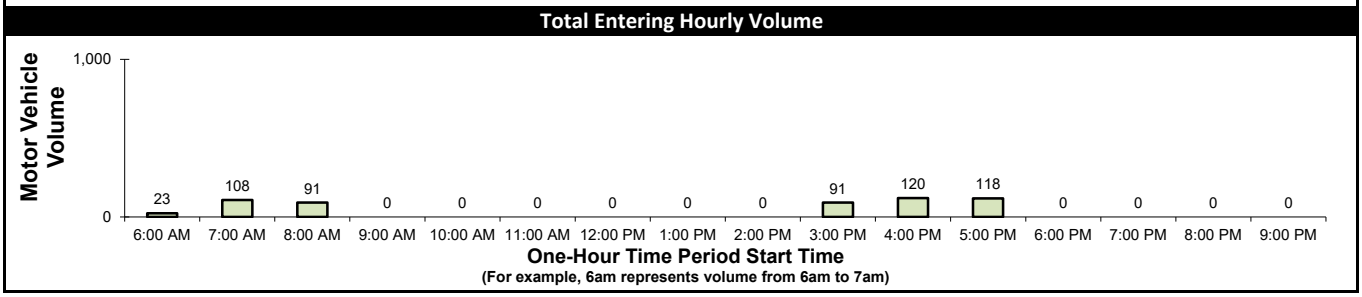
| | | | |
|---|---|---|---|
| Municipality | City of Pewaukee | | |
| County | 67 - Waukesha | WisDOT Region | SE |
| Traffic Control | Partial Stop Control | | |
| Roadway Names | | North Direction | ↑ |
| North Leg | HIGHFIELD RD | | |
| East Leg | AUBURN COURT | | |
| South Leg | HIGHFIELD RD | | |
| West Leg | HIGHFIELD COURT | | |
| Special Considerations | | | |
| Schools | 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

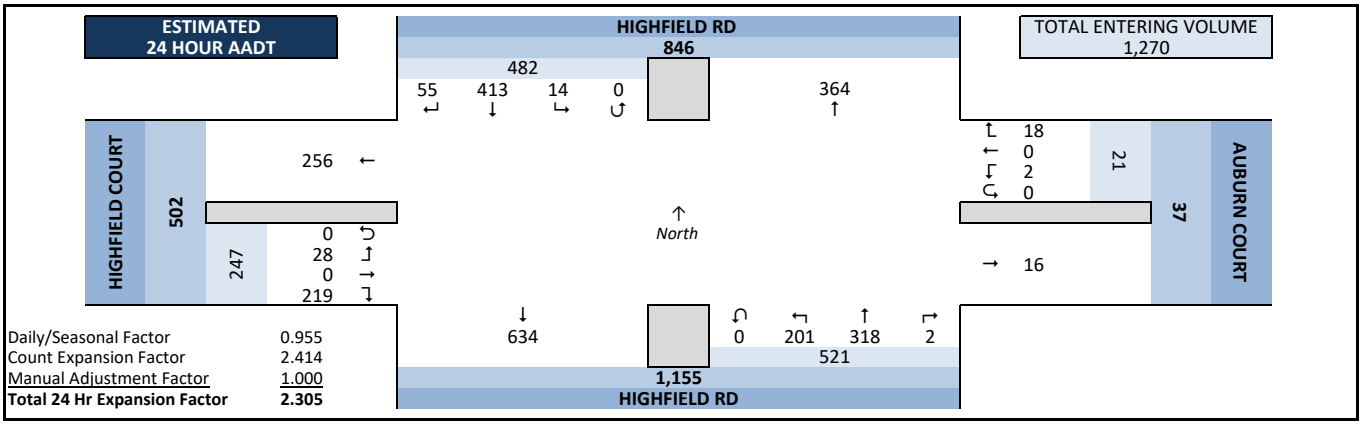
| | | | | | |
|---|---|---|---|---|---|
| Hrs Counted: | 06:30 AM-09:00 AM and 03:00 PM-06:00 PM | | | | |
| 1st Day of Count | Tuesday, April 11, 2023 | | | Weather | |
| AM Peak Period | Wednesday, April 12, 2023 | | | Clear & Dry | |
| Midday Peak Period | Wednesday, April 12, 2023 | | | Clear & Dry | |
| PM Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| Calculated Peak Hours | | | | | |
| AM | 7:45-8:45am | MD | | PM | 4:45-5:45pm |
| Peak Hours Selected for Analysis | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Daily/Seasonal Adjustment Group | (2) Urban Arterials & Collectors | | | | |
| Count Expansion Group | (2) Urban Arterials & Collectors | | | | |
| Daily/Seasonal Adjustment Factor | 0.955 | | Count Expansion Factor | | 2.414 |
| Company Name | TADI, Inc. | | | Manual Adj. | 1.000 |
| Observers: AM Peak Period | LuAnn Gaertner | | | | |
| Observers: Midday Peak Period | None | | | | |
| Observers: PM Peak Period | Jane Fait | | | | |
| Comments | 2021 DOT Daily & Seasonal Factors | | | | |

### *Observed 5.5 Hour Volume Summary*




### *Estimated 24 Hour AADT*




| | |
|---|---|
| Daily/Seasonal Factor | 0.955 |
| Count Expansion Factor | 2.414 |
| Manual Adjustment Factor | 1.000 |
| **Total 24 Hr Expansion Factor** | **2.305** |

# Intersection Traffic Volume Report

| Count Basics | | | Page 2 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

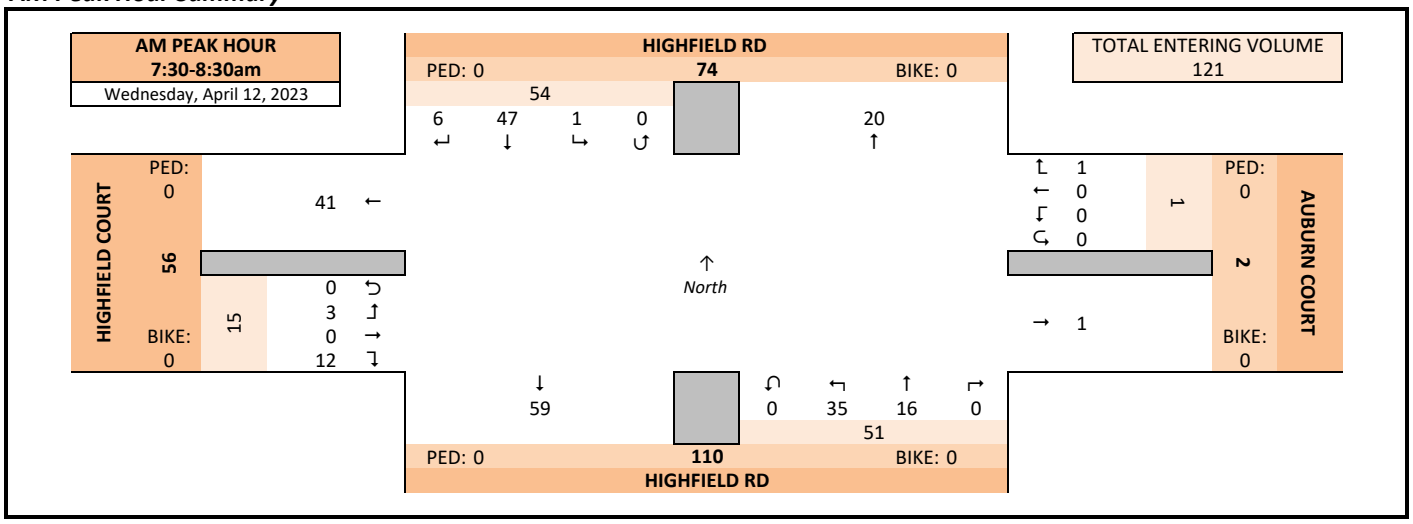
## *Peak Hour Volume Graphical Summary*

***HIGHFIELD RD & HIGHFIELD COURT***

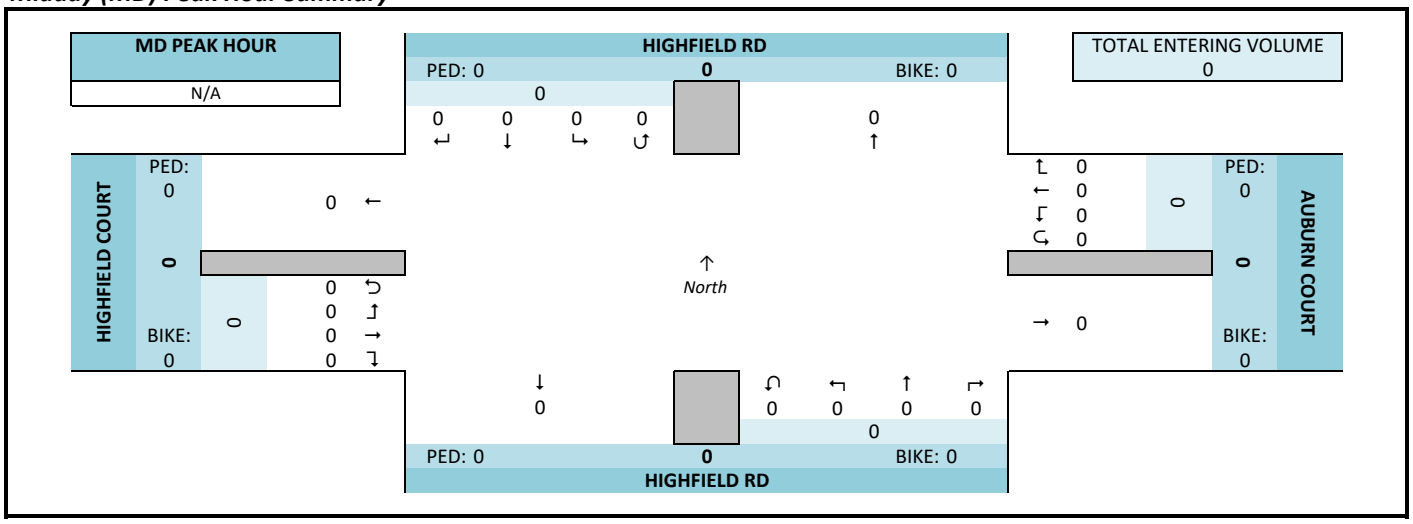
**All Motor Vehicles**



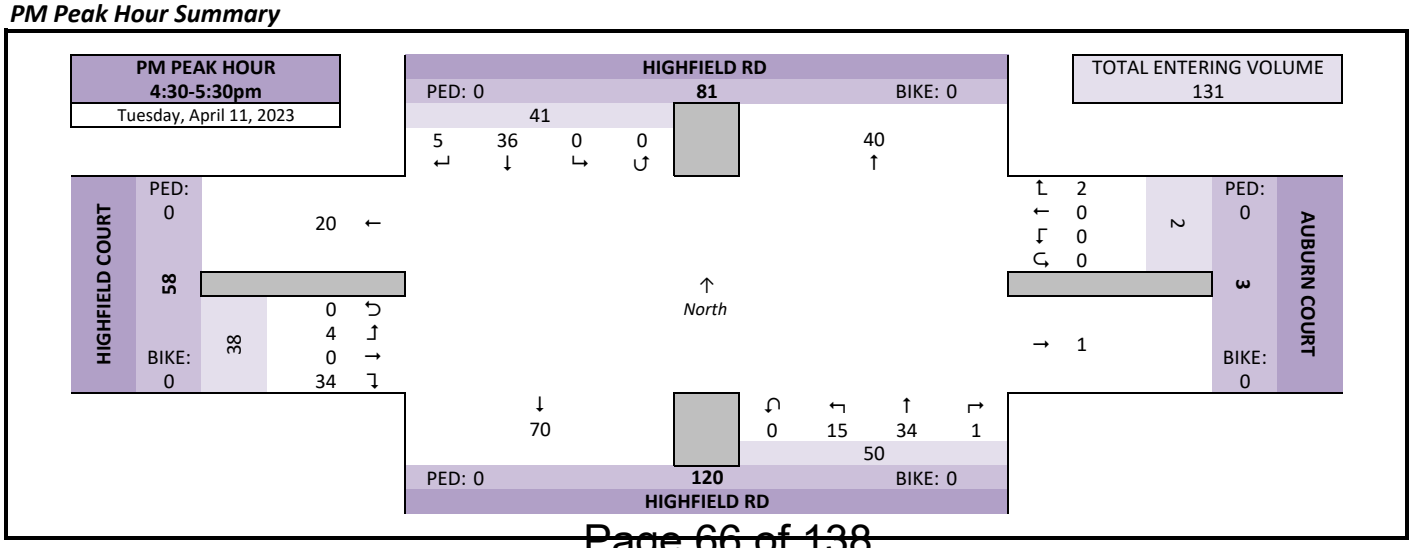
### *AM Peak Hour Summary*




### *Midday (MD) Peak Hour Summary*




### *PM Peak Hour Summary*

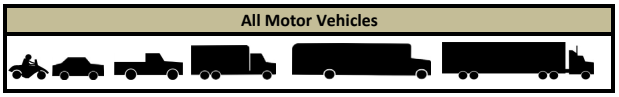


# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 3 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Peak Hour Volume Summary*

***HIGHFIELD RD & HIGHFIELD COURT***




**Peak Hour Volumes, Truck Percentages, and PHFs**

| Wednesday, April 12, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour | HIGHFIELD RD | | | | | AUBURN COURT | | | | | HIGHFIELD RD | | | | | HIGHFIELD COURT | | | | | |
| | 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 | 7:30 AM | 1 | 5 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 14 | 4 | 0 | 0 | 0 | 4 | 25 |
| | 7:45 AM | 2 | 18 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 11 | 3 | 0 | 1 | 0 | 4 | 35 |
| | 8:00 AM | 1 | 11 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 9 | 0 | 12 | 2 | 0 | 1 | 0 | 3 | 28 |
| | 8:15 AM | 2 | 13 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 14 | 3 | 0 | 1 | 0 | 4 | 33 |
| | Peak Hour Volume | 6 | 47 | 1 | 0 | 54 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 35 | 0 | 51 | 12 | 0 | 3 | 0 | 15 | 121 |
| | Rounded Hourly Volume | 5 | 45 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 35 | 0 | 50 | 10 | 0 | 5 | 0 | 15 | 115 |
| | % Single Unit Trucks | 16.7 | 2.1 | 0.0 | 0.0 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5 | 2.9 | 0.0 | 5.9 | 8.3 | 0.0 | 33.3 | 0.0 | 13.3 | 5.8 |
| | % 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) | 16.7 | 2.1 | 0.0 | 0.0 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 12.5 | 2.9 | 0.0 | 5.9 | 8.3 | 0.0 | 33.3 | 0.0 | 13.3 | 5.8 |
| | Peak Hour Factor (PHF) | 0.75 | 0.65 | 0.25 | 0.00 | 0.67 | 0.25 | 0.00 | 0.00 | 0.00 | 0.25 | 0.00 | 0.80 | 0.97 | 0.00 | 0.91 | 0.75 | 0.00 | 0.75 | 0.00 | 0.94 | 0.86 |

| N/A | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MD Peak Hour | HIGHFIELD RD | | | | | AUBURN COURT | | | | | HIGHFIELD RD | | | | | HIGHFIELD COURT | | | | | |
| | 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 | 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 |

| Tuesday, April 11, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PM Peak Hour | HIGHFIELD RD | | | | | AUBURN COURT | | | | | HIGHFIELD RD | | | | | HIGHFIELD COURT | | | | | |
| | 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 | 4:30 PM | 1 | 12 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 2 | 1 | 8 | 2 | 0 | 11 | 5 | 0 | 1 | 0 | 6 | 32 |
| | 4:45 PM | 1 | 11 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 14 | 10 | 0 | 1 | 0 | 11 | 37 |
| | 5:00 PM | 2 | 10 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 3 | 0 | 12 | 12 | 0 | 2 | 0 | 14 | 38 |
| | 5:15 PM | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 3 | 0 | 13 | 7 | 0 | 0 | 0 | 7 | 24 |
| | Peak Hour Volume | 5 | 36 | 0 | 0 | 41 | 2 | 0 | 0 | 0 | 2 | 1 | 34 | 15 | 0 | 50 | 34 | 0 | 4 | 0 | 38 | 131 |
| | Rounded Hourly Volume | 5 | 35 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 15 | 0 | 50 | 35 | 0 | 5 | 0 | 40 | 130 |
| | % Single Unit Trucks | 0.0 | 8.3 | 0.0 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 |
| | % 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 | 8.3 | 0.0 | 0.0 | 7.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 |
| | Peak Hour Factor (PHF) | 0.62 | 0.75 | 0.00 | 0.00 | 0.79 | 0.25 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 | 0.85 | 0.54 | 0.00 | 0.89 | 0.71 | 0.00 | 0.50 | 0.00 | 0.68 | 0.86 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HIGHFIELD RD | | | AUBURN COURT | | | HIGHFIELD RD | | | HIGHFIELD COURT | | | |
| | 15-Minute Start Time | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | |
| AM | 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 |
| | 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 | 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 |
| | Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

# Intersection Traffic Volume Report

| *Count Basics* | | *Page 5 of 13* |
|---|---|---|
| Start Date: Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | Non-Holiday | No Special Events |

## *15-Minute Motor Vehicle Data*

***HIGHFIELD RD & HIGHFIELD COURT***

**All Motor Vehicles**



**15-Minute Motor Vehicle Data**

| 15-Minute Time Period | | From North (↓) HIGHFIELD RD | | | | | From East (←) AUBURN COURT | | | | | From South (↑) HIGHFIELD RD | | | | | From West (→) HIGHFIELD COURT | | | | | 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 | 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 | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 9 | 71 | 0.66 |
| | 6:45 AM | 2 | 6 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 14 | 87 | 0.81 |
| | 7:00 AM | 1 | 16 | 0 | 0 | 17 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 4 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 27 | 108 | 0.77 |
| | 7:15 AM | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 5 | 1 | 0 | 0 | 0 | 1 | 21 | 109 | 0.78 |
| | 7:30 AM | 1 | 5 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 14 | 4 | 0 | 0 | 0 | 4 | 25 | 121 | 0.86 |
| | 7:45 AM | 2 | 18 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 0 | 11 | 3 | 0 | 1 | 0 | 4 | 35 | 125 | 0.89 |
| | 8:00 AM | 1 | 11 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 9 | 0 | 12 | 2 | 0 | 1 | 0 | 3 | 28 | 91 | 0.69 |
| | 8:15 AM | 2 | 13 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 | 0 | 14 | 3 | 0 | 1 | 0 | 4 | 33 | | |
| | 8:30 AM | 1 | 13 | 0 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 6 | 0 | 11 | 4 | 0 | 0 | 0 | 4 | 29 | | |
| | 8:45 AM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | | |
| | 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 12 | 0 | 0 | 14 | 2 | 0 | 1 | 0 | 3 | 0 | 5 | 3 | 0 | 8 | 2 | 0 | 1 | 0 | 3 | 28 | 91 | 0.81 |
| | 3:15 PM | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 12 | 3 | 0 | 0 | 0 | 3 | 18 | 92 | 0.79 |
| | 3:30 PM | 0 | 4 | 2 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 3 | 0 | 13 | 1 | 0 | 0 | 0 | 1 | 20 | 96 | 0.83 |
| | 3:45 PM | 1 | 6 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 5 | 0 | 12 | 5 | 0 | 0 | 0 | 5 | 25 | 108 | 0.84 |
| | 4:00 PM | 2 | 7 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 4 | 0 | 15 | 4 | 0 | 1 | 0 | 5 | 29 | 120 | 0.81 |
| | 4:15 PM | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 4 | 0 | 12 | 5 | 0 | 0 | 0 | 5 | 22 | 129 | 0.85 |
| | 4:30 PM | 1 | 12 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 2 | 1 | 8 | 2 | 0 | 11 | 5 | 0 | 1 | 0 | 6 | 32 | 131 | 0.86 |
| | 4:45 PM | 1 | 11 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 0 | 14 | 10 | 0 | 1 | 0 | 11 | 37 | 133 | 0.88 |
| | 5:00 PM | 2 | 10 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 3 | 0 | 12 | 12 | 0 | 2 | 0 | 14 | 38 | 118 | 0.78 |
| | 5:15 PM | 1 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 3 | 0 | 13 | 7 | 0 | 0 | 0 | 7 | 24 | | |
| | 5:30 PM | 0 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 15 | 14 | 0 | 1 | 0 | 15 | 34 | | |
| | 5:45 PM | 0 | 4 | 1 | 0 | 5 | 2 | 0 | 0 | 0 | 2 | 0 | 6 | 2 | 0 | 8 | 6 | 0 | 1 | 0 | 7 | 22 | | |
| | 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 | | 24 | 179 | 6 | 0 | 209 | 8 | 0 | 1 | 0 | 9 | 1 | 138 | 87 | 0 | 226 | 95 | 0 | 12 | 0 | 107 | 551 | | |

**Peak Hour All Vehicle Volume Summary**

| Hourly Time Period | | From North (↓) HIGHFIELD RD | | | | | From East (←) AUBURN COURT | | | | | From South (↑) HIGHFIELD RD | | | | | From West (→) HIGHFIELD COURT | | | | | 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 | PHF |
| AM | 7:30 AM | 6 | 47 | 1 | 0 | 54 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 35 | 0 | 51 | 12 | 0 | 3 | 0 | 15 | 121 | 0.86 |
| 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 | 4:30 PM | 5 | 36 | 0 | 0 | 41 | 2 | 0 | 0 | 0 | 2 | 1 | 34 | 25 | 0 | 60 | 34 | 0 | 4 | 0 | 38 | 131 | 0.86 |

# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 9 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *15-Minute Heavy Vehicle Data*

***HIGHFIELD RD & HIGHFIELD COURT***




**15-Minute Heavy Vehicle Data**

| | 15-Minute | From North | | | | | From East | | | | | From South | | | | | From West | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | HIGHFIELD RD | | | | | AUBURN COURT | | | | | HIGHFIELD RD | | | | | HIGHFIELD COURT | | | | | 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 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 4 | 5 |
| | 6:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| | 7:30 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| | 7:45 AM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 6 |
| | 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 3 |
| | 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | 8:30 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | 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 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 4 |
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 3:45 PM | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 3 |
| | 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 |
| | 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 |
| | 4:45 PM | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| | 5:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| | 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 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 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 | | 4 | 5 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 0 | 8 | 1 | 0 | 4 | 0 | 5 | 23 | |

**Peak Hour Heavy Vehicle Volume Summary**

| | Hourly | From North | | | | | From East | | | | | From South | | | | | From West | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | HIGHFIELD RD | | | | | AUBURN COURT | | | | | HIGHFIELD RD | | | | | HIGHFIELD COURT | | | | | 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** | 7:30 AM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 1 | 0 | 1 | 0 | 2 | 7 |
| **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** | 4:30 PM | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |

# Intersection Traffic Volume Report

| Count Basics | Version 2022.11.2 | | Page 1 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Base Information, Observed (5.5) Hour and Estimated (24) Hour Volume Summaries*

***Major St:*** **STH 190 - Capitol Drive**
***Minor St:*** **Highfield Road**
***Intersection of:*** ***STH 190 - Capitol Drive & Highfield Road***

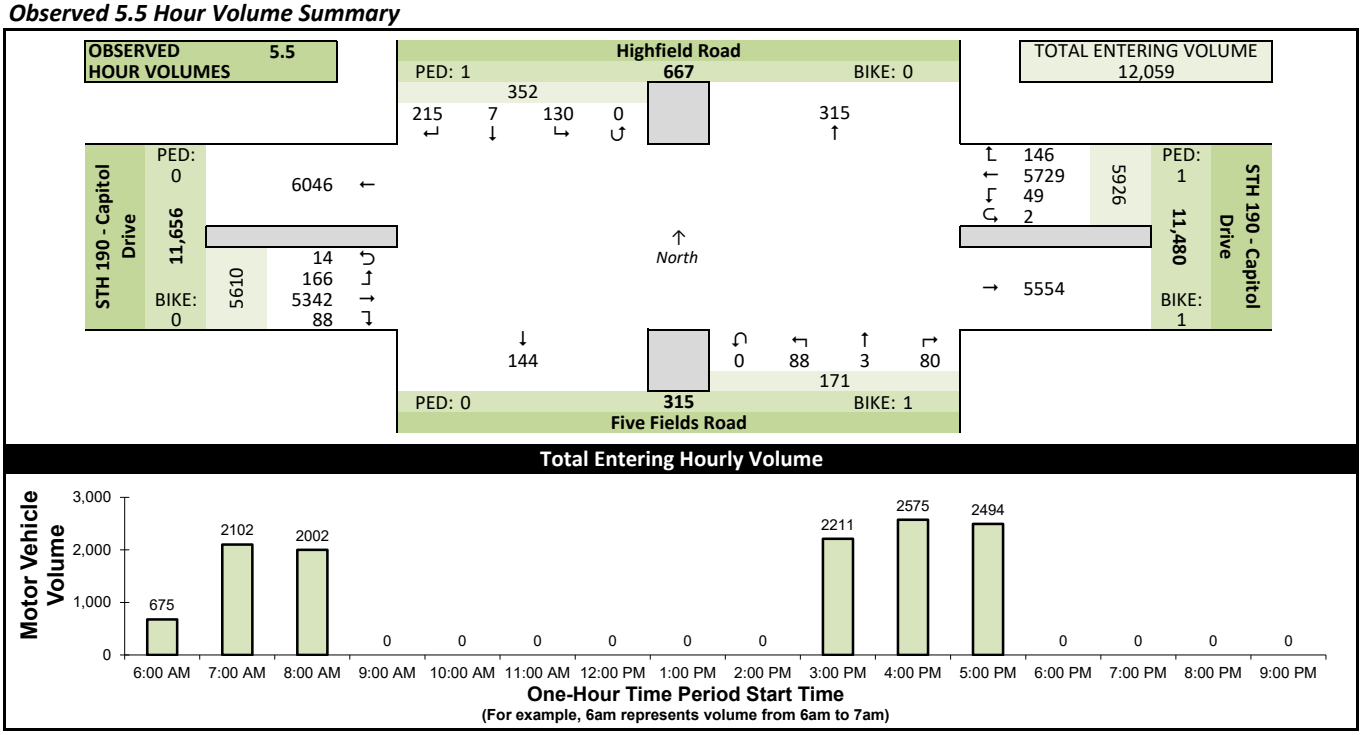
### Site Information

| | | | |
|---|---|---|---|
| Municipality | City of Pewaukee | | |
| County | 67 - Waukesha | WisDOT Region | SE |
| Traffic Control | Partial Stop Control | | |
| Roadway Names | | North Direction | ↑ |
| North Leg | Highfield Road | | |
| East Leg | STH 190 - Capitol Drive | | |
| South Leg | Five Fields Road | | |
| West Leg | STH 190 - Capitol Drive | | |
| Special Considerations | | | |
| Schools | 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 | |

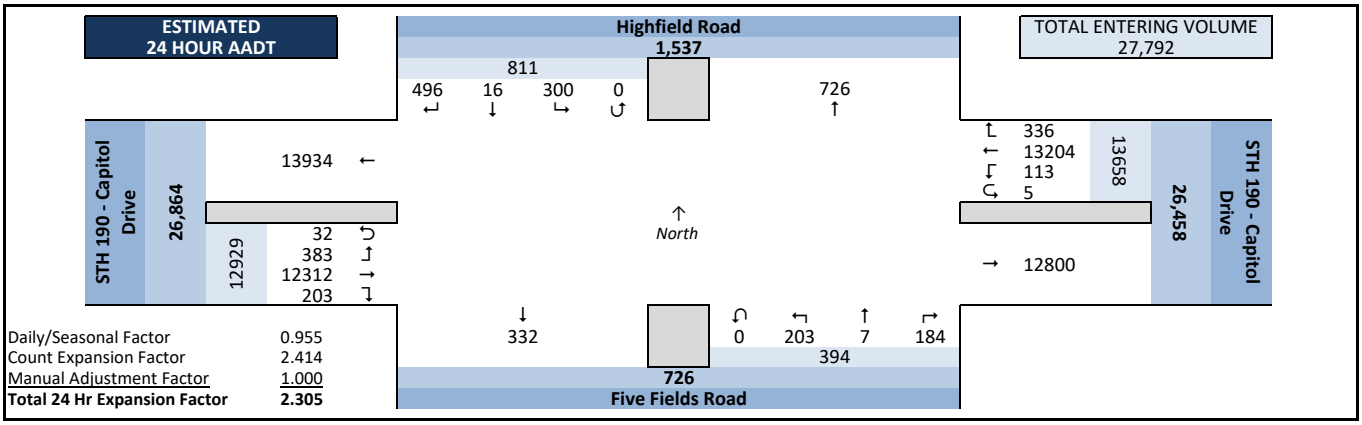
### Count Information

| | | | | | |
|---|---|---|---|---|---|
| Hrs Counted: | 06:30 AM-09:00 AM and 03:00 PM-06:00 PM | | | | |
| 1st Day of Count | Tuesday, April 11, 2023 | | | Weather | |
| AM Peak Period | Wednesday, April 12, 2023 | | | Clear & Dry | |
| Midday Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| PM Peak Period | Tuesday, April 11, 2023 | | | Clear & Dry | |
| Calculated Peak Hours | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Peak Hours Selected for Analysis | | | | | |
| AM | 7:30-8:30am | MD | | PM | 4:30-5:30pm |
| Daily/Seasonal Adjustment Group | (2) Urban Arterials & Collectors | | | | |
| Count Expansion Group | (2) Urban Arterials & Collectors | | | | |
| Daily/Seasonal Adjustment Factor | 0.955 | Count Expansion Factor | 2.414 | | |
| Company Name | TADI, Inc. | | | Manual Adj. | 1.000 |
| Observers: AM Peak Period | Amy Scheuerlein | | | | |
| Observers: Midday Peak Period | None | | | | |
| Observers: PM Peak Period | Amy Scheuerlein | | | | |
| Comments | 2021 DOT Daily & Seasonal Factors | | | | |

### *Observed 5.5 Hour Volume Summary*




### *Estimated 24 Hour AADT*



# Intersection Traffic Volume Report

| Count Basics | | | Page 2 of 13 |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

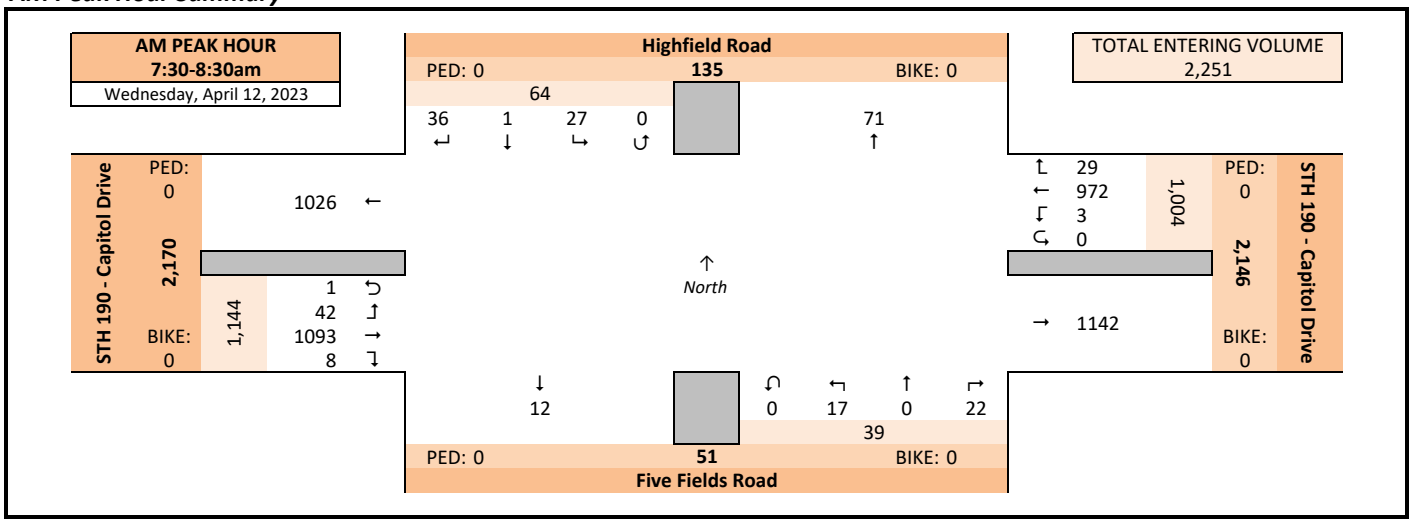
## *Peak Hour Volume Graphical Summary*

***STH 190 - Capitol Drive & Highfield Road***

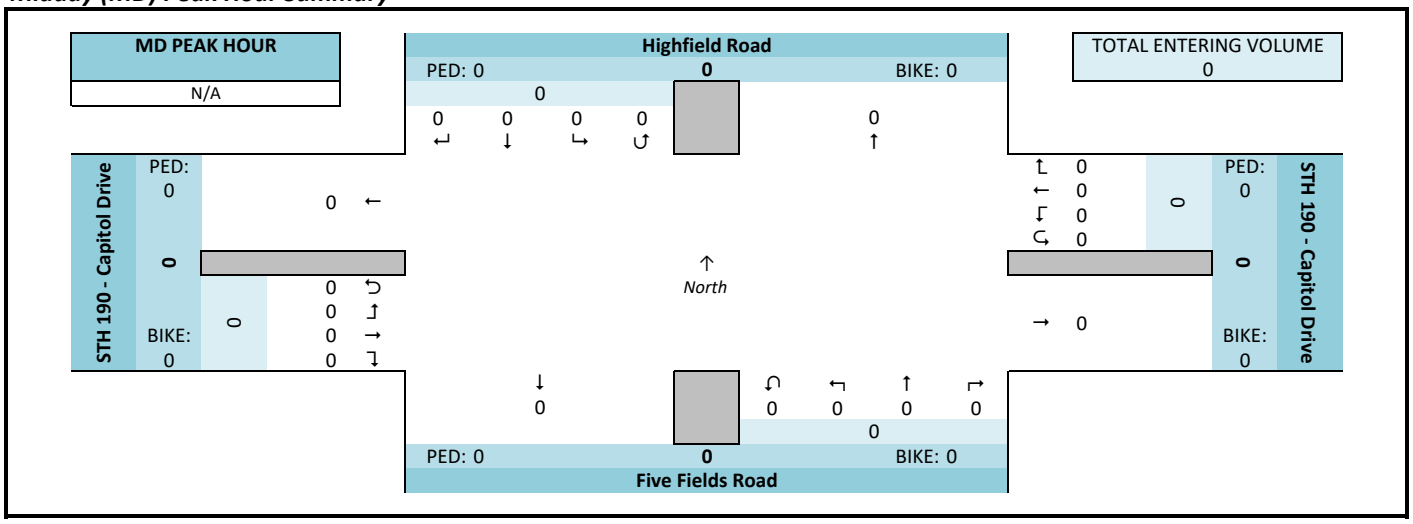
**All Motor Vehicles**



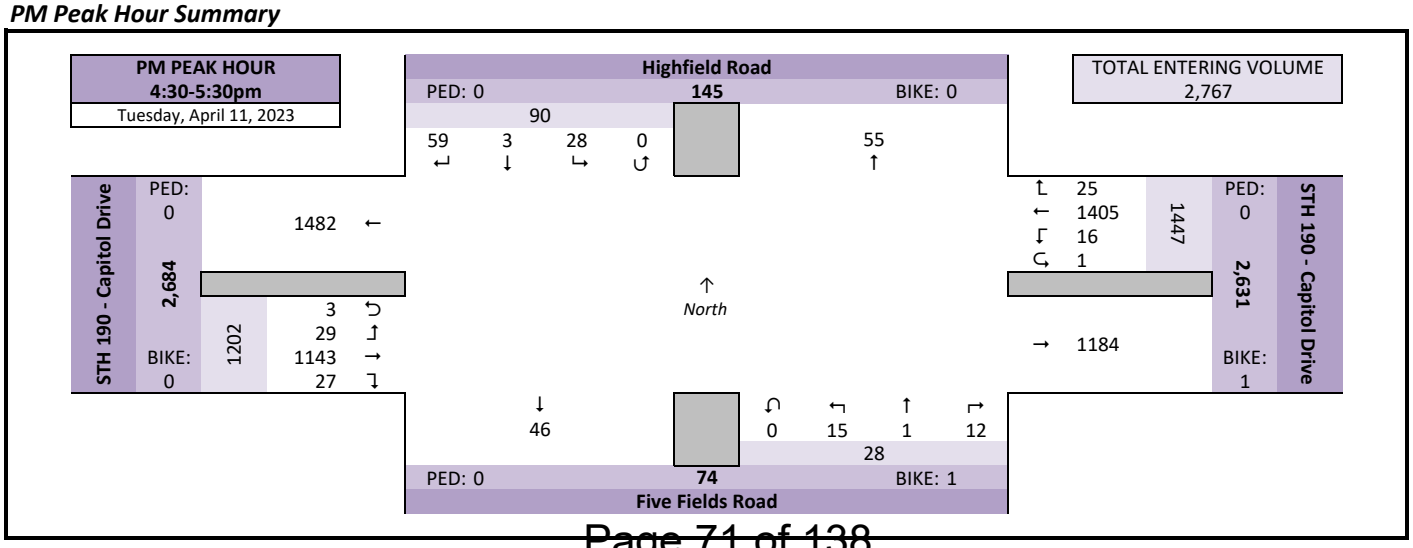
### *AM Peak Hour Summary*




### *Midday (MD) Peak Hour Summary*




### *PM Peak Hour Summary*

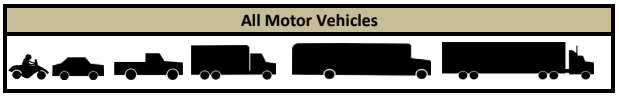


# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 3 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *Peak Hour Volume Summary*

***STH 190 - Capitol Drive & Highfield Road***




**Peak Hour Volumes, Truck Percentages, and PHFs**

| Wednesday, April 12, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AM Peak Hour | Highfield Road | | | | | STH 190 - Capitol Drive | | | | | Five Fields Road | | | | | STH 190 - Capitol Drive | | | | | |
| | 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 | 7:30 AM | 3 | 0 | 4 | 0 | 7 | 9 | 248 | 0 | 0 | 257 | 7 | 0 | 5 | 0 | 12 | 1 | 321 | 10 | 1 | 333 | 609 |
| | 7:45 AM | 10 | 1 | 13 | 0 | 24 | 10 | 259 | 0 | 0 | 269 | 8 | 0 | 5 | 0 | 13 | 2 | 273 | 17 | 0 | 292 | 598 |
| | 8:00 AM | 11 | 0 | 1 | 0 | 12 | 4 | 242 | 2 | 0 | 248 | 5 | 0 | 3 | 0 | 8 | 2 | 255 | 10 | 0 | 267 | 535 |
| | 8:15 AM | 12 | 0 | 9 | 0 | 21 | 6 | 223 | 1 | 0 | 230 | 2 | 0 | 4 | 0 | 6 | 3 | 244 | 5 | 0 | 252 | 509 |
| | Peak Hour Volume | 36 | 1 | 27 | 0 | 64 | 29 | 972 | 3 | 0 | 1004 | 22 | 0 | 17 | 0 | 39 | 8 | 1093 | 42 | 1 | 1144 | 2251 |
| | Rounded Hourly Volume | 35 | 0 | 25 | 0 | 60 | 30 | 970 | 5 | 0 | 1005 | 20 | 0 | 15 | 0 | 35 | 10 | 1095 | 40 | 0 | 1145 | 2245 |
| | % Single Unit Trucks | 2.8 | 0.0 | 0.0 | 0.0 | 1.6 | 6.9 | 3.7 | 0.0 | 0.0 | 3.8 | 4.5 | 0.0 | 5.9 | 0.0 | 5.1 | 0.0 | 3.8 | 2.4 | 0.0 | 3.7 | 3.7 |
| | % Heavy Trucks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 1.0 | 0.9 |
| | % Trucks (Total) | 2.8 | 0.0 | 0.0 | 0.0 | 1.6 | 6.9 | 4.5 | 0.0 | 0.0 | 4.6 | 4.5 | 0.0 | 5.9 | 0.0 | 5.1 | 0.0 | 4.8 | 2.4 | 0.0 | 4.7 | 4.6 |
| | Peak Hour Factor (PHF) | 0.75 | 0.25 | 0.52 | 0.00 | 0.67 | 0.72 | 0.94 | 0.37 | 0.00 | 0.93 | 0.69 | 0.00 | 0.85 | 0.00 | 0.75 | 0.67 | 0.85 | 0.62 | 0.25 | 0.86 | 0.92 |

| N/A | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MD Peak Hour | Highfield Road | | | | | STH 190 - Capitol Drive | | | | | Five Fields Road | | | | | STH 190 - Capitol Drive | | | | | |
| | 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 | 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 |

| Tuesday, April 11, 2023 | | From North | | | | | From East | | | | | From South | | | | | From West | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | PM Peak Hour | Highfield Road | | | | | STH 190 - Capitol Drive | | | | | Five Fields Road | | | | | STH 190 - Capitol Drive | | | | | |
| | 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 | 4:30 PM | 10 | 1 | 6 | 0 | 17 | 6 | 326 | 5 | 0 | 337 | 5 | 0 | 7 | 0 | 12 | 7 | 286 | 8 | 2 | 303 | 669 |
| | 4:45 PM | 19 | 2 | 12 | 0 | 33 | 6 | 344 | 4 | 0 | 354 | 3 | 1 | 1 | 0 | 5 | 4 | 269 | 8 | 1 | 282 | 674 |
| | 5:00 PM | 16 | 0 | 4 | 0 | 20 | 6 | 365 | 3 | 0 | 374 | 4 | 0 | 4 | 0 | 8 | 10 | 302 | 8 | 0 | 320 | 722 |
| | 5:15 PM | 14 | 0 | 6 | 0 | 20 | 7 | 370 | 4 | 1 | 382 | 0 | 0 | 3 | 0 | 3 | 6 | 286 | 5 | 0 | 297 | 702 |
| | Peak Hour Volume | 59 | 3 | 28 | 0 | 90 | 25 | 1405 | 16 | 1 | 1447 | 12 | 1 | 15 | 0 | 28 | 27 | 1143 | 29 | 3 | 1202 | 2767 |
| | Rounded Hourly Volume | 60 | 5 | 30 | 0 | 95 | 25 | 1405 | 15 | 0 | 1445 | 10 | 0 | 15 | 0 | 25 | 25 | 1145 | 30 | 5 | 1205 | 2770 |
| | % Single Unit Trucks | 3.4 | 0.0 | 3.6 | 0.0 | 3.3 | 0.0 | 1.3 | 6.2 | 0.0 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.7 | 3.4 | 0.0 | 1.7 | 1.5 |
| | % Heavy Trucks | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 | 0.3 |
| | % Trucks (Total) | 3.4 | 0.0 | 3.6 | 0.0 | 3.3 | 0.0 | 1.8 | 6.2 | 0.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 3.4 | 0.0 | 1.8 | 1.8 |
| | Peak Hour Factor (PHF) | 0.78 | 0.37 | 0.58 | 0.00 | 0.68 | 0.89 | 0.95 | 0.80 | 0.25 | 0.95 | 0.60 | 0.25 | 0.54 | 0.00 | 0.58 | 0.67 | 0.95 | 0.91 | 0.37 | 0.94 | 0.96 |

**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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Highfield Road | | | STH 190 - Capitol Drive | | | Five Fields Road | | | STH 190 - Capitol Drive | | | |
| | 15-Minute Start Time | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | Pedestrian | Bicyclist | Total | |
| AM | 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 |
| | 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 | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| | 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 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Total | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |

# Intersection Traffic Volume Report

| *Count Basics* | | *Page 5 of 13* |
|---|---|---|
| Start Date: Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | Non-Holiday | No Special Events |

## *15-Minute Motor Vehicle Data*

***STH 190 - Capitol Drive & Highfield Road***

**All Motor Vehicles**



**15-Minute Motor Vehicle Data**

| | 15-Minute Time Period | From North (↓) Highfield Road | | | | | From East (←) STH 190 - Capitol Drive | | | | | From South (↑) Five Fields Road | | | | | From West (→) STH 190 - Capitol Drive | | | | | 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 | 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 | 1 | 3 | 0 | 4 | 3 | 108 | 0 | 0 | 111 | 3 | 0 | 3 | 0 | 6 | 1 | 174 | 0 | 0 | 175 | 296 | 1570 | 0.82 |
| | 6:45 AM | 3 | 1 | 6 | 0 | 10 | 4 | 170 | 1 | 0 | 175 | 3 | 0 | 1 | 0 | 4 | 2 | 186 | 2 | 0 | 190 | 379 | 1883 | 0.77 |
| | 7:00 AM | 11 | 1 | 9 | 0 | 21 | 1 | 170 | 0 | 0 | 171 | 5 | 0 | 3 | 0 | 8 | 1 | 211 | 5 | 0 | 217 | 417 | 2102 | 0.86 |
| | 7:15 AM | 4 | 0 | 3 | 0 | 7 | 5 | 192 | 0 | 0 | 197 | 4 | 0 | 4 | 0 | 8 | 1 | 255 | 10 | 0 | 266 | 478 | 2220 | 0.91 |
| | 7:30 AM | 3 | 0 | 4 | 0 | 7 | 9 | 248 | 0 | 0 | 257 | 7 | 0 | 5 | 0 | 12 | 1 | 321 | 10 | 1 | 333 | 609 | 2251 | 0.92 |
| | 7:45 AM | 10 | 1 | 13 | 0 | 24 | 10 | 259 | 0 | 0 | 269 | 8 | 0 | 5 | 0 | 13 | 2 | 273 | 17 | 0 | 292 | 598 | 2137 | 0.89 |
| | 8:00 AM | 11 | 0 | 1 | 0 | 12 | 4 | 242 | 2 | 0 | 248 | 5 | 0 | 3 | 0 | 8 | 2 | 255 | 10 | 0 | 267 | 535 | 2002 | 0.94 |
| | 8:15 AM | 12 | 0 | 9 | 0 | 21 | 6 | 223 | 1 | 0 | 230 | 2 | 0 | 4 | 0 | 6 | 3 | 244 | 5 | 0 | 252 | 509 | | |
| | 8:30 AM | 4 | 0 | 9 | 0 | 13 | 6 | 206 | 0 | 0 | 212 | 4 | 0 | 2 | 0 | 6 | 3 | 253 | 8 | 0 | 264 | 495 | | |
| | 8:45 AM | 11 | 0 | 6 | 0 | 17 | 5 | 195 | 1 | 0 | 201 | 3 | 0 | 9 | 0 | 12 | 2 | 219 | 11 | 1 | 233 | 463 | | |
| | 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 | 13 | 0 | 10 | 0 | 23 | 2 | 243 | 4 | 0 | 249 | 1 | 0 | 5 | 0 | 6 | 6 | 217 | 9 | 0 | 232 | 510 | 2211 | 0.94 |
| | 3:15 PM | 10 | 0 | 0 | 0 | 10 | 9 | 279 | 3 | 0 | 291 | 1 | 0 | 1 | 0 | 2 | 6 | 215 | 9 | 0 | 230 | 533 | 2302 | 0.96 |
| | 3:30 PM | 7 | 0 | 3 | 0 | 10 | 9 | 314 | 0 | 0 | 323 | 3 | 0 | 1 | 0 | 4 | 7 | 231 | 10 | 5 | 253 | 590 | 2400 | 0.95 |
| | 3:45 PM | 13 | 0 | 5 | 0 | 18 | 7 | 271 | 6 | 0 | 284 | 6 | 0 | 5 | 0 | 11 | 2 | 253 | 10 | 0 | 265 | 578 | 2479 | 0.93 |
| | 4:00 PM | 11 | 0 | 6 | 0 | 17 | 10 | 295 | 4 | 0 | 309 | 2 | 1 | 8 | 0 | 11 | 8 | 251 | 5 | 0 | 264 | 601 | 2575 | 0.96 |
| | 4:15 PM | 13 | 0 | 3 | 0 | 16 | 13 | 322 | 4 | 1 | 340 | 2 | 0 | 9 | 0 | 11 | 3 | 251 | 8 | 2 | 264 | 631 | 2696 | 0.93 |
| | 4:30 PM | 10 | 1 | 6 | 0 | 17 | 6 | 326 | 5 | 0 | 337 | 5 | 0 | 7 | 0 | 12 | 7 | 286 | 8 | 2 | 303 | 669 | 2767 | 0.96 |
| | 4:45 PM | 19 | 2 | 12 | 0 | 33 | 6 | 344 | 4 | 0 | 354 | 3 | 1 | 1 | 0 | 5 | 4 | 269 | 8 | 1 | 282 | 674 | 2684 | 0.93 |
| | 5:00 PM | 16 | 0 | 4 | 0 | 20 | 6 | 365 | 3 | 0 | 374 | 4 | 0 | 4 | 0 | 8 | 10 | 302 | 8 | 0 | 320 | 722 | 2494 | 0.86 |
| | 5:15 PM | 14 | 0 | 6 | 0 | 20 | 7 | 370 | 4 | 1 | 382 | 0 | 0 | 3 | 0 | 3 | 6 | 286 | 5 | 0 | 297 | 702 | | |
| | 5:30 PM | 11 | 0 | 10 | 0 | 21 | 9 | 308 | 1 | 0 | 318 | 7 | 0 | 3 | 0 | 10 | 8 | 221 | 7 | 1 | 237 | 586 | | |
| | 5:45 PM | 9 | 0 | 2 | 0 | 11 | 9 | 279 | 6 | 0 | 294 | 2 | 1 | 2 | 0 | 5 | 3 | 169 | 1 | 1 | 174 | 484 | | |
| | 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** | | 215 | 7 | 130 | 0 | 352 | 146 | 5729 | 49 | 2 | 5926 | 80 | 3 | 88 | 0 | 171 | 88 | 5342 | 166 | 14 | 5610 | 12059 | | |

**Peak Hour All Vehicle Volume Summary**

| | Hourly Time Period | From North (↓) Highfield Road | | | | | From East (←) STH 190 - Capitol Drive | | | | | From South (↑) Five Fields Road | | | | | From West (→) STH 190 - Capitol Drive | | | | | 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 | PHF |
| AM | 7:30 AM | 36 | 1 | 27 | 0 | 64 | 29 | 972 | 3 | 0 | 1004 | 22 | 0 | 17 | 0 | 39 | 8 | 1093 | 42 | 1 | 1144 | 2251 | 0.92 |
| 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 | 4:30 PM | 59 | 3 | 28 | 0 | 90 | 25 | 1405 | 16 | 1 | 1447 | 12 | 1 | 25 | 0 | 38 | 27 | 1143 | 29 | 3 | 1202 | 2767 | 0.96 |

# Intersection Traffic Volume Report

| *Count Basics* | | | *Page 9 of 13* |
|---|---|---|---|
| Start Date: | Tuesday, April 11, 2023 | Weekday | Schools in Session |
| Total Number of Hours Counted: 5.5 | | Non-Holiday | No Special Events |

## *15-Minute Heavy Vehicle Data*

***STH 190 - Capitol Drive & Highfield Road***




**15-Minute Heavy Vehicle Data**

| | 15-Minute | From North | | | | | From East | | | | | From South | | | | | From West | | | | | 15-Min | Hourly |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Highfield Road | | | | | STH 190 - Capitol Drive | | | | | Five Fields Road | | | | | STH 190 - Capitol Drive | | | | | Totals | 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 | 1 | 9 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 20 | 66 |
| | 6:45 AM | 0 | 0 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 15 | 66 |
| | 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 15 | 79 |
| | 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 16 | 94 |
| | 7:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 13 | 20 | 103 |
| | 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 16 | 0 | 0 | 16 | 28 | 112 |
| | 8:00 AM | 1 | 0 | 0 | 0 | 1 | 1 | 14 | 0 | 0 | 15 | 0 | 0 | 1 | 0 | 1 | 0 | 12 | 1 | 0 | 13 | 30 | 110 |
| | 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 25 | |
| | 8:30 AM | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 17 | 0 | 0 | 17 | 29 | |
| | 8:45 AM | 0 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 0 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 16 | 0 | 0 | 16 | 26 | |
| | 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 | 7 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 12 | 0 | 0 | 12 | 20 | 72 |
| | 3:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 14 | 66 |
| | 3:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 1 | 1 | 6 | 0 | 0 | 7 | 20 | 68 |
| | 3:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 1 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 0 | 8 | 18 | 60 |
| | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 14 | 59 |
| | 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 16 | 61 |
| | 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 12 | 51 |
| | 4:45 PM | 1 | 0 | 1 | 0 | 2 | 0 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 10 | 17 | 44 |
| | 5:00 PM | 1 | 0 | 0 | 0 | 1 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 9 | 16 | 36 |
| | 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| | 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 3 | 5 | |
| | 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 9 | |
| | 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 | | 3 | 0 | 3 | 0 | 6 | 5 | 182 | 2 | 0 | 189 | 4 | 1 | 5 | 0 | 10 | 1 | 182 | 3 | 0 | 186 | 391 | |

**Peak Hour Heavy Vehicle Volume Summary**

| | Hourly | From North | | | | | From East | | | | | From South | | | | | From West | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Time Period | Highfield Road | | | | | STH 190 - Capitol Drive | | | | | Five Fields Road | | | | | STH 190 - Capitol Drive | | | | | 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 | 7:30 AM | 1 | 0 | 0 | 0 | 1 | 2 | 44 | 0 | 0 | 46 | 1 | 0 | 1 | 0 | 2 | 0 | 53 | 1 | 0 | 54 | 103 |
| 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 | 4:30 PM | 2 | 0 | 1 | 0 | 3 | 0 | 25 | 1 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 1 | 0 | 22 | 51 |

# APPENDIX B

# LOS DEFINITIONS & SYNCHRO TRAFFIC ANALYSIS

## Existing Traffic

**Level of Service Definitions**

| 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 intersection delays. | | |
| 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 timing. | | |
| 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. | | |

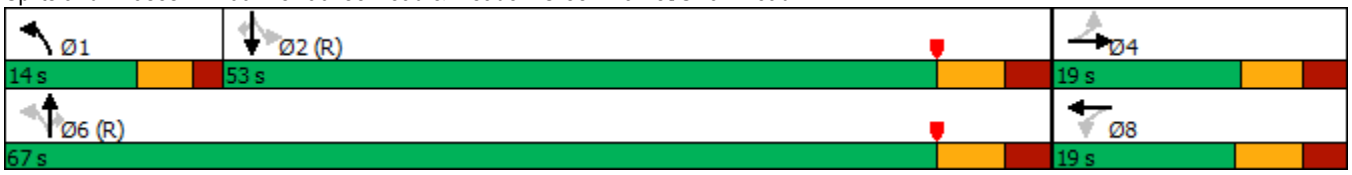
*Source: Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010*

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 945 | 40 | 50 | 405 | 50 |
| Future Volume (vph) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 945 | 40 | 50 | 405 | 50 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 10% | 10% | 10% | 9% | 9% | 9% | 6% | 6% | 6% | 11% | 11% | 11% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 60 | 21 | 0 | 27 | 54 | 0 | 11 | 1038 | 27 | 55 | 445 | 34 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 19.0 | 19.0 | | 19.0 | 19.0 | | 14.0 | 67.0 | 67.0 | 53.0 | 53.0 | 53.0 |
| Total Split (%) | 22.1% | 22.1% | | 22.1% | 22.1% | | 16.3% | 77.9% | 77.9% | 61.6% | 61.6% | 61.6% |
| Maximum Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.5 | 59.7 | 59.7 | 45.7 | 45.7 | 45.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.44 | 0.12 | | 0.20 | 0.33 | | 0.01 | 0.38 | 0.02 | 0.15 | 0.18 | 0.03 |
| Control Delay | 46.1 | 35.3 | | 38.1 | 40.9 | | 3.2 | 4.6 | 3.7 | 8.0 | 5.5 | 6.2 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 46.1 | 35.3 | | 38.1 | 40.9 | | 3.2 | 4.6 | 3.7 | 8.0 | 5.5 | 6.2 |
| 90th %ile Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.0 | 59.7 | 59.7 | 46.2 | 46.2 | 46.2 |
| 90th %ile Term Code | Max | Max | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 9.8 | 9.8 | | 9.4 | 9.4 | | 0.0 | 62.0 | 62.0 | 62.0 | 62.0 | 62.0 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 50th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 30th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 78.7 | 78.7 | 78.7 | 78.7 | 78.7 |
| 10th %ile Term Code | Skip | Skip | | Skip | Skip | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 31 | 11 | | 14 | 28 | | 1 | 89 | 3 | 7 | 31 | 4 |
| Queue Length 95th (ft) | 67 | 31 | | 37 | 61 | | 5 | 142 | 11 | 38 | 90 | 21 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 175 | 234 | | 176 | 211 | | 747 | 2750 | 1185 | 366 | 2519 | 1086 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.34 | 0.09 | | 0.15 | 0.26 | | 0.01 | 0.38 | 0.02 | 0.15 | 0.18 | 0.03 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 86 | |
| Actuated Cycle Length: 86 | |
| Offset: 4 (5%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 945 | 40 | 50 | 405 | 50 |
| Future Volume (veh/h) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 945 | 40 | 50 | 405 | 50 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1767 | 1767 | 1767 | 1880 | 1880 | 1811 | 1803 | 1803 | 1737 |
| Adj Flow Rate, veh/h | 60 | 16 | 5 | 27 | 16 | 38 | 11 | 1038 | 27 | 55 | 445 | 34 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 9 | 9 | 9 | 6 | 6 | 6 | 11 | 11 | 11 |
| Cap, veh/h | 169 | 128 | 40 | 200 | 46 | 110 | 667 | 2608 | 1121 | 400 | 2209 | 949 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.02 | 0.73 | 0.73 | 0.64 | 0.64 | 0.64 |
| Sat Flow, veh/h | 1264 | 1280 | 400 | 1314 | 465 | 1103 | 1790 | 3571 | 1535 | 511 | 3425 | 1472 |
| Grp Volume(v), veh/h | 60 | 0 | 21 | 27 | 0 | 54 | 11 | 1038 | 27 | 55 | 445 | 34 |
| Grp Sat Flow(s),veh/h/ln | 1264 | 0 | 1680 | 1314 | 0 | 1568 | 1790 | 1786 | 1535 | 511 | 1713 | 1472 |
| Q Serve(g_s), s | 4.0 | 0.0 | 1.0 | 1.6 | 0.0 | 2.8 | 0.2 | 9.5 | 0.4 | 3.9 | 4.6 | 0.7 |
| Cycle Q Clear(g_c), s | 6.8 | 0.0 | 1.0 | 2.6 | 0.0 | 2.8 | 0.2 | 9.5 | 0.4 | 6.1 | 4.6 | 0.7 |
| Prop In Lane | 1.00 | | 0.24 | 1.00 | | 0.70 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 169 | 0 | 168 | 200 | 0 | 157 | 667 | 2608 | 1121 | 400 | 2209 | 949 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.13 | 0.13 | 0.00 | 0.34 | 0.02 | 0.40 | 0.02 | 0.14 | 0.20 | 0.04 |
| Avail Cap(c_a), veh/h | 221 | 0 | 236 | 247 | 0 | 213 | 805 | 2608 | 1121 | 400 | 2209 | 949 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.2 | 0.0 | 35.3 | 36.5 | 0.0 | 36.1 | 4.4 | 4.4 | 3.2 | 7.0 | 6.2 | 5.6 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 0.1 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 0.7 | 0.2 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 0.0 | 0.4 | 0.5 | 0.0 | 1.1 | 0.0 | 2.3 | 0.1 | 0.4 | 1.3 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.7 | 0.0 | 35.4 | 36.6 | 0.0 | 36.6 | 4.4 | 4.9 | 3.2 | 7.7 | 6.4 | 5.6 |
| LnGrp LOS | D | A | D | D | A | D | A | A | A | A | A | A |
| Approach Vol, veh/h | | 81 | | | 81 | | | 1076 | | | 534 | |
| Approach Delay, s/veh | | 38.6 | | | 36.6 | | | 4.8 | | | 6.5 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 7.3 | 62.8 | | 15.9 | | 70.1 | | 15.9 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 45.7 | | * 12 | | 59.7 | | 11.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.2 | 8.1 | | 8.8 | | 11.5 | | 4.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.0 | | 0.0 | | 8.7 | | 0.1 | | | | |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 8.3 |
| HCM 6th LOS | | A |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 20 | 35 | 5 | 5 | 20 |
| Future Volume (vph) | 5 | 20 | 35 | 5 | 5 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 17% | 17% | 1% | 1% | 12% | 12% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 32 | 0 | 0 | 51 | 32 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

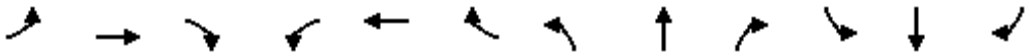
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 20 | 35 | 5 | 5 | 20 |
| Future Vol, veh/h | 5 | 20 | 35 | 5 | 5 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 17 | 17 | 1 | 1 | 12 | 12 |
| Mvmt Flow | 6 | 26 | 45 | 6 | 6 | 26 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 32 | 0 | 115 | 19 |
| Stage 1 | - | - | - | - | 19 | - |
| Stage 2 | - | - | - | - | 96 | - |
| Critical Hdwy | - | - | 4.11 | - | 6.52 | 6.32 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.52 | - |
| Follow-up Hdwy | - | - | 2.209 | - | 3.608 | 3.408 |
| Pot Cap-1 Maneuver | - | - | 1587 | - | 858 | 1031 |
| Stage 1 | - | - | - | - | 978 | - |
| Stage 2 | - | - | - | - | 903 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1587 | - | 834 | 1031 |
| Mov Cap-2 Maneuver | - | - | - | - | 834 | - |
| Stage 1 | - | - | - | - | 978 | - |
| Stage 2 | - | - | - | - | 878 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.4 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 984 | - | - | 1587 | - |
| HCM Lane V/C Ratio | 0.033 | - | - | 0.029 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 1 | 10 | 1 | 1 | 1 | 35 | 20 | 1 | 1 | 50 | 5 |
| Future Volume (vph) | 5 | 1 | 10 | 1 | 1 | 1 | 35 | 20 | 1 | 1 | 50 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 13% | 13% | 13% | 1% | 1% | 1% | 6% | 6% | 6% | 4% | 4% | 4% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 19 | 0 | 0 | 3 | 0 | 0 | 65 | 0 | 0 | 65 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

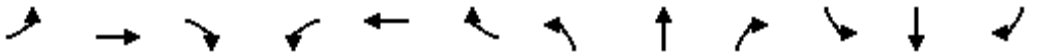
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 1 | 10 | 1 | 1 | 1 | 35 | 20 | 1 | 1 | 50 | 5 |
| Future Vol, veh/h | 5 | 1 | 10 | 1 | 1 | 1 | 35 | 20 | 1 | 1 | 50 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 13 | 13 | 13 | 1 | 1 | 1 | 6 | 6 | 6 | 4 | 4 | 4 |
| Mvmt Flow | 6 | 1 | 12 | 1 | 1 | 1 | 41 | 23 | 1 | 1 | 58 | 6 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 170 | 169 | 61 | 176 | 172 | 24 | 64 | 0 | 0 | 24 | 0 | 0 |
| Stage 1 | 63 | 63 | - | 106 | 106 | - | - | - | - | - | - | - |
| Stage 2 | 107 | 106 | - | 70 | 66 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.23 | 6.63 | 6.33 | 7.11 | 6.51 | 6.21 | 4.16 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.617 | 4.117 | 3.417 | 3.509 | 4.009 | 3.309 | 2.254 | - | - | 2.236 | - | - |
| Pot Cap-1 Maneuver | 770 | 704 | 974 | 789 | 723 | 1055 | 1513 | - | - | 1578 | - | - |
| Stage 1 | 921 | 821 | - | 902 | 809 | - | - | - | - | - | - | - |
| Stage 2 | 872 | 787 | - | 942 | 842 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 752 | 684 | 974 | 762 | 703 | 1055 | 1513 | - | - | 1578 | - | - |
| Mov Cap-2 Maneuver | 752 | 684 | - | 762 | 703 | - | - | - | - | - | - | - |
| Stage 1 | 896 | 820 | - | 878 | 787 | - | - | - | - | - | - | - |
| Stage 2 | 846 | 766 | - | 929 | 841 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 9.2 | 9.4 | 4.7 | 0.1 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1513 | - | - | 871 | 815 | 1578 | - | - |
| HCM Lane V/C Ratio | 0.027 | - | - | 0.021 | 0.004 | 0.001 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | - | 9.2 | 9.4 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 1095 | 10 | 5 | 970 | 30 | 15 | 1 | 20 | 25 | 1 | 35 |
| Future Volume (vph) | 40 | 1095 | 10 | 5 | 970 | 30 | 15 | 1 | 20 | 25 | 1 | 35 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 43 | 1190 | 11 | 5 | 1054 | 33 | 0 | 39 | 0 | 0 | 28 | 38 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.2 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 40 | 1095 | 10 | 5 | 970 | 30 | 15 | 1 | 20 | 25 | 1 | 35 |
| Future Vol, veh/h | 40 | 1095 | 10 | 5 | 970 | 30 | 15 | 1 | 20 | 25 | 1 | 35 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 2 | 2 |
| Mvmt Flow | 43 | 1190 | 11 | 5 | 1054 | 33 | 16 | 1 | 22 | 27 | 1 | 38 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1087 | 0 | 0 | 1201 | 0 | 0 | 1814 | 2373 | 595 | 1746 | 2351 | 527 |
| Stage 1 | - | - | - | - | - | - | 1276 | 1276 | - | 1064 | 1064 | - |
| Stage 2 | - | - | - | - | - | - | 538 | 1097 | - | 682 | 1287 | - |
| Critical Hdwy | 4.2 | - | - | 4.2 | - | - | 7.6 | 6.6 | 7 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Follow-up Hdwy | 2.25 | - | - | 2.25 | - | - | 3.55 | 4.05 | 3.35 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver | 620 | - | - | 560 | - | - | 47 | 33 | 440 | 55 | 35 | 496 |
| Stage 1 | - | - | - | - | - | - | 172 | 230 | - | 238 | 298 | - |
| Stage 2 | - | - | - | - | - | - | 487 | 281 | - | 406 | 233 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 620 | - | - | 560 | - | - | 41 | 30 | 440 | 49 | 32 | 496 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 143 | 151 | - | 182 | 164 | - |
| Stage 1 | - | - | - | - | - | - | 160 | 214 | - | 222 | 295 | - |
| Stage 2 | - | - | - | - | - | - | 444 | 278 | - | 357 | 217 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.4 | 0.1 | 23.9 | 19.5 |
| HCM LOS | | | C | C |

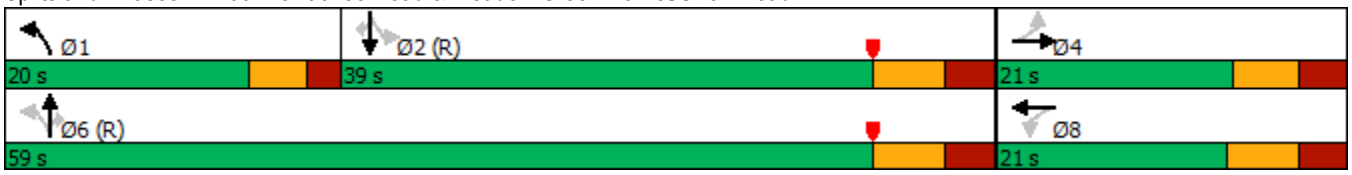
| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 229 | 620 | - | - | 560 | - | - | 181 | 496 |
| HCM Lane V/C Ratio | 0.171 | 0.07 | - | - | 0.01 | - | - | 0.156 | 0.077 |
| HCM Control Delay (s) | 23.9 | 11.2 | - | - | 11.5 | - | - | 28.5 | 12.9 |
| HCM Lane LOS | C | B | - | - | B | - | - | D | B |
| HCM 95th %tile Q(veh) | 0.6 | 0.2 | - | - | 0 | - | - | 0.5 | 0.2 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1230 | 100 | 5 | 775 | 85 |
| Future Volume (vph) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1230 | 100 | 5 | 775 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 4% | 4% | 4% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 109 | 162 | 0 | 89 | 26 | 0 | 125 | 1281 | 65 | 5 | 807 | 55 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 20.0 | 59.0 | 59.0 | 39.0 | 39.0 | 39.0 |
| Total Split (%) | 26.3% | 26.3% | | 26.3% | 26.3% | | 25.0% | 73.8% | 73.8% | 48.8% | 48.8% | 48.8% |
| Maximum Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 14.5 | 51.7 | 51.7 | 31.7 | 31.7 | 31.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.55 | 0.68 | | 0.54 | 0.11 | | 0.25 | 0.51 | 0.06 | 0.02 | 0.41 | 0.06 |
| Control Delay | 42.2 | 46.7 | | 44.2 | 29.9 | | 5.4 | 7.4 | 5.0 | 11.4 | 12.7 | 11.1 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.2 | 46.7 | | 44.2 | 29.9 | | 5.4 | 7.4 | 5.0 | 11.4 | 12.7 | 11.1 |
| 90th %ile Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 8.0 | 51.7 | 51.7 | 38.2 | 38.2 | 38.2 |
| 90th %ile Term Code | Max | Max | | Max | Max | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 13.6 | 13.6 | | 13.2 | 13.2 | | 8.0 | 52.2 | 52.2 | 38.7 | 38.7 | 38.7 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 11.5 | 11.5 | | 11.1 | 11.1 | | 8.0 | 54.3 | 54.3 | 40.8 | 40.8 | 40.8 |
| 50th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 9.4 | 9.4 | | 9.0 | 9.0 | | 8.0 | 56.4 | 56.4 | 42.9 | 42.9 | 42.9 |
| 30th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 57.4 | 57.4 | 57.4 | 57.4 | 57.4 |
| 10th %ile Term Code | Hold | Hold | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 51 | 78 | | 42 | 12 | | 17 | 141 | 9 | 1 | 125 | 13 |
| Queue Length 95th (ft) | 98 | 135 | | 85 | 32 | | 36 | 207 | 24 | 7 | 182 | 33 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 245 | 296 | | 204 | 303 | | 617 | 2522 | 1087 | 225 | 1982 | 854 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.55 | | 0.44 | 0.09 | | 0.20 | 0.51 | 0.06 | 0.02 | 0.41 | 0.06 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 80 | |
| Actuated Cycle Length: 80 | |
| Offset: 70 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1230 | 100 | 5 | 775 | 85 |
| Future Volume (veh/h) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1230 | 100 | 5 | 775 | 85 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1841 | 1841 | 1841 | 1957 | 1957 | 1885 | 1926 | 1926 | 1856 |
| Adj Flow Rate, veh/h | 109 | 47 | 115 | 89 | 21 | 5 | 125 | 1281 | 65 | 5 | 807 | 55 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 4 | 4 | 4 | 1 | 1 | 1 | 3 | 3 | 3 |
| Cap, veh/h | 312 | 83 | 203 | 189 | 246 | 59 | 491 | 2402 | 1032 | 282 | 1770 | 761 |
| Arrive On Green | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.09 | 0.65 | 0.65 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1396 | 485 | 1187 | 1205 | 1437 | 342 | 1863 | 3718 | 1598 | 418 | 3659 | 1572 |
| Grp Volume(v), veh/h | 109 | 0 | 162 | 89 | 0 | 26 | 125 | 1281 | 65 | 5 | 807 | 55 |
| Grp Sat Flow(s),veh/h/ln | 1396 | 0 | 1672 | 1205 | 0 | 1779 | 1863 | 1859 | 1598 | 418 | 1830 | 1572 |
| Q Serve(g_s), s | 5.7 | 0.0 | 7.1 | 5.9 | 0.0 | 1.0 | 2.3 | 14.9 | 1.2 | 0.5 | 11.7 | 1.5 |
| Cycle Q Clear(g_c), s | 6.7 | 0.0 | 7.1 | 13.0 | 0.0 | 1.0 | 2.3 | 14.9 | 1.2 | 2.4 | 11.7 | 1.5 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.19 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 312 | 0 | 286 | 189 | 0 | 305 | 491 | 2402 | 1032 | 282 | 1770 | 761 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.57 | 0.47 | 0.00 | 0.09 | 0.25 | 0.53 | 0.06 | 0.02 | 0.46 | 0.07 |
| Avail Cap(c_a), veh/h | 319 | 0 | 295 | 189 | 0 | 305 | 654 | 2402 | 1032 | 282 | 1770 | 761 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.7 | 0.0 | 30.4 | 36.4 | 0.0 | 27.9 | 8.2 | 7.6 | 5.2 | 11.8 | 13.7 | 11.0 |
| Incr Delay (d2), s/veh | 0.2 | 0.0 | 1.4 | 0.7 | 0.0 | 0.0 | 0.1 | 0.9 | 0.1 | 0.1 | 0.8 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.9 | 0.0 | 2.9 | 1.7 | 0.0 | 0.4 | 0.7 | 4.5 | 0.3 | 0.1 | 4.3 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 30.9 | 0.0 | 31.8 | 37.0 | 0.0 | 27.9 | 8.3 | 8.5 | 5.3 | 11.9 | 14.5 | 11.2 |
| LnGrp LOS | C | A | C | D | A | C | A | A | A | B | B | B |
| Approach Vol, veh/h | | 271 | | | 115 | | | 1471 | | | 867 | |
| Approach Delay, s/veh | | 31.5 | | | 35.0 | | | 8.3 | | | 14.3 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 46.0 | | 21.0 | | 59.0 | | 21.0 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 31.7 | | * 14 | | 51.7 | | 13.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 13.7 | | 9.1 | | 16.9 | | 15.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 8.4 | | 0.3 | | 11.3 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 13.7 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 10 | 10 | 30 | 5 | 10 | 30 |
| Future Volume (vph) | 10 | 10 | 30 | 5 | 10 | 30 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 9% | 9% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 22 | 0 | 0 | 40 | 45 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

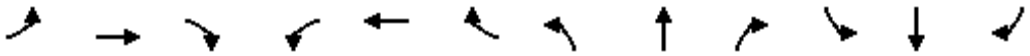
| Intersection | |
|---|---|
| Int Delay, s/veh | 6 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 10 | 10 | 30 | 5 | 10 | 30 |
| Future Vol, veh/h | 10 | 10 | 30 | 5 | 10 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 2 | 2 |
| Mvmt Flow | 11 | 11 | 34 | 6 | 11 | 34 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 22 | 0 | 91 | 17 |
| Stage 1 | - | - | - | - | 17 | - |
| Stage 2 | - | - | - | - | 74 | - |
| Critical Hdwy | - | - | 4.19 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.281 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1549 | - | 909 | 1062 |
| Stage 1 | - | - | - | - | 1006 | - |
| Stage 2 | - | - | - | - | 949 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1549 | - | 889 | 1062 |
| Mov Cap-2 Maneuver | - | - | - | - | 889 | - |
| Stage 1 | - | - | - | - | 1006 | - |
| Stage 2 | - | - | - | - | 928 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.3 | 8.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1013 | - | - | 1549 | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.022 | - |
| HCM Control Delay (s) | 8.7 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 1 | 35 | 1 | 1 | 1 | 15 | 35 | 1 | 1 | 35 | 5 |
| Future Volume (vph) | 5 | 1 | 35 | 1 | 1 | 1 | 15 | 35 | 1 | 1 | 35 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 7% | 7% | 7% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 48 | 0 | 0 | 3 | 0 | 0 | 59 | 0 | 0 | 48 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

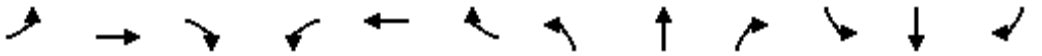
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 1 | 35 | 1 | 1 | 1 | 15 | 35 | 1 | 1 | 35 | 5 |
| Future Vol, veh/h | 5 | 1 | 35 | 1 | 1 | 1 | 15 | 35 | 1 | 1 | 35 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 7 | 7 | 7 |
| Mvmt Flow | 6 | 1 | 41 | 1 | 1 | 1 | 17 | 41 | 1 | 1 | 41 | 6 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 123 | 122 | 44 | 143 | 125 | 42 | 47 | 0 | 0 | 42 | 0 | 0 |
| Stage 1 | 46 | 46 | - | 76 | 76 | - | - | - | - | - | - | - |
| Stage 2 | 77 | 76 | - | 67 | 49 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | 7.11 | 6.51 | 6.21 | 4.12 | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | 3.509 | 4.009 | 3.309 | 2.218 | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | 854 | 770 | 1029 | 829 | 767 | 1032 | 1560 | - | - | 1535 | - | - |
| Stage 1 | 970 | 859 | - | 936 | 834 | - | - | - | - | - | - | - |
| Stage 2 | 934 | 834 | - | 946 | 856 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 845 | 761 | 1029 | 788 | 758 | 1032 | 1560 | - | - | 1535 | - | - |
| Mov Cap-2 Maneuver | 845 | 761 | - | 788 | 758 | - | - | - | - | - | - | - |
| Stage 1 | 959 | 858 | - | 926 | 825 | - | - | - | - | - | - | - |
| Stage 2 | 921 | 825 | - | 906 | 855 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 8.8 | 9.3 | 2.2 | 0.2 |
| HCM LOS | A | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1560 | - | - | 994 | 843 | 1535 | - | - |
| HCM Lane V/C Ratio | 0.011 | - | - | 0.048 | 0.004 | 0.001 | - | - |
| HCM Control Delay (s) | 7.3 | 0 | - | 8.8 | 9.3 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | A | A | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0.2 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 1145 | 25 | 15 | 1405 | 25 | 15 | 1 | 10 | 30 | 5 | 60 |
| Future Volume (vph) | 30 | 1145 | 25 | 15 | 1405 | 25 | 15 | 1 | 10 | 30 | 5 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 31 | 1193 | 26 | 16 | 1464 | 26 | 0 | 27 | 0 | 0 | 36 | 63 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 30 | 1145 | 25 | 15 | 1405 | 25 | 15 | 1 | 10 | 30 | 5 | 60 |
| Future Vol, veh/h | 30 | 1145 | 25 | 15 | 1405 | 25 | 15 | 1 | 10 | 30 | 5 | 60 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| Mvmt Flow | 31 | 1193 | 26 | 16 | 1464 | 26 | 16 | 1 | 10 | 31 | 5 | 63 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1490 | 0 | 0 | 1219 | 0 | 0 | 2022 | 2777 | 597 | 2155 | 2777 | 732 |
| Stage 1 | - | - | - | - | - | - | 1255 | 1255 | - | 1496 | 1496 | - |
| Stage 2 | - | - | - | - | - | - | 767 | 1522 | - | 659 | 1281 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.52 | 6.52 | 6.92 | 7.56 | 6.56 | 6.96 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.51 | 4.01 | 3.31 | 3.53 | 4.03 | 3.33 |
| Pot Cap-1 Maneuver | 447 | - | - | 568 | - | - | 34 | 19 | 449 | ~ 27 | 18 | 361 |
| Stage 1 | - | - | - | - | - | - | 183 | 243 | - | 127 | 183 | - |
| Stage 2 | - | - | - | - | - | - | 363 | 181 | - | 417 | 233 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 447 | - | - | 568 | - | - | 25 | 17 | 449 | ~ 24 | 16 | 361 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 134 | 115 | - | 107 | 124 | - |
| Stage 1 | - | - | - | - | - | - | 170 | 226 | - | 118 | 178 | - |
| Stage 2 | - | - | - | - | - | - | 283 | 176 | - | 377 | 217 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.3 | 0.1 | 28.2 | 30.6 |
| HCM LOS | | | D | D |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 182 | 447 | - | - | 568 | - | - | 109 | 361 |
| HCM Lane V/C Ratio | 0.149 | 0.07 | - | - | 0.028 | - | - | 0.334 | 0.173 |
| HCM Control Delay (s) | 28.2 | 13.7 | - | - | 11.5 | - | - | 53.8 | 17 |
| HCM Lane LOS | D | B | - | - | B | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.5 | 0.2 | - | - | 0.1 | - | - | 1.3 | 0.6 |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

# APPENDIX C

# SYNCHRO TRAFFIC ANALYSIS

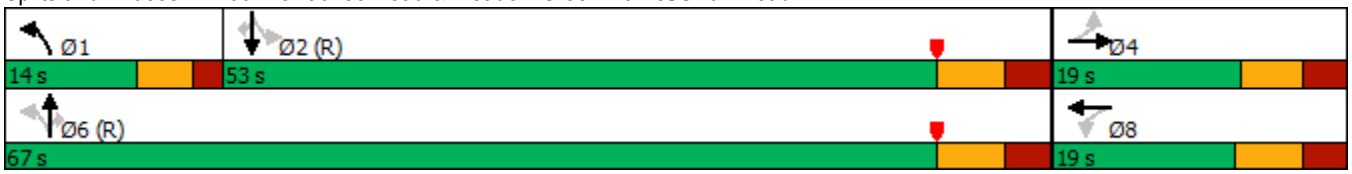
## Build Traffic
## Scenario A

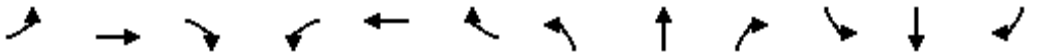
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 955 | 40 | 50 | 415 | 50 |
| Future Volume (vph) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 955 | 40 | 50 | 415 | 50 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 10% | 10% | 10% | 9% | 9% | 9% | 6% | 6% | 6% | 11% | 11% | 11% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 60 | 21 | 0 | 27 | 54 | 0 | 11 | 1049 | 27 | 55 | 456 | 34 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 19.0 | 19.0 | | 19.0 | 19.0 | | 14.0 | 67.0 | 67.0 | 53.0 | 53.0 | 53.0 |
| Total Split (%) | 22.1% | 22.1% | | 22.1% | 22.1% | | 16.3% | 77.9% | 77.9% | 61.6% | 61.6% | 61.6% |
| Maximum Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.5 | 59.7 | 59.7 | 45.7 | 45.7 | 45.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.44 | 0.12 | | 0.20 | 0.33 | | 0.01 | 0.38 | 0.02 | 0.15 | 0.18 | 0.03 |
| Control Delay | 46.1 | 35.3 | | 38.1 | 40.9 | | 3.2 | 4.7 | 3.7 | 8.0 | 5.5 | 6.2 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 46.1 | 35.3 | | 38.1 | 40.9 | | 3.2 | 4.7 | 3.7 | 8.0 | 5.5 | 6.2 |
| 90th %ile Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.0 | 59.7 | 59.7 | 46.2 | 46.2 | 46.2 |
| 90th %ile Term Code | Max | Max | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 9.8 | 9.8 | | 9.4 | 9.4 | | 0.0 | 62.0 | 62.0 | 62.0 | 62.0 | 62.0 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 50th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 30th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 78.7 | 78.7 | 78.7 | 78.7 | 78.7 |
| 10th %ile Term Code | Skip | Skip | | Skip | Skip | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 31 | 11 | | 14 | 28 | | 1 | 90 | 3 | 7 | 32 | 4 |
| Queue Length 95th (ft) | 67 | 31 | | 37 | 61 | | 5 | 144 | 11 | 38 | 93 | 21 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 175 | 234 | | 176 | 211 | | 741 | 2750 | 1185 | 362 | 2519 | 1086 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.34 | 0.09 | | 0.15 | 0.26 | | 0.01 | 0.38 | 0.02 | 0.15 | 0.18 | 0.03 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 86 | |
| Actuated Cycle Length: 86 | |
| Offset: 4 (5%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 955 | 40 | 50 | 415 | 50 |
| Future Volume (veh/h) | 55 | 15 | 5 | 25 | 15 | 35 | 10 | 955 | 40 | 50 | 415 | 50 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1767 | 1767 | 1767 | 1880 | 1880 | 1811 | 1803 | 1803 | 1737 |
| Adj Flow Rate, veh/h | 60 | 16 | 5 | 27 | 16 | 38 | 11 | 1049 | 27 | 55 | 456 | 34 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 9 | 9 | 9 | 6 | 6 | 6 | 11 | 11 | 11 |
| Cap, veh/h | 169 | 128 | 40 | 200 | 46 | 110 | 660 | 2608 | 1121 | 396 | 2209 | 949 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.02 | 0.73 | 0.73 | 0.64 | 0.64 | 0.64 |
| Sat Flow, veh/h | 1264 | 1280 | 400 | 1314 | 465 | 1103 | 1790 | 3571 | 1535 | 505 | 3425 | 1472 |
| Grp Volume(v), veh/h | 60 | 0 | 21 | 27 | 0 | 54 | 11 | 1049 | 27 | 55 | 456 | 34 |
| Grp Sat Flow(s),veh/h/ln | 1264 | 0 | 1680 | 1314 | 0 | 1568 | 1790 | 1786 | 1535 | 505 | 1713 | 1472 |
| Q Serve(g_s), s | 4.0 | 0.0 | 1.0 | 1.6 | 0.0 | 2.8 | 0.2 | 9.6 | 0.4 | 4.0 | 4.7 | 0.7 |
| Cycle Q Clear(g_c), s | 6.8 | 0.0 | 1.0 | 2.6 | 0.0 | 2.8 | 0.2 | 9.6 | 0.4 | 6.3 | 4.7 | 0.7 |
| Prop In Lane | 1.00 | | 0.24 | 1.00 | | 0.70 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 169 | 0 | 168 | 200 | 0 | 157 | 660 | 2608 | 1121 | 396 | 2209 | 949 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.13 | 0.13 | 0.00 | 0.34 | 0.02 | 0.40 | 0.02 | 0.14 | 0.21 | 0.04 |
| Avail Cap(c_a), veh/h | 221 | 0 | 236 | 247 | 0 | 213 | 798 | 2608 | 1121 | 396 | 2209 | 949 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.2 | 0.0 | 35.3 | 36.5 | 0.0 | 36.1 | 4.4 | 4.4 | 3.2 | 7.0 | 6.3 | 5.6 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 0.1 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 0.7 | 0.2 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 0.0 | 0.4 | 0.5 | 0.0 | 1.1 | 0.0 | 2.3 | 0.1 | 0.4 | 1.4 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.7 | 0.0 | 35.4 | 36.6 | 0.0 | 36.6 | 4.4 | 4.9 | 3.2 | 7.8 | 6.5 | 5.6 |
| LnGrp LOS | D | A | D | D | A | D | A | A | A | A | A | A |
| Approach Vol, veh/h | | 81 | | | 81 | | | 1087 | | | 545 | |
| Approach Delay, s/veh | | 38.6 | | | 36.6 | | | 4.8 | | | 6.5 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 7.3 | 62.8 | | 15.9 | | 70.1 | | 15.9 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 45.7 | | * 12 | | 59.7 | | 11.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.2 | 8.3 | | 8.8 | | 11.6 | | 4.8 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.2 | | 0.0 | | 8.8 | | 0.1 | | | | |

| Intersection Summary | | |
|---|---|---|
| HCM 6th Ctrl Delay | | 8.3 |
| HCM 6th LOS | | A |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 20 | 35 | 5 | 5 | 20 |
| Future Volume (vph) | 5 | 20 | 35 | 5 | 5 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 17% | 17% | 1% | 1% | 12% | 12% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 32 | 0 | 0 | 51 | 32 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

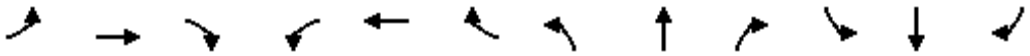
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 20 | 35 | 5 | 5 | 20 |
| Future Vol, veh/h | 5 | 20 | 35 | 5 | 5 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 17 | 17 | 1 | 1 | 12 | 12 |
| Mvmt Flow | 6 | 26 | 45 | 6 | 6 | 26 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 32 | 0 | 115 | 19 |
| Stage 1 | - | - | - | - | 19 | - |
| Stage 2 | - | - | - | - | 96 | - |
| Critical Hdwy | - | - | 4.11 | - | 6.52 | 6.32 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.52 | - |
| Follow-up Hdwy | - | - | 2.209 | - | 3.608 | 3.408 |
| Pot Cap-1 Maneuver | - | - | 1587 | - | 858 | 1031 |
| Stage 1 | - | - | - | - | 978 | - |
| Stage 2 | - | - | - | - | 903 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1587 | - | 834 | 1031 |
| Mov Cap-2 Maneuver | - | - | - | - | 834 | - |
| Stage 1 | - | - | - | - | 978 | - |
| Stage 2 | - | - | - | - | 878 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.4 | 8.8 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 984 | - | - | 1587 | - |
| HCM Lane V/C Ratio | 0.033 | - | - | 0.029 | - |
| HCM Control Delay (s) | 8.8 | - | - | 7.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 1 | 60 | 1 | 1 | 1 | 95 | 20 | 1 | 1 | 50 | 5 |
| Future Volume (vph) | 5 | 1 | 60 | 1 | 1 | 1 | 95 | 20 | 1 | 1 | 50 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 13% | 13% | 13% | 1% | 1% | 1% | 6% | 6% | 6% | 4% | 4% | 4% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 77 | 0 | 0 | 3 | 0 | 0 | 134 | 0 | 0 | 65 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

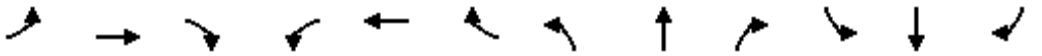
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 5 | 1 | 60 | 1 | 1 | 1 | 95 | 20 | 1 | 1 | 50 | 5 |
| Future Vol, veh/h | 5 | 1 | 60 | 1 | 1 | 1 | 95 | 20 | 1 | 1 | 50 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 13 | 13 | 13 | 1 | 1 | 1 | 6 | 6 | 6 | 4 | 4 | 4 |
| Mvmt Flow | 6 | 1 | 70 | 1 | 1 | 1 | 110 | 23 | 1 | 1 | 58 | 6 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 308 | 307 | 61 | 343 | 310 | 24 | 64 | 0 | 0 | 24 | 0 | 0 |
| Stage 1 | 63 | 63 | - | 244 | 244 | - | - | - | - | - | - | - |
| Stage 2 | 245 | 244 | - | 99 | 66 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.23 | 6.63 | 6.33 | 7.11 | 6.51 | 6.21 | 4.16 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.617 | 4.117 | 3.417 | 3.509 | 4.009 | 3.309 | 2.254 | - | - | 2.236 | - | - |
| Pot Cap-1 Maneuver | 623 | 589 | 974 | 613 | 606 | 1055 | 1513 | - | - | 1578 | - | - |
| Stage 1 | 921 | 821 | - | 762 | 706 | - | - | - | - | - | - | - |
| Stage 2 | 735 | 684 | - | 910 | 842 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 586 | 545 | 974 | 536 | 561 | 1055 | 1513 | - | - | 1578 | - | - |
| Mov Cap-2 Maneuver | 586 | 545 | - | 536 | 561 | - | - | - | - | - | - | - |
| Stage 1 | 853 | 820 | - | 706 | 654 | - | - | - | - | - | - | - |
| Stage 2 | 679 | 633 | - | 843 | 841 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 9.3 | 10.5 | 6.2 | 0.1 |
| HCM LOS | A | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1513 | - | - | 917 | 653 | 1578 | - | - |
| HCM Lane V/C Ratio | 0.073 | - | - | 0.084 | 0.005 | 0.001 | - | - |
| HCM Control Delay (s) | 7.6 | 0 | - | 9.3 | 10.5 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0.3 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 85 | 1095 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 35 | 1 | 75 |
| Future Volume (vph) | 85 | 1095 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 35 | 1 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 92 | 1190 | 11 | 5 | 1054 | 49 | 0 | 39 | 0 | 0 | 39 | 82 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.9 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 85 | 1095 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 35 | 1 | 75 |
| Future Vol, veh/h | 85 | 1095 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 35 | 1 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 2 | 2 |
| Mvmt Flow | 92 | 1190 | 11 | 5 | 1054 | 49 | 16 | 1 | 22 | 38 | 1 | 82 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1103 | 0 | 0 | 1201 | 0 | 0 | 1912 | 2487 | 595 | 1844 | 2449 | 527 |
| Stage 1 | - | - | - | - | - | - | 1374 | 1374 | - | 1064 | 1064 | - |
| Stage 2 | - | - | - | - | - | - | 538 | 1113 | - | 780 | 1385 | - |
| Critical Hdwy | 4.2 | - | - | 4.2 | - | - | 7.6 | 6.6 | 7 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Follow-up Hdwy | 2.25 | - | - | 2.25 | - | - | 3.55 | 4.05 | 3.35 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver | 611 | - | - | 560 | - | - | 40 | 28 | 440 | 46 | 31 | 496 |
| Stage 1 | - | - | - | - | - | - | 149 | 206 | - | 238 | 298 | - |
| Stage 2 | - | - | - | - | - | - | 487 | 276 | - | 354 | 209 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 611 | - | - | 560 | - | - | 29 | 24 | 440 | ~ 38 | 26 | 496 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 113 | 120 | - | 158 | 141 | - |
| Stage 1 | - | - | - | - | - | - | 127 | 175 | - | 202 | 295 | - |
| Stage 2 | - | - | - | - | - | - | 402 | 274 | - | 284 | 177 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.9 | 0.1 | 28.3 | 20.7 |
| HCM LOS | | | D | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 193 | 611 | - | - | 560 | - | - | 157 | 496 |
| HCM Lane V/C Ratio | 0.203 | 0.151 | - | - | 0.01 | - | - | 0.249 | 0.164 |
| HCM Control Delay (s) | 28.3 | 11.9 | - | - | 11.5 | - | - | 35.4 | 13.7 |
| HCM Lane LOS | D | B | - | - | B | - | - | E | B |
| HCM 95th %tile Q(veh) | 0.7 | 0.5 | - | - | 0 | - | - | 0.9 | 0.6 |

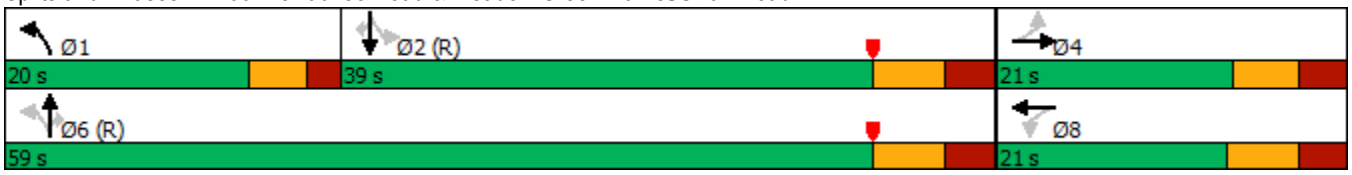
| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1240 | 100 | 5 | 785 | 85 |
| Future Volume (vph) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1240 | 100 | 5 | 785 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 4% | 4% | 4% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 109 | 162 | 0 | 89 | 26 | 0 | 125 | 1292 | 65 | 5 | 818 | 55 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 20.0 | 59.0 | 59.0 | 39.0 | 39.0 | 39.0 |
| Total Split (%) | 26.3% | 26.3% | | 26.3% | 26.3% | | 25.0% | 73.8% | 73.8% | 48.8% | 48.8% | 48.8% |
| Maximum Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 14.5 | 51.7 | 51.7 | 31.7 | 31.7 | 31.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.55 | 0.68 | | 0.54 | 0.11 | | 0.25 | 0.51 | 0.06 | 0.02 | 0.41 | 0.06 |
| Control Delay | 42.2 | 46.7 | | 44.2 | 29.9 | | 5.5 | 7.5 | 5.0 | 11.4 | 12.7 | 11.1 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.2 | 46.7 | | 44.2 | 29.9 | | 5.5 | 7.5 | 5.0 | 11.4 | 12.7 | 11.1 |
| 90th %ile Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 8.0 | 51.7 | 51.7 | 38.2 | 38.2 | 38.2 |
| 90th %ile Term Code | Max | Max | | Max | Max | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 13.6 | 13.6 | | 13.2 | 13.2 | | 8.0 | 52.2 | 52.2 | 38.7 | 38.7 | 38.7 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 11.5 | 11.5 | | 11.1 | 11.1 | | 8.0 | 54.3 | 54.3 | 40.8 | 40.8 | 40.8 |
| 50th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 9.4 | 9.4 | | 9.0 | 9.0 | | 8.0 | 56.4 | 56.4 | 42.9 | 42.9 | 42.9 |
| 30th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 57.4 | 57.4 | 57.4 | 57.4 | 57.4 |
| 10th %ile Term Code | Hold | Hold | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 51 | 78 | | 42 | 12 | | 17 | 142 | 9 | 1 | 127 | 13 |
| Queue Length 95th (ft) | 98 | 135 | | 85 | 32 | | 36 | 210 | 24 | 7 | 185 | 33 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 245 | 296 | | 204 | 303 | | 613 | 2522 | 1087 | 223 | 1982 | 854 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.55 | | 0.44 | 0.09 | | 0.20 | 0.51 | 0.06 | 0.02 | 0.41 | 0.06 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 80 | |
| Actuated Cycle Length: 80 | |
| Offset: 70 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1240 | 100 | 5 | 785 | 85 |
| Future Volume (veh/h) | 105 | 45 | 110 | 85 | 20 | 5 | 120 | 1240 | 100 | 5 | 785 | 85 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1841 | 1841 | 1841 | 1957 | 1957 | 1885 | 1926 | 1926 | 1856 |
| Adj Flow Rate, veh/h | 109 | 47 | 115 | 89 | 21 | 5 | 125 | 1292 | 65 | 5 | 818 | 55 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 4 | 4 | 4 | 1 | 1 | 1 | 3 | 3 | 3 |
| Cap, veh/h | 312 | 83 | 203 | 189 | 246 | 59 | 487 | 2402 | 1032 | 279 | 1770 | 761 |
| Arrive On Green | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.09 | 0.65 | 0.65 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1396 | 485 | 1187 | 1205 | 1437 | 342 | 1863 | 3718 | 1598 | 413 | 3659 | 1572 |
| Grp Volume(v), veh/h | 109 | 0 | 162 | 89 | 0 | 26 | 125 | 1292 | 65 | 5 | 818 | 55 |
| Grp Sat Flow(s),veh/h/ln | 1396 | 0 | 1672 | 1205 | 0 | 1779 | 1863 | 1859 | 1598 | 413 | 1830 | 1572 |
| Q Serve(g_s), s | 5.7 | 0.0 | 7.1 | 5.9 | 0.0 | 1.0 | 2.3 | 15.1 | 1.2 | 0.5 | 11.9 | 1.5 |
| Cycle Q Clear(g_c), s | 6.7 | 0.0 | 7.1 | 13.0 | 0.0 | 1.0 | 2.3 | 15.1 | 1.2 | 2.6 | 11.9 | 1.5 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.19 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 312 | 0 | 286 | 189 | 0 | 305 | 487 | 2402 | 1032 | 279 | 1770 | 761 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.57 | 0.47 | 0.00 | 0.09 | 0.26 | 0.54 | 0.06 | 0.02 | 0.46 | 0.07 |
| Avail Cap(c_a), veh/h | 319 | 0 | 295 | 189 | 0 | 305 | 650 | 2402 | 1032 | 279 | 1770 | 761 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.7 | 0.0 | 30.4 | 36.4 | 0.0 | 27.9 | 8.3 | 7.7 | 5.2 | 11.9 | 13.7 | 11.0 |
| Incr Delay (d2), s/veh | 0.2 | 0.0 | 1.4 | 0.7 | 0.0 | 0.0 | 0.1 | 0.9 | 0.1 | 0.1 | 0.9 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.9 | 0.0 | 2.9 | 1.7 | 0.0 | 0.4 | 0.7 | 4.5 | 0.3 | 0.1 | 4.4 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 30.9 | 0.0 | 31.8 | 37.0 | 0.0 | 27.9 | 8.4 | 8.5 | 5.3 | 12.0 | 14.6 | 11.2 |
| LnGrp LOS | C | A | C | D | A | C | A | A | A | B | B | B |
| Approach Vol, veh/h | | 271 | | | 115 | | | 1482 | | | 878 | |
| Approach Delay, s/veh | | 31.5 | | | 35.0 | | | 8.4 | | | 14.4 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 46.0 | | 21.0 | | 59.0 | | 21.0 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 31.7 | | * 14 | | 51.7 | | 13.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 13.9 | | 9.1 | | 17.1 | | 15.0 | | | | |
| Green Ext Time (p_c), s | 0.1 | 8.4 | | 0.3 | | 11.4 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 13.7 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 10 | 10 | 30 | 5 | 10 | 30 |
| Future Volume (vph) | 10 | 10 | 30 | 5 | 10 | 30 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 9% | 9% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 22 | 0 | 0 | 40 | 45 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

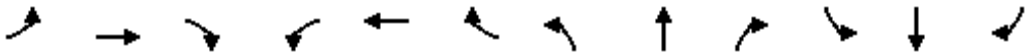
| Intersection | |
|---|---|
| Int Delay, s/veh | 6 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 10 | 10 | 30 | 5 | 10 | 30 |
| Future Vol, veh/h | 10 | 10 | 30 | 5 | 10 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 2 | 2 |
| Mvmt Flow | 11 | 11 | 34 | 6 | 11 | 34 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 22 | 0 | 91 | 17 |
| Stage 1 | - | - | - | - | 17 | - |
| Stage 2 | - | - | - | - | 74 | - |
| Critical Hdwy | - | - | 4.19 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.281 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1549 | - | 909 | 1062 |
| Stage 1 | - | - | - | - | 1006 | - |
| Stage 2 | - | - | - | - | 949 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1549 | - | 889 | 1062 |
| Mov Cap-2 Maneuver | - | - | - | - | 889 | - |
| Stage 1 | - | - | - | - | 1006 | - |
| Stage 2 | - | - | - | - | 928 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.3 | 8.7 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1013 | - | - | 1549 | - |
| HCM Lane V/C Ratio | 0.045 | - | - | 0.022 | - |
| HCM Control Delay (s) | 8.7 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 1 | 90 | 1 | 1 | 1 | 65 | 35 | 1 | 1 | 35 | 5 |
| Future Volume (vph) | 5 | 1 | 90 | 1 | 1 | 1 | 65 | 35 | 1 | 1 | 35 | 5 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 7% | 7% | 7% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 112 | 0 | 0 | 3 | 0 | 0 | 118 | 0 | 0 | 48 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

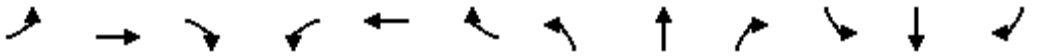
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.8 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ⇕ | | | ⇕ | | | ⇕ | | | ⇕ | |
| Traffic Vol, veh/h | 5 | 1 | 90 | 1 | 1 | 1 | 65 | 35 | 1 | 1 | 35 | 5 |
| Future Vol, veh/h | 5 | 1 | 90 | 1 | 1 | 1 | 65 | 35 | 1 | 1 | 35 | 5 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 7 | 7 | 7 |
| Mvmt Flow | 6 | 1 | 105 | 1 | 1 | 1 | 76 | 41 | 1 | 1 | 41 | 6 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 241 | 240 | 44 | 293 | 243 | 42 | 47 | 0 | 0 | 42 | 0 | 0 |
| Stage 1 | 46 | 46 | - | 194 | 194 | - | - | - | - | - | - | - |
| Stage 2 | 195 | 194 | - | 99 | 49 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | 7.11 | 6.51 | 6.21 | 4.12 | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | 3.509 | 4.009 | 3.309 | 2.218 | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | 715 | 663 | 1029 | 661 | 660 | 1032 | 1560 | - | - | 1535 | - | - |
| Stage 1 | 970 | 859 | - | 810 | 742 | - | - | - | - | - | - | - |
| Stage 2 | 809 | 742 | - | 910 | 856 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 686 | 629 | 1029 | 570 | 626 | 1032 | 1560 | - | - | 1535 | - | - |
| Mov Cap-2 Maneuver | 686 | 629 | - | 570 | 626 | - | - | - | - | - | - | - |
| Stage 1 | 922 | 858 | - | 770 | 705 | - | - | - | - | - | - | - |
| Stage 2 | 766 | 705 | - | 816 | 855 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 9.1 | 10.2 | 4.8 | 0.2 |
| HCM LOS | A | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1560 | - | - | 996 | 694 | 1535 | - | - |
| HCM Lane V/C Ratio | 0.048 | - | - | 0.112 | 0.005 | 0.001 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | - | 9.1 | 10.2 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0.4 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 70 | 1145 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 45 | 5 | 100 |
| Future Volume (vph) | 70 | 1145 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 45 | 5 | 100 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 73 | 1193 | 26 | 16 | 1464 | 36 | 0 | 27 | 0 | 0 | 52 | 104 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 70 | 1145 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 45 | 5 | 100 |
| Future Vol, veh/h | 70 | 1145 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 45 | 5 | 100 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| Mvmt Flow | 73 | 1193 | 26 | 16 | 1464 | 36 | 16 | 1 | 10 | 47 | 5 | 104 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1500 | 0 | 0 | 1219 | 0 | 0 | 2106 | 2871 | 597 | 2239 | 2861 | 732 |
| Stage 1 | - | - | - | - | - | - | 1339 | 1339 | - | 1496 | 1496 | - |
| Stage 2 | - | - | - | - | - | - | 767 | 1532 | - | 743 | 1365 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.52 | 6.52 | 6.92 | 7.56 | 6.56 | 6.96 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.51 | 4.01 | 3.31 | 3.53 | 4.03 | 3.33 |
| Pot Cap-1 Maneuver | 443 | - | - | 568 | - | - | 30 | 17 | 449 | ~ 23 | 16 | 361 |
| Stage 1 | - | - | - | - | - | - | 163 | 222 | - | 127 | 183 | - |
| Stage 2 | - | - | - | - | - | - | 363 | 179 | - | 371 | 212 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 443 | - | - | 568 | - | - | 18 | 14 | 449 | ~ 19 | 13 | 361 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 101 | 84 | - | 94 | 111 | - |
| Stage 1 | - | - | - | - | - | - | 136 | 185 | - | 106 | 178 | - |
| Stage 2 | - | - | - | - | - | - | 244 | 174 | - | 301 | 177 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.8 | 0.1 | 36.2 | 39.8 |
| HCM LOS | | | E | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 142 | 443 | - | - | 568 | - | - | 95 | 361 |
| HCM Lane V/C Ratio | 0.191 | 0.165 | - | - | 0.028 | - | - | 0.548 | 0.289 |
| HCM Control Delay (s) | 36.2 | 14.7 | - | - | 11.5 | - | - | 81.5 | 19 |
| HCM Lane LOS | E | B | - | - | B | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.7 | 0.6 | - | - | 0.1 | - | - | 2.5 | 1.2 |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

# APPENDIX D

# SYNCHRO TRAFFIC ANALYSIS

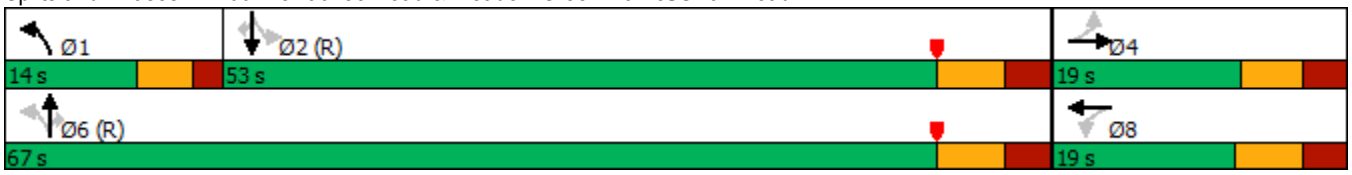
## Build Traffic
## Scenario B

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 15 | 5 | 30 | 15 | 40 | 10 | 950 | 40 | 60 | 405 | 50 |
| Future Volume (vph) | 55 | 15 | 5 | 30 | 15 | 40 | 10 | 950 | 40 | 60 | 405 | 50 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 10% | 10% | 10% | 9% | 9% | 9% | 6% | 6% | 6% | 11% | 11% | 11% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 60 | 21 | 0 | 33 | 60 | 0 | 11 | 1044 | 27 | 66 | 445 | 34 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 19.0 | 19.0 | | 19.0 | 19.0 | | 14.0 | 67.0 | 67.0 | 53.0 | 53.0 | 53.0 |
| Total Split (%) | 22.1% | 22.1% | | 22.1% | 22.1% | | 16.3% | 77.9% | 77.9% | 61.6% | 61.6% | 61.6% |
| Maximum Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.5 | 59.7 | 59.7 | 45.7 | 45.7 | 45.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.45 | 0.12 | | 0.24 | 0.37 | | 0.01 | 0.38 | 0.02 | 0.18 | 0.18 | 0.03 |
| Control Delay | 46.3 | 35.3 | | 39.3 | 42.1 | | 3.2 | 4.7 | 3.7 | 8.4 | 5.5 | 6.2 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 46.3 | 35.3 | | 39.3 | 42.1 | | 3.2 | 4.7 | 3.7 | 8.4 | 5.5 | 6.2 |
| 90th %ile Green (s) | 12.1 | 12.1 | | 11.7 | 11.7 | | 8.0 | 59.7 | 59.7 | 46.2 | 46.2 | 46.2 |
| 90th %ile Term Code | Max | Max | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 9.8 | 9.8 | | 9.4 | 9.4 | | 0.0 | 62.0 | 62.0 | 62.0 | 62.0 | 62.0 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 50th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 63.4 | 63.4 | 63.4 | 63.4 | 63.4 |
| 30th %ile Term Code | Hold | Hold | | Min | Min | | Skip | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 78.7 | 78.7 | 78.7 | 78.7 | 78.7 |
| 10th %ile Term Code | Skip | Skip | | Skip | Skip | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 31 | 11 | | 17 | 31 | | 1 | 90 | 3 | 9 | 31 | 4 |
| Queue Length 95th (ft) | 67 | 31 | | 43 | 66 | | 5 | 143 | 11 | 45 | 90 | 21 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 174 | 234 | | 176 | 211 | | 747 | 2750 | 1185 | 363 | 2519 | 1086 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.34 | 0.09 | | 0.19 | 0.28 | | 0.01 | 0.38 | 0.02 | 0.18 | 0.18 | 0.03 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 86 | |
| Actuated Cycle Length: 86 | |
| Offset: 4 (5%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 15 | 5 | 30 | 15 | 40 | 10 | 950 | 40 | 60 | 405 | 50 |
| Future Volume (veh/h) | 55 | 15 | 5 | 30 | 15 | 40 | 10 | 950 | 40 | 60 | 405 | 50 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1752 | 1752 | 1752 | 1767 | 1767 | 1767 | 1880 | 1880 | 1811 | 1803 | 1803 | 1737 |
| Adj Flow Rate, veh/h | 60 | 16 | 5 | 33 | 16 | 44 | 11 | 1044 | 27 | 66 | 445 | 34 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 10 | 10 | 10 | 9 | 9 | 9 | 6 | 6 | 6 | 11 | 11 | 11 |
| Cap, veh/h | 170 | 134 | 42 | 206 | 43 | 119 | 662 | 2593 | 1114 | 395 | 2194 | 943 |
| Arrive On Green | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.02 | 0.73 | 0.73 | 0.64 | 0.64 | 0.64 |
| Sat Flow, veh/h | 1258 | 1280 | 400 | 1314 | 416 | 1144 | 1790 | 3571 | 1535 | 508 | 3425 | 1472 |
| Grp Volume(v), veh/h | 60 | 0 | 21 | 33 | 0 | 60 | 11 | 1044 | 27 | 66 | 445 | 34 |
| Grp Sat Flow(s),veh/h/ln | 1258 | 0 | 1680 | 1314 | 0 | 1561 | 1790 | 1786 | 1535 | 508 | 1713 | 1472 |
| Q Serve(g_s), s | 4.0 | 0.0 | 1.0 | 2.0 | 0.0 | 3.1 | 0.2 | 9.7 | 0.4 | 5.0 | 4.6 | 0.7 |
| Cycle Q Clear(g_c), s | 7.1 | 0.0 | 1.0 | 3.0 | 0.0 | 3.1 | 0.2 | 9.7 | 0.4 | 7.4 | 4.6 | 0.7 |
| Prop In Lane | 1.00 | | 0.24 | 1.00 | | 0.73 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 170 | 0 | 175 | 206 | 0 | 163 | 662 | 2593 | 1114 | 395 | 2194 | 943 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.12 | 0.16 | 0.00 | 0.37 | 0.02 | 0.40 | 0.02 | 0.17 | 0.20 | 0.04 |
| Avail Cap(c_a), veh/h | 216 | 0 | 236 | 248 | 0 | 212 | 801 | 2593 | 1114 | 395 | 2194 | 943 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 39.2 | 0.0 | 34.9 | 36.3 | 0.0 | 35.9 | 4.5 | 4.6 | 3.3 | 7.4 | 6.4 | 5.7 |
| Incr Delay (d2), s/veh | 0.5 | 0.0 | 0.1 | 0.1 | 0.0 | 0.5 | 0.0 | 0.5 | 0.0 | 0.9 | 0.2 | 0.1 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.2 | 0.0 | 0.4 | 0.6 | 0.0 | 1.2 | 0.0 | 2.4 | 0.1 | 0.5 | 1.4 | 0.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 39.6 | 0.0 | 35.0 | 36.4 | 0.0 | 36.4 | 4.5 | 5.0 | 3.3 | 8.3 | 6.6 | 5.8 |
| LnGrp LOS | D | A | D | D | A | D | A | A | A | A | A | A |
| Approach Vol, veh/h | | 81 | | | 93 | | | 1082 | | | 545 | |
| Approach Delay, s/veh | | 38.4 | | | 36.4 | | | 5.0 | | | 6.8 | |
| Approach LOS | | D | | | D | | | A | | | A | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 7.3 | 62.4 | | 16.3 | | 69.7 | | 16.3 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 8.5 | 45.7 | | * 12 | | 59.7 | | 11.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 2.2 | 9.4 | | 9.1 | | 11.7 | | 5.1 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.2 | | 0.0 | | 8.7 | | 0.1 | | | | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 6th Ctrl Delay | | 8.6 | |
| HCM 6th LOS | | A | |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 30 | 35 | 5 | 15 | 20 |
| Future Volume (vph) | 5 | 30 | 35 | 5 | 15 | 20 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 17% | 17% | 1% | 1% | 12% | 12% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 45 | 0 | 0 | 51 | 45 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

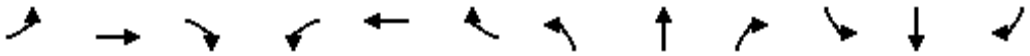
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 30 | 35 | 5 | 15 | 20 |
| Future Vol, veh/h | 5 | 30 | 35 | 5 | 15 | 20 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 17 | 17 | 1 | 1 | 12 | 12 |
| Mvmt Flow | 6 | 39 | 45 | 6 | 19 | 26 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 45 | 0 | 122 | 26 |
| Stage 1 | - | - | - | - | 26 | - |
| Stage 2 | - | - | - | - | 96 | - |
| Critical Hdwy | - | - | 4.11 | - | 6.52 | 6.32 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.52 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.52 | - |
| Follow-up Hdwy | - | - | 2.209 | - | 3.608 | 3.408 |
| Pot Cap-1 Maneuver | - | - | 1570 | - | 850 | 1022 |
| Stage 1 | - | - | - | - | 971 | - |
| Stage 2 | - | - | - | - | 903 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1570 | - | 825 | 1022 |
| Mov Cap-2 Maneuver | - | - | - | - | 825 | - |
| Stage 1 | - | - | - | - | 971 | - |
| Stage 2 | - | - | - | - | 877 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.4 | 9.1 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 927 | - | - | 1570 | - |
| HCM Lane V/C Ratio | 0.049 | - | - | 0.029 | - |
| HCM Control Delay (s) | 9.1 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 1 | 50 | 1 | 1 | 1 | 85 | 20 | 1 | 1 | 50 | 15 |
| Future Volume (vph) | 15 | 1 | 50 | 1 | 1 | 1 | 85 | 20 | 1 | 1 | 50 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 13% | 13% | 13% | 1% | 1% | 1% | 6% | 6% | 6% | 4% | 4% | 4% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 76 | 0 | 0 | 3 | 0 | 0 | 123 | 0 | 0 | 76 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

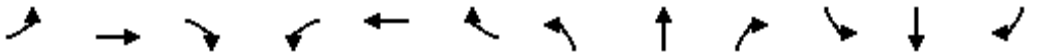
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 1 | 50 | 1 | 1 | 1 | 85 | 20 | 1 | 1 | 50 | 15 |
| Future Vol, veh/h | 15 | 1 | 50 | 1 | 1 | 1 | 85 | 20 | 1 | 1 | 50 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 13 | 13 | 13 | 1 | 1 | 1 | 6 | 6 | 6 | 4 | 4 | 4 |
| Mvmt Flow | 17 | 1 | 58 | 1 | 1 | 1 | 99 | 23 | 1 | 1 | 58 | 17 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 292 | 291 | 67 | 320 | 299 | 24 | 75 | 0 | 0 | 24 | 0 | 0 |
| Stage 1 | 69 | 69 | - | 222 | 222 | - | - | - | - | - | - | - |
| Stage 2 | 223 | 222 | - | 98 | 77 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.23 | 6.63 | 6.33 | 7.11 | 6.51 | 6.21 | 4.16 | - | - | 4.14 | - | - |
| Critical Hdwy Stg 1 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.23 | 5.63 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.617 | 4.117 | 3.417 | 3.509 | 4.009 | 3.309 | 2.254 | - | - | 2.236 | - | - |
| Pot Cap-1 Maneuver | 639 | 601 | 967 | 635 | 615 | 1055 | 1499 | - | - | 1578 | - | - |
| Stage 1 | 914 | 816 | - | 783 | 722 | - | - | - | - | - | - | - |
| Stage 2 | 755 | 700 | - | 911 | 833 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 604 | 560 | 967 | 565 | 573 | 1055 | 1499 | - | - | 1578 | - | - |
| Mov Cap-2 Maneuver | 604 | 560 | - | 565 | 573 | - | - | - | - | - | - | - |
| Stage 1 | 853 | 815 | - | 731 | 674 | - | - | - | - | - | - | - |
| Stage 2 | 702 | 653 | - | 854 | 832 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 9.7 | 10.4 | 6.1 | 0.1 |
| HCM LOS | A | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1499 | - | - | 843 | 672 | 1578 | - | - |
| HCM Lane V/C Ratio | 0.066 | - | - | 0.091 | 0.005 | 0.001 | - | - |
| HCM Control Delay (s) | 7.6 | 0 | - | 9.7 | 10.4 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0.3 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 75 | 1100 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 30 | 1 | 70 |
| Future Volume (vph) | 75 | 1100 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 30 | 1 | 70 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 5% | 2% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 82 | 1196 | 11 | 5 | 1054 | 49 | 0 | 39 | 0 | 0 | 34 | 76 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

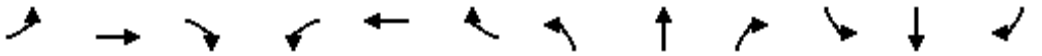
| Intersection | |
|---|---|
| Int Delay, s/veh | 1.7 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 75 | 1100 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 30 | 1 | 70 |
| Future Vol, veh/h | 75 | 1100 | 10 | 5 | 970 | 45 | 15 | 1 | 20 | 30 | 1 | 70 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 2 | 2 |
| Mvmt Flow | 82 | 1196 | 11 | 5 | 1054 | 49 | 16 | 1 | 22 | 33 | 1 | 76 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1103 | 0 | 0 | 1207 | 0 | 0 | 1898 | 2473 | 598 | 1827 | 2435 | 527 |
| Stage 1 | - | - | - | - | - | - | 1360 | 1360 | - | 1064 | 1064 | - |
| Stage 2 | - | - | - | - | - | - | 538 | 1113 | - | 763 | 1371 | - |
| Critical Hdwy | 4.2 | - | - | 4.2 | - | - | 7.6 | 6.6 | 7 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.6 | 5.6 | - | 6.54 | 5.54 | - |
| Follow-up Hdwy | 2.25 | - | - | 2.25 | - | - | 3.55 | 4.05 | 3.35 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver | 611 | - | - | 557 | - | - | 41 | 28 | 438 | 48 | 31 | 496 |
| Stage 1 | - | - | - | - | - | - | 152 | 209 | - | 238 | 298 | - |
| Stage 2 | - | - | - | - | - | - | 487 | 276 | - | 363 | 212 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 611 | - | - | 557 | - | - | 31 | 24 | 438 | 40 | 27 | 496 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 118 | 125 | - | 163 | 145 | - |
| Stage 1 | - | - | - | - | - | - | 132 | 181 | - | 206 | 295 | - |
| Stage 2 | - | - | - | - | - | - | 407 | 274 | - | 297 | 184 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.7 | 0.1 | 27.5 | 19.6 |
| HCM LOS | | | D | C |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 199 | 611 | - | - | 557 | - | - | 162 | 496 |
| HCM Lane V/C Ratio | 0.197 | 0.133 | - | - | 0.01 | - | - | 0.208 | 0.153 |
| HCM Control Delay (s) | 27.5 | 11.8 | - | - | 11.5 | - | - | 33 | 13.6 |
| HCM Lane LOS | D | B | - | - | B | - | - | D | B |
| HCM 95th %tile Q(veh) | 0.7 | 0.5 | - | - | 0 | - | - | 0.8 | 0.5 |

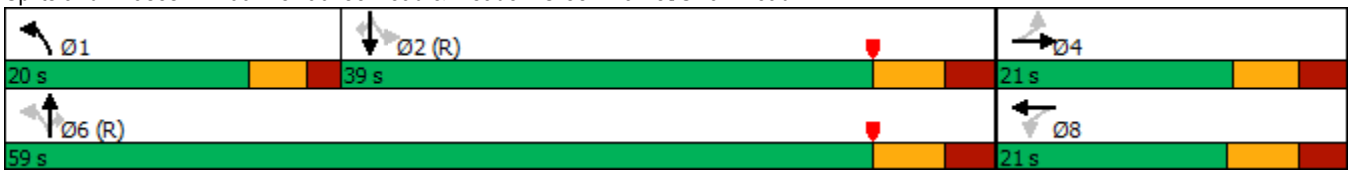


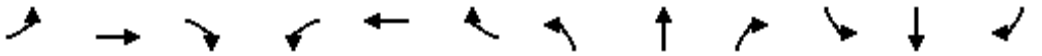
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 105 | 45 | 110 | 90 | 20 | 10 | 120 | 1235 | 100 | 15 | 775 | 85 |
| Future Volume (vph) | 105 | 45 | 110 | 90 | 20 | 10 | 120 | 1235 | 100 | 15 | 775 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1972 | 1972 | 1900 | 1972 | 1972 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 120 | | 0 | 210 | | 0 | 435 | | 230 | 355 | | 315 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 1 | 1 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 45 | | | 45 | |
| Link Distance (ft) | | 420 | | | 477 | | | 663 | | | 577 | |
| Travel Time (s) | | 8.2 | | | 9.3 | | | 10.0 | | | 8.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 62% | 100% | 100% | 62% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 4% | 4% | 4% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 109 | 162 | 0 | 94 | 31 | 0 | 125 | 1286 | 65 | 16 | 807 | 55 |
| Turn Type | Perm | NA | | Perm | NA | | pm+pt | NA | Perm | Perm | NA | Perm |
| Protected Phases | | 4 | | | 8 | | 1 | 6 | | | 2 | |
| Permitted Phases | 4 | | | 8 | | | 6 | | 6 | 2 | | 2 |
| Detector Phase | 4 | 4 | | 8 | 8 | | 1 | 6 | 6 | 2 | 2 | 2 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Minimum Split (s) | 14.9 | 14.9 | | 15.3 | 15.3 | | 13.5 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |
| Total Split (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 20.0 | 59.0 | 59.0 | 39.0 | 39.0 | 39.0 |
| Total Split (%) | 26.3% | 26.3% | | 26.3% | 26.3% | | 25.0% | 73.8% | 73.8% | 48.8% | 48.8% | 48.8% |
| Maximum Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 14.5 | 51.7 | 51.7 | 31.7 | 31.7 | 31.7 |
| Yellow Time (s) | 3.9 | 3.9 | | 4.3 | 4.3 | | 3.5 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| All-Red Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 2.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.9 | 6.9 | | 7.3 | 7.3 | | 5.5 | 7.3 | 7.3 | 7.3 | 7.3 | 7.3 |
| Lead/Lag | | | | | | | Lead | | | Lag | Lag | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 3.0 | 3.0 | 4.8 | 4.8 | 4.8 |
| Minimum Gap (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 2.0 | 2.0 | 3.8 | 3.8 | 3.8 |
| Time Before Reduce (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 25.0 | 19.0 | 19.0 | 29.0 | 29.0 | 29.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 13.0 | 13.0 | 8.0 | 8.0 | 8.0 |
| Recall Mode | None | None | | None | None | | None | C-Max | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| v/c Ratio | 0.55 | 0.68 | | 0.57 | 0.13 | | 0.25 | 0.51 | 0.06 | 0.07 | 0.41 | 0.06 |
| Control Delay | 42.4 | 46.7 | | 45.9 | 30.3 | | 5.4 | 7.5 | 5.0 | 12.3 | 12.7 | 11.1 |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 42.4 | 46.7 | | 45.9 | 30.3 | | 5.4 | 7.5 | 5.0 | 12.3 | 12.7 | 11.1 |
| 90th %ile Green (s) | 14.1 | 14.1 | | 13.7 | 13.7 | | 8.0 | 51.7 | 51.7 | 38.2 | 38.2 | 38.2 |
| 90th %ile Term Code | Max | Max | | Max | Max | | Min | Coord | Coord | Coord | Coord | Coord |
| 70th %ile Green (s) | 13.6 | 13.6 | | 13.2 | 13.2 | | 8.0 | 52.2 | 52.2 | 38.7 | 38.7 | 38.7 |
| 70th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 50th %ile Green (s) | 11.5 | 11.5 | | 11.1 | 11.1 | | 8.0 | 54.3 | 54.3 | 40.8 | 40.8 | 40.8 |
| 50th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 30th %ile Green (s) | 9.4 | 9.4 | | 9.0 | 9.0 | | 8.0 | 56.4 | 56.4 | 42.9 | 42.9 | 42.9 |
| 30th %ile Term Code | Gap | Gap | | Hold | Hold | | Min | Coord | Coord | Coord | Coord | Coord |
| 10th %ile Green (s) | 8.4 | 8.4 | | 8.0 | 8.0 | | 0.0 | 57.4 | 57.4 | 57.4 | 57.4 | 57.4 |
| 10th %ile Term Code | Hold | Hold | | Hold | Hold | | Skip | Coord | Coord | Coord | Coord | Coord |
| Queue Length 50th (ft) | 51 | 78 | | 45 | 14 | | 17 | 142 | 9 | 4 | 125 | 13 |
| Queue Length 95th (ft) | 98 | 135 | | 89 | 37 | | 36 | 208 | 24 | 16 | 182 | 33 |
| Internal Link Dist (ft) | | 340 | | | 397 | | | 583 | | | 497 | |
| Turn Bay Length (ft) | 120 | | | 210 | | | 435 | | 230 | 355 | | 315 |
| Base Capacity (vph) | 244 | 296 | | 204 | 297 | | 617 | 2522 | 1087 | 224 | 1982 | 854 |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.45 | 0.55 | | 0.46 | 0.10 | | 0.20 | 0.51 | 0.06 | 0.07 | 0.41 | 0.06 |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 80 | |
| Actuated Cycle Length: 80 | |
| Offset: 70 (88%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow | |
| Natural Cycle: 55 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 100: Pewaukee Road & Meadow Creek Market/Swan Road





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 105 | 45 | 110 | 90 | 20 | 10 | 120 | 1235 | 100 | 15 | 775 | 85 |
| Future Volume (veh/h) | 105 | 45 | 110 | 90 | 20 | 10 | 120 | 1235 | 100 | 15 | 775 | 85 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1885 | 1885 | 1885 | 1841 | 1841 | 1841 | 1957 | 1957 | 1885 | 1926 | 1926 | 1856 |
| Adj Flow Rate, veh/h | 109 | 47 | 115 | 94 | 21 | 10 | 125 | 1286 | 65 | 16 | 807 | 55 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 4 | 4 | 4 | 1 | 1 | 1 | 3 | 3 | 3 |
| Cap, veh/h | 307 | 83 | 203 | 189 | 202 | 96 | 491 | 2402 | 1032 | 281 | 1770 | 761 |
| Arrive On Green | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.09 | 0.65 | 0.65 | 0.48 | 0.48 | 0.48 |
| Sat Flow, veh/h | 1389 | 485 | 1187 | 1205 | 1179 | 561 | 1863 | 3718 | 1598 | 416 | 3659 | 1572 |
| Grp Volume(v), veh/h | 109 | 0 | 162 | 94 | 0 | 31 | 125 | 1286 | 65 | 16 | 807 | 55 |
| Grp Sat Flow(s),veh/h/ln | 1389 | 0 | 1672 | 1205 | 0 | 1740 | 1863 | 1859 | 1598 | 416 | 1830 | 1572 |
| Q Serve(g_s), s | 5.7 | 0.0 | 7.1 | 6.2 | 0.0 | 1.2 | 2.3 | 15.0 | 1.2 | 1.7 | 11.7 | 1.5 |
| Cycle Q Clear(g_c), s | 6.9 | 0.0 | 7.1 | 13.3 | 0.0 | 1.2 | 2.3 | 15.0 | 1.2 | 3.7 | 11.7 | 1.5 |
| Prop In Lane | 1.00 | | 0.71 | 1.00 | | 0.32 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 307 | 0 | 286 | 189 | 0 | 298 | 491 | 2402 | 1032 | 281 | 1770 | 761 |
| V/C Ratio(X) | 0.36 | 0.00 | 0.57 | 0.50 | 0.00 | 0.10 | 0.25 | 0.54 | 0.06 | 0.06 | 0.46 | 0.07 |
| Avail Cap(c_a), veh/h | 314 | 0 | 295 | 189 | 0 | 298 | 654 | 2402 | 1032 | 281 | 1770 | 761 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 30.9 | 0.0 | 30.4 | 36.5 | 0.0 | 28.0 | 8.2 | 7.7 | 5.2 | 12.2 | 13.7 | 11.0 |
| Incr Delay (d2), s/veh | 0.3 | 0.0 | 1.4 | 0.7 | 0.0 | 0.1 | 0.1 | 0.9 | 0.1 | 0.4 | 0.8 | 0.2 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 1.9 | 0.0 | 2.9 | 1.8 | 0.0 | 0.5 | 0.7 | 4.5 | 0.3 | 0.2 | 4.3 | 0.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 31.2 | 0.0 | 31.8 | 37.3 | 0.0 | 28.0 | 8.3 | 8.5 | 5.3 | 12.6 | 14.5 | 11.2 |
| LnGrp LOS | C | A | C | D | A | C | A | A | A | B | B | B |
| Approach Vol, veh/h | | 271 | | | 125 | | | 1476 | | | 878 | |
| Approach Delay, s/veh | | 31.6 | | | 35.0 | | | 8.4 | | | 14.3 | |
| Approach LOS | | C | | | C | | | A | | | B | |

| Timer - Assigned Phs | 1 | 2 | | 4 | | 6 | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 13.0 | 46.0 | | 21.0 | | 59.0 | | 21.0 | | | | |
| Change Period (Y+Rc), s | 5.5 | 7.3 | | * 7.3 | | 7.3 | | 7.3 | | | | |
| Max Green Setting (Gmax), s | 14.5 | 31.7 | | * 14 | | 51.7 | | 13.7 | | | | |
| Max Q Clear Time (g_c+I1), s | 4.3 | 13.7 | | 9.1 | | 17.0 | | 15.3 | | | | |
| Green Ext Time (p_c), s | 0.1 | 8.6 | | 0.3 | | 11.3 | | 0.0 | | | | |

| Intersection Summary | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HCM 6th Ctrl Delay | | | 13.7 | | | | | | | | | |
| HCM 6th LOS | | | B | | | | | | | | | |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 10 | 20 | 30 | 5 | 20 | 30 |
| Future Volume (vph) | 10 | 20 | 30 | 5 | 20 | 30 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | 0% | | | 0% | 0% | |
| Storage Length (ft) | | 0 | 0 | | 0 | 0 |
| Storage Lanes | | 0 | 0 | | 1 | 0 |
| Taper Length (ft) | | | 100 | | 100 | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 314 | | | 325 | 406 | |
| Travel Time (s) | 8.6 | | | 8.9 | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | |
| Confl. Bikes (#/hr) | | | | | | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 9% | 9% | 2% | 2% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | |
| Mid-Block Traffic (%) | 0% | | | 0% | 0% | |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 34 | 0 | 0 | 40 | 57 | 0 |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

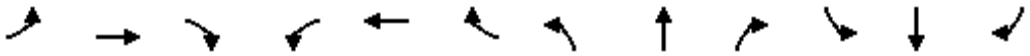
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.8 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 10 | 20 | 30 | 5 | 20 | 30 |
| Future Vol, veh/h | 10 | 20 | 30 | 5 | 20 | 30 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 88 | 88 | 88 | 88 | 88 | 88 |
| Heavy Vehicles, % | 1 | 1 | 9 | 9 | 2 | 2 |
| Mvmt Flow | 11 | 23 | 34 | 6 | 23 | 34 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 34 | 0 | 97 | 23 |
| Stage 1 | - | - | - | - | 23 | - |
| Stage 2 | - | - | - | - | 74 | - |
| Critical Hdwy | - | - | 4.19 | - | 6.42 | 6.22 |
| Critical Hdwy Stg 1 | - | - | - | - | 5.42 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 5.42 | - |
| Follow-up Hdwy | - | - | 2.281 | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver | - | - | 1533 | - | 902 | 1054 |
| Stage 1 | - | - | - | - | 1000 | - |
| Stage 2 | - | - | - | - | 949 | - |
| Platoon blocked, % | - | - | | - | | |
| Mov Cap-1 Maneuver | - | - | 1533 | - | 882 | 1054 |
| Mov Cap-2 Maneuver | - | - | - | - | 882 | - |
| Stage 1 | - | - | - | - | 1000 | - |
| Stage 2 | - | - | - | - | 928 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 6.3 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 978 | - | - | 1533 | - |
| HCM Lane V/C Ratio | 0.058 | - | - | 0.022 | - |
| HCM Control Delay (s) | 8.9 | - | - | 7.4 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 1 | 80 | 1 | 1 | 1 | 55 | 35 | 1 | 1 | 35 | 15 |
| Future Volume (vph) | 15 | 1 | 80 | 1 | 1 | 1 | 55 | 35 | 1 | 1 | 35 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 327 | | | 194 | | | 539 | | | 406 | |
| Travel Time (s) | | 8.9 | | | 5.3 | | | 14.7 | | | 11.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 7% | 7% | 7% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 111 | 0 | 0 | 3 | 0 | 0 | 106 | 0 | 0 | 59 | 0 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

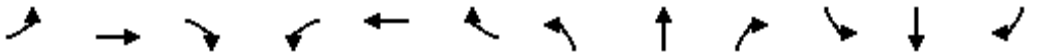
| Intersection | |
|---|---|
| Int Delay, s/veh | 5.5 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 1 | 80 | 1 | 1 | 1 | 55 | 35 | 1 | 1 | 35 | 15 |
| Future Vol, veh/h | 15 | 1 | 80 | 1 | 1 | 1 | 55 | 35 | 1 | 1 | 35 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | - | - | - | - | - | - | - | - | - | - | - | - |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 7 | 7 | 7 |
| Mvmt Flow | 17 | 1 | 93 | 1 | 1 | 1 | 64 | 41 | 1 | 1 | 41 | 17 |

| Major/Minor | Minor2 | | | Minor1 | | | Major1 | | | Major2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 223 | 222 | 50 | 269 | 230 | 42 | 58 | 0 | 0 | 42 | 0 | 0 |
| Stage 1 | 52 | 52 | - | 170 | 170 | - | - | - | - | - | - | - |
| Stage 2 | 171 | 170 | - | 99 | 60 | - | - | - | - | - | - | - |
| Critical Hdwy | 7.11 | 6.51 | 6.21 | 7.11 | 6.51 | 6.21 | 4.12 | - | - | 4.17 | - | - |
| Critical Hdwy Stg 1 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | 6.11 | 5.51 | - | 6.11 | 5.51 | - | - | - | - | - | - | - |
| Follow-up Hdwy | 3.509 | 4.009 | 3.309 | 3.509 | 4.009 | 3.309 | 2.218 | - | - | 2.263 | - | - |
| Pot Cap-1 Maneuver | 735 | 678 | 1021 | 686 | 672 | 1032 | 1546 | - | - | 1535 | - | - |
| Stage 1 | 963 | 854 | - | 834 | 760 | - | - | - | - | - | - | - |
| Stage 2 | 833 | 760 | - | 910 | 847 | - | - | - | - | - | - | - |
| Platoon blocked, % | | | | | | | | - | - | | - | - |
| Mov Cap-1 Maneuver | 709 | 649 | 1021 | 602 | 643 | 1032 | 1546 | - | - | 1535 | - | - |
| Mov Cap-2 Maneuver | 709 | 649 | - | 602 | 643 | - | - | - | - | - | - | - |
| Stage 1 | 923 | 853 | - | 799 | 728 | - | - | - | - | - | - | - |
| Stage 2 | 796 | 728 | - | 825 | 846 | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 9.3 | 10 | 4.5 | 0.1 |
| HCM LOS | A | B | | |

| Minor Lane/Major Mvmt | NBL | NBT | NBR | EBLn1 | WBLn1 | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1546 | - | - | 950 | 717 | 1535 | - | - |
| HCM Lane V/C Ratio | 0.041 | - | - | 0.118 | 0.005 | 0.001 | - | - |
| HCM Control Delay (s) | 7.4 | 0 | - | 9.3 | 10 | 7.3 | 0 | - |
| HCM Lane LOS | A | A | - | A | B | A | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.4 | 0 | 0 | - | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 60 | 1150 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 40 | 5 | 95 |
| Future Volume (vph) | 60 | 1150 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 40 | 5 | 95 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 355 | | 305 | 330 | | 290 | 0 | | 0 | 0 | | 100 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 0 | | 0 | 0 | | 1 |
| Taper Length (ft) | 100 | | | 100 | | | 100 | | | 100 | | |
| Link Speed (mph) | | 55 | | | 55 | | | 25 | | | 25 | |
| Link Distance (ft) | | 989 | | | 984 | | | 394 | | | 539 | |
| Travel Time (s) | | 12.3 | | | 12.2 | | | 10.7 | | | 14.7 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 3% | 3% | 3% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 63 | 1198 | 26 | 16 | 1464 | 36 | 0 | 27 | 0 | 0 | 47 | 99 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 60 | 1150 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 40 | 5 | 95 |
| Future Vol, veh/h | 60 | 1150 | 25 | 15 | 1405 | 35 | 15 | 1 | 10 | 40 | 5 | 95 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 355 | - | 305 | 330 | - | 290 | - | - | - | - | - | 100 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 2 | - | - | 2 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 |
| Mvmt Flow | 63 | 1198 | 26 | 16 | 1464 | 36 | 16 | 1 | 10 | 42 | 5 | 99 |

| Major/Minor | Major1 | | | Major2 | | | Minor1 | | | Minor2 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Flow All | 1500 | 0 | 0 | 1224 | 0 | 0 | 2091 | 2856 | 599 | 2222 | 2846 | 732 |
| Stage 1 | - | - | - | - | - | - | 1324 | 1324 | - | 1496 | 1496 | - |
| Stage 2 | - | - | - | - | - | - | 767 | 1532 | - | 726 | 1350 | - |
| Critical Hdwy | 4.14 | - | - | 4.14 | - | - | 7.52 | 6.52 | 6.92 | 7.56 | 6.56 | 6.96 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.52 | 5.52 | - | 6.56 | 5.56 | - |
| Follow-up Hdwy | 2.22 | - | - | 2.22 | - | - | 3.51 | 4.01 | 3.31 | 3.53 | 4.03 | 3.33 |
| Pot Cap-1 Maneuver | 443 | - | - | 565 | - | - | 30 | 17 | 447 | ~ 24 | 17 | 361 |
| Stage 1 | - | - | - | - | - | - | 166 | 225 | - | 127 | 183 | - |
| Stage 2 | - | - | - | - | - | - | 363 | 179 | - | 380 | 215 | - |
| Platoon blocked, % | | - | - | | - | - | | | | | | |
| Mov Cap-1 Maneuver | 443 | - | - | 565 | - | - | 18 | 14 | 447 | ~ 20 | 14 | 361 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 107 | 91 | - | 97 | 114 | - |
| Stage 1 | - | - | - | - | - | - | 142 | 193 | - | 109 | 178 | - |
| Stage 2 | - | - | - | - | - | - | 249 | 174 | - | 317 | 184 | - |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| HCM Control Delay, s | 0.7 | 0.1 | 34.2 | 35.4 |
| HCM LOS | | | D | E |

| Minor Lane/Major Mvmt | NBLn1 | EBL | EBT | EBR | WBL | WBT | WBR | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|---|---|---|
| Capacity (veh/h) | 150 | 443 | - | - | 565 | - | - | 99 | 361 |
| HCM Lane V/C Ratio | 0.181 | 0.141 | - | - | 0.028 | - | - | 0.473 | 0.274 |
| HCM Control Delay (s) | 34.2 | 14.5 | - | - | 11.6 | - | - | 70.5 | 18.7 |
| HCM Lane LOS | D | B | - | - | B | - | - | F | C |
| HCM 95th %tile Q(veh) | 0.6 | 0.5 | - | - | 0.1 | - | - | 2.1 | 1.1 |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

# APPENDIX E

# TRAFFIC GAP CALCULATIONS

**Gap Analysis Calculations**
Capitol Drive & Highfield Road

**Inputs**

| | | |
|---|---|---|
| Lanes on Major St. (both dir.) | 4 lanes | *EB=2 lanes, WB=2 lanes* |
| %HV on Minor Street (AM) | 1.6% | *New traffic from minor = low truck %* |
| %HV on Minor Street (PM, SAT) | 3.3% | *New traffic from minor = low truck %* |
| Grade | 0.0% | |
| Gap Acceptance | 2 stage | |
| Legs at Intersection | 4 leg | |

**Calculations**

| | AM | | | | | PM, SAT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $T_{c,x}$ | $T_{f,x}$ | 1 Veh | 2 Veh | 3 Veh | $T_{c,x}$ | $T_{f,x}$ | 1 Veh | 2 Veh | 3 Veh |
| Left turn from major | 3.1 | 2.2 | 3.1 | 8.5 | 13.8 | 3.2 | 2.2 | 3.2 | 8.6 | 14.0 |
| Right Turn from Minor | 5.9 | 3.3 | 5.9 | 15.2 | 24.4 | 6.0 | 3.3 | 6.0 | 15.3 | 24.6 |
| Through Traffic on Minor | 5.5 | 4.0 | 5.5 | 15.1 | 24.6 | 5.6 | 4.0 | 5.6 | 15.2 | 24.8 |
| Left Turn from Minor | 6.5 | 3.5 | 6.5 | 16.6 | 26.6 | 6.6 | 3.5 | 6.6 | 16.7 | 26.8 |

**Equations**

$T_{c,x} = T_{c,base} + T_{c,HV}P_{HV} + T_{c,G}G - T_{c,T} - T_{3,LT}$

$T_{f,x} = T_{f,base} + T_{f,HV}P_{HV}$

**Definitions**

| | |
|---|---|
| $T_{c,x}$ | Critical gap for movement |
| $T_{c,base}$ | base critical gap (Exhibit 17-5) |
| $T_{c,HV}$ | HV adjustment factor (1.0 2-ln, 2.0 4-ln) for major street |
| $P_{HV}$ | proportion of heavy vehicles for minor movement |
| $T_{c,G}$ | grade adjustment factor (0.1 mvmts 9 & 12, 0.2 mvmts 7, 8, 10, & 11) |
| G | percent grade divided by 100 |
| $T_{c,T}$ | 2-stage gap acceptance adjustment factor (1.0 for 1st or 2nd stage, 0.0 for only 1 stage) |
| $T_{3,LT}$ | intersection geometry adjsutment factor (0.7 minor street left turn at 3-leg intersection, 0.0 otherwise) |
| $T_{f,x}$ | minor movement follow-up time |
| $T_{f,base}$ | base follow-up time from exhibit 17-5 |
| $T_{f,HV}$ | heavy vehicle adjustment factor (0.9 for 2-ln major, 1.0 for 4-ln major) |
| $P_{HV}$ | proportion of heavy vehicles for minor movement |

**Look Up Tables**

| Major Street | $T_{c,HV}$ | $T_{f,HV}$ |
|---|---|---|
| 2 lanes | 1.0 | 0.9 |
| 4 lanes | 2.0 | 1.0 |

| Grade Adjust. | $T_{c,G}$ |
|---|---|
| Minor RT | 0.1 |
| Minor LT/TH | 0.2 |

| Gap Acceptance | $T_{c,t}$ |
|---|---|
| 1 stage | 0.0 |
| 2 stage | 1.0 |

| Geometry | $T_{3,lt}$ |
|---|---|
| 3-leg | 0.7 |
| 4-leg | 0.0 |

| HCM Exhibit 17-5 | Base Critical Gap $T_{c,base}$ (s) | | Base follow-up |
|---|---|---|---|
| Vehicle Movement | 2-Ln Major | 4-Ln Major | $T_{f,base}$ (s) |
| LT from Major | 4.1 | 4.1 | 2.2 |
| RT from Minor | 6.2 | 6.9 | 3.3 |
| TH on Minor | 6.5 | 6.5 | 4.0 |
| LT from Minor | 7.1 | 7.5 | 3.5 |

**Calculated Values**

| $T_{c,HV}$ | $T_{f,HV}$ |
|---|---|
| 2.0 | 1.0 |

| G |
|---|
| 0.0 |

| $T_{c,t}$ |
|---|
| 1.0 |

| $T_{3,lt}$ |
|---|
| 0.0 |

| $T_{c,base}$ | $T_{f,base}$ | $T_{c,G}$ |
|---|---|---|
| 4.1 | 2.2 | 0.0 |
| 6.9 | 3.3 | 0.1 |
| 6.5 | 4.0 | 0.2 |
| 7.5 | 3.5 | 0.2 |

| | $P_{HV}$ |
|---|---|
| AM | 0.02 |
| PM | 0.03 |

| Weekday AM 4/13/20203 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Westbound Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 7:15 AM | 6 | 22 | 10 | 13 | 7 | 5 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 |
| 7:30 AM | 8 | 14 | 11 | 9 | 9 | 4 | 2 | 2 | 0 | 0 | 0 | 2 | 1 | 2 | 0 |
| 7:45 AM | 9 | 15 | 14 | 7 | 2 | 6 | 6 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 2 |
| 8:00 AM | 11 | 16 | 17 | 7 | 8 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | 0 |
| Total | 34 | 67 | 52 | 36 | 26 | 18 | 12 | 5 | 5 | 5 | 1 | 3 | 1 | 2 | 4 |
| **Eastbound Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 7:15 AM | 9 | 9 | 7 | 7 | 5 | 2 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| 7:30 AM | 8 | 11 | 6 | 2 | 5 | 3 | 2 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 3 |
| 7:45 AM | 6 | 16 | 7 | 5 | 3 | 3 | 3 | 2 | 3 | 1 | 2 | 0 | 0 | 0 | 2 |
| 8:00 AM | 11 | 15 | 5 | 4 | 0 | 4 | 3 | 3 | 1 | 1 | 1 | 0 | 3 | 0 | 2 |
| Total | 34 | 51 | 25 | 18 | 13 | 12 | 9 | 9 | 7 | 2 | 6 | 1 | 3 | 0 | 11 |
| **Combined Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 7:15 AM | 23 | 15 | 8 | 4 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7:30 AM | 14 | 25 | 11 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 7:45 AM | 21 | 17 | 12 | 4 | 0 | 3 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 23 | 14 | 11 | 5 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 81 | 71 | 42 | 20 | 9 | 7 | 6 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |

| **Gap Calcs** | SB RT from Minor | | |
|---|---|---|---|
| | Gap Times | | Gaps |
| 1 Veh (x1) | 5.9 | 15.08 | 142 |
| 2 Veh (x2) | 15.18 | 24.3 | 44 |
| 3 Veh (x3) | 24.4 | & up | 29 |
| Equivalent Gaps | | | 214 |

*Westbound Gap*

| NB RT from Minor | | |
|---|---|---|
| Gap Times | | Gaps |
| 5.9 | 15.08 | 75 |
| 15.18 | 24.3 | 57 |
| 24.4 | & up | 45 |
| | | 177 |

*Eastbound Gap*

| **Gap Calcs** | SB TH from Minor | | | SB LT from Minor | | |
|---|---|---|---|---|---|---|
| | Gap Times | | Gaps | Gap Times | | Gaps |
| 1 Veh (x1) | 5.5 | 14.98 | 155 | 6.5 | 16.48 | 73 |
| 2 Veh (x2) | 15.08 | 24.5 | 46 | 16.58 | 26.5 | 47 |
| 3 Veh (x3) | 24.6 | & up | 28 | 26.6 | & up | 40 |
| Equivalent Gaps | | | 228 | | | 160 |

*Stage 1-WB Gap* *Stage 2-EB Gap*

| NB TH from Minor | | | NB LT from Minor | | |
|---|---|---|---|---|---|
| Gap Times | | Gaps | Gap Times | | Gaps |
| 5.5 | 14.98 | 85 | 6.5 | 16.48 | 132 |
| 15.08 | 24.5 | 58 | 16.58 | 26.5 | 36 |
| 24.6 | & up | 44 | 26.6 | & up | 20 |
| | | 187 | | | 189 |

*Stage 1-EB Gap* *Stage 2-WB Gap*

| **Gap Calcs** | EB LT from Major | | |
|---|---|---|---|
| | Gap Times | | Gaps |
| 1 Veh (x1) | 3.1 | 8.38 | 141 |
| 2 Veh (x2) | 8.5 | 13.7 | 141 |
| 3 Veh (x3) | 13.8 | & up | 122 |
| Equivalent Gaps | | | 404 |

*Westbound Gap*

| WB LT from Major | | |
|---|---|---|
| Gap Times | | Gaps |
| 3.1 | 8.38 | 95 |
| 8.5 | 13.7 | 76 |
| 13.8 | & up | 149 |
| | | 320 |

*Eastbound Gap*

| Weekday PM 4/13/23 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Westbound Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 4:15 PM | 2 | 15 | 14 | 9 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 0 |
| 4:30 PM | 6 | 20 | 15 | 12 | 5 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 4:45 PM | 5 | 13 | 13 | 7 | 1 | 4 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 5:00 PM | 9 | 21 | 21 | 6 | 0 | 1 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total | 22 | 69 | 63 | 34 | 10 | 6 | 8 | 5 | 1 | 1 | 2 | 1 | 1 | 3 | 1 |
| **Eastbound Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 4:15 PM | 7 | 8 | 7 | 6 | 3 | 0 | 0 | 1 | 3 | 1 | 1 | 1 | 0 | 1 | 4 |
| 4:30 PM | 11 | 7 | 4 | 2 | 0 | 4 | 2 | 3 | 0 | 1 | 0 | 2 | 1 | 0 | 7 |
| 4:45 PM | 6 | 13 | 8 | 3 | 3 | 3 | 1 | 3 | 0 | 0 | 1 | 1 | 1 | 1 | 3 |
| 5:00 PM | 8 | 8 | 4 | 4 | 1 | 4 | 3 | 0 | 1 | 2 | 0 | 1 | 0 | 1 | 6 |
| Total | 32 | 36 | 23 | 15 | 7 | 11 | 6 | 7 | 4 | 4 | 2 | 5 | 2 | 3 | 20 |
| **Combined Gaps** | | | | | | | | | | | | | | | |
| Start Time | 2 - 3 | 4 - 5 | 6 - 7 | 8 - 9 | 10 - 11 | 12 - 13 | 14 - 15 | 16 - 17 | 18 - 19 | 20 - 21 | 22 - 23 | 24 - 25 | 26 - 27 | 28 - 29 | >29 |
| 4:15 PM | 11 | 16 | 10 | 3 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 13 | 18 | 8 | 5 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 9 | 13 | 5 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 12 | 20 | 10 | 4 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 45 | 67 | 33 | 14 | 8 | 6 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |

| **Gap Calcs** | SB RT from Minor | | |
|---|---|---|---|
| | Gap Times | | Gaps |
| 1 Veh (x1) | 6.0 | 15.17 | 118 |
| 2 Veh (x2) | 15.27 | 24.5 | 25 |
| 3 Veh (x3) | 24.6 | & up | 17 |
| Equivalent Gaps | | | 160 |

*Westbound Gap*

| NB RT from Minor | | |
|---|---|---|
| Gap Times | | Gaps |
| 6.0 | 15.17 | 60 |
| 15.27 | 24.5 | 41 |
| 24.6 | & up | 86 |
| | | 187 |

*Eastbound Gap*

| **Gap Calcs** | SB TH from Minor | | | SB LT from Minor | | |
|---|---|---|---|---|---|---|
| | Gap Times | | Gaps | Gap Times | | Gaps |
| 1 Veh (x1) | 5.6 | 15.07 | 131 | 6.6 | 16.57 | 57 |
| 2 Veh (x2) | 15.17 | 24.7 | 26 | 16.67 | 26.7 | 41 |
| 3 Veh (x3) | 24.8 | & up | 17 | 26.8 | & up | 73 |
| Equivalent Gaps | | | 174 | | | 171 |

*Stage 1-WB Gap* *Stage 2-EB Gap*

| NB TH from Minor | | | NB LT from Minor | | |
|---|---|---|---|---|---|
| Gap Times | | Gaps | Gap Times | | Gaps |
| 5.6 | 15.07 | 66 | 6.6 | 16.57 | 104 |
| 15.17 | 24.7 | 43 | 16.67 | 26.7 | 18 |
| 24.8 | & up | 85 | 26.8 | & up | 14 |
| | | 194 | | | 135 |

*Stage 1-EB Gap* *Stage 2-WB Gap*

| **Gap Calcs** | EB LT from Major | | |
|---|---|---|---|
| | Gap Times | | Gaps |
| 1 Veh (x1) | 3.2 | 8.47 | 149 |
| 2 Veh (x2) | 8.6 | 13.9 | 83 |
| 3 Veh (x3) | 14.0 | & up | 46 |
| Equivalent Gaps | | | 278 |

*Westbound Gap*

| WB LT from Major | | |
|---|---|---|
| Gap Times | | Gaps |
| 3.2 | 8.47 | 75 |
| 8.6 | 13.9 | 58 |
| 14.0 | & up | 142 |
| | | 275 |

*Eastbound Gap*

# TIA TECHNICAL MEMORANDUM

**Date:** August 16, 2023

**Prepared for:** Brett Dahlman, P.E.
Quattro Development, LLC

**Prepared by:** Tammi Czewski, P.E., PTOE
Traffic Analysis & Design, Inc.

**Subject:** **Early Childhood School – Pewaukee, WI**
**Traffic Impact Analysis Summary**

## Introduction

This technical memorandum was prepared to summarize the traffic and operations for the proposed early childhood school in Pewaukee, Wisconsin as detailed in the May 2, 2023 *Early Childhood School Traffic Impact Analysis* (TIA) report. The school is proposed to be located between an existing office building and Capitol Drive East KinderCare on the south side of Highfield Court.

## Development Site

The early childhood school will provide Montessori childcare for up to 152 children (aged toddler through six years old) and 29 full-time staff in an 11,836-square foot building. The school will be open from 7:00 a.m. to 6:00 p.m. Monday through Friday. The site does not include a pick-up/drop-off lane – parents park first and then escort the children directly into the school. Due to variability in parent schedules, pick-ups and drop-off times are staggered over a two-to-three-hour period in the morning and afternoon.

## Trip Generation

Based on data from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*, a daycare with up to 152 students generates 620 weekday daily trips, with 110 trips in the AM peak hour and 105 trips in the PM peak hour. The site is zoned B-6 Mixed Use District, which allows for various commercial land uses such as medical-dental office buildings, retail buildings, banks, restaurants, etc. Assuming similar-sized buildings on these lots to the day-care center (or typical sizes for the land use type), many of these other uses would generate similar traffic volumes during the peak hours or during the entire weekday. Several uses (pharmacy,

high-turnover restaurant, or fast-food restaurant) would generate more than double the weekday daily trips than the early childhood school (Table 1).

**Table 1. Trip Generation – Comparative Uses**

| Land Use | ITE Code | Size | Weekday Daily | AM Peak In | AM Peak Out | AM Peak Total | PM Peak In | PM Peak Out | PM Peak Total |
|---|---|---|---|---|---|---|---|---|---|
| Day Care Center | 565 | 152 Students | 620 (4.09) | 60 (53%) | 50 (47%) | 110 FCE | 50 (47%) | 55 (53%) | 105 FCE |
| Medical-Dental Office Building (Stand-alone) | 720 | 11,836 SF | 430 (36.00) | 30 (79%) | 5 (21%) | 35 FCE | 15 (30%) | 30 (70%) | 45 FCE |
| Strip Retail Plaza (<40k) | 822 | 11,836 SF | 640 (54.45) | 20 (60%) | 10 (40%) | 30 (2.36) | 45 (50%) | 45 (50%) | 90 FCE |
| Pharmacy/Drugstore with Drive-Through Window | 881 | 11,836 SF | 1,280 (108.40) | 25 (52%) | 20 (48%) | 45 (3.74) | 60 (50%) | 60 (50%) | 120 (10.25) |
| General Office Building | 710 | 11,836 SF | 180 FCE | 20 (88%) | 5 (12%) | 25 FCE | 5 (17%) | 25 (83%) | 30 FCE |
| Drive-in Bank | 912 | 3 Lanes | 390 FCE | 15 (61%) | 10 (39%) | 25 FCE | 40 (49%) | 40 (51%) | 80 (27.07) |
| High-Turnover (Sit-Down) Restaurant | 932 | 11,836 SF | 1,270 (107.20) | 65 (55%) | 50 (45%) | 115 (9.57) | 65 (61%) | 40 (39%) | 105 (9.05) |
| Fast-Food Restaurant with Drive-Through Window | 934 | 3,000 SF | 1,400 (467.48) | 70 (51%) | 65 (49%) | 135 (44.61) | 50 (52%) | 50 (48%) | 100 (33.03) |

[1] *ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 11th Edition.*

### "Cut-Through" Traffic

About 17% of existing peak hour traffic from Highfield Court travel north on Highfield Road to either "cut through" the neighborhood to reach Pewaukee Road, Swan Road, or the homes in the residential neighborhood. For this study, scenarios were investigated assuming that none of the early childhood school trips travelled north on Highfield Road (Scenario A – without cut-through traffic) and that 17% of the early childhood school trips travelled north on Highfield Road (Scenario B – with cut-through traffic).

### Traffic Operations

The existing (no early childhood school traffic) and build (with early childhood school traffic) traffic volumes were evaluated based on the methodologies in the Highway Capacity Manual (HCM). Based on the analysis, all turning movements at the study intersections operate acceptably at LOS D or better with the existing, build Scenario A, and build Scenario B traffic volumes except for the Highfield Road/Five Fields Road intersection with Capitol Drive. At this intersection, the HCM reported that one or more movements operate at LOS E or F beginning with the existing traffic condition. Since the HCM tends to underestimate gaps in traffic for vehicles to turn from side streets, a gap study was completed to verify these conditions. Based on the gap study, there are enough excess gaps in Capitol Drive traffic to accommodate both existing traffic and future traffic with acceptable delays (LOS D or better).

# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 7.

**DATE:** September 5, 2023

**DEPARTMENT:** Planning

**PROVIDED BY:** Nick Fuchs

***SUBJECT:***

Discussion and Possible Action Regarding **Resolution 23-09-14** Releasing a Forty-Five Foot Reserved Right-of-Way Restriction Upon Lots 1 and 2 of Certified Survey Map No. 10366 as Requested by Quattro Development Reservation [Fuchs]

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

A motion approving the release of the 45' Reserved Right-of-Way restriction located upon Lots 1 and 2 of CSM No. 10366.

**ATTACHMENTS:**

Description

Resolution 23-09-14

Quattro Development Resolution

Reservation release request

CSM 10366

**STATE OF WISCONSIN CITY OF PEWAUKEE WAUKESHA COUNTY**
**RESOLUTION #23-09-14**

**A RESOLUTION AUTHORIZING THE RELEASE, WAIVER, VACATION AND REVISION OF A FORTY-FIVE FOOT RESERVED RIGHT-OF-WAY RESTRICTION UPON LOTS 1 AND 2 OF CERTIFIED SURVEY MAP NO. 10366 FOR PROPERTIES LOCATED AT APPROXIMATELY N35 W23877 HIGHFIELD COURT BEARING TAX KEY NUMBERS PWC 0906-993 AND PWC 0906-994**

**WHEREAS,** the Plan Commission having approved a Conditional Use and Site and Building Plan Review Application upon the application of Quattro Development, LLC on March 16, 2023, and the Plan Commission having conditioned approval thereof in part upon Common Council approval of the release of a 45' Reserved Right-of-Way restriction located upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, as further described below:

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 1 of CSM No. 10366.

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 2 of CSM No. 10366; and

**WHEREAS**, the City Engineering Department and City Planner have reviewed the proposed release of a 45' Reserved Right-of-Way restriction and recommended approval thereof to the Common Council; and

**WHEREAS,** the 45' Reserved Right-of-Way has been determined to no longer be needed considering the developments of the subject properties and adjacent parcels to the east; and

**WHEREAS,** the previously recorded 45' Reserved Right-of-Way restriction described above are located upon Certified Survey Map No. 10366, which properties are legally described as follows:

Commencing at the Southwest comer of the Northwest ¼ of said Section; thence N00°20'35"W along the West line of the Northwest ¼ of said Section 671.90 feet; thence N89°36'25"E 430.02 feet to the Northwest comer of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the West line of Parcel 2 of said Certified Survey Map 155.00 feet to the point of beginning; thence N 89°36'25"E along the South right-of-way line of Highfield Drive; thence N44°14'24" E along the Southeasterly right-of-way line of said Drive 116.99 feet; thence N66°55'27"E along the DRAFT Southeasterly right-of-way line of said Drive 30.47 feet; thence N89°36'25"E along the South right-of-way line of said Drive 268.82 feet to a point on the East line of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the East line of Parcel 2 of said Certified Survey Map 411.40 feet to the Southeast comer of Parcel 2 of said Certified Survey Map and a point on the North right-of-way line of Capitol Drive; thence S89°44'25"W along the South line of Parcel 2 of said Certified Survey Map and the North right-of-way line of said Drive 474.81 feet to the Southwest comer of Parcel 2 of said Certified Survey Map; thence N00°17'10"W along the West line of Parcel 2 of said Certified Survey Map 315.31 feet to the point of beginning. Containing 4.17 acres of land more or less.

**WHEREAS,** Wis. Stats section 236.293 provides in part that any restriction placed on platted land by covenant, grant of easement or in any other manner, which was required by a public body vests in the public body the right to enforce the restriction at law or in equity and that the restriction may be released or waived in writing by the public body having the right of enforcement; and

**WHEREAS,** the Common Council has determined that the release, waiver, vacation and revision of the prior recorded 45' Reserved Right-of-Way is reasonable as it is no longer necessary for the orderly development of the subject properties or appropriate following the approval of the aforesaid site and building development plans submitted by Quattro Development, LLC.

**NOW, THEREFORE, BE IT RESOLVED**, by the Mayor and Common Council of the City of Pewaukee, Wisconsin, that the 45' Reserved Right-of-Way upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, be and the same are hereby waived and released. BE IT

**FURTHER RESOLVED** that the City Clerk is hereby directed to record this Resolution in the Office of the Register of Deeds for Waukesha County, Wisconsin following the approval of the proposed Quattro Development, LLC Conditional Use and Site and Building Plan Review applications.

Passed and adopted this 5th day of September, 2023.

FOR THE COMMON COUNCIL OF THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

_____
Steve Bierce, Mayor

ATTEST:

_____
Kelly Tarczewski, Clerk/Treasurer

**WAUKESHA COUNTY CITY OF PEWAUKEE STATE OF WISCONSIN**

**RESOLUTION NO. __-__**

**A RESOLUTION AUTHORIZING THE RELEASE, WAIVER, VACATION AND REVISION OF A FORTY-FIVE FOOT RESERVED RIGHT-OF-WAY RESTRICTION UPON LOTS 1 AND 2 OF CERTIFIED SURVEY MAP NO. 10366 FOR PROPERTIES LOCATED AT APPROXIMATELY N35W23877 HIGHFIELD COURT BEARING TAX KEY NOS. 0906993 AND 0906994**

**WHEREAS,** the Plan Commission having approved a Conditional Use and Site and Building Plan Review Application upon the application of Quattro Development, LLC on March 16, 2023, and the Plan Commission having conditioned approval thereof in part upon Common Council approval of the release of a 45' Reserved Right-of-Way restriction located upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, as further described below:

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 1 of CSM No. 10366.

Release of the 45' Reserved Right-Of-Way located along the south property line of Parcel 2 of CSM No. 10366; and

**WHEREAS,** the City Engineering Department and City Planner have reviewed the proposed release of a 45' Reserved Right-of-Way restriction and recommended approval thereof to the Common Council; and

**WHEREAS,** the 45' Reserved Right-of-Way has been determined to no longer be needed considering the developments of the subject properties and adjacent parcels to the east; and

**WHEREAS,** the previously recorded 45' Reserved Right-of-Way restriction described above are located upon Certified Survey Map No. 10366, which properties are legally described as follows:

> Commencing at the Southwest comer of the Northwest ¼ of said Section; thence N00°20'35"W along the West line of the Northwest ¼ of said Section 671.90 feet; thence N89°36'25"E 430.02 feet to the Northwest comer of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the West line of Parcel 2 of said Certified Survey Map 155.00 feet to the point of beginning; thence N 89°36'25"E along the South right-of-way line of Highfield Drive; thence N44°14'24" E along the Southeasterly right-of-way line of said Drive 116.99 feet; thence N66°55'27"E along the

Southeasterly right-of-way line of said Drive 30.47 feet; thence N89°36'25"E along the South right-of-way line of said Drive 268.82 feet to a point on the East line of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the East line of Parcel 2 of said Certified Survey Map 411.40 feet to the Southeast comer of Parcel 2 of said Certified Survey Map and a point on the North right-of-way line of Capitol Drive; thence S89°44'25"W along the South line of Parcel 2 of said Certified Survey Map and the North right-of-way line of said Drive 474.81 feet to the Southwest comer of Parcel 2 of said Certified Survey Map; thence N00°17'10"W along the West line of Parcel 2 of said Certified Survey Map 315.31 feet to the point of beginning. Containing 4.17 acres of land more or less.

**WHEREAS,** Wis. Stats section 236.293 provides in part that any restriction placed on platted land by covenant, grant of easement or in any other manner, which was required by a public body vests in the public body the right to enforce the restriction at law or in equity and that the restriction may be released or waived in writing by the public body having the right of enforcement; and

**WHEREAS,** the Common Council has determined that the release, waiver, vacation and revision of the prior recorded 45' Reserved Right-of-Way is reasonable as it is no longer necessary for the orderly development of the subject properties or appropriate following the approval of the aforesaid site and building development plans submitted by Quattro Development, LLC.

**NOW, THEREFORE, BE IT RESOLVED,** by the Mayor and Common Council of the City of Pewaukee, Wisconsin, that the 45' Reserved Right-of-Way upon Parcels 1 and 2 of Certified Survey Map No. 10366, recorded April 13, 2007 in Volume 98 of Certified Survey Maps on Pages 03 to 209, inclusive as Document No. 3472291 with the Office of the Register of Deeds for Waukesha County, Wisconsin, be and the same are hereby waived and released.

**BE IT FURTHER RESOLVED** that the City Clerk is hereby directed to record this Resolution in the Office of the Register of Deeds for Waukesha County, Wisconsin following the approval of the proposed Quattro Development, LLC Conditional Use and Site and Building Plan Review applications.

Passed and adopted this __th day of _____, 2023.

FOR THE COMMON COUNCIL OF THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN

ATTEST:

_____
Steve Bierce, Mayor

_____
Kelly Tarczewski, Clerk/Treasurer

Quattro Development
1100 Jorie Blvd. • Suite 140
Oak Brook, IL 60523
(630) 870-1921

January 26, 2023

Mr. Nick Fuchs
Planner & Community Development Director
City of Pewaukee
W240N3065 Pewaukee Road
Pewaukee, WI 53072

Re: Release of 45' Reserved Right-of-Way from
Lot 2 of Certified Survey Map No. 10366
Pewaukee, WI

Dear Mr. Fuchs:

This letter is in regards to the existing 45' reserved right-of-way along the southern property line of Lot 2 of Certified Survey Map No. 13066.

Per our prior conversations, we have confirmed with the Wisconsin DOT that this was not a DOT requirement, but rather a City of Pewaukee requirement. In reviewing the aerial maps of this area, it appears that the lots adjacent to this property have encroached into the reserved right-of-way leading us to believe that the City has no plans to develop within this area. To develop Lot 2 to its full potential, we respectfully request that the City vacate / discontinue this future right-of-way from Lot 2.

Please review and let us know if the City would be open to this request.

If you have any further questions regarding this matter, please feel free to contact me at (630) 870-1921.

Sincerely,

**Quattro Development, LLC**

Brett J. Dahlman, P.E.
Director of Construction & Development
brett@quattrodevelopment.com

Attachment: CSM 10366

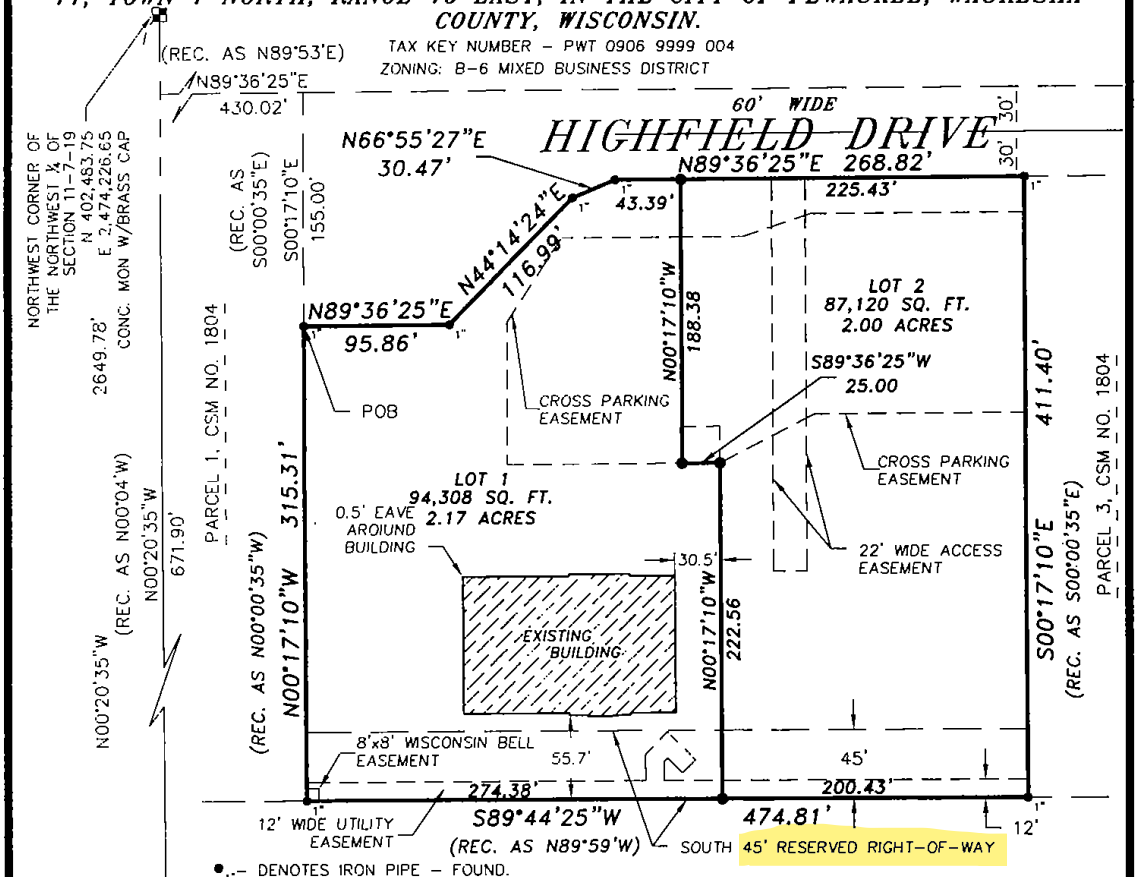
WC3472291-007

3472291

# CERTIFIED SURVEY MAP NO. 10966

**BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.**

TAX KEY NUMBER – PWT 0906 9999 004
ZONING: B-6 MIXED BUSINESS DISTRICT




●1 – DENOTES IRON PIPE – FOUND.

● – DENOTES 1.315" O.D. IRON PIPE, WEIGHTING NOT LESS THAN 1.13 LBS PER LINEAL FOOT, 18" IN LENGTH – SET.

ALL DIMENSIONS ARE MEASURED AND COMPUTED TO THE NEAREST ONE HUNDREDTH OF A FOOT.

BEARINGS ARE REFERENCE TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, ASSUMED WEST LINE N00°20'35"W.

THERE SHALL BE NO DIRECT ACCESS FROM LOTS 1, 2 AND 3 TO S.T.H. "190" / CAPITOL DRIVE.

WIDTH VARIES

CAPITOL DRIVE
(S.T.H. "190")

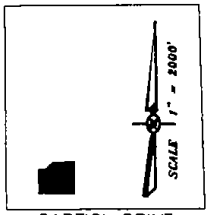
SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11-7-19
N 399,834.27
E 2,474,242.52
CONC. MON W/BRASS CAP

OWNER:
KB Pewaukee, LLC
2226 STATE ROAD 580
CLEARWATER, FL. 33763

SEE SHEET 2 OF 7 FOR EASEMENT DETAILS
SEE SHEET 3 OF 7 FOR LINE TABLE

GRAPHIC SCALE
100' 50' 0 100'

SCALE 1" = 100'



CAPTIOL DRIVE
VICINITY MAP
NW 1/4 SEC. 11-7-19

WISCONSIN
MARK D. NESGOOD
S-1967
KENOSHA, WI
LAND SURVEYOR

**McCLURE ENGINEERING ASSOCIATES, INC.**
5417 North 118th Court, Milwaukee, WI 53225
(414)616-4880 PROJECT NO. 08-15-05-114
(414) 616-4885 (FAX) DRAWING: 05114C2.DWG

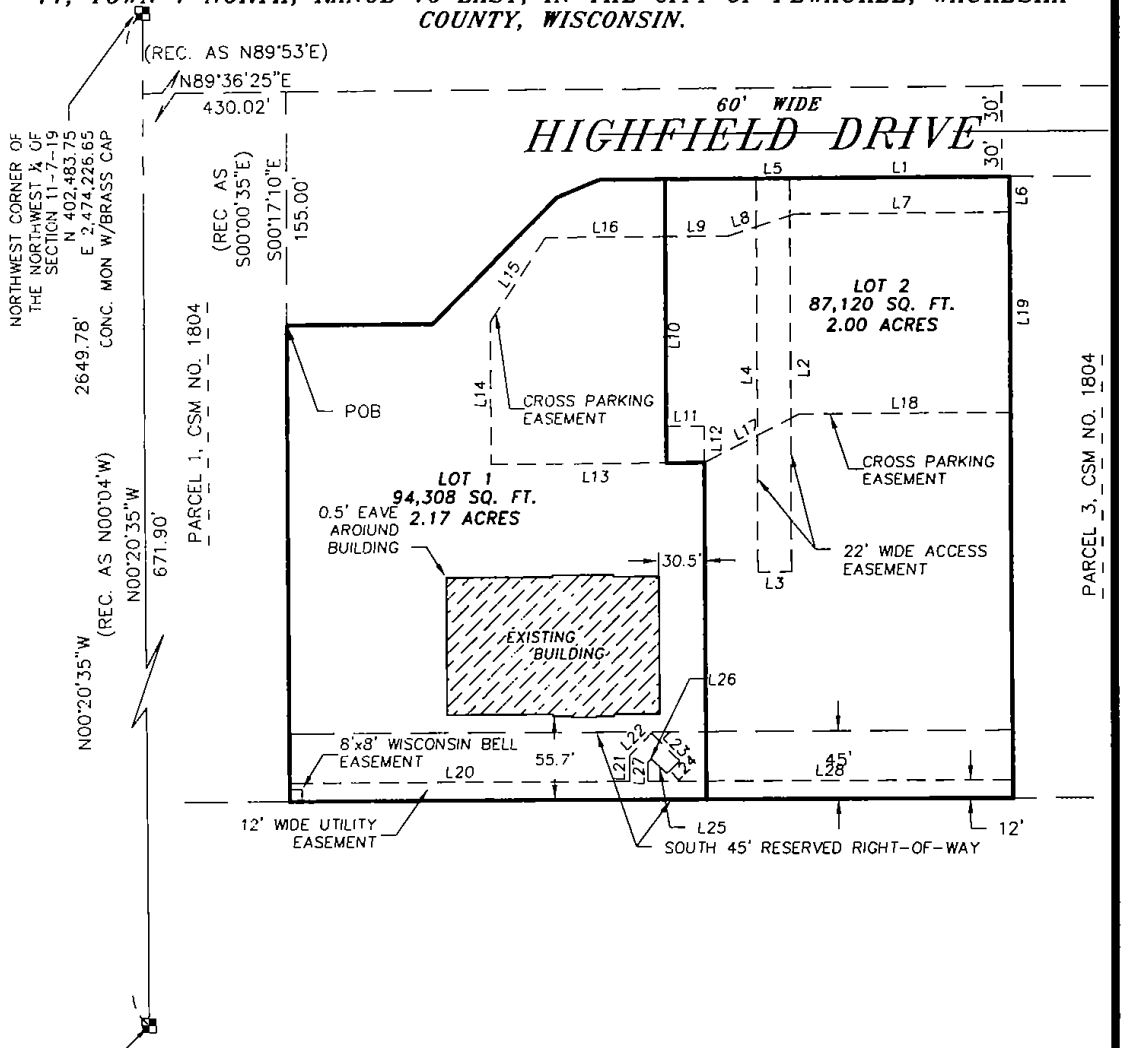
WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 1 OF 7

# CERTIFIED SURVEY MAP NO. 10364

**BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.**




GRAPHIC SCALE

100' 50' 0 100'

1" = 100'

SCALE

WISCONSIN
MARK D. NESGOOD
S-1967
KENOSHA, WI
LAND SURVEYOR

**McCLURE ENGINEERING ASSOCIATES, INC.**

5417 North 118th Court, Milwaukee, WI 53225
(414)616-4880 PROJECT NO. 08-15-05-114
(414) 616-4885 (FAX) DRAWING: 05114C2.DWG

3/28/07

WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 2 OF 7

# CERTIFIED SURVEY MAP NO. 10366

*BEING A REDIVISION OF PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.*

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | DISTANCE |
| L1 | S89°36'25"W | 143.52' |
| L2 | S00°16'37"E | 260.80' |
| L3 | S89°43'25"W | 22.00' |
| L4 | N00°16'37"W | 260.75' |
| L5 | S89°36'25"W | 22.00' |
| L6 | S00°17'10"E | 23.68' |
| L7 | S89°36'25"W | 140.49' |
| L8 | S71°16'14"W | 46.32' |
| L9 | S89°36'25"W | 41.00' |
| L10 | S00°17'10"E | 125.82' |
| L11 | N89°36'25"E | 25.00' |
| L12 | S00°17'10"E | 24.30' |
| L13 | S89°36'25"W | 140.49' |
| L14 | N00°17'10"W | 94.45' |
| L15 | N32°59'24"E | 66.67' |
| L16 | N89°36'25"E | 78.91' |
| L17 | N62°29'07"E | 70.01' |
| L18 | N89°36'25"E | 138.18' |
| L19 | N00°17'10"W | 132.78' |
| L20 | N89°44'25"E | 223.97' |
| L21 | N00°32'10"W | 17.46' |
| L22 | N44°27'51"E | 20.49' |
| L23 | S45°32'09"E | 26.00' |
| L24 | S44°27'51"W | 12.00' |
| L25 | N45°32'09"W | 14.00' |
| L26 | S44°27'51"W | 3.51' |
| L27 | S00°32'10"E | 12.54' |
| L28 | N89°44'25"E | 238.84' |

WISCONSIN
MARK D. NESGOOD S-1967 KENOSHA, WI
LAND SURVEYOR

3/28/07

WISCONSIN REGISTERED LAND SURVEYOR
MARK D. NESGOOD S-1967

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, RLS

SHEET 3 OF 7

# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

## SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN)
MILWAUKEE COUNTY) SS

I, Mark D. Nesgood, Registered Land Surveyor, do hereby certify that I have surveyed, divided and mapped a Redivision of a part of Parcel 2 of Certified Survey Map No. 1804, being a part of the Southwest ¼ of the Northwest ¼ of Section 11, Town 7 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin, bounded and described as follows:

Commencing at the Southwest corner of the Northwest ¼ of said Section; thence N00°20'35"W along the West line of the Northwest ¼ of said Section 671.90 feet; thence N89°36'25"E 430.02 feet to the Northwest corner of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the West line of Parcel 2 of said Certified Survey Map 155.00 feet to the point of beginning; thence N89°36'25"E along the South right-of-way line of Highfield Drive; thence N44°14'24"E along the Southeasterly right-of-way line of said Drive 116.99 feet; thence N66°55'27"E along the Southeasterly right-of-way line of said Drive 30.47 feet; thence N89°36'25"E along the South right-of-way line of said Drive 268.82 feet to a point on the East line of Parcel 2 of said Certified Survey Map; thence S00°17'10"E along the East line of Parcel 2 of said Certified Survey Map 411.40 feet to the Southeast corner of Parcel 2 of said Certified Survey Map and a point on the North right-of-way line of Capitol Drive; thence S89°44'25"W along the South line of Parcel 2 of said Certified Survey Map and the North right-of-way line of said Drive 474.81 feet to the Southwest corner of Parcel 2 of said Certified Survey Map; thence N00°17'10"W along the West line of Parcel 2 of said Certified Survey Map 315.31 feet to the point of beginning. Containing 4.17 acres of land more or less.

THAT I have made such survey, land division and map by the direction of KB Pewaukee, LLC, a Florida limited liability company, owner of said land.

THAT such map is a correct representation of all exterior boundaries and of the land surveyed and the land division thereof made.

THAT I have fully complied with the provisions of Chapter 236 of the Wisconsin State Statutes and the regulations of the City of Pewaukee in surveying, dividing and mapping the same.

Dated this 28th day of March, 2007




Wisconsin Registered Land Surveyor
Mark D. Nesgood S-1967

# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

## OWNERS CERTIFICATE

As Owner, I do hereby certify that I have caused the land described on this plat to be surveyed, divided and mapped as represented on this plat. We also certify that this Certified Survey Map is Required to be submitted to the following for approval: City of Pewaukee.

WITNESS the hand and seal of said Owner this 29th day of March, 2007.

IN THE PRESENCE OF:

KB Pewaukee, LLC, a Florida Limited Liability Company.

_____, Member
Robert E. Schmidt, Jr.
Managing Member

STATE OF Florida )
Pinellas COUNTY) SS

PERSONALLY came before me this 29 day of March, 2007, the above named Robert E Schmidt Member of KB Pewaukee, LLC a Florida Limited Liability Company, to me known to be the person who executed the foregoing instruction and acknowledged the same.

Amanda D. Norwick
Commission # DD641050
Expires: FEB. 15, 2011
www.AaronNotary.com

_____
Notary Public, State of Florida
My commission expires Feb. 15, 2011

WISCONSIN
MARK D. NESGOOD
S-1966
KENOSHA, WI
LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S. SHEET 5 OF 7



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## CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

**CONSENT OF CORPORATE MORTGAGEE**

Park Bank, mortgagee of the above described land, does hereby consent to the surveying, dividing and mapping of the land described on this map, and does hereby consent to the foregoing owner's certificate.

Park Bank

STATE OF )
COUNTY) SS

Personally came before me this 2ND day of APRIL, 2007, HEATHER BAYLOR of the above named Corporation, to be known to be the person who executed the foregoing instrument, and to me known to be such VICE PRESIDENT of said Corporation, and acknowledged that he executed the foregoing instrument as such officer as the deed of said corporation, by its authority.

Notary Public, State of WI
My Commission expires 4-[illegible]

WISCONSIN
MARK D.
NESGOOD
S-1967
KENOSHA
LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S. SHEET 6 OF 7



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# CERTIFIED SURVEY MAP NO. 10366

BEING A REDIVISION OF A PART OF PARCEL 2 OF CERTIFIED SURVEY MAP NO. 1804, BEING A PART OF THE SOUTHWEST ¼ OF THE NORTHWEST ¼ OF SECTION 11, TOWN 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

**CITY PLAN COMMISSION APPROVAL:**

Approved by the Plan Commission, City of Pewaukee, this 15th day of March, 2007.

Scott Klein – Chairman

David Mokros – Secretary

**CITY COMMON COUNCIL APPROVAL:**

Approved by the Common Council, City of Pewaukee, this 19th day of March, 2007.

Scott Klein – Mayor

Kelly Tarczewski – Clerk

CITY OF PEWAUKEE CORPORATE SEAL WISCONSIN

Vol 48 Pages 203-209

3472291

REGISTER'S OFFICE
WAUKESHA COUNTY, WI
RECORDED ON

04-13-2007 11:51 AM

MICHAEL J. HASSLINGER
REGISTER OF DEEDS

REC. FEE: 16.00
REC. FEE-CO: 5.00
REC. FEE-ST: 2.00
TRAN. FEE:
TRAN. FEE-STATE:
PAGES: 7

WISCONSIN MARK D. NESGOOD S-1967 KENOSHA WI LAND SURVEYOR

THIS INSTRUMENT WAS DRAFTED BY MARK D. NESGOOD, R.L.S. SHEET 7 OF 7

# CITY OF PEWAUKEE
# COMMON COUNCIL AGENDA ITEM 8.

**DATE:** September 5, 2023

**DEPARTMENT:** PW - Engineering

**PROVIDED BY:** Magdelene Wagner

***SUBJECT:***

Discussion and Possible Action Regarding Signals at the Intersection of Lindsay Road and Pewaukee Road (STH 164) [Wagner].

***BACKGROUND:***

The Wisconsin Department of Transportation (WisDOT) is completing a pavement maintenance project along Pewaukee Road (STH 164) from Swan Road north. As part of this construction, Staff inquired about signals at the intersection of Lindsay Road and Pewaukee Road. The State has indicated the intersection does not meet the warrants for signals as part of its current maintenance project proposed on Pewaukee Road. They did indicate that they would install signals at the intersection at the expense of the City. Since the signals are located in the Village of Pewaukee, the Public Works Committee directed Staff to approach the Village of Pewaukee to install signals at the intersection (see attached meeting notes). The Village of Pewaukee Staff indicated they do not believe there is an issue at the intersection and therefore would not support installing signals at their cost at the intersection. After discussing their response with the Mayor Bierce, he requested we ask if the Village was willing to give the City the right of way in this location so we could install signals at our expense. The Village Staff responded they would not object to this and asked about the process and then gave two options to proceed with pursuing this with their board.

The transfer of the right of way does not involve any tax base land so changing this jurisdiction should not impact either communities funds. The transfer would allow the City to pay for signals at this intersection with the WisDOT project.

The City does receive complaints regarding this intersection. I've attached the signal warrant analysis completed by WisDOT which is in the Public Works Committee Agenda attachment. Staff would support installing signals at this intersection.

The Common Council would need to enter into an agreement with WisDOT stating we would reimburse them for the installation of the signals which they have estimated to be $300,000. They need the decision soon to include in their current project slated for 2025 construction. The agreement and terms would be brought back to the Council for formal action and approval.

Prior to finalizing this agreement with the WisDOT, Staff need permission from the Council to pursue the jurisdictional transfer of this intersection with the Village Board with the intent to add signals at the intersection. In addition, Staff would work with the City Attorney on the jurisdictional transfer.

***FINANCIAL IMPACT:***

The City would need to pay for the legal paperwork for the jurisdiction transfer as well as revising the City's legal boundaries. The City would also need to pay for the improvements at the intersection which the State has currently

estimated to be $300,000.

***RECOMMENDED MOTION:***

Common Council direct Staff to formally request the Village of Pewaukee to transfer the right of way to the City to pursue installing signals at the intersection, pursue the agreement with the State to install the signals, and direct Staff to include the cost of the signals in the 2024 budget.

**ATTACHMENTS:**

Description

Public Works Committee Packet Agenda

Public Works Committee Packet Minutes

Vilage Correspondence

# CITY OF PEWAUKEE
# PUBLIC WORKS COMMITTEE AGENDA ITEM 6.1.

**DATE:** April 27, 2023

**DEPARTMENT:** PW - Engineering

**PROVIDED BY:** Magdelene Wagner

***SUBJECT:***

Discussion and possible action regarding the intersection of Lindsay Road and Pewaukee Road (STH 164) and possible signals.

***BACKGROUND:***

Committee Member Swan requested Staff further pursue discussion with the State Department of Transportation (WDOT) regarding the safety of the intersection of Lindsay Road and Pewaukee Road (STH 164). Staff had previously reported that in discussions with the WDOT as part of their Owner's meetings, they indicated the intersection did not meet warrants for improvements. The request from Committee Member Swan was to determine when the traffic counts were completed for the analysis and if they would allow improvements at City cost.

Staff reached out to WDOT Engineers. WDOT evaluated the intersection using 2021 traffic counts. The intersection did meet one of the warrants for signalization, but it does not qualify for this improvement as part of their current resurfacing project. They did indicate the City could request the intersection be signalized as part of the project if they enter into an agreement to pay 100% of the cost of these improvements. They currently are estimating the cost to be $300,000 for each signalized intersection. The agreement needs to be in place by summer to accommodate the request.

Upon further review of this intersection, it has been determined this intersection is 100% in the Village of Pewaukee. The Village of Pewaukee would need to make this request and agree to pay the WDOT for the intersection improvements if this intersection is to be signalized.

At this time, Staff needs further direction on this matter as it is not under City jurisdiction. Options include:
1. No nothing.
2. Public Works Committee recommend to the Common Council to approach the Village to make the request for signals and pay for them.
3. Public Works Committee recommend to the Common Council to approach the Village to make the request for signals and enter into an agreement to cost share the expense.
4. Public Works Committee recommend to the Common Council to approach the Village to make the request for signals and enter into an agreement to pay 100% of the cost.

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

Committee make a recommendation to the Council on this matter.

**ATTACHMENTS:**

Description

WDOT email

Signal Warrants Analysis

City Limits Map of Intersection

## Wagner, Magdelene

**From:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Sent:** Wednesday, April 12, 2023 9:11 AM
**To:** Wagner, Magdelene
**Cc:** Wilfert, Mark J - DOT
**Subject:** RE: 2370-00-05/75 - WIS 164
**Attachments:** Signal Warrant Analysis WIS 164 & Lindsay.pdf

Hi Maggie,

Thank you for catching that. It does NOT meet criteria to be included in a resurfacing project. I recently updated the project budget and after talking to the DOT Signals unit I estimated $300,000 for each signalized intersection. The traffic volumes used to reevaluate the intersection were from 2021. I've attached the data they used. The warrants met are shown on the first page. If the City would like to proceed, we would need an agreement in place by summer. The cost would not be billed to the City until construction occurring.

Thank you.

Dawn

***Dawn L. Marshall***
Wisconsin Department of Transportation
PDS Unit 7
Phone: 262-548-6443
Cell: 414-750-1462

---

**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Wednesday, April 12, 2023 8:47 AM
**To:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Cc:** Wilfert, Mark J - DOT <Mark.Wilfert@dot.wi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

**CAUTION: This email originated from outside the organization.**
**Do not click links or open attachments unless you recognize the sender and know the content is safe.**

Hi Dawn,

Thanks for the response. I have a couple of follow-up questions and a clarification.

You stated: "Although it does meet one of the MUTCD warrants for signalization, it does meet the criteria to be signalized at part of a resurfacing project." Were one of these "does" supposed to be a doesn't?

What is the year for the traffic counts that were used in the review?
Which warrant did this intersection meet?
Do you have an estimate of the cost of the signals that the City would be responsible for?
If the City did agree to pay 100% for the cost, when do you need to know this to be included in your project?

Thank you,
Maggie Wagner

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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---

**From:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Sent:** Wednesday, April 12, 2023 7:51 AM
**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Wilfert, Mark J - DOT <Mark.Wilfert@dot.wi.gov>
**Subject:** 2370-00-05/75 - WIS 164

Good morning Maggie,

I just wanted to get back to you and let you know that the intersection of WIS 164 with Lindsay Road was rereviewed. Although it does meet one of the MUTCD warrants for signalization, it does meet the criteria to be signalized at part of a resurfacing project. This would not preclude it from being signalized as part of the project, but without meeting full warrants the cost of signalization would need to be paid by the City of Pewaukee. Please let me or Mark know if you have any additional questions.

Thank you.

Dawn

***Dawn L. Marshall***
Wisconsin Department of Transportation
PDS Unit 7
Phone: 262-548-6443
Cell: 414-750-1462

***Dawn L. Marshall***
Wisconsin Department of Transportation
PDS Unit 7
Phone: 262-548-6443
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# Wisconsin Department of Transportation Traffic Signal Warrant Summary Worksheet

**70%**

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: STH 164 & Lindsay Rd
County: Waukesha
Village: Pewaukee

Major Street: STH 164
Critical Approach Speed: 45 mph
Lanes: 2 or more lanes

Minor Street: Lindsay Rd
Critical Approach Speed: 25 mph
Lanes: 1 lane

% Right Turns Included
From North (SB) 100%
From East (WB) 0%
From South (NB) 100%
From West (EB) 0%

In built-up area of isolated community of < 10,000 population? No
Total number of approaches at intersection? 3
If it is a "T" intersection, inflate minor threshold to 150%? No
Manually set volume level?

**Analysis based on EXISTING volume data.**

| Date | Day of the Week | Time (HH:MM) | | | |
|---|---|---|---|---|---|
| | | From | AM / PM | To | AM / PM |
| Mar-21 | | 6:00 | AM | 7:00 | PM |

| Warrant Evaluation Summary | Warrant Met: |
|---|---|
| **Warrant 1: Eight - Hour Vehicular Volume** | **Yes** |
| Condition A: Minimum Vehicular Volume | No |
| Condition B: Interruption of Continuous Traffic | Yes |
| Condition C: Combination: 80% of A and B | No |
| **Warrant 2: Four-Hour Volume** | **Yes** |
| **Warrant 3: Peak Hour Volume** | **N/A** |
| **Warrant 4: Pedestrian Volume** | **N/A** |
| Criterion A: Four-Hour | |
| Criterion B: Peak-Hour | |
| **Warrant 5: School Crossing** | **N/A** |
| **Warrant 6: Coordinated Signal System** | **N/A** |
| **Warrant 7: Crash Experience** | **N/A** |
| **Warrant 8: Roadway Network** | **N/A** |
| **Warrant 9: Intersection Near a Grade Crossing** | **N/A** |

**Warrant Analysis Conducted By:**

Name: Revised by Mike Borck
Agency: WisDOT
Date: 5/3/2022

# Warrant 1: Eight - Hour Vehicular Volume 70%

**Warrant Evaluated? Yes** **Warrant Satisfied? Yes** **Manually Set To:**

| Condition A : Min. Veh. Volume | | |
|---|---|---|
| Volume Level | 70% | 56% |
| Major Rd. Req | 420 | 336 |
| Minor Rd. Req | 105 | 84 |
| Number of Hours | 1 | 3 |

**Satisfied? No**

| Condition B: Interruption of Continuous Traffic | | |
|---|---|---|
| Volume Level | 70% | 56% |
| Major Rd. Req | 630 | 504 |
| Minor Rd. Req | 53 | 42 |
| Number of Hours | 12 | 12 |

**Satisfied? Yes**

| Condition C: Combination of A & B at 56% |
|---|

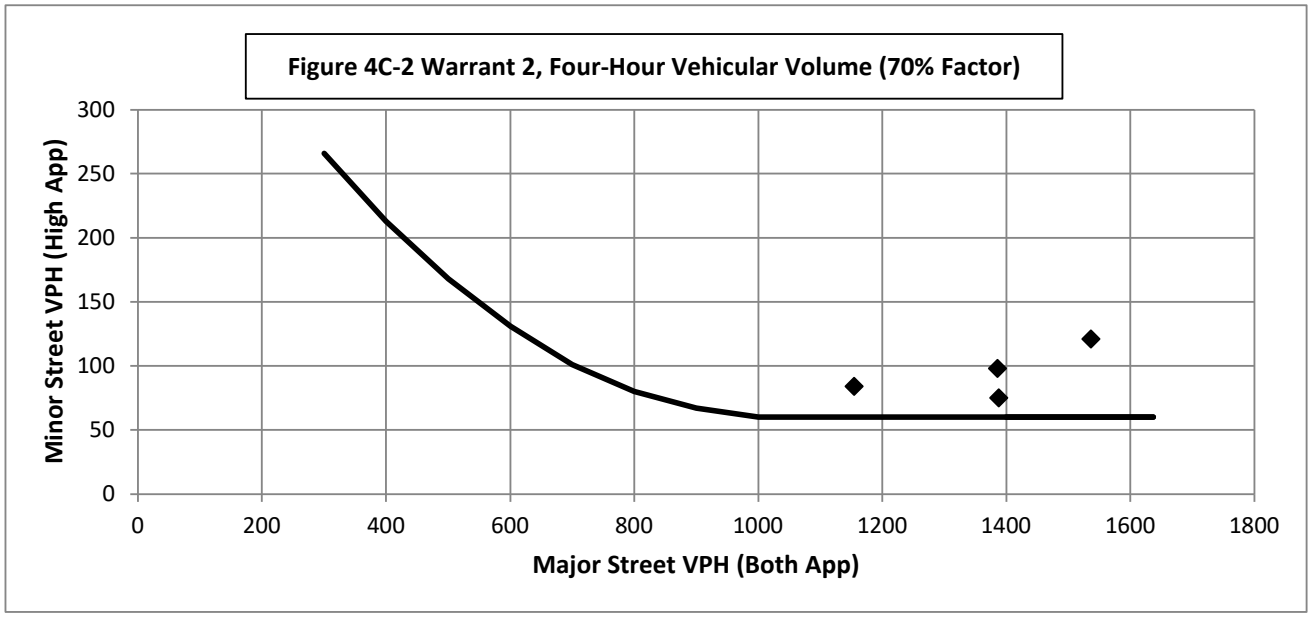
**Satisfied? No**

| 6:00 AM | Enter Start Time (Military Time) (HH:MM) | | | | |
|---|---|---|---|---|---|
| **Time Period** | **From** | **To** | **Major Road: Both App. (VPH)** | **Minor Road: High App. (VPH)** | **Total** |
| 1 | 6:00 | 7:00 | 802 | 55 | 857 |
| 2 | 7:00 | 8:00 | 1155 | 84 | 1239 |
| 3 | 8:00 | 9:00 | 944 | 64 | 1008 |
| 4 | 9:00 | 10:00 | 763 | 40 | 803 |
| 5 | 10:00 | 11:00 | 866 | 57 | 923 |
| 6 | 11:00 | 12:00 | 994 | 75 | 1069 |
| 7 | 12:00 | 13:00 | 1048 | 66 | 1114 |
| 8 | 13:00 | 14:00 | 993 | 63 | 1056 |
| 9 | 14:00 | 15:00 | 1137 | 71 | 1208 |
| 10 | 15:00 | 16:00 | 1386 | 98 | 1484 |
| 11 | 16:00 | 17:00 | 1537 | 121 | 1658 |
| 12 | 17:00 | 18:00 | 1388 | 75 | 1463 |
| 13 | 18:00 | 19:00 | 824 | 59 | 883 |
| 14 | 19:00 | 20:00 | 0 | 0 | 0 |
| 15 | 20:00 | 21:00 | 0 | 0 | 0 |
| 16 | 21:00 | 22:00 | 0 | 0 | 0 |

# Warrant 2: Four-Hour Volume 70%

**Warrant Evaluated? Yes**
**Warrant Satisfied? Yes**
**Manually Set To:**

| Hour Start | 16:00 | 15:00 | 17:00 | 7:00 |
|---|---|---|---|---|
| Major Road Vol. | 1537 | 1386 | 1388 | 1155 |
| Minor Road Vol. | 121 | 98 | 75 | 84 |



## Warrant 3: Peak Hour Volume 70%

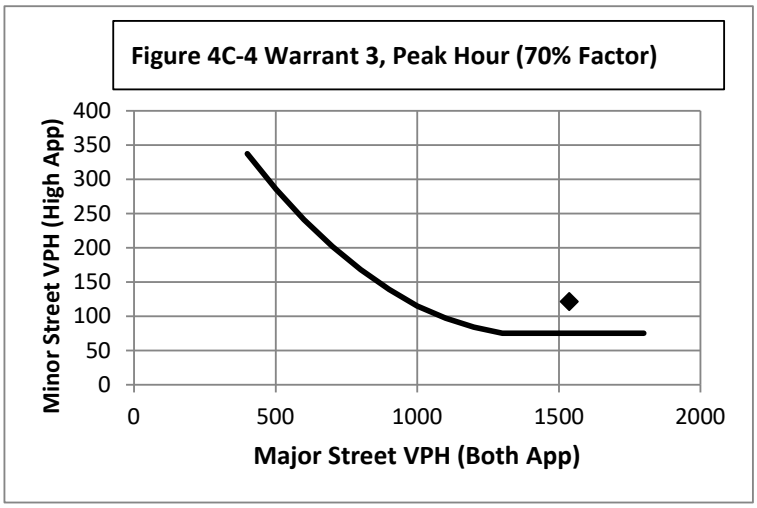
**Warrant Evaluated? No** **Warrant Satisfied? N/A** **Manually Set To:**

Condition justifying use of warrant:

| Criteria | | Met? |
|---|---|---|
| Delay on Minor Approach | 4 | |
| Volume on Minor Approach | 100 | |
| Total Entering Volume (veh/h) | 650 | |

**Manually Set Peak Hour?**

| Peak Hour | Major Road Vol. (Both App.) | Minor Road Vol. (High App.) |
|---|---|---|
| 16:00 | 1537 | 121 |




## Warrant 4: Pedestrian Volume 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

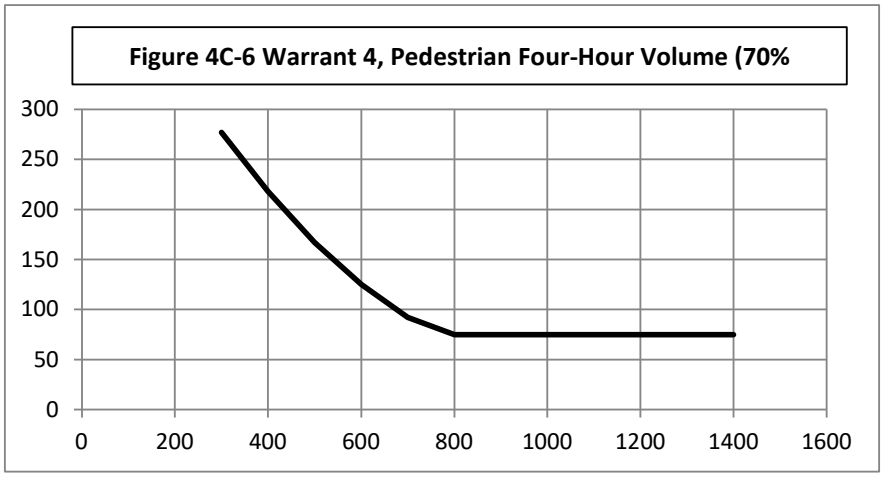
**Criterion A: Four Hour**

| Hour (Start) | Pedestrian Volume | Major Road Vol. |
|---|---|---|
| | | 0 |
| | | 0 |
| | | 0 |
| | | 0 |

**Manually Set Major Rd Vol?**

**Avg. walk speed less than 3.5 ft/s?**

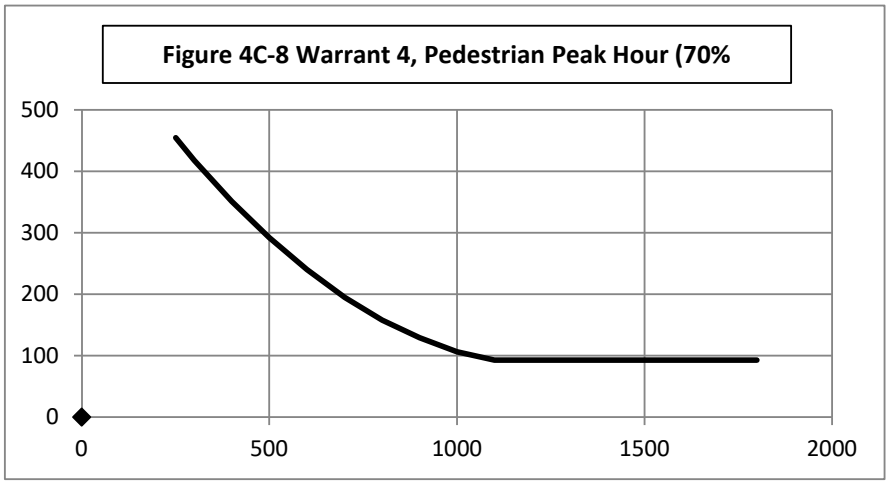
**Criterion A Satisfied?**




**Criterion B: Peak Hour**

| Peak Hour | Pedestrian Vol. | Major Road Vol. |
|---|---|---|
| 0:00 | 0 | 0 |

**Criterion B Satisfied?**



## Warrant 5: School Crossing 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

| **Criteria** | | Fulfilled? |
|---|---|---|
| 1 | There are a MINIMUM of 20 school children during the highest crossing hour. | |
| 2 | There are fewer adequate gaps in the major road traffic stream during the period when the school children are using the crossing than the number of minutes in the same period. | |
| 3 | The nearest traffic signal along the major road is located more than 300 ft away. Or, the nearest traffic signal is within 300 ft but the proposed traffic signal will not restrict the progressive movement of traffic. | |

## Warrant 6: Coordinated Signal System 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

| **Criteria** | | Fulfilled? |
|---|---|---|
| 1 | Signal spacing > 1000 ft | |
| 2 | On a one-way road or a road that has traffic predominantly in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning. | |
| 3 | On a two-way road, adjacent signals do not provide the necessary degree of platooning and the proposed and the adjacent signals will collectively provide a progressive operation. | |

## Warrant 7: Crash Experience 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

| **Criteria** | | | Met? | Fulfilled? |
|---|---|---|---|---|
| 1 | Adequate trial of other remedial measures has failed to reduce crash frequency. | | | |
| | Measures Tried: | | | |
| 2 | Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12 month period. | # of crashes per 12 months | | |
| 3 | Warrant 1, Condition A (80%) | | No | Yes |
| | Warrant 1, Condition B (80%) | | Yes | |
| | Warrant 4, Criterion A (80%) | | No | |
| | Warrant 4, Criterion B (80%) | | No | |

## Warrant 8: Roadway Network 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

| **Criteria** | | | | | | Met? | Fulfilled? |
|---|---|---|---|---|---|---|---|
| 1 | Total entering volume of at least 1,000 veh/h during typical weekday peak hour | | | | 1658 | Yes | No |
| | Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3. | | | | | No | |
| 2 | Total entering vol. of at least 1,000 veh/h for each of any 5 hrs of non-normal business day (Sat. or Sun.) | | | | | | |
| | Hour | | | | | | |
| | Volume | | | | | | |

| **Characteristics of Major Routes - Select yes if all intersecting routes have characteristic** | | Fulfilled? |
|---|---|---|
| 1 | Part of the road or highway system that serves as the principal roadway network for through traffic flow | |
| 2 | Rural or suburban highway outside of, entering, or traversing a city | |
| 3 | Appears as a major route on an official plan | |

# Warrant 9: Intersection Near a Grade Crossing 70%

**Warrant Evaluated?** **Warrant Satisfied? N/A** **Manually Set To:**

| Adjustment Factors | | | Manually Set Peak Hour? | | | | |
|---|---|---|---|---|---|---|---|
| Rail Traffic per Day | % High Occupancy Buses on Minor Road | % Tractor-Trailer Trucks on Minor Road | D | Peak Hour | Major Road Vol. | Minor Road Vol. | Adjusted Minor Vol. |
| 1 | 0 | 0% to 2.5% | 660 | 16:00 | 1537 | 121 | 40.535 |

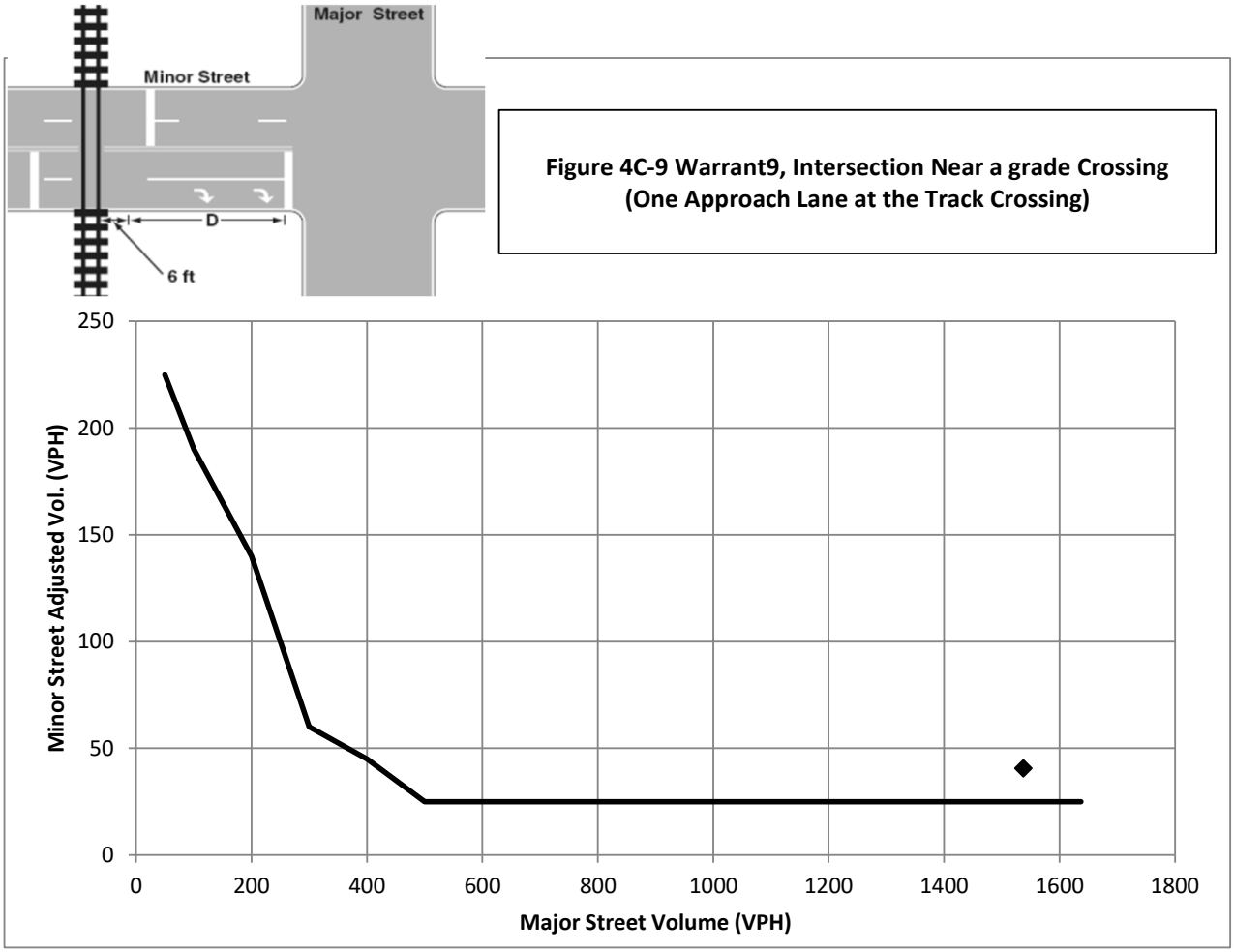



**Figure 4C-9 Warrant9, Intersection Near a grade Crossing (One Approach Lane at the Track Crossing)**

**Conclusions/Comments:**

Updated: 12/6/2017

## Hourly Volume Data

| One Hour Time Period Start Time | | From North (SB) ↓ | | | | | From East (WB) ← | | | | | From South (NB) ↑ | | | | | From West (EB) → | | | | | Total Vehicle Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 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* | 6:00 | 61 | 501 | 4 | 0 | 566 | 12 | 13 | 2 | 0 | 27 | 1 | 229 | 6 | 0 | 236 | 11 | 8 | 47 | 0 | 66 | 895 |
| | 7:00 | 97 | 715 | 7 | 0 | 819 | 12 | 46 | 1 | 0 | 59 | 1 | 311 | 24 | 0 | 336 | 30 | 24 | 59 | 1 | 114 | 1328 |
| | 8:00 | 77 | 540 | 1 | 1 | 619 | 1 | 19 | 7 | 0 | 27 | 2 | 312 | 11 | 0 | 325 | 28 | 14 | 50 | 0 | 92 | 1063 |
| | 9:00 | 45 | 386 | 4 | 0 | 435 | 7 | 16 | 8 | 0 | 31 | 7 | 310 | 11 | 0 | 328 | 15 | 10 | 30 | 0 | 55 | 849 |
| *MD* | 10:00 | 42 | 459 | 2 | 0 | 503 | 3 | 13 | 12 | 0 | 28 | 7 | 339 | 16 | 1 | 363 | 23 | 11 | 46 | 0 | 80 | 974 |
| | 11:00 | 63 | 462 | 3 | 0 | 528 | 10 | 13 | 4 | 0 | 27 | 5 | 439 | 22 | 0 | 466 | 30 | 17 | 58 | 0 | 105 | 1126 |
| | 12:00 | 52 | 472 | 5 | 0 | 529 | 6 | 15 | 7 | 0 | 28 | 4 | 483 | 32 | 0 | 519 | 23 | 14 | 52 | 0 | 89 | 1165 |
| | 13:00 | 62 | 455 | 2 | 0 | 519 | 6 | 15 | 7 | 0 | 28 | 6 | 447 | 20 | 1 | 474 | 24 | 17 | 46 | 0 | 87 | 1108 |
| *PM* | 14:00 | 66 | 466 | 5 | 0 | 537 | 5 | 27 | 3 | 0 | 35 | 6 | 559 | 35 | 0 | 600 | 25 | 23 | 48 | 0 | 96 | 1268 |
| | 15:00 | 77 | 534 | 6 | 1 | 618 | 6 | 28 | 9 | 0 | 43 | 10 | 726 | 32 | 0 | 768 | 27 | 26 | 71 | 1 | 125 | 1554 |
| | 16:00 | 110 | 579 | 9 | 0 | 698 | 13 | 22 | 11 | 0 | 46 | 12 | 796 | 31 | 0 | 839 | 23 | 26 | 95 | 0 | 144 | 1727 |
| | 17:00 | 97 | 531 | 6 | 1 | 635 | 7 | 27 | 7 | 0 | 41 | 7 | 706 | 40 | 0 | 753 | 21 | 19 | 56 | 0 | 96 | 1525 |
| | 18:00 | 44 | 318 | 6 | 0 | 368 | 6 | 14 | 8 | 0 | 28 | 10 | 428 | 18 | 0 | 456 | 19 | 16 | 43 | 0 | 78 | 930 |
| | 19:00 | | | | | | | | | | | | | | | | | | | | | 0 |
| | 20:00 | | | | | | | | | | | | | | | | | | | | | 0 |
| | 21:00 | | | | | | | | | | | | | | | | | | | | | 0 |
| **Totals** | | 893 | 6418 | 60 | 3 | 7374 | 94 | 268 | 86 | 0 | 448 | 78 | 6085 | 298 | 2 | 6463 | 299 | 225 | 701 | 2 | 1227 | 15512 |

**Note: Copy volume data and paste into cells using paste special -> values**

**Note: U-Turns are counted as Left Turns in the Volume Totals**

**Please Select the Major Road:** **N/S**

**Major Road Left Turn as Minor Approach?** **No**

**% Right Turns Included (Default 0%)**

| | |
|---|---|
| From North (SB) | **100%** |
| From East (WB) | **0%** |
| From South (NB) | **100%** |
| From West (EB) | **0%** |

| Major Road Volume Totals: North/South | | | | |
|---|---|---|---|---|
| Right | Thru | Left | T+LT | Total |
| 62 | 730 | 10 | 740 | 802 |
| 98 | 1026 | 31 | 1057 | 1155 |
| 79 | 852 | 13 | 865 | 944 |
| 52 | 696 | 15 | 711 | 763 |
| 49 | 798 | 19 | 817 | 866 |
| 68 | 901 | 25 | 926 | 994 |
| 56 | 955 | 37 | 992 | 1048 |
| 68 | 902 | 23 | 925 | 993 |
| 72 | 1025 | 40 | 1065 | 1137 |
| 87 | 1260 | 39 | 1299 | 1386 |
| 122 | 1375 | 40 | 1415 | 1537 |
| 104 | 1237 | 47 | 1284 | 1388 |
| 54 | 746 | 24 | 770 | 824 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 971 | 12503 | 363 | 12866 | 13837 |

| Minor Road Highest Volume: East/West | | | | |
|---|---|---|---|---|
| Right | Thru | Left | T+LT | Total |
| 0 | 8 | 47 | 55 | 55 |
| 0 | 24 | 60 | 84 | 84 |
| 0 | 14 | 50 | 64 | 64 |
| 0 | 10 | 30 | 40 | 40 |
| 0 | 11 | 46 | 57 | 57 |
| 0 | 17 | 58 | 75 | 75 |
| 0 | 14 | 52 | 66 | 66 |
| 0 | 17 | 46 | 63 | 63 |
| 0 | 23 | 48 | 71 | 71 |
| 0 | 26 | 72 | 98 | 98 |
| 0 | 26 | 95 | 121 | 121 |
| 0 | 19 | 56 | 75 | 75 |
| 0 | 16 | 43 | 59 | 59 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 225 | 703 | 928 | 928 |

MAP WAUKESHA county

# Waukesha County GIS Map




**Legend**

- Municipal Boundary_2K
- Parcel_Dimension_2K
- Note_Text_2K
- Lots_2K
  - Lot
  - Unit
  - General Common Element
  - Outlot
- SimultaneousConveyance
  - Assessor Plat
  - CSM
  - Condominium
  - Subdivision
- Cartoline_2K
  - EA-Easement_Line
  - PL-DA
  - PL-Extended_Tie_line
  - PL-Meander_Line
  - PL-Note
  - PL-Tie
  - PL-Tie_Line
  - <all other values>
- Railroad_2K

0 144.07 Feet

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**Notes:**

Printed: 4/24/2023

Mayor Bierce asked why a homeowner wouldn't want to participate in the program? Ms. Mueller replied it's usually because people don't have time. We can adjust our work hours for the workday, but not on weekends or late evenings at this point. There is also a general government mistrust, our already heavy workloads, and supply chain issues that have contributed to the lost time in getting this done.

Mr. Swan asked how far do we go back with our customers having lead pipes? Ms. Mueller doesn't know that information. She said that not everyone on a private well is connected to municipal water. We are not looking at private wells, just our municipal water system. Initially, we were attempting to complete multiple items at once during these home inspections - the meter change, the pipe inventory, the DNR's cross connection check, and private well piping. By obtaining all this information during one visit, it would help the customer and we would collect the information required for the next 10-20 years. But what the pipe material from a lateral would be except for by the construction timeframe, she doesn't know.

**A motion was made and seconded (J. Tormey, M. Kreiter) to award the proposal to 120 Water to create a Lead & Copper Rule Revisions (LCRR) Service Line Inventory as required by EPA regulations**. Motion Passed: 5-For, 0-Against.

5.2. Discussion on Well #1 motor failure update.

Ms. Mueller reported that the Well #1 motor failure was on the part of the motor manufacturer. She stated this was warranty work and we have not received a bill for any of the repairs.

Mr. Swan asked what caused it? Ms. Mueller replied that the manufacturer said that they need to improve their stator design.

Mr. Tormey asked if this motor failed repeatedly? Ms. Mueller said yes, they did cover another one under warranty. He asked if they would all be manufacturer's defects? Ms. Wagner replied all but the first one, and they have not admitted to the second one and have not covered it under warranty yet.

Alderman Wamser asked if we will be reimbursed for labor? Ms. Mueller said that we hired a contractor and have not paid anything on this warranty at all. She plans to go back to the manufacturer and have a discussion with them regarding the previous motors.

6. Engineering Division

6.1. Discussion and possible action regarding the intersection of Lindsay Road and Pewaukee Road (STH 164) and possible signals.

Ms. Wagner reported on Mr. Swan's request for further discussion with the Wisconsin Dept of Transportation (WDOT) about putting traffic signals at the intersection of Lindsay Road and Pewaukee Road (STH 164). She mentioned a previous discussion she had with the WDOT in a planning meeting where they indicated that the city did not meet the warrants to have those improvements done as part of this resurfacing project.

Mr. Swan asked for additional information on how they made that determination. Ms. Wagner said she reached out to WDOT engineers and was told that it was based on their warrant analysis from 2021 traffic counts. The city did meet one warrant, but it was not sufficient for the WDOT to include it in this project. Mr. Swan asked what that warrant was? Ms. Wagner included the analysis in the packet and referenced "Condition B. Interruption of Continuous Traffic". The city was told that we could request signals at that intersection, but we would have to pay 100% of the cost of the signal improvements for the intersection. And, any agreements to that end would have to be in place by early this summer to be included as part of this project. Ms. Wagner said that given this is not in our jurisdiction, she needs some direction from the committee if they want to pursue this further.

Ms. Wagner provided the crash rates Mr. Swan requested, which were a total of 16 reported crashes in the last five years.

Mr. Tormey suggested we alert the Village that there is a problem. He is in favor of Alternative 4, to notify the Village of the status of the problem and then it's between the Village and the state. He feels if we pay for this, we are setting a dangerous precedent.

Ms. Wagner said the Village is aware that there is a problem at that intersection but has not advocated for anything. She said that we can ask them, but feels their response will be that if you want it, you pursue it.

Mr. Tormey said that even though the traffic would warrant signals, the state can't do it because it is a resurfacing project. Ms. Wagner agreed.

Ms. Wagner reported that she didn't realize the intersection wasn't part of the city because she was thinking that it was split between the city and the village.

Mr. Swan stated he would like this pursued further. He asked for the Mayor and Village President to make the request to the state to see if they would change their position. He asked for an official recommendation from this committee. He feels the state should pay for it. The committee discussed the different alternatives and agreed to Mr. Swan's request.

**A motion was made and seconded (J. Tormey, D. Swan) directing the Mayor to approach the Village President, and speak with the State to pay for the signals with the help of the Village and the City**. Motion Passed: 5-For, 0-Against

7. Highway Division

7.1. Discussion and possible action regarding City Entrance signs.

Ms. Wagner provided the committee with a few options to choose from on the style of the 30 entrance signs that will be posted throughout the city. There were two font options to choose from, one with all block lettering and one with script and block lettering. There were also two with different size options to choose from, either 18x30" or 24x30".

## Wagner, Magdelene

**From:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Sent:** Wednesday, August 2, 2023 3:31 PM
**To:** Wagner, Magdelene
**Cc:** Klein, Scott; Scott Gosse
**Subject:** RE: 2370-00-05/75 - WIS 164

I guess it depends on how you want to approach it.

If you want to be certain of Village Board buy in before drafting documents, I suggest the City prepare a memorandum to the Board explaining why you want to implement traffic signals and what you believe the process will be, what the City is offering to do, etc, to present at the next meeting, and asking for their agreement. I assume you could get on the agenda for the 15th.

Or, you could just go straight to preparing any necessary draft legal documents necessary for the lands transfer, explain how the financial obligations for signal installation and maintenance, etc. would work, if applicable, to present to the Board. Not sure if such a transfer would require a public hearing. I'm actually not even sure how to perform a municipal jurisdictional transfer besides the obvious of a legal description of the land involved.

Do you have some other suggestion?, we're open. I think some version of the first idea is the way to go.

Daniel Naze, P.E.
Village of Pewaukee
Director of Public Works/Village Engineer
1000 Hickory Street
Pewaukee, WI 53072
262-691-5694, 7:00 am – 3:00 pm

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---

**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Wednesday, August 2, 2023 9:00 AM
**To:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Hi Dan,

Any update on next steps? Is it possible to get on an agenda to begin this process?

Thank you,
Maggie

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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**From:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Sent:** Wednesday, July 12, 2023 10:32 AM
**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Yes, Scott and I discussed this a little while back. We believe the Village Board may look at it positively.

When Scott is back next week we'll have to discuss what the next steps would be for you relative to Village agreement, approval, etc.

BTW this email was sent to my junk folder.

Daniel Naze, P.E.
Village of Pewaukee
Director of Public Works/Village Engineer
1000 Hickory Street
Pewaukee, WI 53072
262-691-5694, 7:00 am – 3:00 pm

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**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Tuesday, July 11, 2023 4:03 PM
**To:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Dan,

Any thoughts on this? The State needs a response from us soon in order to accommodate this in their upcoming project.

Thanks,
Maggie

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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---

**From:** Wagner, Magdelene
**Sent:** Tuesday, June 6, 2023 2:02 PM
**To:** 'Daniel Naze' <dnaze@villageofpewaukeewi.gov>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Dan,

Yes. The boundary of the Pewaukee's would change. I think it would be an ordinance resolution and legal description for both of us but would follow up with our attorney to ensure we capture all the necessary paperwork. What you have drawn would work for our purposes.

O&M hasn't been discussed. The intersection does meet 1 warrant for lights, but it does not meet enough warrants to make it into a resurfacing project. If the signals are in the City's jurisdiction and if O&M is shared with the State, it would be the City funding it.

Thank you,
Maggie

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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---

**From:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Sent:** Tuesday, June 6, 2023 1:08 PM

**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Maggie,

How would this work? Are you suggesting the boundary of the municipal limits would change?, something like this maybe, added to the City?

Not exactly sure how to go about that. Also, how does WISDOT look at O+M on signals they weren't interested in installing.




Daniel Naze, P.E.
Village of Pewaukee
Director of Public Works/Village Engineer
1000 Hickory Street
Pewaukee, WI 53072
262-691-5694, 7:00 am – 3:00 pm

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**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Friday, June 2, 2023 10:45 AM
**To:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Hi Dan,

Sorry for my delay on responding to this.

From what I gather, you do not necessarily disagree with the signals, but you don't support them either.

After a brief discussion with the Mayor, the City would be willing to pay for the signals, but we would need the ROW annexed to the City in this area so it would be under our jurisdiction. This would only be the ROW, not any developable or taxable land so I wouldn't think it would be a major hurdle. Is that something you would support taking to the Board?

Thank you,
Maggie

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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**From:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Sent:** Wednesday, May 3, 2023 12:44 PM
**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Hi Maggie:

I can say that I'm not aware of any Village residents providing concerns there. I go through here daily on my commute. My observations have been that there is a p.m. window where EB Lindsay to NB 164 has some queing occasionally, but that's it. I'm not sure I would support more …everything associated with traffic signals if warrants aren't met. When there are huge lopsided traffic counts at the side street, it just hacks off the majority of the people on the main road who

must stop for the one car. This project at a minimum though could be an opportunity to install the underground ducts, vaults, and maybe even pole bases for the future.

Questions:

Are you proposing that the City would pay 100% of the installation cost? If WISDOT is saying it's not necessary, but it is installed at another agency's cost, who then would be responsible in the future for such things as intersection pavement marking, power, and perpetual maintenance? In any case this would be a Village Board decision to support even at no cost commitment, and other considerations if there were budgetary and/or maintenance implications.

Let me know and Scott and I can consider what action to take.

Daniel Naze, P.E.
Village of Pewaukee
Director of Public Works/Village Engineer
1000 Hickory Street
Pewaukee, WI 53072
262-691-5694, 7:00 am – 3:00 pm

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---

**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Monday, May 1, 2023 6:10 PM
**To:** Daniel Naze <dnaze@villageofpewaukeewi.gov>
**Cc:** Mayor <mayor@pewaukee.wi.us>; Klein, Scott <sklein@pewaukee.wi.us>; Scott Gosse <sgosse@villageofpewaukeewi.gov>
**Subject:** FW: 2370-00-05/75 - WIS 164

HI Dan,

Hope all is well with you.

Please see the email thread below regarding getting signals at the intersection of Lindsay Road and Pewaukee Road (STH 164) as part of the WisDOT resurfacing project.

The City has received complaints regarding this intersection for a number of years and I assume you have heard the same complaints hence the inquiry to the WisDOT. This intersection is entirely located in the Village of Pewaukee and therefore the request to the WisDOT, I believe, needs to come from the Village. The City is willing to give a letter of support to any request the Village would make if desired.

As you can read below, the intersection does meet a warrant for signals, but it is not sufficient to include in a resurfacing project and be funded by the State. A review of traffic accidents over the last 5 years shows 14 property damage only and 2 injury accidents.

The State is willing to install the signals, cost estimated at $300,000, as part of the project as long as the agreement to do so is executed by summer. Would the Village consider moving this forward? The City is willing to discuss this further if desired.

Thank you,
Maggie

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
W240N3065 Pewaukee Road
Pewaukee, WI 53072
262-691-0804

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**From:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Sent:** Wednesday, April 12, 2023 9:11 AM
**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Wilfert, Mark J - DOT <Mark.Wilfert@dot.wi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

Hi Maggie,

Thank you for catching that. It does NOT meet criteria to be included in a resurfacing project. I recently updated the project budget and after talking to the DOT Signals unit I estimated $300,000 for each signalized intersection. The traffic volumes used to reevaluate the intersection were from 2021. I've attached the data they used. The warrants met are shown on the first page. If the City would like to proceed, we would need an agreement in place by summer. The cost would not be billed to the City until construction occurring.

Thank you.

Dawn

***Dawn L. Marshall***
Wisconsin Department of Transportation
PDS Unit 7
Phone: 262-548-6443
Cell: 414-750-1462

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**From:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Sent:** Wednesday, April 12, 2023 8:47 AM
**To:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Cc:** Wilfert, Mark J - DOT <Mark.Wilfert@dot.wi.gov>
**Subject:** RE: 2370-00-05/75 - WIS 164

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Hi Dawn,

Thanks for the response. I have a couple of follow-up questions and a clarification.

You stated: "Although it does meet one of the MUTCD warrants for signalization, it does meet the criteria to be signalized at part of a resurfacing project." Were one of these "does" supposed to be a doesn't?

What is the year for the traffic counts that were used in the review?
Which warrant did this intersection meet?
Do you have an estimate of the cost of the signals that the City would be responsible for?
If the City did agree to pay 100% for the cost, when do you need to know this to be included in your project?

Thank you,
Maggie Wagner

**Magdelene Wagner, P.E.**
**Director of Public Works/City Engineer**
**City of Pewaukee**
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**From:** Marshall, Dawn - DOT <Dawn.Marshall@dot.wi.gov>
**Sent:** Wednesday, April 12, 2023 7:51 AM
**To:** Wagner, Magdelene <wagner@pewaukee.wi.us>
**Cc:** Wilfert, Mark J - DOT <Mark.Wilfert@dot.wi.gov>
**Subject:** 2370-00-05/75 - WIS 164

Good morning Maggie,

I just wanted to get back to you and let you know that the intersection of WIS 164 with Lindsay Road was rereviewed. Although it does meet one of the MUTCD warrants for signalization, it does meet the criteria to be signalized at part of a resurfacing project. This would not preclude it from being signalized as part of the project, but without meeting full warrants the cost of signalization would need to be paid by the City of Pewaukee. Please let me or Mark know if you have any additional questions.

Thank you.

Dawn

***Dawn L. Marshall***
Wisconsin Department of Transportation
PDS Unit 7
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